

5.1 NO. 14 (LOT: 119; D/P: 1223) FRANKLIN STREET, LEEDERVILLE - PROPOSED THREE GROUPED DWELLINGS

Ward: North

- Attachments:**
1. Consultation and Location Map
 2. Development Plans
 3. Superseded Plans from First Round of Advertising
 4. 3D Perspectives
 5. Applicant's Written Justification
 6. Summary of Submissions - Administration's Response
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RECOMMENDATION:

That Council, in accordance with the provisions of the City of Vincent Local Planning Scheme No. 2 and the Metropolitan Region Scheme, APPROVES the application for Three Grouped Dwellings at No. 14 (Lot: 119; D/P: 1223) Franklin Street, Leederville, in accordance with the plans shown in Attachment 2, subject to the following conditions, with the associated determination advice notes in Attachment 9:

1. Development Plans

This approval is for Three Grouped Dwellings as shown on the approved plans dated 8 July 2021. No other development forms part of this approval;

2. Boundary Walls

2.1 The surface finish of boundary walls facing an adjoining property shall be of a good and clean condition, prior to the occupation or use of the development, and thereafter maintained, to the satisfaction of the City. The finish of boundary walls is to be fully rendered or face brick, or material as otherwise approved, to the satisfaction of the City;

2.2 The following walls of Units 1 and 2 must be constructed simultaneously:

- Unit 1: the first floor wall abutting Unit 2; and
- Unit 2: the first floor wall abutting Unit 1;

These walls must be constructed and finished as per the approved plans prior to the first occupation or use of either Unit 1 or Unit 2;

3. External Fixtures

All external fixtures, such as television antennas (of a non-standard type), radio and other antennae, satellite dishes, solar panels, external hot water heaters, air conditioners, and the like, shall not be visible from the street(s), are designed integrally with the building, and be located so as not to be visually obtrusive to the satisfaction of the City;

4. Visual Privacy

Prior to occupancy or use of the development, all privacy screening shown on the approved plans shall be installed and shall be visually impermeable and is to comply in all respects with the requirements of Clause 5.4.1 of the Residential Design Codes (Visual Privacy) deemed-to-comply provisions, to the satisfaction of the City;

5. Colours and Materials

Prior to the lodgement of a building permit, a schedule detailing the colour and texture of the building materials, demonstrating that the proposed development complements the

surrounding area, must be submitted to and approved by City. The development must be finished, and thereafter maintained, in accordance with the approved schedule prior to occupation, to the satisfaction of the City;

6. Landscaping

All landscaping works shall be undertaken in accordance with the approved plans to the City's satisfaction, prior to the occupancy or use of the development and maintained thereafter to the satisfaction of the City at the expense of the owners/occupiers;

7. Stormwater

Stormwater from all roofed and paved areas shall be collected and contained on site. Stormwater must not affect or be allowed to flow onto or into any other property or road reserve;

8. Sight Lines

No walls, letterboxes or fences above 0.75 metres in height to be constructed within 1.5 metre of where:

- Walls, letterboxes or fences adjoin vehicular access points to the site; or
- A driveway meets a public street; or
- Two streets intersect;

unless otherwise approved by the City;

9. Car Parking and Access

9.1 The layout and dimensions of all driveway(s) and parking area(s) shall be in accordance with AS2890.1;

9.2 All driveways, car parking and manoeuvring area(s) which form part of this approval shall be sealed, drained, paved and line marked in accordance with the approved plans prior to the first occupation of the development and maintained thereafter by the owner/occupier to the satisfaction of the City;

9.3 No goods or materials being stored, either temporarily or permanently, in the parking or landscape areas or within the access driveways. All goods and materials are to be stored within the buildings; and

9.4 Prior to the first occupation of the development, redundant or "blind" crossovers shall be removed and the verge and kerb made good to the satisfaction of the City, at the applicant/owner's full expense;

10. Right of Way Widening

A 0.5 metre wide right of way widening is to be provided, constructed and drained to the specifications of the City at the landowner/applicant cost along the northern boundary of the subject land (refer advice note 15). The right-of-way is to be accurately illustrated on any future Deposited Plan or Survey-strata plan and vested in the Crown under Section 152 of the *Planning and Development Act 2005*, such land to be ceded free of cost and without any payment of compensation by the Crown; and

11. Garage Doors

Garage doors are not permitted to be installed to the front of the Unit 1 or Unit 2 garages (shown as 'carports' on the approved plans) facing Franklin Street unless a further approval is granted by the City.

PURPOSE OF REPORT:

To consider an application for development approval for a Three Grouped Dwellings development at No. 14 Franklin Street, Leederville (the subject site).

PROPOSAL:

The application proposes three two storey grouped dwellings with two fronting Franklin Street and one fronting the right of way (ROW). The subject site currently contains a dilapidated single house which would be demolished to facilitate the proposed development.

BACKGROUND:

Landowner:	Vincent Sammut
Applicant:	Sadhana Constructions Pty Ltd
Date of Application:	4 December 2020
Zoning:	MRS: Urban LPS2: Zone: Residential R Code: R30
Built Form Area:	Residential
Existing Land Use:	Single House – ‘P’
Proposed Use Class:	Grouped Dwellings – ‘P’
Lot Area:	880m ²
Right of Way (ROW):	Yes – 5 metres wide, City owned, sealed and drained
Heritage List:	No

The subject site is bound by Franklin Street to the south, single houses to the east and west and a 5 metre wide ROW to the north.

The subject site and all adjoining properties are zoned Residential R30 under the City's Local Planning Scheme No. 2 (LPS2). The subject site and all adjoining properties are within the Residential built form area and have a building height limit of two storeys under the City's Policy No. 7.1.1 – Built Form (Built Form Policy).

The Western Australian Planning Commission (WAPC) conditionally approved a subdivision application on 11 February 2021. The proposed lots shown on the subject development plans reflect the subdivision approval. This includes two 8.0 metre wide lots fronting onto Franklin Street, and one lot fronting onto the ROW with pedestrian access through to Franklin Street. The City has not received an application for clearance of the subdivision conditions at this stage and the proposed lots have not yet been created.

A location plan is included as **Attachment 1**.

DETAILS:**Summary Assessment**

The table below summarises the planning assessment of the proposal against the provisions of the City's LPS2, the City's Built Form Policy and the State Government's Residential Design Codes. In each instance where the proposal requires the discretion of Council, the relevant planning element is discussed in the Detailed Assessment section following from this table.

Planning Element	Deemed-to-Comply	Requires the Discretion of Council
Street Setback		✓
Lot Boundary Setback		✓
Open Space		✓
Building Height	✓	
Setback of Garages and Carports		✓
Garage Width		✓
Street Surveillance	✓	
Street Walls and Fences		✓
Outdoor Living Areas	✓	

Planning Element	Deemed-to-Comply	Requires the Discretion of Council
Landscaping (R Codes)	✓	
Parking and Access	✓	
Site Works and Retaining Walls	✓	
Visual Privacy	✓	
Solar Access	✓	
External Fixtures, Utilities & Facilities		✓
Developments on Right of Ways	✓	

Detailed Assessment

The deemed-to-comply assessment of the elements that require the discretion of Council is as follows:

Street Setback	
Deemed-to-Comply Standard	Proposal
Built Form Policy Clause 5.1	
<p><u>Ground Floor</u> Primary street setback is the average setback of the five adjoining properties either side of the proposed development, being 7.67 metres.</p> <p><u>Upper Floors</u> Walls on upper floors setback a minimum of 2 metres behind the ground floor predominant building line.</p> <p><u>Balconies</u> Balconies setback a minimum of 1 metre behind the ground floor predominant building line.</p>	<p><u>Ground Floor</u> Units 1 and 2 primary street setback of 7.2 metres.</p> <p><u>First Floor</u> Units 1 and 2 first floor walls setback 0.7 metres behind the ground floor predominant building line. Unit 3 first floor walls project 0.5 metres forward of the ground floor predominant building line.</p> <p><u>Balconies</u> Units 1 and 2 balconies setback 0.2 metres behind the predominant building line.</p>
Lot Boundary Setback	
Deemed-to-Comply Standard	Proposal
R Codes Clause 5.1.3	
<p><u>Western Lot Boundary</u> Unit 1 upper floor balcony to bed 2 (bulk): 2.4 metres</p> <p>Walls not built up to the lot boundary within the primary street setback area.</p> <p><u>Eastern Lot Boundary</u> Unit 3 ground floor alfresco to scullery: 2.2 metres.</p>	<p><u>Western Lot Boundary</u> Unit 1 upper floor balcony to bed 2 (bulk): 1.5 metres</p> <p>Unit 1 carport wall built up to the western lot boundary within the primary street setback area.</p> <p><u>Eastern Lot Boundary</u> Unit 3 ground floor alfresco to scullery: 1.0 metre.</p>
Open Space	
Deemed-to-Comply Standard	Proposal
R Codes Clause 5.1.4	
45 percent for an R30 site	Units 1 and 2 provide 41.3 percent open space.
Setback of Garages and Carports	
Deemed-to-Comply Standard	Proposal
Built Form Policy Clause 5.4	
Garages setback a minimum of 0.5 metres behind the dwelling alignment.	Units 1 and 2 garages project 0.8 metres forward of the dwelling alignment.
Garage Width	
Deemed-to-Comply Standard	Proposal

Built Form Policy Clause 5.4	
Garage width not to exceed 50 percent of the lot width.	Units 1 and 2 garages occupy 70.9 percent of the lot widths.
Street Walls and Fences	
Deemed-to-Comply Standard	Proposal
Built Form Policy Clause 5.7	
Street fence to the primary street to have a maximum height of 1.8 metres.	Unit 3 maximum fence height of 1.9 metres.
External Fixtures, Utilities and Facilities	
Deemed-to-Comply Standard	Proposal
R Codes Clause 5.4.4	
Each grouped dwelling provided with a 4 square metre store room.	Units 1 and 2 store rooms are 3.3 square metres.

The above elements of the proposal do not meet the specified deemed-to-comply standards and are discussed in the Comments section below.

CONSULTATION/ADVERTISING:

Community consultation was undertaken in accordance with the *Planning and Development (Local Planning Schemes) Regulations 2015* for a period of 14 days commencing on 22 January 2021 and concluding on 5 February 2021. Community consultation was undertaken by way of written notification with seven letters being sent to surrounding land owners and occupiers, as shown in **Attachment 1** and a notice on the City's website in accordance with the City's Policy No. 4.1.5 – Community Consultation. The plans that were advertised during this first round of consultation are included as **Attachment 3**.

The City received eight submissions in objection of the proposal at the conclusion of the first advertising period. The key concerns raised during the first round of consultation are as follows:

- Impact of reduced lot boundary setbacks to the eastern and western lot boundaries;
- Non-compliance with the average lot size required for an R30 site and an overdevelopment of the site;
- Impact of overlooking from the Unit 3 first floor windows to the properties to the east and across the ROW to the north;
- Dominance of the Units 1 and 2 garages and facades as viewed from Franklin Street;
- Lack of on-site visitor car parking; and
- Lack of retaining walls provided along the western lot boundary.

The City provided the applicant with a summary of the submissions received during the first round of consultation. The applicant responded by providing the City with amended plans and written justification which are included in **Attachment 2** and **Attachment 5** respectively. The key modifications to the plans are as follows:

- Removing Units 1 and 2 garage doors and reducing Units 1 and 2 first floor setbacks to increase surveillance to Franklin Street at the ground and first floor levels;
- Changing Units 1 and 2 roof forms from skillion to concealed (flat) to reduce the maximum building height from 7.3 metres to 6.4 metres as viewed from Franklin Street;
- The change in roof form reduced the number and extent of departures to the R Codes lot boundary setback standards as follows:
 - The Unit 1 first floor bedroom 2 and balcony to master bedroom required deemed-to-comply setbacks reduced from 1.3 metres to 1.2 metres. The setbacks of these walls were increased from 1.15 meters to 1.2 metres and satisfy the deemed-to-comply standard; and
 - The Unit 1 first floor study/library to living room required deemed-to-comply setback reduced from 2.6 metres to 2.4 metres. The setback of this wall remained unchanged at 1.5 metres;
- Reducing the aggregate width of crossovers to Franklin Street from 8.6 metres to 6.0 metres;
- Reducing the height of the Unit 1 lot boundary wall to the west from 3.3 metres to 3.1 metres;
- Reducing Units 1 and 2 open space from 43.1 and 43.0 percent respectively to 41.3 percent. This was as a result of modifications to the plans to increase street setbacks; and

- Providing an amended colours and materials palette for the development that removes Colourbond Monument elements and proposes lighter colours and materials such as recycled brick with perforations, grey cement dado render and wood look aluminium cladding.

The amended plans were readvertised to the previous submitters for a period of seven days commencing on 9 June 2021 and concluding on 16 June 2021. The City received 11 further submissions during the second round of consultation. Of the submissions received:

- Six were in support of the proposal and received from new submitters who reside in the City of Vincent but not within close proximity to the subject site;
- Four were in objection and received from previous submitters reaffirming their initial concerns. No response was received from the four other objectors from the first round of consultation; and
- One was received from a new submitter which was neither in support or objection to the proposal.

The key concerns raised during the second round of consultation reiterated the previous concerns outlined above.

A summary of the submissions received during both rounds of advertising and Administration's response is provided in **Attachment 6**. The applicant provided a response to the submissions both rounds of advertising which is included in **Attachment 7**.

Design Review Panel (DRP):

Referred to DRP: Yes

The plans subject to the first round of community consultation which are included in **Attachment 3** were referred to a member of the City's DRP. Comments were sought on the appropriateness of the design in relation to the existing streetscape context surrounding the subject site, particularly the front façades of Units 1 and 2 fronting Franklin Street. The DRP member was not supportive of the initial proposal and raised the following concerns:

- Units 1 and 2 garage doors would dominate and be inconsistent with the Franklin Street streetscape;
- The ground and first floor design of Units 1 and 2 would result in a lack of interaction and surveillance to Franklin Street;
- The use of dark Colourbond Monument materials to frame the roof form of Units 1 and 2 would be imposing and inconsistent with the Franklin Street streetscape;
- Units 1 and 2 skillion roof forms would not be compatible with the surrounding streetscape and consideration should be given to the use of a pitched roof form, concealed roof form or a combination of the two; and
- The lot boundary setback departures would contribute to the bulk and scale of the development and consideration should be given to increasing the amount of articulation to reduce this bulk and scale.

Administration met with the DRP member and the applicant to discuss the abovementioned concerns. Following this meeting the applicant submitted amended plans incorporating the DRP member's feedback which are included in **Attachment 2** and which were subsequently readvertised for the second round of consultation. The key modifications to the plans are outlined in the Consultation/Advertising section of this report above.

The amended plans were referred back to the DRP member and it was confirmed that the amended plans were supported for the following reasons:

- The amended proposal would be compatible with the Franklin Street streetscape, provide appropriate street surveillance, and reduce the appearance and impact of Units 1 and 2 garages; and
- The appearance and impact of building bulk to the side lot boundaries has been effectively reduced through a combination of reduced building height, increased glazing and the use of contrasting colours and materials.

LEGAL/POLICY:

- *Planning and Development Act 2005*;
- *Planning and Development (Local Planning Schemes) Regulations 2015*;
- City of Vincent Local Planning Scheme No. 2;

- State Planning Policy 7.3 – Residential Design Codes Volume 1;
- Policy No. 4.1.5 – Community Consultation; and
- Policy No. 7.1.1 – Built Form.

State Planning Policy 7.3 – Residential Design Codes Volume 1

Amendments to the R Codes Volume 1 were gazetted and took effect on 2 July 2021. Amendments to the R Codes were minor and reduced the extent of the departures to deemed-to-comply standards proposed in the application.

The initial set of plans included in **Attachment 3** were submitted on 4 December 2020, and were assessed against and advertised based on the provisions of the previous version of the R Codes.

Amended plans included in **Attachment 2** were received on 1 June 2021 prior to the gazettal date of the R Codes amendments. These amended plans have been assessed against and advertised based on the current version of the R Codes, as it applies at the time of determination of the subject application by Council.

Amendment 3 to Policy No. 7.1.1 – Built Form

Council resolved to adopt Amendment 3 to the Built Form Policy at its Ordinary Meeting on 22 June 2021. The purpose of the amendment was to address inconsistencies between the Built Form Policy and the R Codes that would result from the amendments to the R Codes that were gazetted on 2 July 2021. The amendments to the Built Form Policy were minor and reduced the extent of the departures to deemed-to-comply standards sought by the applicant.

Delegation to Determine Applications:

This matter is being referred to Council for determination as the proposal received more than five objections during the City's community consultation period.

RISK MANAGEMENT IMPLICATIONS:

There are minimal risks to Council and the City's business function when Council exercises its discretionary power to determine a planning application.

STRATEGIC IMPLICATIONS:

This is in keeping with the City's Strategic Community Plan 2018-2028:

Innovative and Accountable

We are open and accountable to an engaged community.

SUSTAINABILITY IMPLICATIONS:

The City has assessed the application against the environmentally sustainable design provisions of the City's Policy No. 7.1.1 – Built Form. These provisions are informed by the key sustainability outcomes of the City's Sustainable Environment Strategy 2019-2024, which requires new developments to demonstrate best practice in respect to reductions in energy, water and waste and improving urban greening.

PUBLIC HEALTH IMPLICATIONS:

This report has no implication on the priority health outcomes of the City's *Public Health Plan 2020-2025*.

FINANCIAL/BUDGET IMPLICATIONS:

There are no finance or budget implications from this report.

COMMENTS:

Street Setback, Garage Setback and Garage Width – Units 1 and 2 to Franklin Street

The Built Form Policy deemed-to-comply standard relating to the ground floor primary street setback is calculated by averaging the setback of the five adjoining properties either side of the proposed development. The primary street setback deemed-to-comply standard to Franklin Street for Units 1 and 2 is 7.67 metres. Units 1 and 2 ground floor primary street setback is proposed to be 7.2 metres.

Units 1 and 2 first floor walls and balconies are proposed to be setback 0.7 metres and 0.2 metres behind the ground floor predominant building line respectively. The Built Form Policy deemed-to-comply standard relating to the upper floor primary street setback requires walls and balconies to be setback a minimum of 2 metres and 1 metre behind the ground floor predominant building line respectively.

The Units 1 and 2 garages are proposed to be 0.8 metres forward of the dwelling alignment, in lieu of the Built Form Policy deemed-to-comply standard that sets out garages are to be setback a minimum of 0.5 metres behind the dwelling alignment.

Units 1 and 2 garage widths are proposed to be 70.9 percent of the lot widths. The Built Form Policy deemed-to-comply standard requires garages to not exceed 50 percent of the lot width.

The City received submissions in support of the units being provided with two on site car parking spaces on the basis that on-street parking along Franklin Street is perceived to be a concern. The City also received a submission in support of the amended design of the Units 1 and 2 car parking spaces that are open to the street.

The proposed Units 1 and 2 primary street setbacks to the ground and first floors, and garage setbacks and widths would satisfy the design principles of the R Codes and local housing objectives of the Built Form Policy for the following reasons:

- The deemed-to-comply average street setback of 7.67 metres includes an outlier at No. 10 Franklin Street which has a setback of 11.2 metres. The remainder of the dwellings subject to the average street setback calculation are setback between 6.5 and 9.0 metres. The proposed dwellings would be setback further than the four existing dwellings located immediately to the west and the two existing dwellings located immediately to the east that range in street setback between 6.5 and 7.0 metres;
- Lightweight materials and colours have been incorporated at the first floor level to minimise the appearance and impact of the first floor as viewed from Franklin Street;
- The first floors of Units 1 and 2 are located behind the front of the ground floor garages but forward of the ground floor guest room which allows the first floor to be clearly distinguishable from the ground floor without dominating the streetscape;
- The proposed first floor setbacks would not be inconsistent with other houses in close proximity along Franklin Street and in the context of the existing streetscape. These other houses have first floors either in line or in front of the ground floor alignment including two dwellings next door to the east at Nos. 12 and 12A Franklin Street, two dwellings directly across the road at Nos. 13 and 13A Franklin Street, and a dwelling across the road to the east at No. 7 Franklin Street;
- The covered vehicle parking spaces for Units 1 and 2 are identified as 'carports' on the development plans. These spaces are defined as 'garages' under the R Codes because they are enclosed on more than two sides. These parking spaces would have the appearance of a carport structure as viewed from Franklin Street and are not proposed to be fitted with roller doors. This would significantly reduce the appearance of building bulk and would ensure that they do not dominate the streetscape. The absence of roller doors would also allow for increased interaction and surveillance at the ground floor level, with major openings provided to the guest rooms that face Franklin Street. Should the application be approved, it is recommended that a condition be imposed prohibiting the installation of roller doors to the front of the garages to Units 1 and 2 to ensure that an open streetscape is maintained and that the developments would not be dominated by garage doors;
- The proposed setback of the garages would not result in any departures to the R Codes deemed-to-comply standards relating to sight lines or vehicle safety;
- Units 1 and 2 crossovers would be tapered to 3.0 metres at the street boundary, being the minimum width permitted under the deemed-to-comply standards of the R Codes. This would reduce the amount of handstand area in the primary street setback and allow for soft landscaping to be provided;
- The application proposes two new Jacaranda trees within the primary street setback area as well as the retention of the existing mature street tree on the verge adjacent to the subject site. This soft landscaping would provide an attractive setting for the dwellings and assist in reducing the appearance of building bulk; and

- The proposal has been referred to a member of the City's DRP and it has been confirmed that the design of the dwelling façades of Units 1 and 2 fronting Franklin Street would be complimentary to the existing streetscape. The dwelling façades fronting Franklin Street provides contrasting colours and materials, articulation and glazing to effectively reduce the appearance of blank solid walls and associated building bulk.

Street Setback – Unit 3 to ROW

The Built Form Policy deemed-to-comply standard relating to the upper floor primary street setback requires walls and balconies to be setback a minimum of 2 metres and 1 metre behind the ground floor predominant building line respectively. The Unit 3 first floor walls are either in line with or for Bed 2 0.5 metres forward of the ground floor predominant building line.

The proposed Unit 3 setback of the first floor to the ROW would satisfy the design principles of the R Codes and local housing objectives of the Built Form Policy for the following reasons:

- The proximity of the first floor from the ROW would not detrimentally impact the ROW streetscape. Unit 3 has also been designed to effectively distinguish between the ground and first floors. The majority of the first floor is proposed to be setback between 1.5 and 3 metres behind the ground floor. The stairs on the first floor that are positioned in line with and over the entry on the ground floor is setback a minimum of 4.0 metres from the ROW after widening. The bed 2 wall on the first floor is setback 7.0 metres away from the ROW after widening and sits 0.5 metres forward of the kitchen below. This bed 2 wall is not cantilevered and rather joins to the roof form of the alfresco on the ground floor below;
- The ROW streetscape is currently characterised by solid fibre cement fences and garage doors. The existing ROW streetscape is not categorised by large upper floor setbacks. Unit 3 incorporates contrasting materials, glazing and articulation to reduce the appearance of blank solid walls and associated building bulk. Unit 3 would be a positive contribution and would not detrimentally impact the current and future ROW streetscape; and
- The application proposes two Jacaranda trees within the ROW setback area which would contribute positively to the streetscape and assist in reducing the appearance of building bulk.

Lot Boundary Setbacks

Western Lot Boundary

The Unit 1 first floor balcony wall is proposed to be setback 1.5 metres from the western lot boundary in lieu of 2.5 metres as set out under the R Codes deemed-to-comply standards relating to lot boundary setbacks.

The deemed-to-comply standards of the R Codes relating to lot boundary setbacks also set out that walls are not be built up to the lot boundary within the 7.67 metre ground floor primary street setback area. A 0.47 metre portion of the proposed Unit 1 carport wall is proposed to be built up to the western lot boundary within the primary street setback area.

The City received objection to the proposed lot boundary setbacks to the western lot boundary, raising concerns with the impacts of building bulk, overlooking, and access to natural sunlight and ventilation for the adjoining western property.

The proposed lot boundary setbacks to the western lot boundary meet the design principles of the R Codes for the following reasons:

- The entire Unit 1 dwelling façade on both the ground and first floors orientating towards the western lot boundary provides articulation, glazing and varying colours and materials to effectively reduce the appearance of blank solid walls and associated building bulk;
- Following the conclusion of the first round of community consultation and a meeting with a member of the City's DRP, the applicant amended the proposal by changing the Unit 1 roof form from skillion to pitched, reducing the height of the Unit 1 western wall by 1.2 metres and increasing the proportion of glazing to the Unit 1 western façade from 8.2 to 21.3 percent. The recessed section of the upper floor wall with a setback of 1.5 metres from the western lot boundary is proposed to be finished using a contrasting darker colour to reduce the appearance of building bulk in line with comments provided by the DRP member;
- The setback of the western lot boundary wall from Franklin Street would not appear to excessively protrude into or be inconsistent with the existing streetscape. This is because the four existing dwellings

immediately to the west of the subject site have street setbacks between 6.5 metres and 7.0 metres, and the two existing dwellings immediately to the east have setbacks of 7.0 metres;

- The western lot boundary wall would not result in excessive building bulk and scale as viewed from Franklin Street or adjoining properties. The western lot boundary wall would have a maximum height of 3.1 metres and length of 6.6 metres which is less than the R Codes deemed-to-comply maximums of 3.5 metres and 28.4 metres respectively;
- The proposed development would not result in any departures to the deemed-to-comply standards of the R Codes relating to visual privacy;
- The proposed development would not have an adverse impact on the adjoining western property's access to direct winter sunlight. This is due to the favourable orientation of the lots with the road reserve located to the south where overshadowing at its worst during winter would fall;
- The proposed 1.5 metre setback from the subject wall on the first floor to the western lot boundary in conjunction with the 2.4 metre setback of the adjoining dwelling would be sufficient to maintain adequate access to natural ventilation; and
- The 0.47 metre portion of the proposed western lot boundary wall located within the primary street setback area abuts a 2.4 metre wide side setback area on the adjoining property with the existing dwelling located beyond this. Adequate access to natural sunlight and ventilation would be maintained.

Eastern Lot Boundary

The Unit 3 ground floor alfresco to scullery wall is proposed to be setback 1.0 metre from the eastern lot boundary in lieu of 2.2 metres as per the R Codes deemed-to-comply standard relating to lot boundary setbacks.

The City received objections to the proposed lot boundary setbacks to the eastern lot boundary, raising concerns with the impacts of building bulk, overlooking, and access to natural sunlight and ventilation for the adjoining property located to the east.

The proposed lot boundary setback to the eastern lot boundary meets the design principles of the R Codes for the following reasons:

- The entire Unit 3 dwelling façade on both the ground and first floors orientating towards the eastern lot boundary provides articulation, glazing and contrasting colours and materials to effectively reduce the appearance of blank solid walls and associated building bulk;
- The entire length of building from the scullery to the alfresco is 10.8 metres. The alfresco occupies 4.0 metres of this which is an open sided structure, reducing the overall appearance and impact of building bulk;
- The proposed development would not result in any departures to the deemed-to-comply standards of the R Codes relating to visual privacy. The eastern lot boundary setback departure to the R Codes deemed-to-comply standard also relates to the ground floor with the 1.8 metre high dividing fence between the properties restricting views to the outdoor living area of the neighbouring property to the east;
- The proposed setback to the eastern lot boundary would not have an adverse impact on the adjoining eastern property's access to direct winter sunlight. This is due to the orientation of the lots, with shadow cast from the proposed building falling to the south and onto the subject site itself;
- The 2.2 metre deemed-to-comply setback requirement is a result of the proposed maximum wall height of 3.7 metres and the provision of a window to the kitchen. A wall height of 3.5 metres without this window would require a 1.0 metre setback from the eastern lot boundary as per the R Codes deemed-to-comply standard. The kitchen window assists in effectively reducing the bulk and scale of the proposed wall and would not create visual privacy issues as it would be screened by the 1.8 metre high dividing fence. Reducing the wall height by 0.2 metres and removing the kitchen window would result in a lot boundary setback consistent with the deemed-to-comply standard of the R Codes but it would not result in any meaningful reduction in building bulk or impact on the adjoining property to the east;
- Eastern lot boundary setbacks at the first floor level meet the deemed-to-comply standard of the R Codes and would allow adequate access to sunlight and natural ventilation for the adjoining property to the east; and
- The finished floor level of Unit 3 is appropriate and represents equal amount of cut and fill across the site which slopes down by up to 1 metre from west to east.

Open Space

The R Codes deemed-to-comply standards relating to open space set out that 45 percent of an R30 site is to be provided as open space. Units 1 and 2 are proposed to have 41.3 percent open space each.

The City received objection during community consultation raising concern that the proposal would be an overdevelopment of the site.

The proposed open space meets the design principles of the R Codes for the following reasons:

- Appropriate setbacks to the street boundary and to lot boundaries are provided for by the proposed units. The proposed development would be consistent with the building bulk and scale that is permissible for an R30 site capable of accommodating three grouped dwellings;
- Units 1 and 2 outdoor living areas are 37.0 square metres in total area with 21.0 square metres uncovered and 5.0 metres in width which exceed the R Codes minimum deemed-to-comply standards of 24 square metres total area, 16 square metres uncovered and 4 metres minimum width. These outdoor living areas in conjunction with the first floor balconies would provide ample opportunity for occupants of the dwellings to undertake outdoor pursuits;
- Units 1 and 2 outdoor living areas and primary living spaces on the ground floor level are open to the northern aspect which would maximise access to natural sunlight;
- Crossovers have been reduced to the minimum width of 3.0 metres permitted under R Codes deemed-to-comply standards. This is to reduce the appearance and impact of handstand areas on the streetscape and to maximise the amount of landscaping provided within the primary street setback area; and
- The application proposes two new Jacaranda trees within the primary street setback area as well as the retention of the existing mature street tree on the verge adjacent to the subject site. This soft landscaping provides an attractive setting for the dwellings and contributes to a sense of open space;

Street Walls and Fences

The Unit 3 primary street wall abutting the ROW is proposed with a maximum height of 1.9 metres, exceeding the Built Form Policy deemed-to-comply standard that prescribes a maximum height of 1.8 metres.

The proposed Unit 3 primary street wall would satisfy the design principles of the R Codes and local housing objectives of the Built Form Policy for the following reasons:

- There is a 1.3 metre natural slope down from west to east along the ROW boundary for the site. The wall is proposed to be stepped down to follow the natural ground levels of this slope;
- The proposed fence would be constructed using face brickwork and breezeblocks. Incorporating breezeblocks would ensure that portions of the wall are visually permeable and not solid. These material finishes would also contribute positively to the existing ROW streetscape which is characterised by fibre cement fences, garage doors and vehicle access points; and
- The primary outdoor living area of Unit 3 is located in the front setback area adjacent to the ROW. This is to maximise access to the northern aspect of the site and winter sunlight. The proposed wall would provide adequate privacy for the occupants of the dwelling while using this space.

Landscaping

In addition to the deemed-to-comply standards of the R Codes, the application has also been assessed against the landscaping provisions of the Built Form Policy that sets out deemed-to-comply standards. The deemed-to-comply landscaping standards set out in the Built Form Policy have not yet been approved by the Western Australian Planning Commission and as such, these provisions are given regard only in the assessment of the application.

The Built Form Policy deemed-to-comply standards requires 12 percent of the site be provided as deep soil areas, 3 percent of the site be provided as planting areas, and 30 percent of the site be provided as canopy coverage at maturity. The application proposes 9.9 percent deep soil and planting areas, and 19.4 percent canopy coverage at maturity.

The proposed landscaping would satisfy the local housing objectives of the Built Form Policy for the following reasons:

- The application proposes two new Jacaranda Trees in the primary street setback area of Units 1 and 2 to maximise canopy coverage and that would be highly visible from Franklin Street and adjoining properties;
- The application proposes the retention of the existing mature street tree on the verge adjacent to the subject site;
- Smaller shrubs and groundcovers are proposed within the planting areas to complement the trees proposed and in order to contribute positively to the overall landscaping outcome on site;
- In addition to the 9.9 percent deep soil areas proposed, the application proposes other landscaped areas with a minimum dimension less than 1 metre which would equate to 2.3 percent of the site area and that would contribute to the overall landscaping outcome; and
- The development would contribute additional canopy coverage that falls outside of the lot boundaries, in addition to the 19.4 percent canopy coverage at maturity that would be provided on-site. This canopy that falls outside of the site boundaries would equate to 6.0 percent of additional canopy coverage that would benefit the locality.

External Fixtures, Utilities and Facilities

Units 1 and 2 store rooms are proposed to be 3.3 square metres in area, in lieu of the R Codes deemed-to-comply standards that require each grouped dwelling to be provided with a 4 square metre store room.

The proposed Units 1 and 2 store rooms would satisfy the design principles of the R Codes and local housing objectives of the Built Form Policy for the following reasons:

- The proposed store rooms are of a sufficient size to accommodate the bulky goods storage needs of the dwellings' occupants. The store rooms would have a minimum dimension of 1.5 metres which satisfies the R Codes deemed-to-comply standard. The store rooms would also be able to be conveniently utilised by occupants of the dwellings, as they are easily accessible from the outdoor living areas of each unit.
- The store room doors are proposed to open outwards to ensure that the internal storage space is maximised;
- The proposed store rooms would be located to the rear of the dwellings ensuring that they are screened from view of the street and able to be easily secured and managed; and
- The approved plan of subdivision for the site does not contain any common property. This means that when the subdivided lots are created, the dwellings would be defined as Single Houses rather than Grouped Dwellings. Single Houses do not require a dedicated store room under the deemed-to-comply standards of the R Codes.

Environmentally Sustainable Design

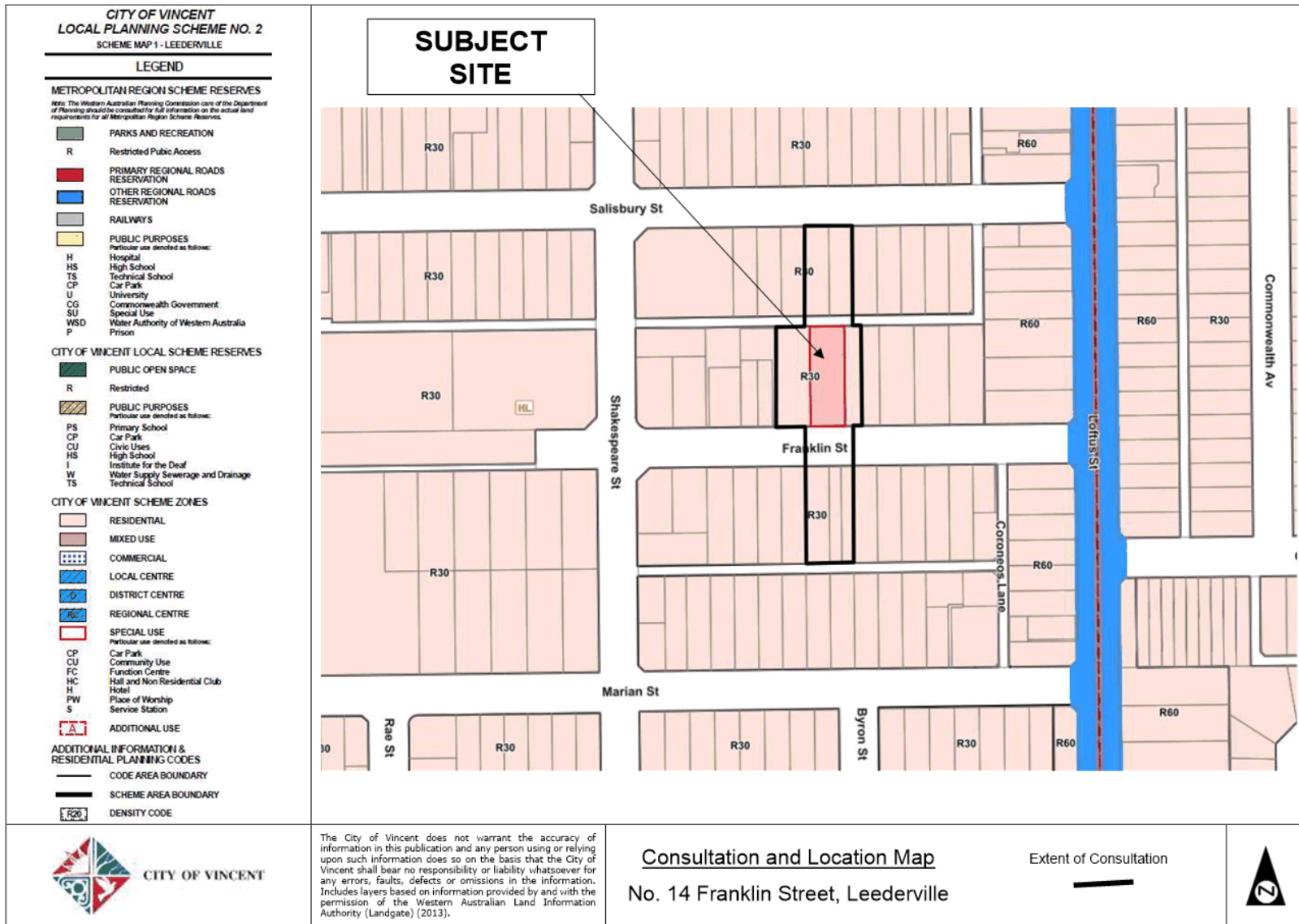
Clause 5.11 of the Built Form Policy provides local housing objectives for environmentally sustainable design.

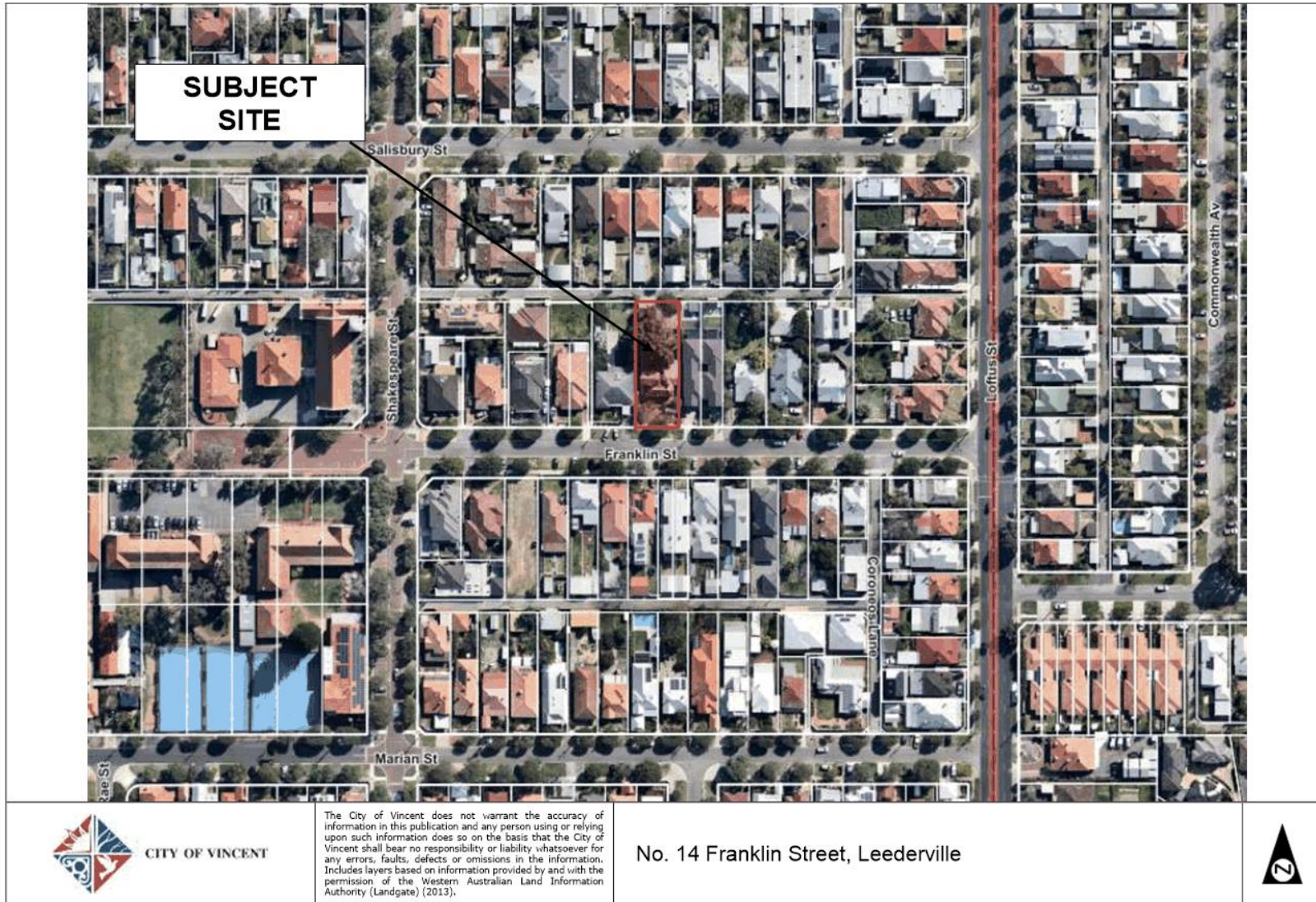
Amendment 2 to the Built Form Policy introduced local housing objectives relating to environmentally sustainable design for Single Houses and Grouped Dwellings. The applicant has submitted a life cycle assessment report which is included in **Attachment 8**. The report and development plans identify the following built form and site planning measures that would be implemented to satisfy the local housing objectives of the Built Form Policy:


- The development would incorporate a solar water heater, LED lights, water efficient appliances and fixtures, and water wise native plants for landscaping;
- All primary outdoor living areas and primary internal living spaces are located within the northern portion of the lots with good access to northern sunlight;
- The development would provide a rooftop solar PV array and that the roof areas of the dwellings are adequate to accommodate approximately 32 square metres of panels;
- The roof colour is light grey to minimise solar absorption;
- The development would result in a 55.6 percent reduction in life cycle greenhouse gas emissions compared to the average Perth residence; and
- Upper level windows are provided for access to year round natural light.

The applicant has confirmed that the recommendations of the report would be implemented into the development.

Administration has reviewed the proposal against the Built Form Policy local housing objectives and is satisfied that the development has incorporated environmentally sustainable design features to meet the intended built form outcomes of development within the City.





TBM deck spike in bitumen equals local RL 10.00 Contractor to check datum before adopting levels	FEATURE AND CONTOUR SURVEY OF LOT 119 ON PLAN 1223 14 Franklin Street, Leederville C/T Vol: 1046 Fol: 723 our ref. 20-9030		Survey Date: 1 October 2020		Scale 1:200@A3		 www.subdivisionexperts.com.au 0403 984 155
	Rev	Date	Description	Surv	Drawn		
	0	05/10/20	Feature Survey Drafted	AW	AW		

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LEGEND	
	Edge of Patio/Verandah
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	Overhead Powerline
	Abandoned Gas Main
	Gas Main
	Sewer Main
	Gully
	Sewer Manhole
	House Connection
	Power Pole
	Telstra/NBN Pit
	Sign
	Tree Stump
	Tree

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SCALE 1:200

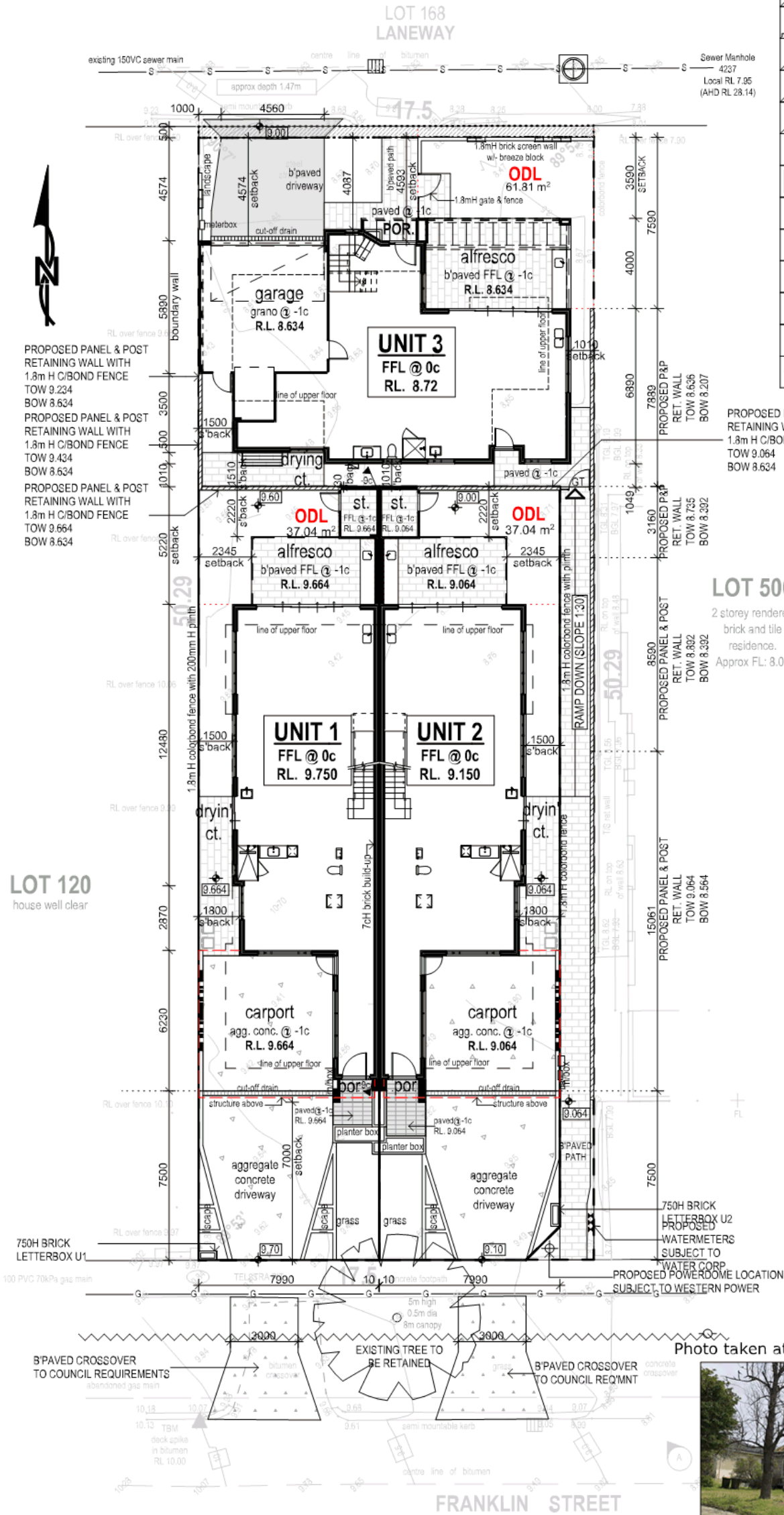
PLANNING APPROVAL REQUIRED:

These drawings are preliminary only and are subject to planning approval. Please take note that drawings are subject to change upon receipt of planning assessment conditions.

Proposed Lot 1 -
 R-coding of site is: R40
 Site area is: 274.47 m²
 Total cover area is: 122.68 m²
 Actual site cover is: 44.7%
 Actual open space achieved is: 55.3%

Proposed Lot 2
 R-coding of site is: R40
 Site area is: 273.23 m²
 Total cover area is: 122.68 m²
 Actual site cover is: 44.9%
 Actual open space achieved is: 55.1%

Proposed Lot 3
 R-coding of site is: R40
 Site area is: 323.62 m²
 Total floor area are: 136.15 m²
 Actual site cover achieved is: 42.1%
 Actual open space achieved is: 57.9%



SITE PLAN

1:200



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PROJECT
PROPOSED 3 DOUBLE STOREY GROUPED DWELLINGS

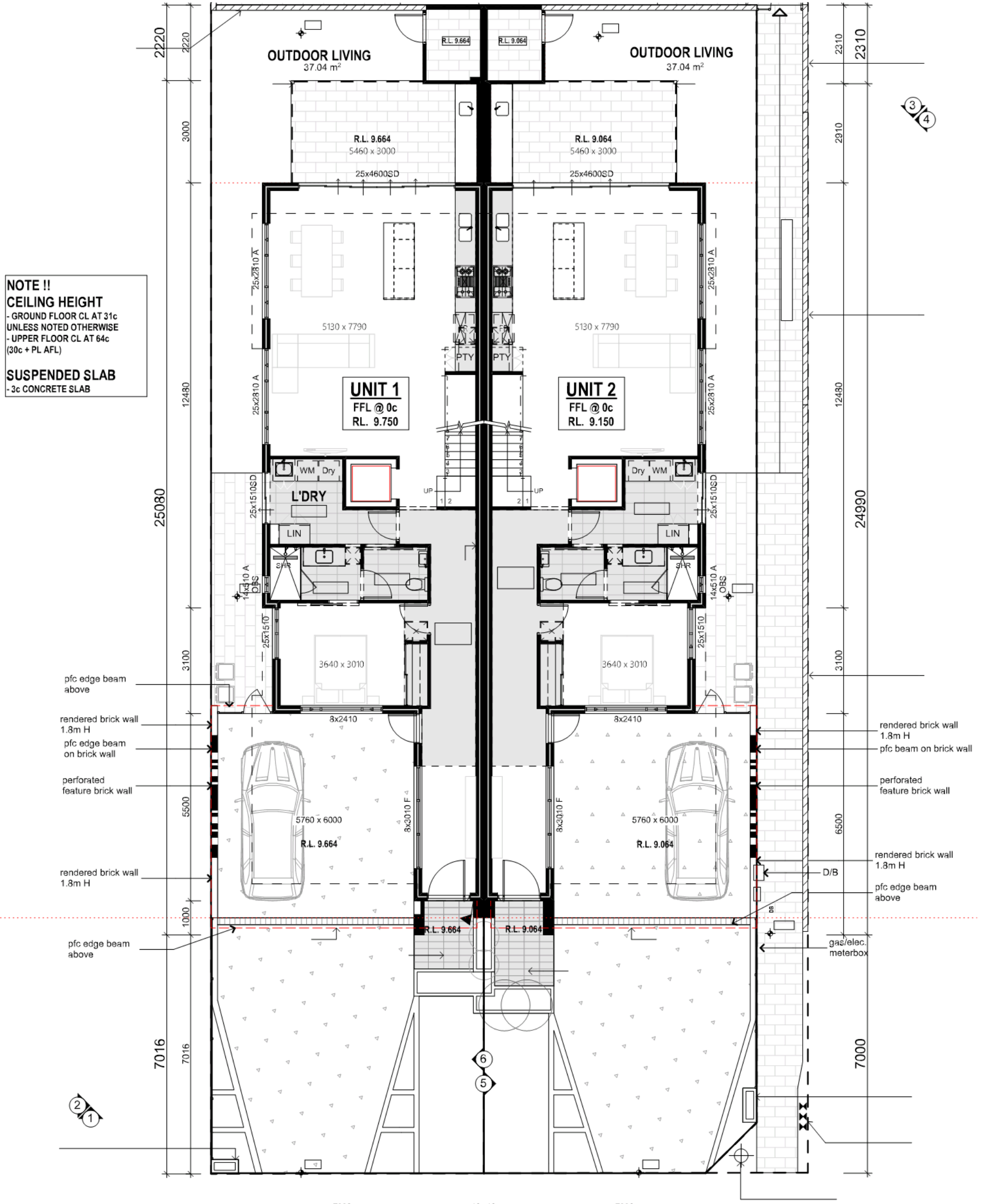
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D	05.07.21	AMENDED DA
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SCALE
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 NORTH

DRAWING TITLE			
SITE PLAN			
DRN BY	CHD BY	DRAWING NO.	REVISION
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NOTE !!
CEILING HEIGHT
 - GROUND FLOOR CL AT 31c
 UNLESS NOTED OTHERWISE
 - UPPER FLOOR CL AT 64c
 (30c + PL AFL)
SUSPENDED SLAB
 - 3c CONCRETE SLAB

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Floors Areas Total - Unit 1&2	
ID	Area
Alfresco	16.77
Balcony	5.67
Carport	36.11
First Floor	131.54
Ground Floor	111.40
Porch	2.04
Store	4.06
Total	307.59 m²

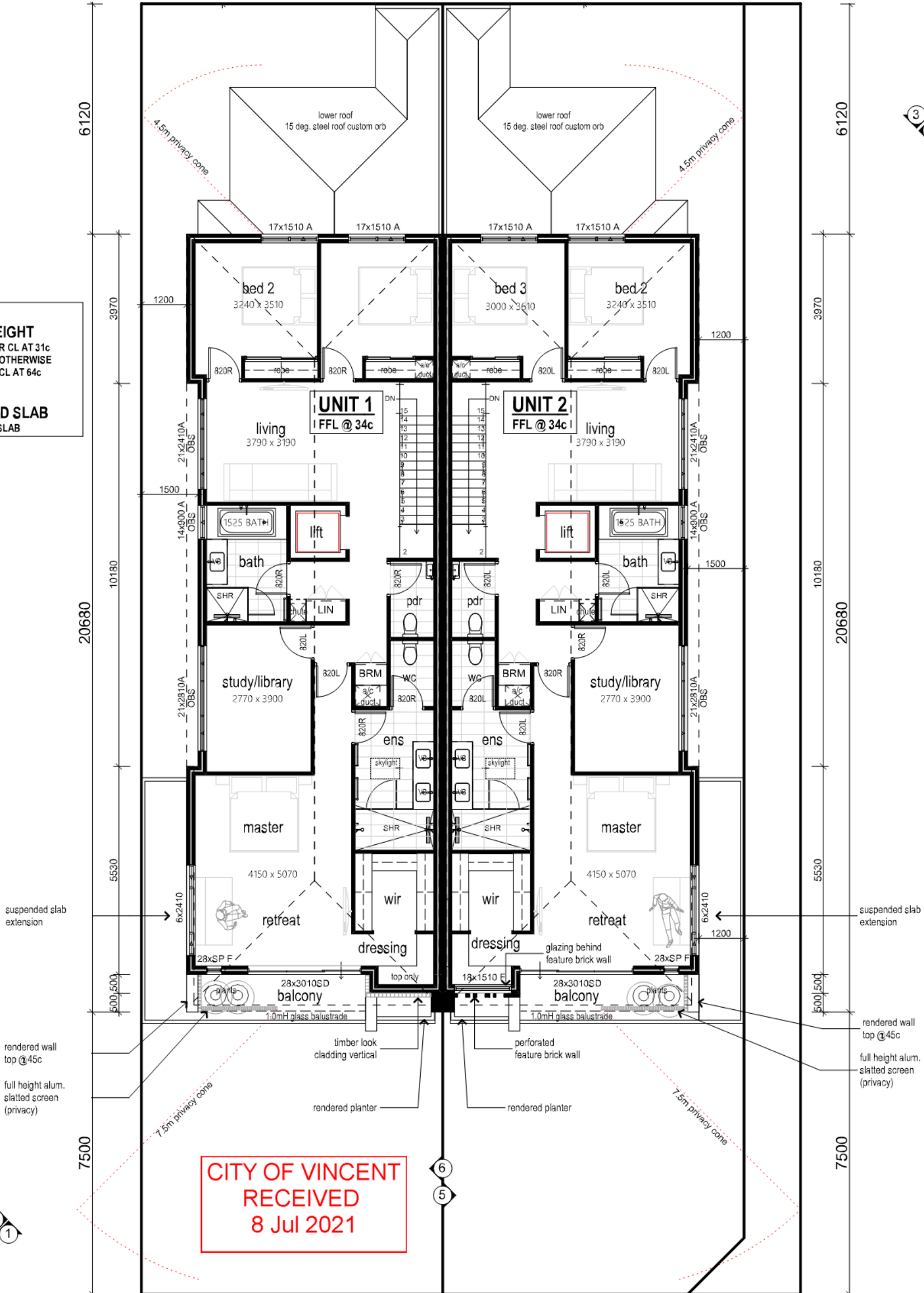


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CLIENT _____ PROJECT _____
 ADDRESS _____ PROPOSED 3 DOUBLE STOREY GROUPED DWELLINGS _____
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 DRN BY _____ CHD BY _____ DRAWING NO. _____ REVISION _____

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SUSPENDED SLAB
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First Floor Plan
 SCALE 1:100

Floors Areas Total - Unit 1&2	
ID	Area
Alfresco	16.77
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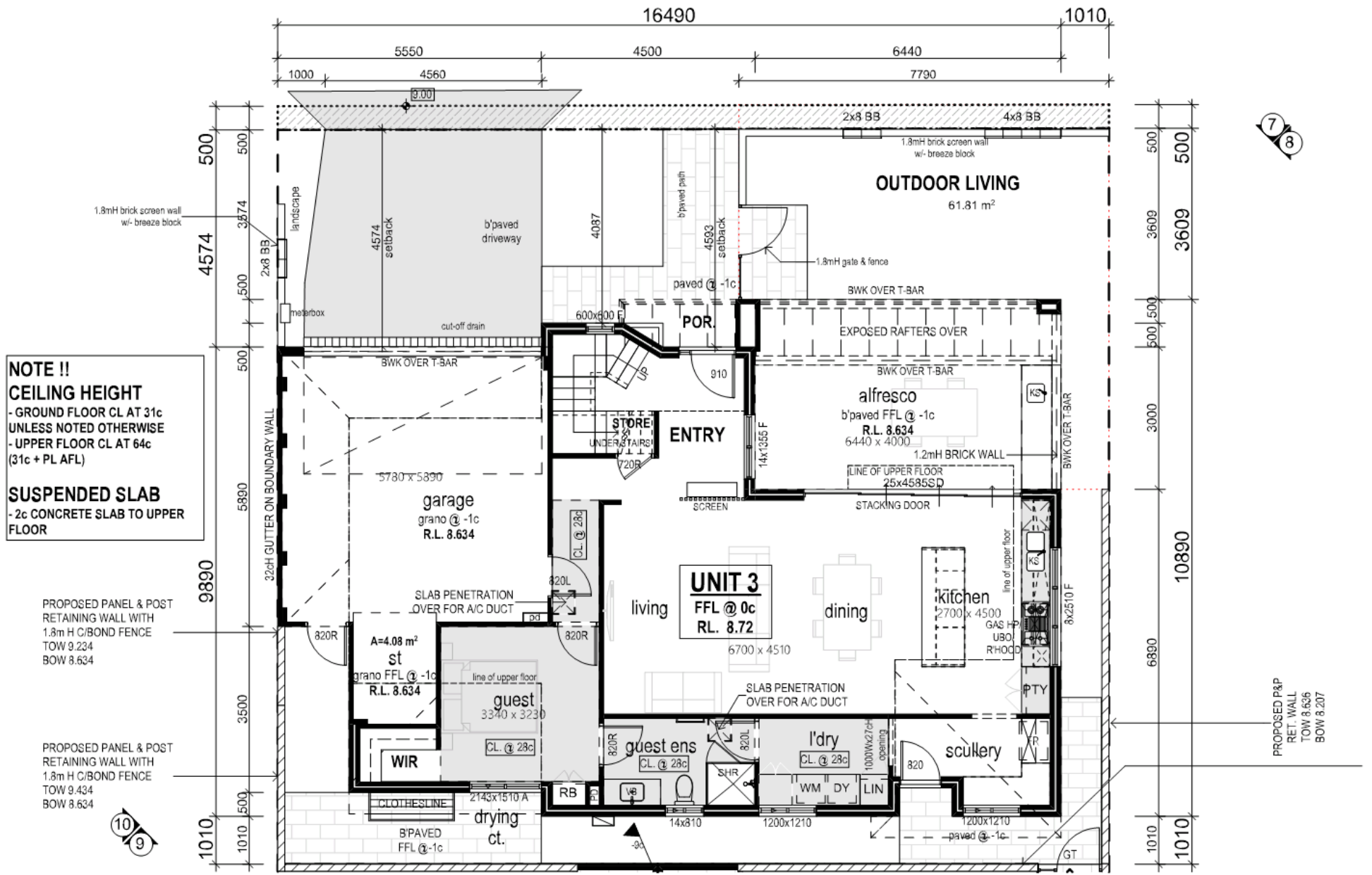
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REV.	DATE	AMENDMENT
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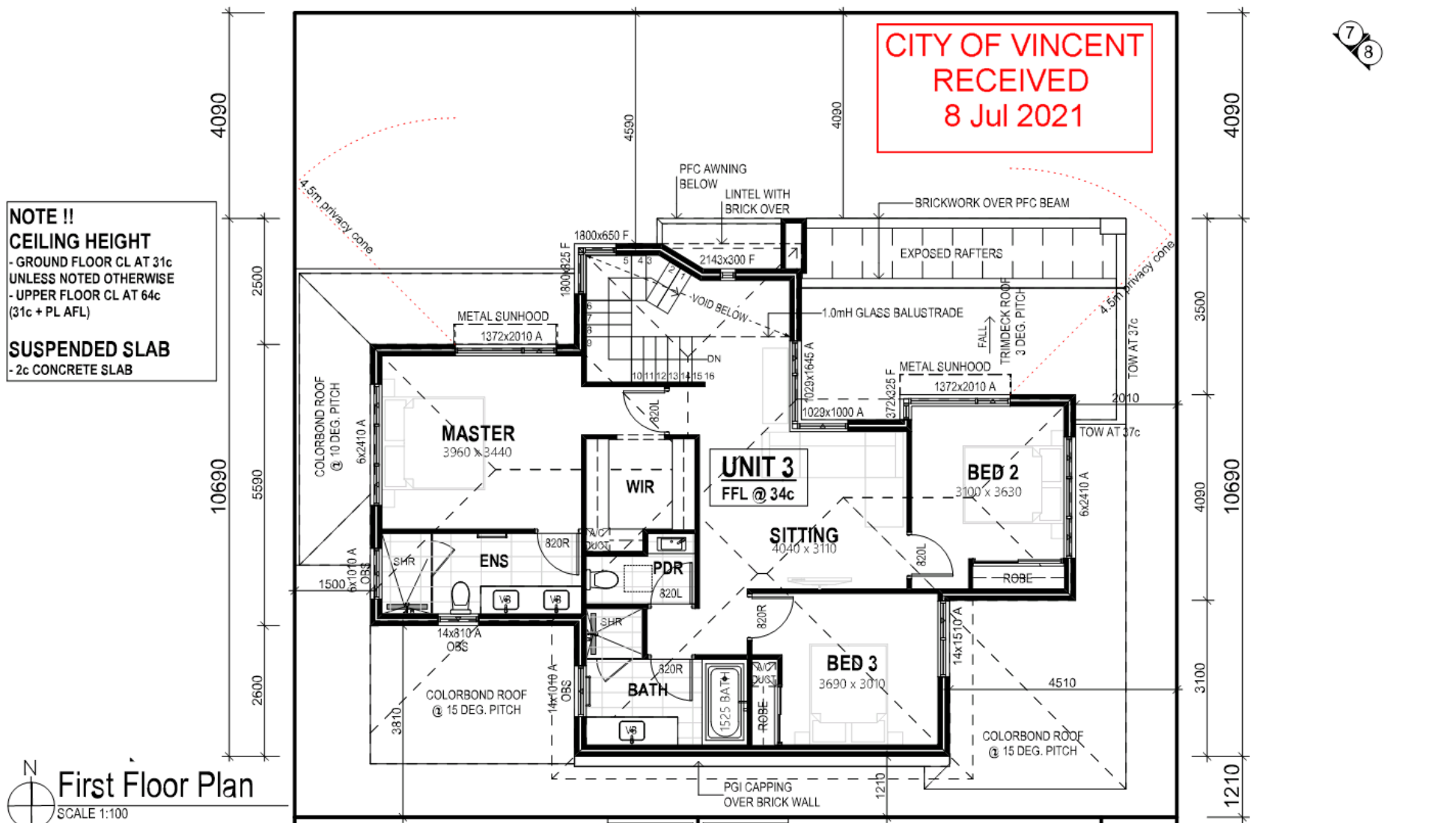
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UNIT 1 & 2 UPPER FLOOR PLAN			
DRN BY	CHD BY	DRAWING NO.	REVISION
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Ground Floor Plan
 SCALE 1:100

Floor Area Total Unit 3	
ID	Area
Alfresco	25.65
First Floor	97.70
Garage	33.12
Ground Floor	99.08
Porch 1	2.71
Porch 2	0.67
Store	3.95
Total	262.88 m²



First Floor Plan
 SCALE 1:100



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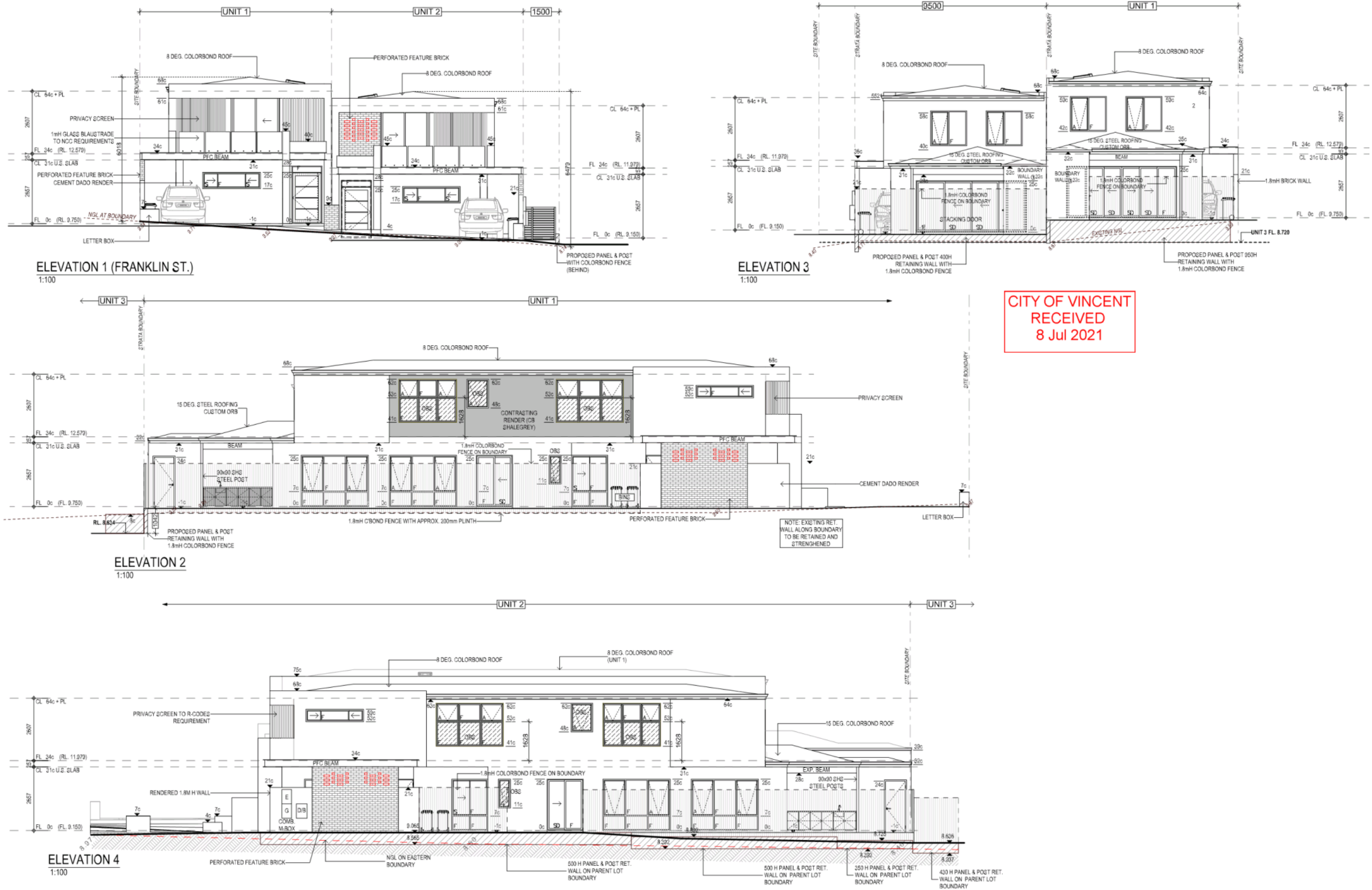
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 UNIT 3 GROUND & FIRST FLOOR PLAN
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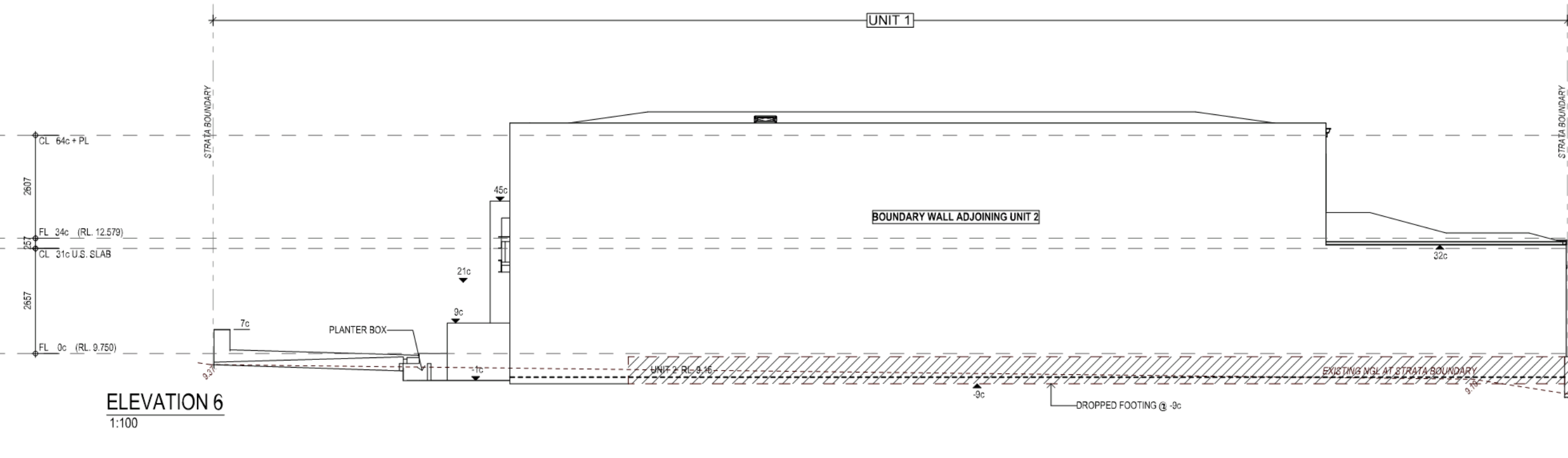
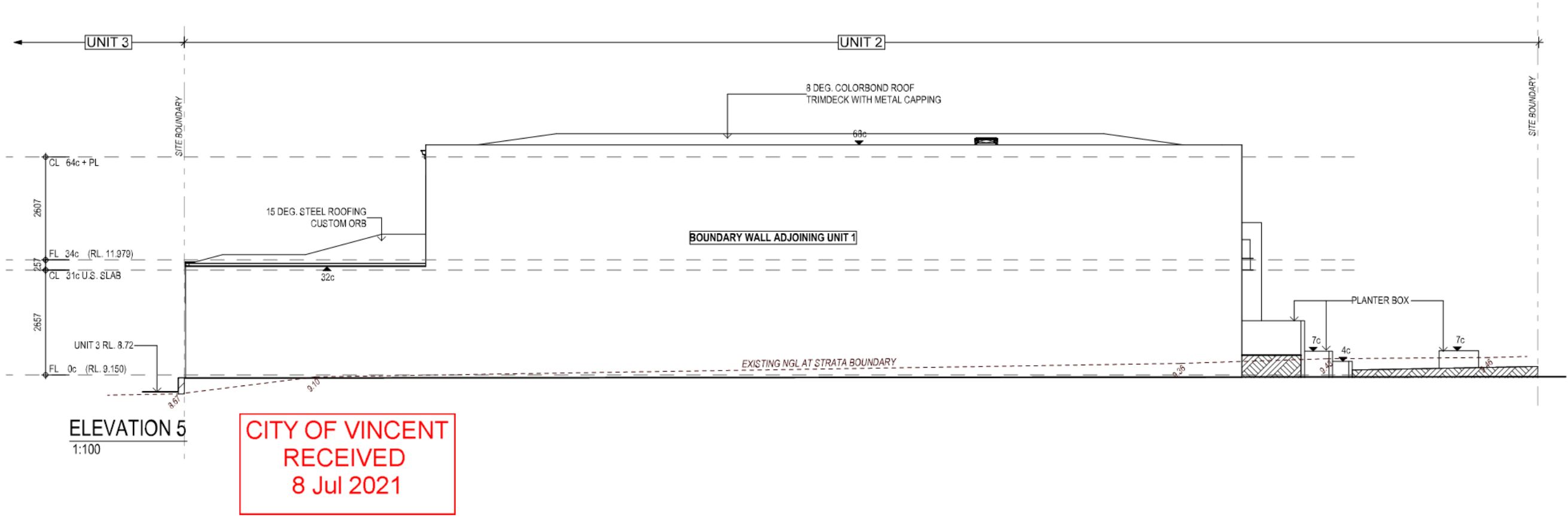
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UNIT 1 & 2 ELEVATIONS
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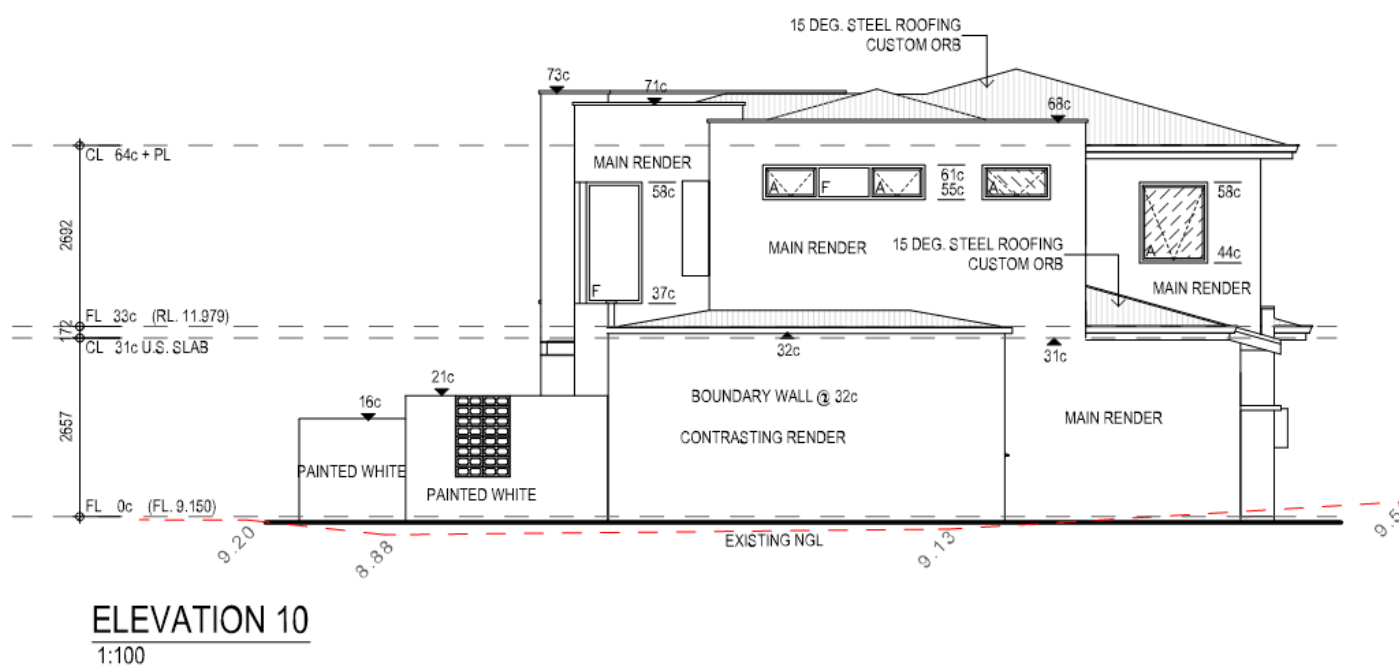
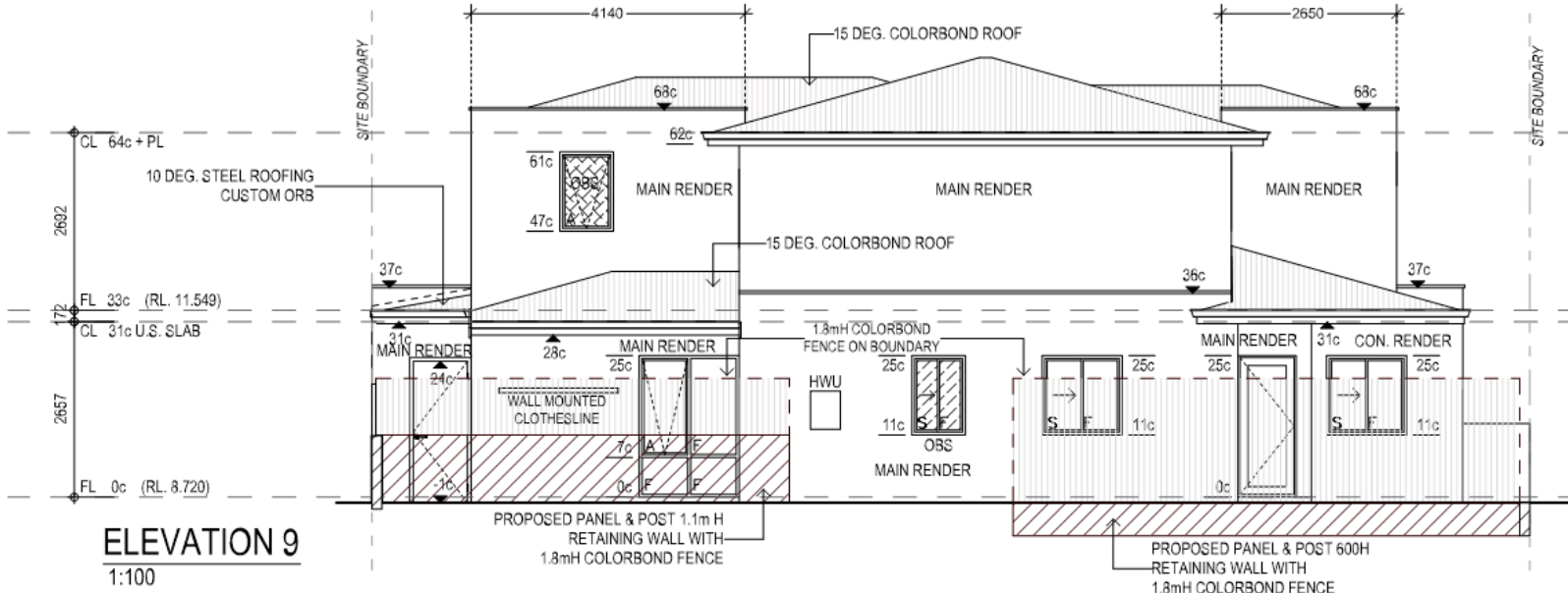
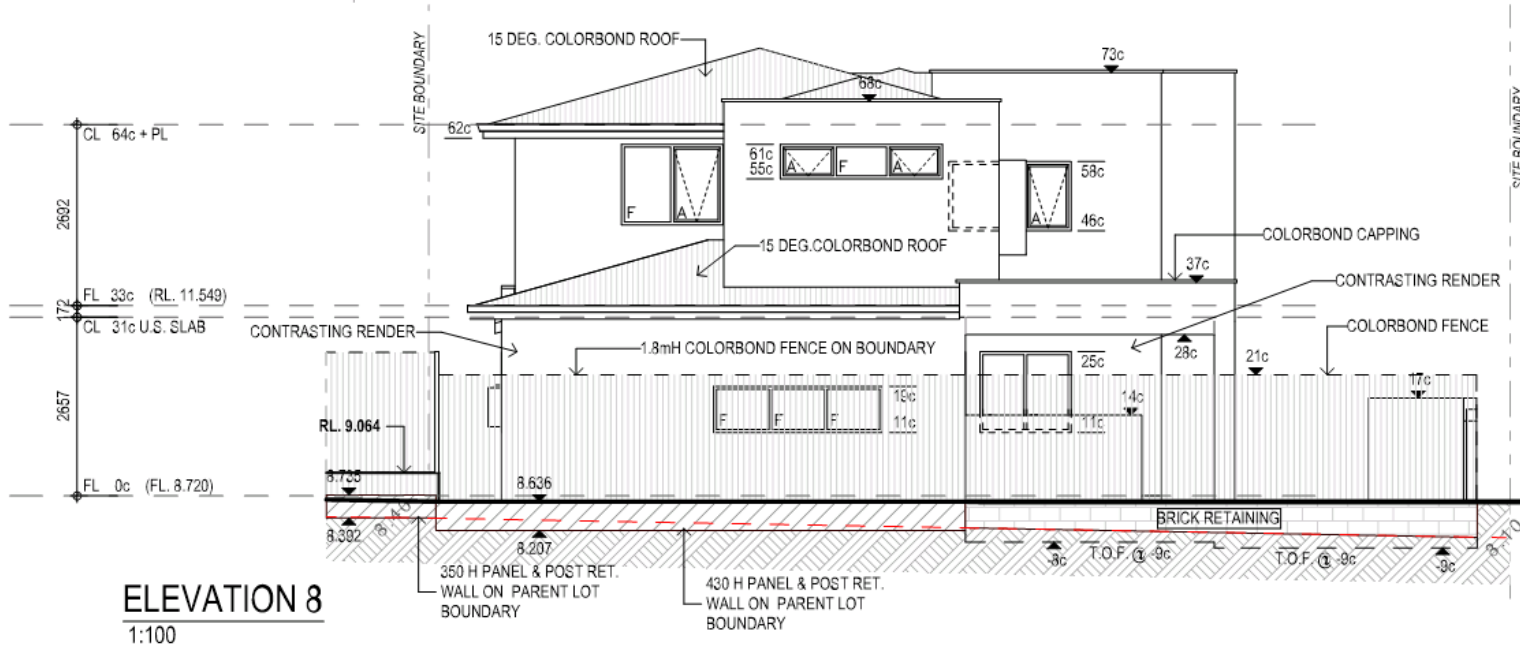
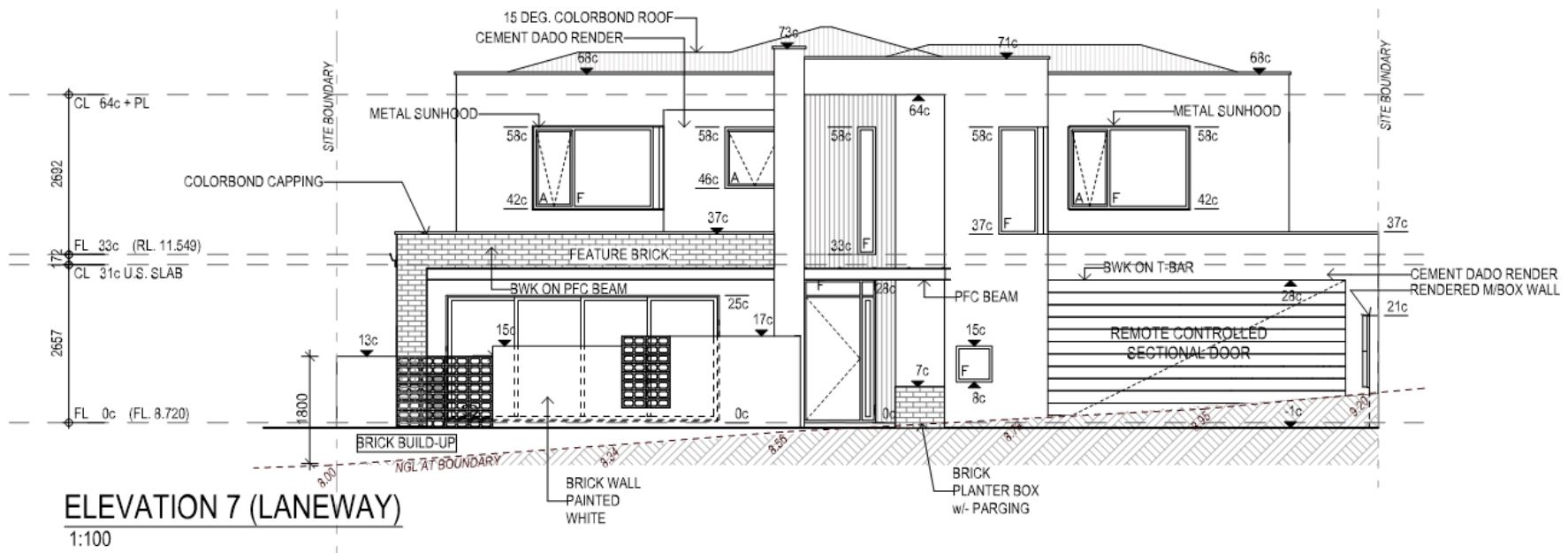
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UNIT 1 & 2 ELEVATIONS			
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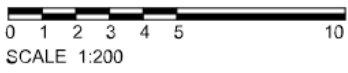
TBM deck spike in bitumen equals local RL 10.00 Contractor to check datum before adopting levels	FEATURE AND CONTOUR SURVEY OF LOT 119 ON PLAN 1223 14 Franklin Street, Leederville C/T Vol: 1046 Fol: 723 our ref. 20-9030	Survey Date: 1 October 2020	Scale 1:200@A3											
		<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>Rev</th> <th>Date</th> <th>Description</th> <th>Surv</th> <th>Drawn</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>05/10/20</td> <td>Feature Survey Drafted</td> <td>AW</td> <td>AW</td> </tr> </tbody> </table>	Rev	Date	Description	Surv	Drawn	0	05/10/20	Feature Survey Drafted	AW	AW		www.subdivisionexperts.com.au 0403 984 155
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LEGEND	
	Edge of Patio/Verandah
	Gutter Line
	Overhead Powerline
	Abandoned Gas Main
	Gas Main
	Sewer Main
	Gully
	Sewer Manhole
	House Connection
	Power Pole
	Telstra/NBN Pit
	Sign
	Tree Stump
	Tree

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PLANT PALETTE

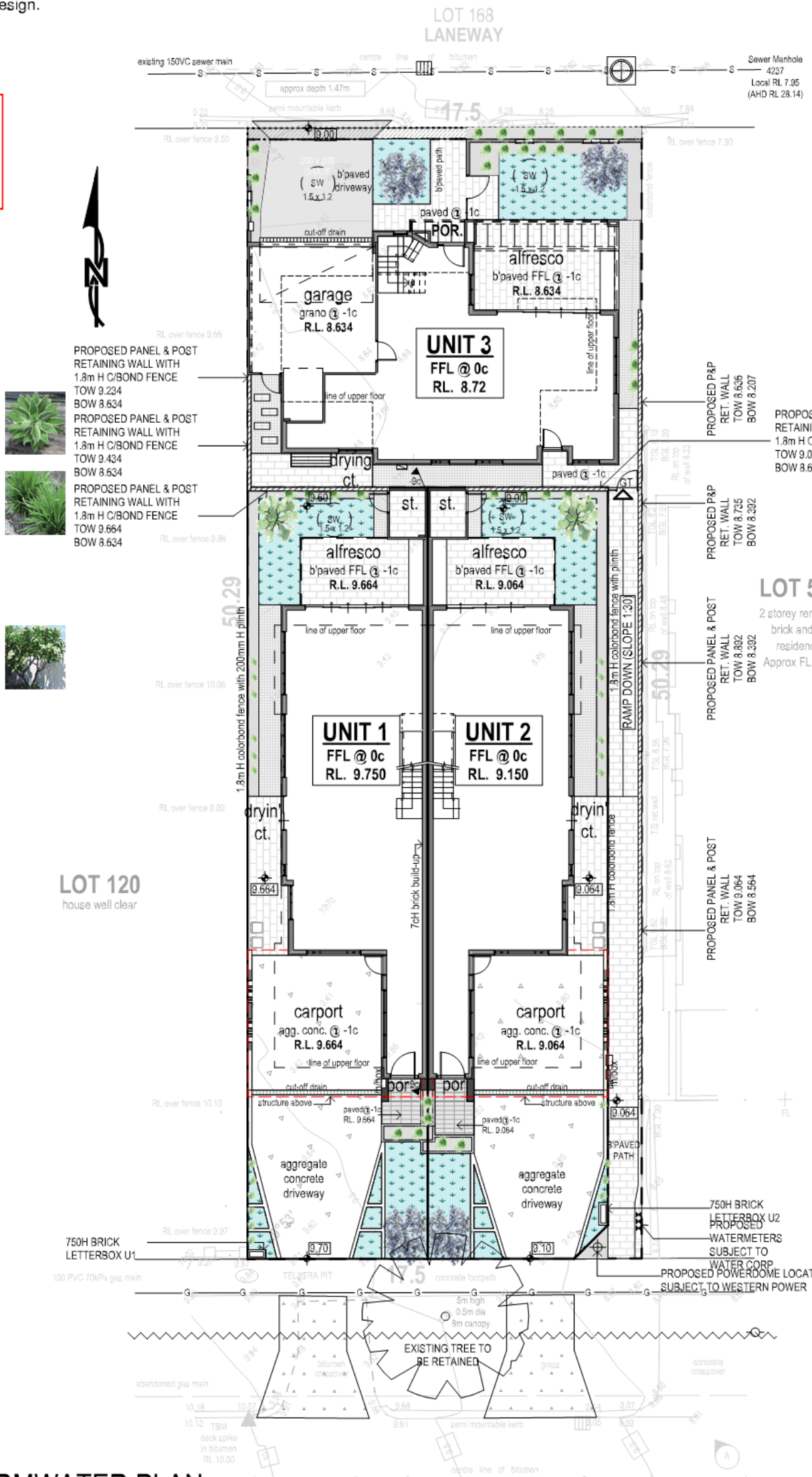
- Agave attenuata**
Low shrub (Up to 1.2m)
Flower: spring or summer
Tolerates drought
- Dianella revoluta**
Grass Sedge or Flax
Flower: Spring, Summer
Tolerates drought, Lime
- Jacaranda mimosifolia**
Size: 90L rootball minimum
Height: 2m minimum
- Plumeria rubra**
Small Tree (Up to 7m)
Tolerates Drought

LEGEND	
	Reticulated lawn
	Reticulated wood mulch
	Pebbles
	Brick pavement
	Feature pavement
	Driveway pavement

No.	Soak Well Type
8.5 m ³	4 SW 1500x1200
8.5 m ³	Total Capacity
492.6 m ²	Roof Area GF
100.3 m ²	Paved Area
593.0 m ²	Total Area
7.4 m ³	Capacity Required (Area x 0.0125)
1.1 m ³	Extra Capacity Provided

NOTE: ALL DOWNPIPES CONNECTED TO SOAKWELLS WITH PVC STORMWATER PIPE


Roof Total Unit 1	
ON PLAN [m ²]	162.05
ON RAKE [m ²]	164.32
Roof Total Unit 2	
ON PLAN [m ²]	162.05
ON RAKE [m ²]	164.32
Roof Total Unit 3	
ON PLAN [m ²]	159.56
ON RAKE [m ²]	164.87



LANDSCAPING / STORMWATER PLAN

1:200

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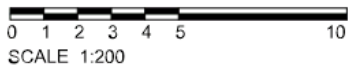
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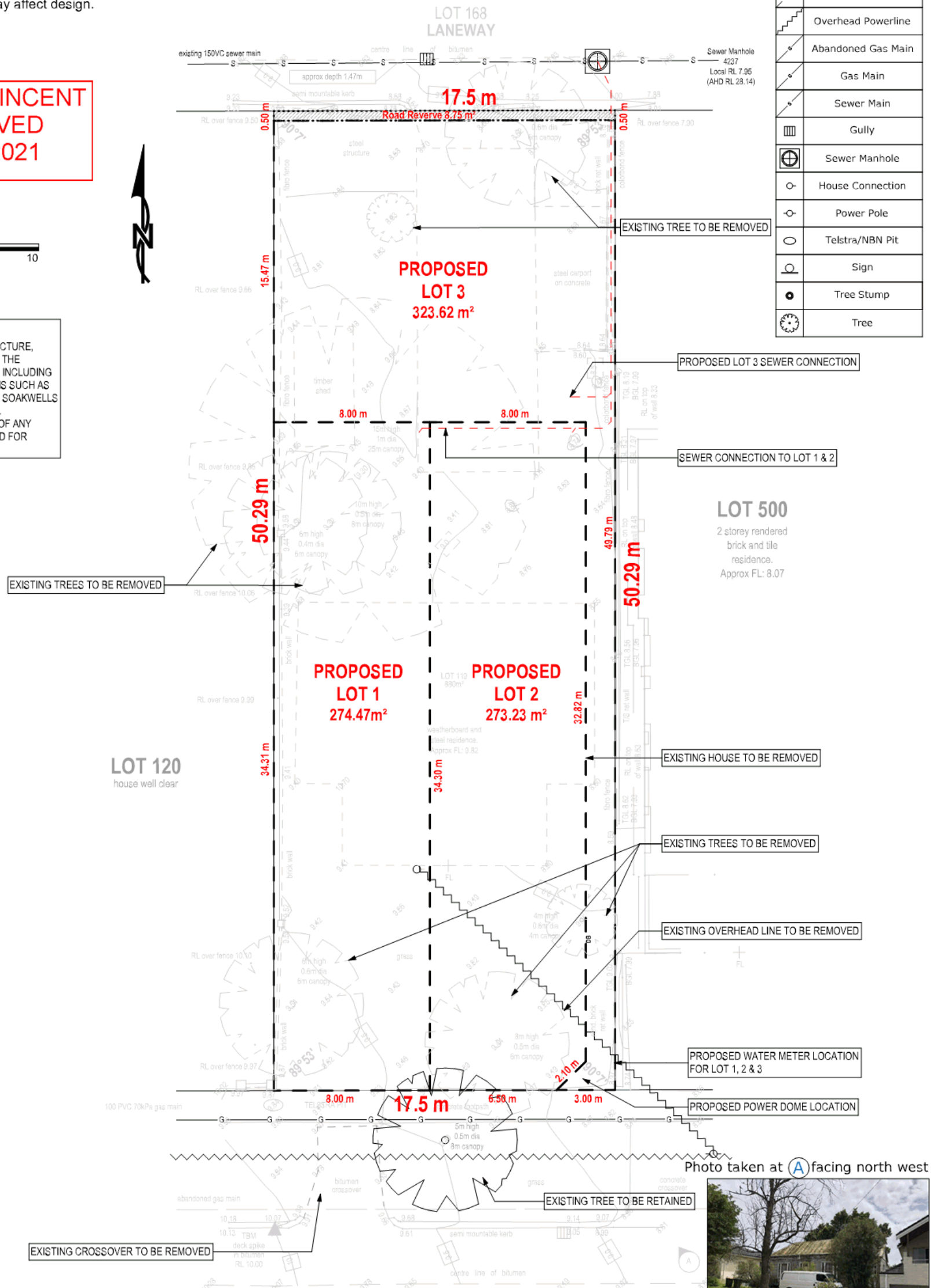
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	Tree

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NOTE:
 - OWNER TO DEMOLISH ALL STRUCTURE, TREES AND OTHER OBJECTS TO THE SATISFACTION OF THE BUILDER, INCLUDING THE REMOVAL OF BURIED DEBRIS SUCH AS SEPTIC TANKS, LEECH DRAINS, SOAKWELLS AND POOL AS SHOWN HATCHED.
 - OWNER IS LIABLE OF REMOVAL OF ANY BOUNDARY FENCES IF REQUIRED FOR CONSTRUCTION PURPOSES.

LOT 1:	274.47m ²
LOT 2:	273.23m ²
LOT 3:	323.62m ²
ROAD RSV:	8.75m ²
TOTAL:	880m ²





LOT 500
 2 storey rendered brick and tile residence.
 Approx FL: 8.07

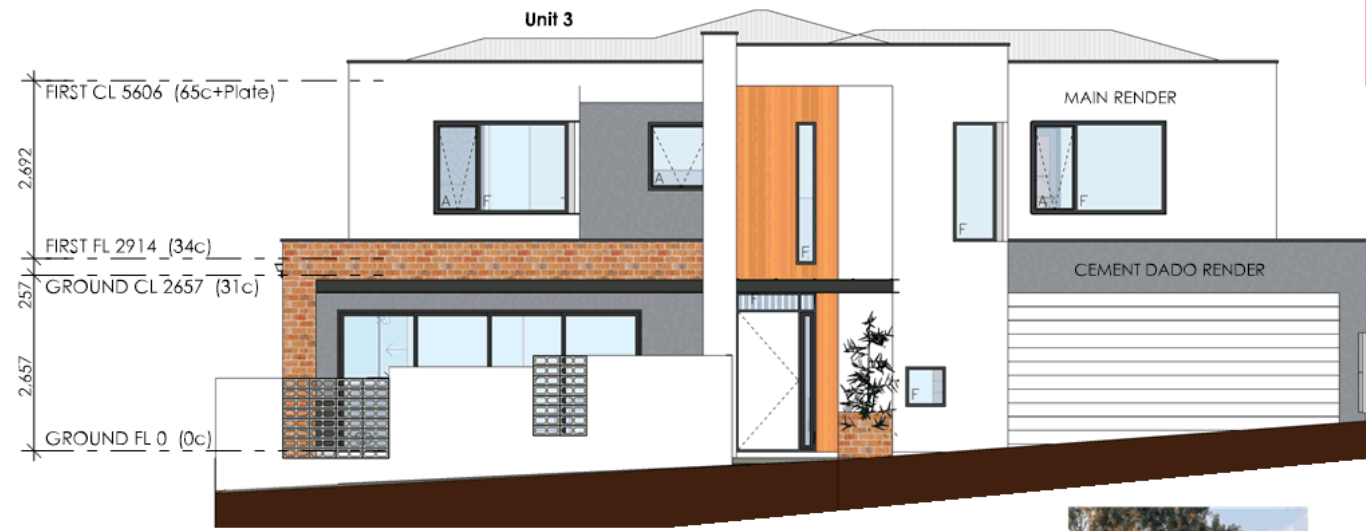
LOT 120
 house well clear



EXISTING SURVEY/STRATA/DEMOLITION PLAN
 1:200

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CITY OF VINCENT
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8 Jul 2021



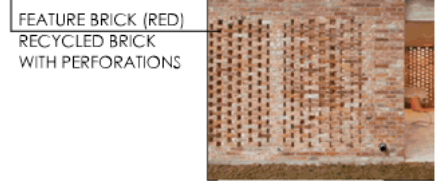
Front Elevation
SCALE 1:100



Side Elevation
SCALE 1:100



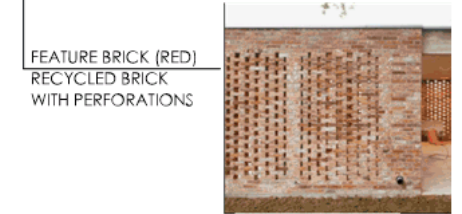
Front Elevation
SCALE 1:100



FEATURE BRICK (RED)
RECYCLED BRICK
WITH PERFORATIONS



CARPOR & BALCONY CEILING LINING
JAMES HARDIE
HARDIEGROVE LINING
VERTICAL JOINT SHEET PANELS



FEATURE BRICK (RED)
RECYCLED BRICK
WITH PERFORATIONS



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CLIENT
FLYNN
ADDRESS
14 Franklin St.
LEEDERVILLE WA

PROJECT
**PROPOSED 3 DOUBLE
STOREY GROUPED
DWELLINGS**

A	16.11.20	FOR DA
B	03.03.21	AMENDED DA
C	26.05.21	AMENDED DA
D	05.07.21	AMENDED DA
REV.	[DATE]	AMENDMENT

E	08.07.20	FOR DA
REV.	[DATE]	AMENDMENT

SCALE
1:100 @ A3
NORTH

DRAWING TITLE			
MATERIAL/COLOURS			
DRN BY	CHD BY	DRAWING NO.	REVISION
ET	YL	A11	E

TBM deck spike in bitumen equals local RL 10.00 Contractor to check datum before adopting levels	FEATURE AND CONTOUR SURVEY OF LOT 119 ON PLAN 1223 14 Franklin Street, Leederville C/T Vol: 1046 Fol: 723 our ref. 20-9030	Survey Date: 1 October 2020		Scale 1:200@A3		
		Rev	Date	Description	Surv	Drawn
		0	05/10/20	Feature Survey Drafted	AW	AW

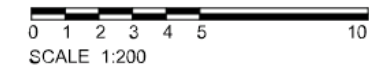


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0403 984 155

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NOTE: No title viewed by Flynn Subdivision Experts. A certificate of title check for easements and encumbrances is highly recommended as should they exist, they may affect design.

SUPERSEDED



PLANNING APPROVAL REQUIRED:

These drawings are preliminary only and are subject to planning approval. Please take note that drawings are subject to change upon receipt of planning assessment conditions.

Proposed Lot 1 -
 R-coding of site is: R40
 Site area is: 274.33 m²
 Total floor area are: 143.73 m²
 (Does not include covered areas with 2 or more open sides)

Open Space: 47.6%

Proposed Lot 2
 R-coding of site is: R40
 Site area is: 273.10 m²
 Total floor area are: 143.37 m²
 (Does not include covered areas with 2 or more open sides)

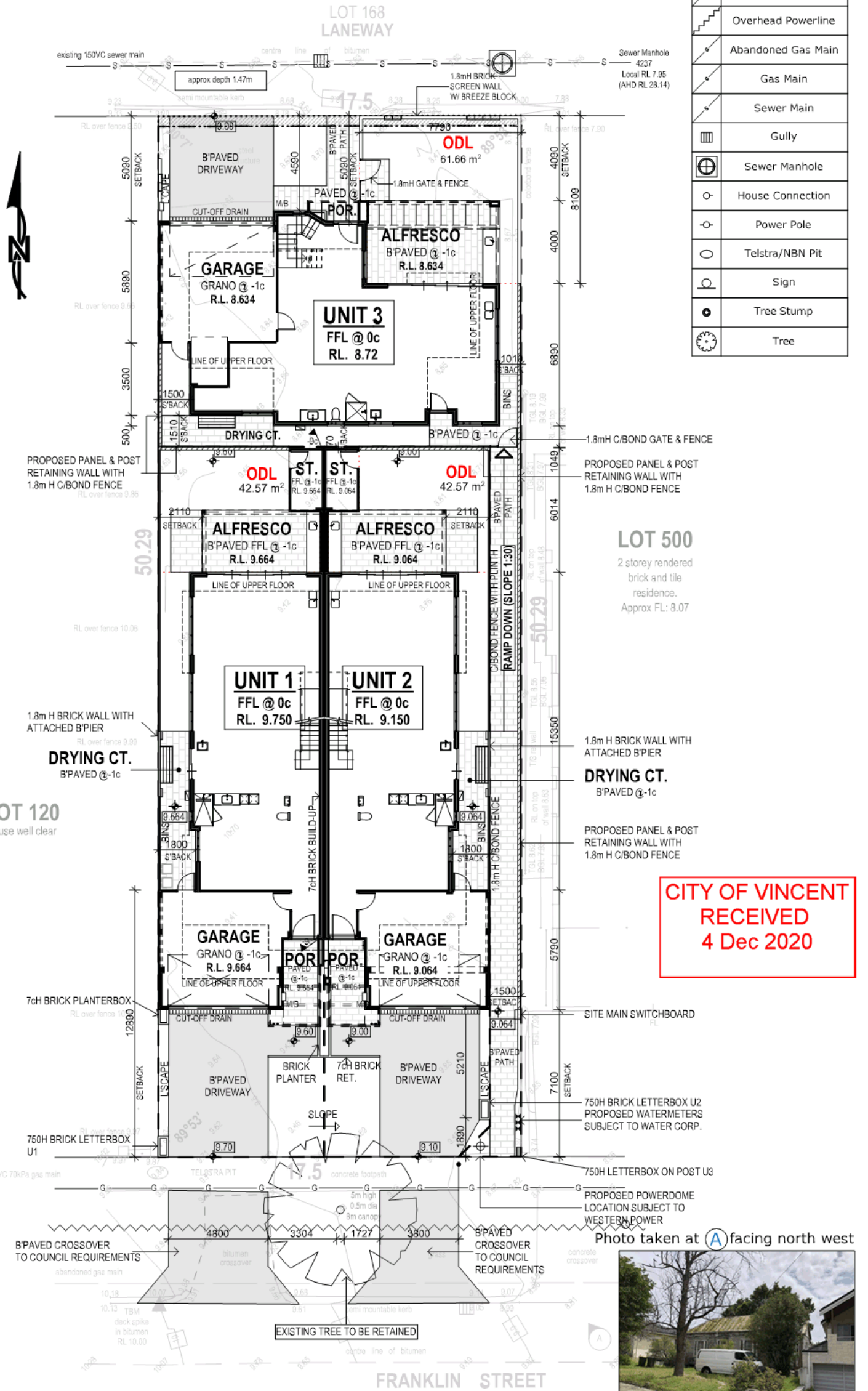
Open Space: 47.5%

Proposed Lot 3
 R-coding of site is: R40
 Site area is: 332.64 m²
 Total floor area are: 136.15 m²
 (Does not include covered areas with 2 or more open sides)

Open Space: 59%

Drawings for planning approval completed on: 15 November 2020
 Drawings for planning approval drawn by: ET

LEGEND	
	Edge of Patio/Verandah
	Gutter Line
	Overhead Powerline
	Abandoned Gas Main
	Gas Main
	Sewer Main
	Gully
	Sewer Manhole
	House Connection
	Power Pole
	Telstra/NBN Pit
	Sign
	Tree Stump
	Tree



CITY OF VINCENT RECEIVED 4 Dec 2020

Previously Advertised Plans

SITE PLAN

1:200



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CLIENT
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PROJECT
 PROPOSED 3 DOUBLE STOREY GROUPED DWELLINGS

A 16.11.20 FOR DA

REV. DATE AMENDMENT

SCALE
 1:200 @ A3
 NORTH

DRAWING TITLE
 SITE PLAN
 DRN BY CHD BY DRAWING NO. REVISION
 ET YL A01 A

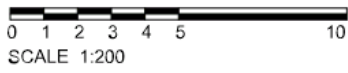
TBM deck spike in bitumen equals local RL 10.00 Contractor to check datum before adopting levels	FEATURE AND CONTOUR SURVEY OF LOT 119 ON PLAN 1223 14 Franklin Street, Leederville C/T Vol: 1046 Fol: 723 our ref. 20-9030		Survey Date: 1 October 2020		Scale 1:200@A3		 www.subdivisionexperts.com.au 0403 984 155
			Rev	Date	Description	Surv	
	0	05/10/20	Feature Survey Drafted	AW	AW		

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LEGEND	
	Edge of Patio/Verandah
	Gutter Line
	Overhead Powerline
	Abandoned Gas Main
	Gas Main
	Sewer Main
	Gully
	Sewer Manhole
	House Connection
	Power Pole
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	Sign
	Tree Stump
	Tree

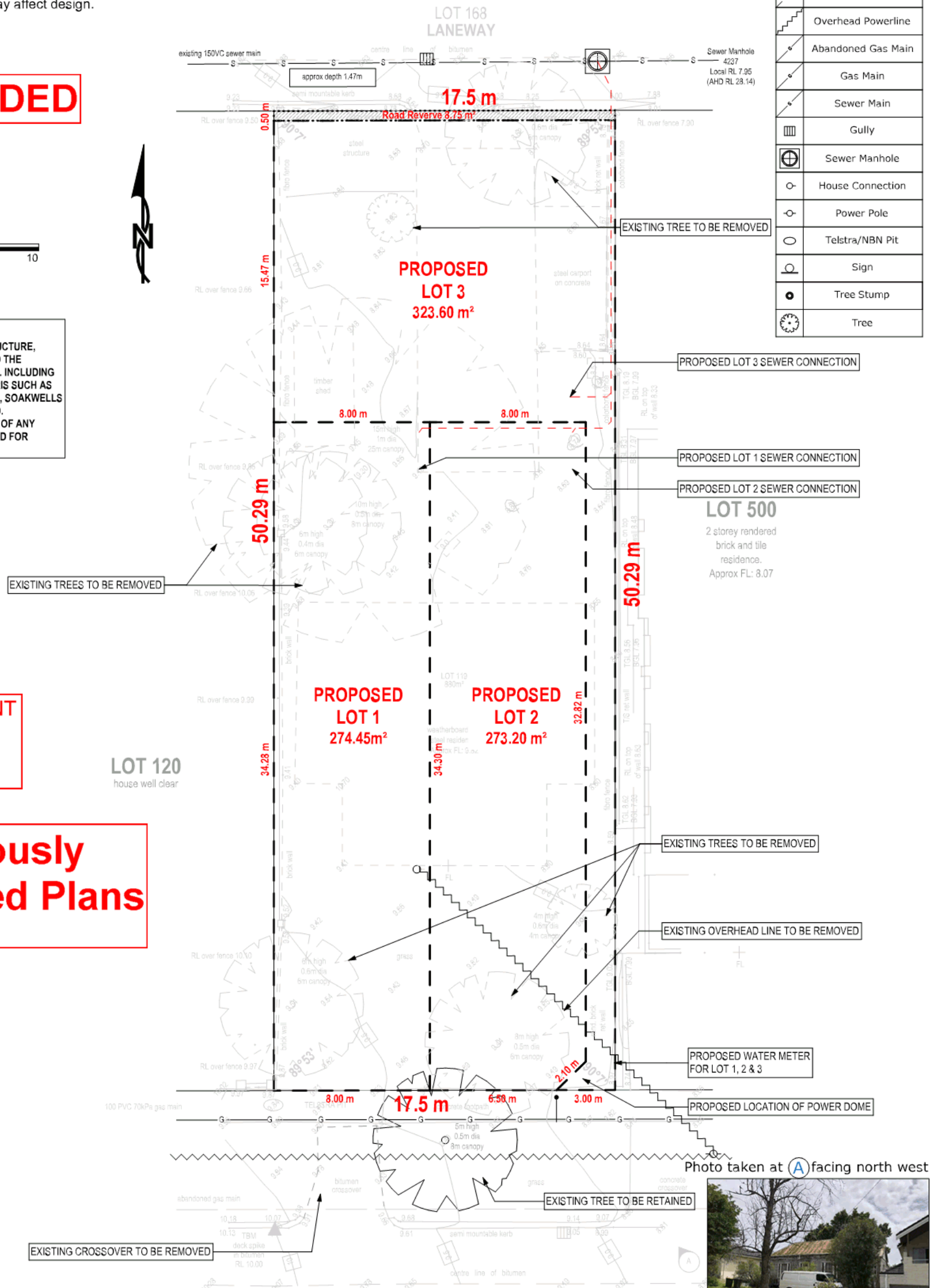
SUPERSEDED



NOTE:
 - OWNER TO DEMOLISH ALL STRUCTURE, TREES AND OTHER OBJECTS TO THE SATISFACTION OF THE BUILDER, INCLUDING THE REMOVAL OF BURIED DEBRIS SUCH AS SEPTIC TANKS, LEECH DRAINS, SOAKWELLS AND POOL AS SHOWN HATCHED.
 - OWNER IS LIABLE OF REMOVAL OF ANY BOUNDARY FENCES IF REQUIRED FOR CONSTRUCTION PURPOSES.


CITY OF VINCENT RECEIVED 4 Dec 2020

Previously Advertised Plans



EXISTING SURVEY/STRATA/DEMOLITION PLAN

1:200

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		FLYNN ADDRESS 14 Franklin St. LEEDERVILLE WA	PROPOSED 3 DOUBLE STOREY GROUPED DWELLINGS	16.11.20 FOR DA	1:200 @ A3 NORTH	
				REV.[DATE] AMENDMENT		

SUPERSEDED

Floor Area Total Unit 3

ID	Area
Alfresco	25.65
First Floor	97.70
Garage/Store	33.12
Ground Floor	99.08
Porch	2.71
Porch 2	0.67
Store	3.95
Total	262.88 m²

**CITY OF VINCENT
RECEIVED
4 Dec 2020**

LOT 500
2 storey rendered
brick and tile
residence.
Approx FL: 8.07

**Previously
Advertised Plans**

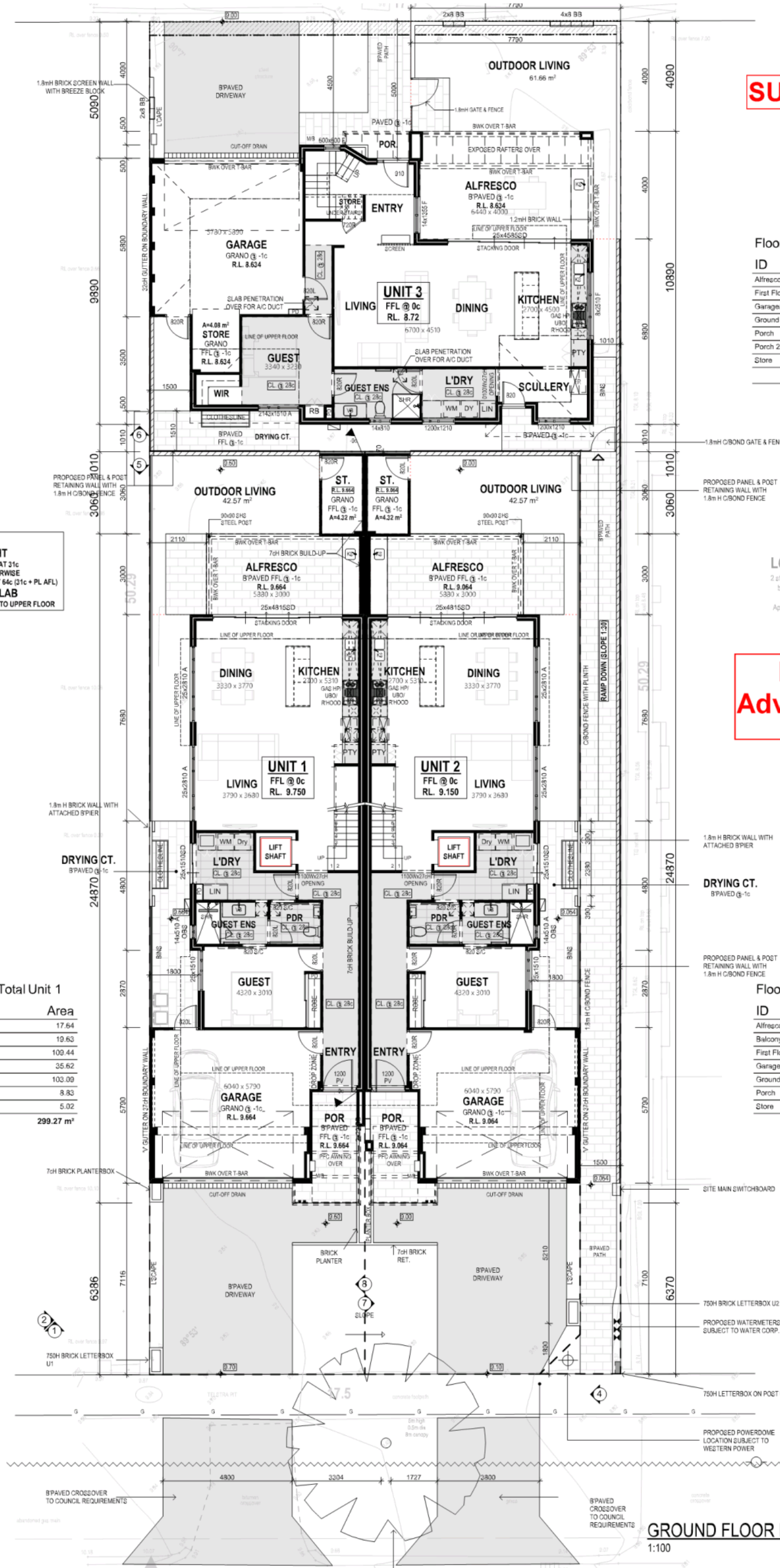
**NOTE !!
CEILING HEIGHT**
- GROUND FLOOR CL AT 31c
UNLESS NOTED OTHERWISE
- UPPER FLOOR CL AT 64c (31c + PL AFL)
SUSPENDED SLAB
- 2c CONCRETE SLAB TO UPPER FLOOR

Floor Area Total Unit 1

ID	Area
Alfresco	17.64
Balcony	12.63
First Floor	109.44
Garage	35.62
Ground Floor	103.09
Porch	8.83
Store	5.02
Total	299.27 m²

Floor Area Total Unit 2

ID	Area
Alfresco	17.64
Balcony	18.19
First Floor	109.44
Garage	35.26
Ground Floor	103.09
Porch	8.83
Store	5.02
Total	297.47 m²



GROUND FLOOR PLAN

1:100



DRAWING TITLE: GROUND FLOOR PLAN
 SCALE: 1:100 @ A2
 NORTH
 PROJECT: PROPOSED 3 DOUBLE STOREY GROUPED DWELLINGS
 CLIENT: FLYNN
 ADDRESS: 14 Franklin Ct, LEEDERVILLE WA
 ARCHITECT: Sādhanā ARCHITECTS

SUPERSEDED

Floor Area Total Unit 3

ID	Area
Alfresco	25.65
First Floor	97.70
Garage/Store	33.12
Ground Floor	99.08
Porch	2.71
Porch 2	0.67
Store	3.95
Total	262.88 m²

**Previously
Advertised Plans**

**CITY OF VINCENT
RECEIVED
4 Dec 2020**

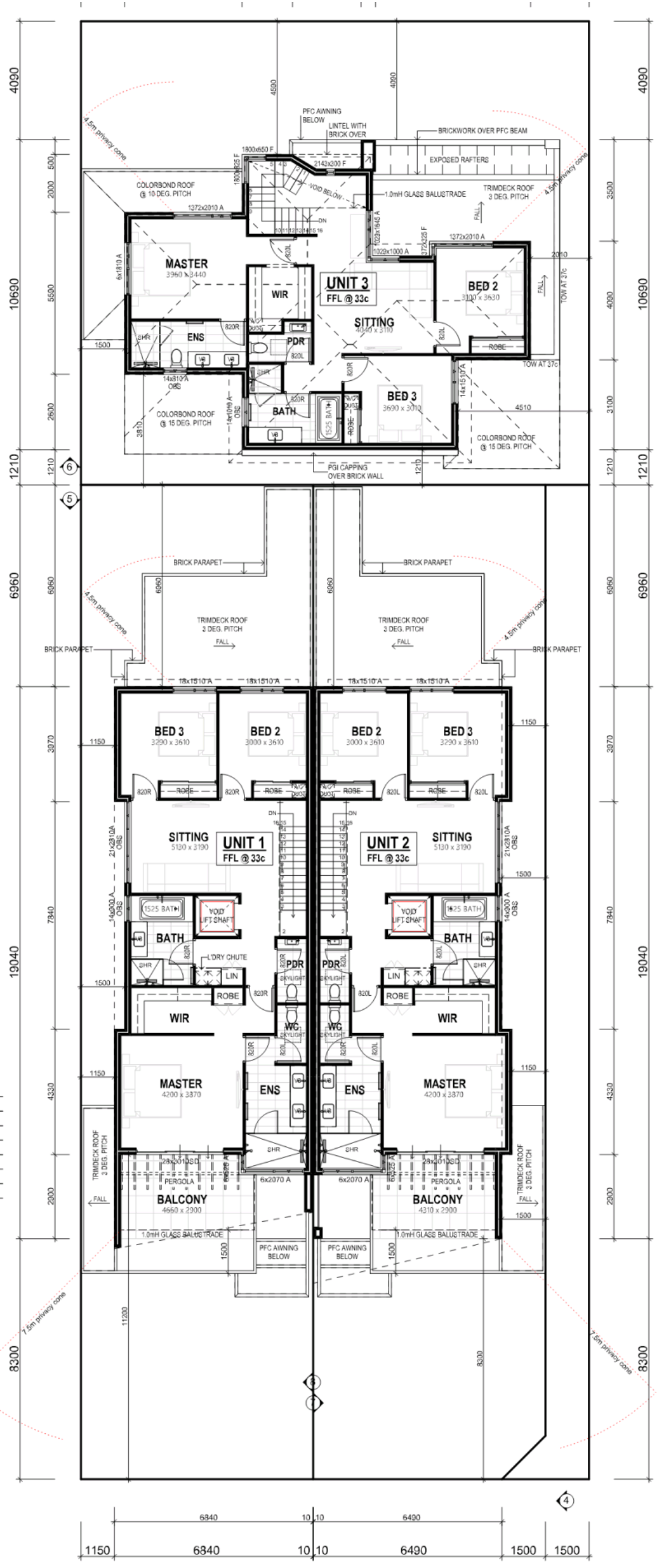
**NOTE !!
CEILING HEIGHT**
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UNLESS NOTED OTHERWISE
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Garage	35.26
Ground Floor	103.00
Porch	8.83
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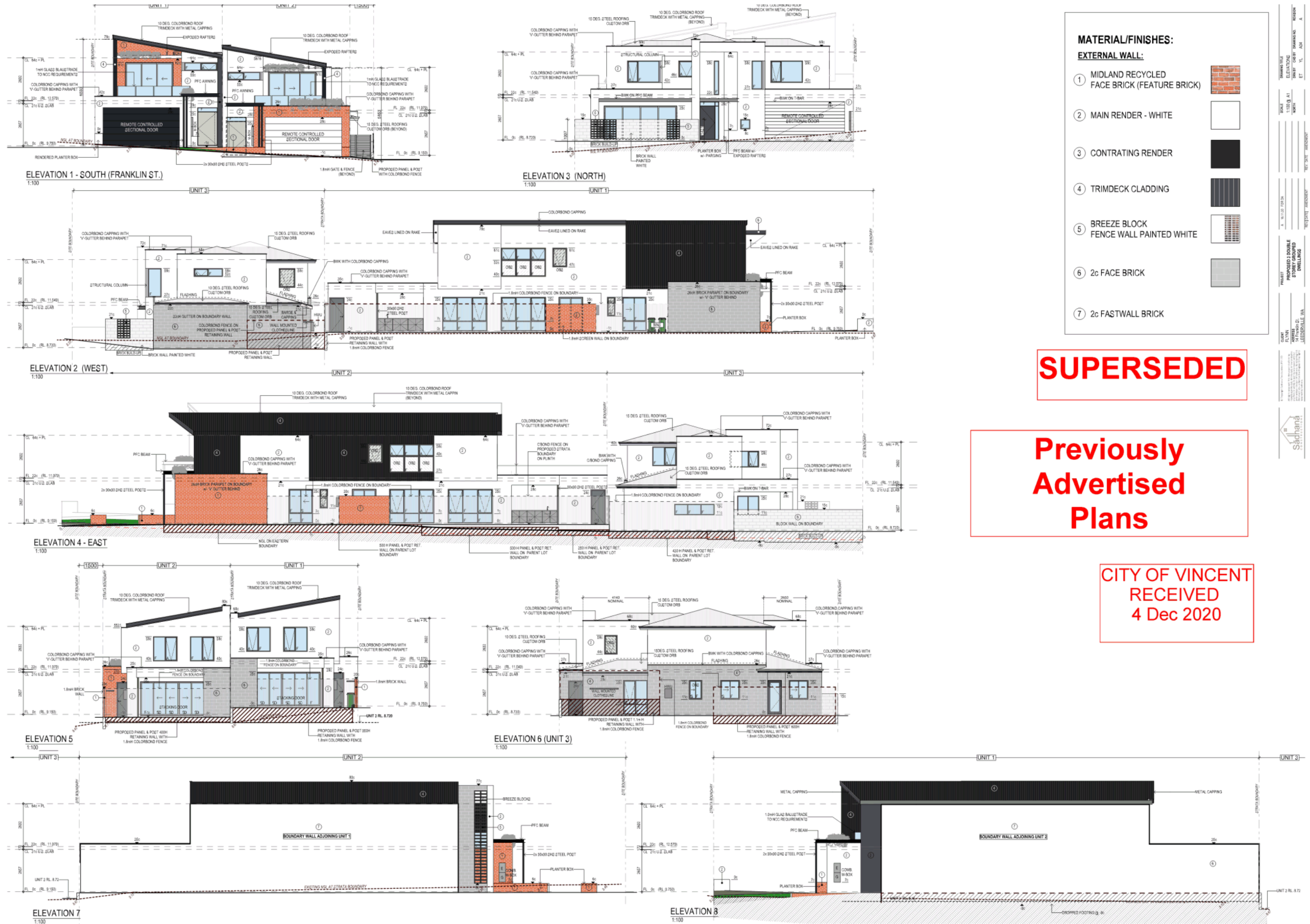


FIRST FLOOR PLAN
1:100



CLIENT: FLYNN
ADDRESS: 14 Franklin Ct, LEEDERVILLE WA
PROJECT: PROPOSED 3 DOUBLE STOREY GROUPED DWELLINGS
SCALE: 1:100 @ A2 NORTH
DRAWING TITLE: FIRST FLOOR PLAN
DRAWN BY: CHB BY
CHECKED BY: ET
DATE: 14 AUG 2020



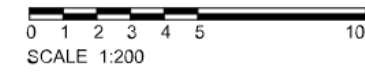


TBM deck spike in bitumen equals local RL 10.00 Contractor to check datum before adopting levels	FEATURE AND CONTOUR SURVEY OF LOT 119 ON PLAN 1223 14 Franklin Street, Leederville C/T Vol: 1046 Fol: 723 our ref. 20-9030	Survey Date: 1 October 2020	Scale 1:200@A3										
		<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>Rev</th> <th>Date</th> <th>Description</th> <th>Surv</th> <th>Drawn</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>05/10/20</td> <td>Feature Survey Drafted</td> <td>AW</td> <td>AW</td> </tr> </tbody> </table>	Rev	Date	Description	Surv	Drawn	0	05/10/20	Feature Survey Drafted	AW	AW	www.subdivisionexperts.com.au 0403 984 155
Rev	Date	Description	Surv	Drawn									
0	05/10/20	Feature Survey Drafted	AW	AW									

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SUPERSEDED



PLANT PALETTE

- Agave attenuata**
 Low shrub (Up to 1.2m)
 Flower: spring or summer
 Tolerates drought
- Dianella revoluta**
 Grass Sedge or Flax
 Flower: Spring, Summer
 Tolerates drought, Lime
- Jacaranda mimosifolia**
 Size: 90L rootball minimum
 Height: 2m minimum
- Plumeria rubra**
 Small Tree (Up to 7m)
 Tolerates Drought

Previously Advertised Plans

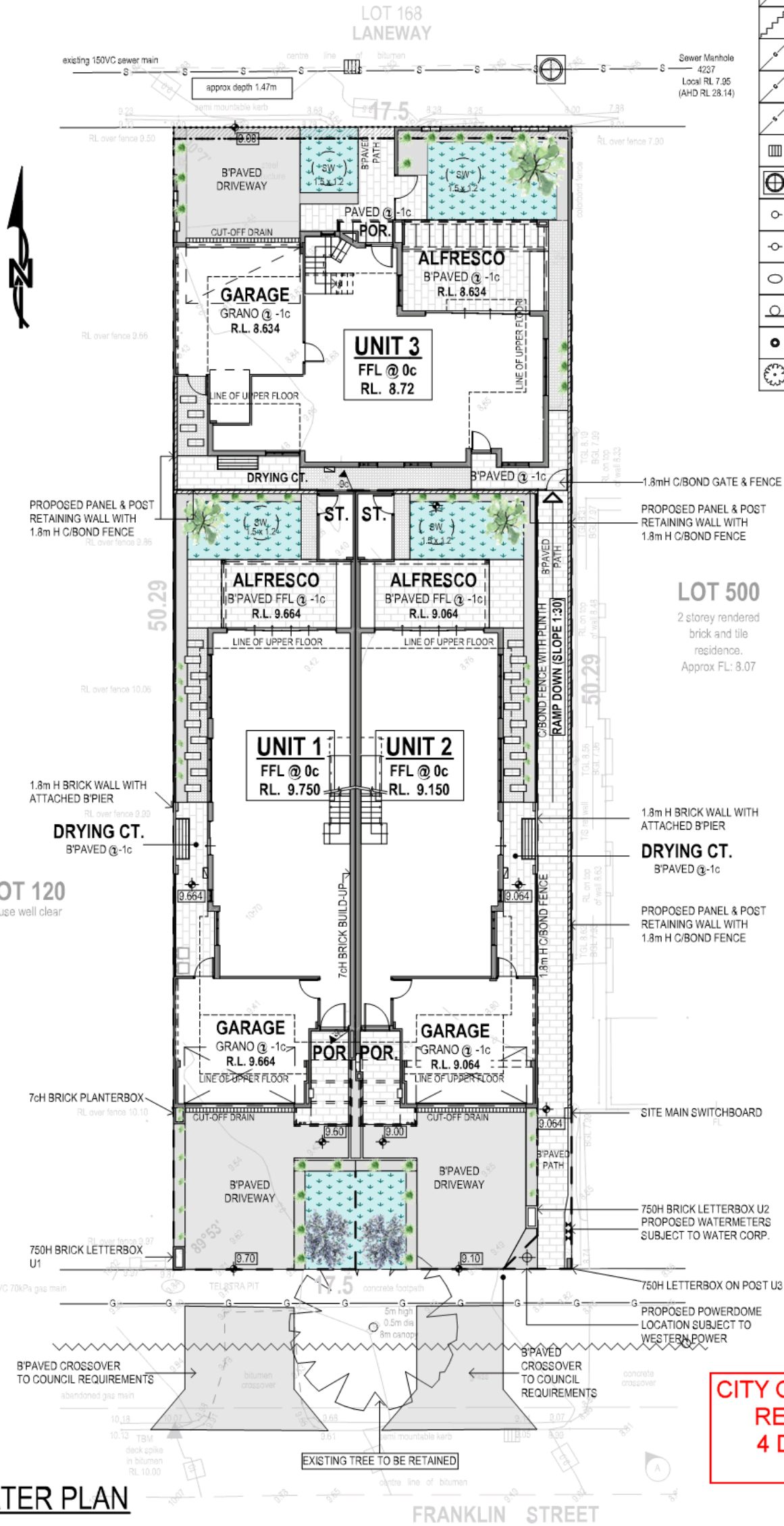
LEGEND

	Reticulated lawn
	Reticulated wood mulch
	Pebbles
	Brick pavement
	Driveway pavement

No.	Soak Well Type
8.5 m ³	4 SW 1500x1200
8.5 m ³	Total Capacity
493.1 m ²	Roof Area GF
171.1 m ²	Paved Area
664.3 m ²	Total Area
8.3 m ³	Capacity Required (Area x 0.0125)
0.2 m ³	Extra Capacity Provided

NOTE: ALL DOWNPIPES CONNECTED TO SOAKWELLS WITH PVC STORMWATER PIPE

Roof Total Lot 1	
ON PLAN [m ²]	162.48
ON RAKE [m ²]	164.51
Roof Total Unit 2	
ON PLAN [m ²]	162.61
ON RAKE [m ²]	164.62
Roof Total Unit 3	
ON PLAN [m ²]	158.82
ON RAKE [m ²]	163.99



LEGEND

	Edge of Patio/Verandah
	Gutter Line
	Overhead Powerline
	Abandoned Gas Main
	Gas Main
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	Gully
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	Tree

CITY OF VINCENT
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LANDSCAPING / STORMWATER PLAN

1:200



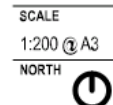
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CLIENT
FLYNN
 ADDRESS
 14 Franklin St.
 LEEDERVILLE WA

PROJECT
**PROPOSED 3 DOUBLE
 STOREY GROUPED
 DWELLINGS**

A 16.11.20 FOR DA
 REV. DATE AMENDMENT

SCALE
 1:200 @ A3
 NORTH



DRAWING TITLE
LANDSCAPING/STORMWATER PLAN
 DRN BY CHD BY DRAWING NO. REVISION
 ET YL A05 A

PROPOSED RESIDENTIAL DEVELOPMENT

LOT 119 (NO.14) FRANKLIN ST, LEEDERVILLE

MAY 2021



FRANKLIN STREET

CITY OF VINCENT
RECEIVED
1 June 2021

1 June 2021

Dear Dan,

NO.14 (LOT 119) FRANKLIN STREET, LEEDERVILLE THREE GROUPED DWELLINGS – REQUEST FOR INFORMATION

Thank you for your email received 20 January 2021 requesting further information relating to the proposed development currently lodged with the City of Vincent for development approval. A summary of the items raised is provided below:

Item	Description	Response
1.	Site area – R-Codes 5.1.1	Approved by WAPC
2.	Street setback – R-Codes 5.1.2 / LPP7.1.1 clause 5.1	Amended with justification
3.	Lot boundary setbacks – R-Codes 5.1.3 / LPP7.1.1 clause 5.2	Amended with justification
4.	Open space – R-Codes 5.1.4	Amended to comply
5.	Building height – R-Codes 5.1.6 / LPP7.1.1 clause 5.3	Amended with justification
6.	Garages and carports – R-Codes 5.2.1 / LPP7.1.1 clause 5.4	Amended to comply
7.	Garage width – R-Codes 5.2.2 / LPP7.1.1 clause 5.5	Amended to comply
8.	Street walls and fences – R-Codes 5.2.4 / LPP7.1.1 clause 5.7	Amended to comply
9.	Sight lines – R-Codes 5.2.5	Amended to comply
10.	Landscaping – R-Codes 5.3.2 / LPP7.1.1 clause 5.9	Amended with justification
11.	Urban design study – LPP7.1.1 clause 5.12	Provided
12.	Additional information	Provided
13.	Design Review Panel comments	Amended as requested
14.	Community consultation (objections)	Concerns addressed

Further consideration has been given to address the concerns raised and amended plans have been prepared alongside justification to address the items raised for further information. Detailed responses on each individual item listed above is provided below.

1. SITE AREA – R-CODES 5.1.1

RFI *Proposed average site area of 293.3m² in lieu of 300m² for an R30 site*

The City is unable to consider any variations to the minimum and average site areas as only the Western Australian Planning Commission (WAPC) has the authority to approve such variations. I understand that you have a concurrent subdivision application under assessment by the WAPC, can you please advise whether an outcome has been reached?

1. SITE AREA – R-CODES 5.1.1

Response The associated subdivision application 1486-20 has now been approved by the WAPC.

2. STREET SETBACK – R-CODES 5.1.2 / LPP7.1.1 CLAUSE 5.1

- RFI**
- Proposed unit 1 and 2 ground floor primary street setback of 7.1m in lieu of 7.67m;
 - Proposed unit 2 roof primary street setback of 6.8m in lieu of 7.67m
 - Proposed unit 3 upper floor primary street setback 0.5m forward of the ground floor building line in lieu of being 2m behind.
 - Proposed unit 1 and 2 porches protrude 1.3m into the primary street setback area without compensating open space behind the primary street setback line.

The City will undertake community consultation in relation to these variations prior to forming a position.

Response The following amendments have been made to the plans addressing the above items;

- Unit 1 and 2 ground floor primary street increased from 7.1m to 8.0m.
- Unit 2 roof primary setback increased from 6.8m to 7.5m.

The amendments result in a compliant ground floor for units 1 and 2, however the increased setback has resulted in the upper floor no longer achieving a 2.0m setback behind the ground floor. The associated design principles and housing objectives for street setback are as follows:

P2.1 Buildings set back from street boundaries an appropriate distance to ensure they:

- contribute to, and are consistent with, an established streetscape;
- provide adequate privacy and open space for dwellings;
- accommodate site planning requirements such as parking, landscape and utilities; and
- allow safety clearances for easements for essential service corridors.

P2.2 Buildings mass and form that:

- uses design features to affect the size and scale of the building;
- uses appropriate minor projections that do not detract from the character of the streetscape;
- minimises the proportion of the façade at ground level taken up by building services, vehicle entries and parking supply, blank walls, servicing infrastructure access and meters and the like; and
- positively contributes to the prevailing or future development context and streetscape as outlined in the local planning framework.

P5.1.1 Development which incorporates predominant features of the streetscape.

P5.1.2 Development which clearly distinguishes all upper floors from lower storeys to clearly distinguish the parts of the dwelling.

P5.1.3 Development which minimises the visual bulk of the buildings through articulation of larger wall lengths and the stepping back of upper storeys walls.

The proposed amended design has significantly altered the building façade of units 1 and 2, taking less influence from 12 Franklin and more influence from 13 Franklin Street which is considered a superior outcome. The proposed street setbacks are consistent with the two adjacent properties, neither of which represent outliers to the typical street setbacks for Franklin Street.

2. STREET SETBACK – R-CODES 5.1.2 / LPP7.1.1 CLAUSE 5.1



Street setback comparison (MetroMap May 2021)

The roof form of both units has been modified to present as a concealed roof and presents consistently with the dwellings opposite at 13 Franklin. The increased upper floor setbacks ensure the two-storey height is not a dominant feature within the streetscape whilst still maintaining a high level of interaction and passive surveillance. The amendments have resulted in a considerable improvement to landscaping within the street setback area, through additional open space alongside hardstand reductions. The bulk of the upper floor has also been considerably reduced through inclusion of privacy screening in the walls presenting to adjacent properties, which improves outlook, access to daylight and ventilation, whilst also increasing articulation and visual interest to the elevation.



Original street elevation



Amended street elevation

The porch protrusion has been optimised to enhance the ground floor entrance point is sufficiently emphasised and framed with landscaping, achieving a clear legible point of entry and providing a strong element at the ground floor to balancing the upper floor presence.

The proposed unit 3 upper floor projecting forward of the ground floor is not of any impact to the right-of-way as there is no existing established streetscape character. It is unclear if the primary street upper floor setback requirement of the built form policy was intended to be applied to developments without frontage to a dedicated road as it is generally considered a positive feature to provide upper floors overlooking rights-of-way for passive surveillance to improve safety and reduce opportunities for concealment within these spaces.

3. LOT BOUNDARY SETBACKS – R-CODES 5.1.3 / LPP7.1.1 CLAUSE 5.2

RFI

- U1 upper floor bed 3 west lot boundary setback of 1.15m in lieu of 1.3m
- U1 upper floor balcony to master bed west lot boundary setback of 1.15m in lieu of 1.3m
- U1 upper floor balcony to bed 3 (bulk) west lot boundary setback of 1.5m in lieu of 2.6m
- U3 ground floor alfresco to scullery east lot boundary setback of 1.0m in lieu of 2.2m

The City will undertake community consultation in relation to these variations prior to forming a position.

3. LOT BOUNDARY SETBACKS – R-CODES 5.1.3 / LPP7.1.1 CLAUSE 5.2

Response The plans have been amended to reduce the upper floor wall heights no less than 6m through change in roof form. The ground floor alfresco and scullery wall height does not exceed 3.5m (and all habitable spaces will be screened by the dividing fence) and therefore does not require more than a 1.5m setback. The reduced setback requirements are as follows:

Variation	Proposed	Required (original)	Required (amended)
U1 upper floor bed 3 west lot boundary setback	1.15m	1.3m	1.2m
U1 upper floor balcony to master bed west lot boundary setback	1.15m	1.3m	1.2m
U1 upper floor balcony to bed 3 (bulk) west lot boundary setback	1.5m	2.6m	2.4m
U3 ground floor alfresco to scullery east lot boundary setback	1.0m	2.2m	1.5m

The associated design principles and housing objectives are as follows:

P3.1 Buildings set back from lot boundaries or adjacent buildings on the same lot so as to:

- reduce impacts of building bulk on adjoining properties;
- provide adequate direct sun and ventilation to the building and open spaces on the site and adjoining properties; and
- minimise the extent of overlooking and resultant loss of privacy on adjoining properties.

P5.2.1 Development which preserves and enhances the visual character of the existing streetscape by considering building setbacks.

With the reduced wall heights proposed, the setbacks are generally consistent with that existing and typically expected within the R30 coded residential area. The impact of bulk is moderated through a number of features including the varied setbacks across the wall length, contrasting finish with the ground floor, numerous and larger windows to reduce the visual presence of the wall into smaller elements, and replacement balcony side wall has also been modified to include screening rather than solid wall which further reduces bulk whilst also improving amenity to the future residents with improved light and ventilation.



Original unit 1 west elevation



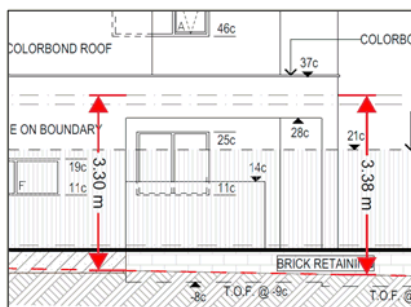
Amended unit 1 west elevation

The eastern elevation of the adjacent property includes at least two windows; however the nature of the associated rooms is unclear. The front room includes a window facing the street to allow for daylight, and this also appears to be the case for the back room. Therefor a minor reduction in daylight is not considered to have any undue impact. Ventilation will not be unduly impacted with a building separation of approximately 2-3m achieved between developments; typical within a two-storey setting and also reflective of existing setback patterns in the street. The setback variation

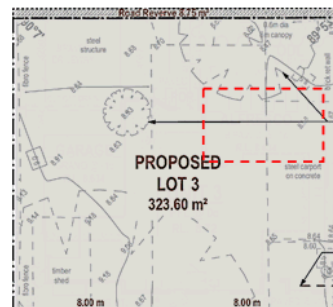
3. LOT BOUNDARY SETBACKS – R-CODES 5.1.3 / LPP7.1.1 CLAUSE 5.2

also does not result in any visual privacy impacts as all openings comply with screening requirements.

The variation relating to the ground floor alfresco area is considered incorrect, as the natural ground level to ceiling height is no greater than 3.5m at any point along the boundary, nor is the finished floor level more than 0.5m above the natural ground level at any point, accordingly the setback requirement is 1.5m; a 0.5m variation.



Wall height for lot boundary setbacks



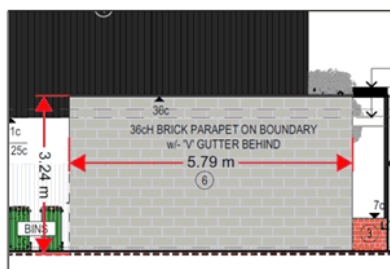
Alfresco relative to the natural ground level

The extent of impact for the reduced setback is minimal, the wall is adjacent to an open area with virtually unencumbered access to light and ventilation, the visual impact of the wall will be minimal, further reduced by portion of the wall relating to an alfresco area which is open in nature and will also be largely screened by a 1.8m high dividing fence. As the finished floor levels closely align with the finished ground levels there will also not be any privacy impacts once the dividing fence is erected.

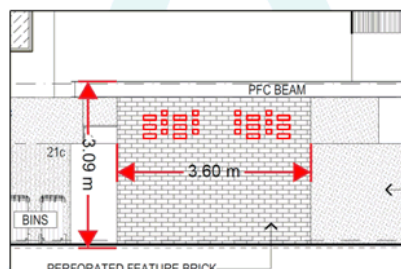
RFI Proposed unit 1 garage boundary wall with an average height of 3.3m in lieu of 3.0m permitted to the western lot boundary.

The City will undertake community consultation in relation to these variations prior to forming a position.

Response The boundary wall has been amended, reduced in height and length as part of the changes to replace the proposed garages with carports. The wall length and height have been reduced to 3.6m and 3.1m respectively. There is limited scope for impact, as there appears to be only one window which will be adjacent to the wall on the affected property, and this room also includes significant windows within the façade, which will mitigate potential loss of light and ventilation as a result of the boundary wall. The adjacent space is otherwise inactive and does not provide any function for the dwelling.

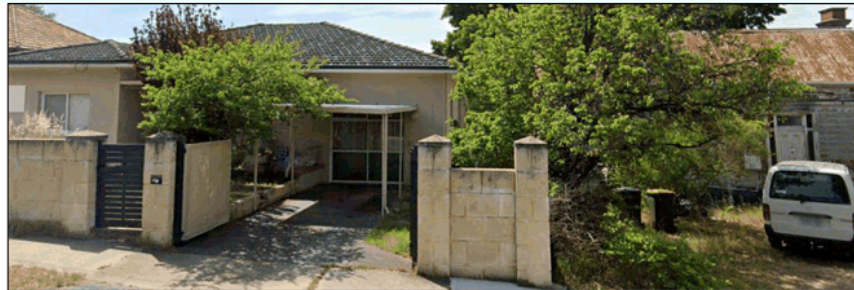


Boundary wall (original)



Boundary wall (amended)

3. LOT BOUNDARY SETBACKS – R-CODES 5.1.3 / LPP7.1.1 CLAUSE 5.2



Interface between 14 and 18 Franklin Street

As of 1 July 2021 boundary wall average calculations will be removed, maintaining only maximum boundary wall height requirements, thereby the boundary wall proposed will be deemed-to-comply.

4. OPEN SPACE – R-CODES 5.1.4

- RFI**
- Proposed unit 1 open space of 43.3% in lieu of 45%.
 - Proposed unit 2 open space of 43% in lieu of 45%

The City will undertake community consultation in relation to these variations prior to forming a position.

Response The amended plans have increased open space on site, with every lot now exceeding the deemed-to-comply requirements, and the net open space 5% above the deemed-to-comply requirement. A revised open space calculation is provided below.

Lot	Area	Built area	Open space
1	274.47m ²	146m ²	46.8%
2	273.23m ²	146m ²	46.6%
3	323.62m ²	139m ²	57.0%
Total	871.32m ²	431m ²	50.5%

5. BUILDING HEIGHT – R-CODES 5.1.6 / LPP7.1.1 CLAUSE 5.3

- RFI**
- Proposed unit 1 with a skillion roof height of 6.5m to the low side and 7.3m to the high side in lieu of 6m and 7m permitted respectively.

Please review the proposal and advise whether there is any opportunity to reduce the finished floor level of this unit to reduce the extent of the building height variation.

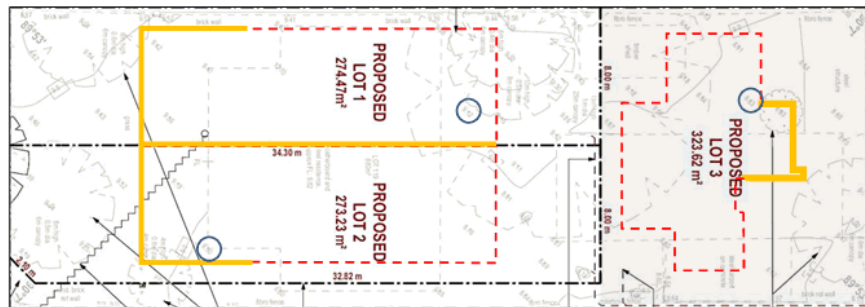
- Proposed unit 2 with a skillion roof height of 6.2m to the low side in lieu of 6m permitted.

The City will undertake community consultation in relation to this variations prior to forming a position.

Response The amended roof form has resulted in considerably lower building wall heights, the table below stipulates the natural ground level where a 6m building height would result based off of the wall heights proposed which can be cross referenced against the diagram below to determine building height.

Lot	FFL	Wall height 1	NGL for 6m	Wall height 2	NGL for 6m
1	9.750	66c (5.676)	9.426	68c (5.848)	9.598
2	9.150	66c (5.676)	8.826	68c (5.848)	8.998
3	8.720	68c (5.848)	8.568	73c (6.278)	8.998

5. BUILDING HEIGHT – R-CODES 5.1.6 / LPP7.1.1 CLAUSE 5.3



Wall height 1 (red) / Wall height 2 (orange) / Highest point of building (blue)

In light of the above, the greatest building heights been circled and are noted above;

- Lot 1: 6.306m
- Lot 2: 6.074m
- Lot 3: 6.168m

The building heights are predominantly within the 6.0m building height, with small sections of variation, at most 0.3m. The design principles and housing objectives for building height are as follows:

P6 Building height that creates no adverse impact on the amenity of adjoining properties or the streetscape, including road reserves and public open space reserves; and where appropriate maintains:

- adequate access to direct sun into buildings and appurtenant open spaces;
- adequate daylight to major openings into habitable rooms; and
- access to views of significance.

P5.3.1 Buildings which respond and contribute to neighbourhood context and streetscape character, and do not overwhelm or dominate existing development.

P5.3.2 Design which is complimentary to existing developments.

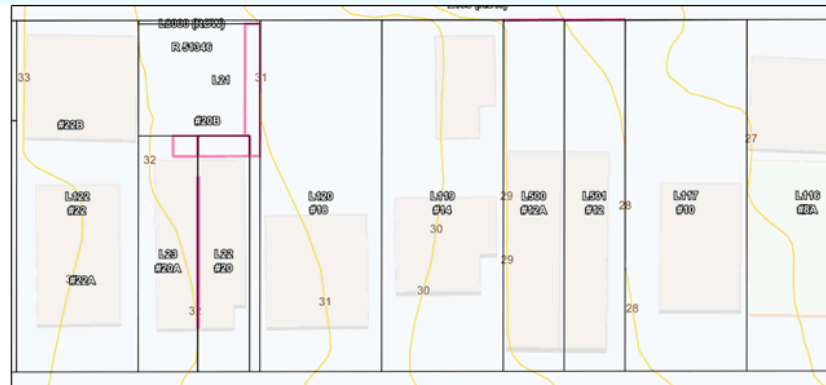
P5.3.3 Development that considers and responds to the natural features of the site and requires minimal excavation/fill.

P5.3.4 Design which minimises overlooking and overshadowing.

P5.3.5 Development which preserves and enhances the visual character of the existing streetscape by considering building bulk and scale.

As the wall heights of lot 1 and 2 present to the street as concealed roofs, the development will appear considerably less than the 7.0m height typically associated with this built form. The greatest variation of 0.3m (lot 1) is likely to be perceived from the adjacent property as compliant height when considering the natural topography of the area with levels continuing to increase to the west. The site survey indicates a 0.5m - 0.6m difference in ground level, which would mean that the building height of the wall as viewed from the adjacent site will be less than 6m.

5. BUILDING HEIGHT – R-CODES 5.1.6 / LPP7.1.1 CLAUSE 5.3



Topographical levels of the subject and adjacent sites

Unit 2 and 3 also present minor building height variations less than 0.2m and likely to be indistinguishable from a compliant 6.0m high wall. It is acknowledged that due to the slope down to the east, that as viewed from the adjacent site at 12A Franklin the height will be greater, however the impact of this height will be mitigated to a greater extent as the pedestrian access way creates a greater setback effectively double that provided to the west.

The dwelling to the east is also double storey in height and will assist in reducing the apparent height of the eastern wall of unit 2. Windows along the western elevation of 12A Franklin are high light to prevent privacy encroachments, however this will also limit the scope for impact from the increased wall height proposed at 14 Franklin. The height of the windows will mean that outlook and access to daylight is unlikely to have any tangible impact, and privacy will also not be affected.

Overall the height variations are relatively minor, and as viewed from the street are entirely in line with the desired streetscape outcome. The proposal is similar in bulk and scale to other recent two-storey developments within the street, and therefore consistent in character with the emerging streetscape.

6. GARAGES AND CARPORTS – R-CODES 5.2.1 / LPP7.1.1 CLAUSE 5.4

RFI

- Proposed unit 1 and 2 garages are the predominant building line of the dwelling rather than being setback 0.5m behind the predominant building line.

The City will undertake community consultation in relation to this variations prior to forming a position.

Response The garages have been removed from units 1 and 2, replaced with open car parking bays below the upper floor.

7. GARAGE WIDTH – R-CODES 5.2.2 / LPP7.1.1 CLAUSE 5.5

RFI

- Proposed unit 1 and 2 garage width of 69.1% in lieu of 50% permitted.

The City will undertake community consultation in relation to this variations prior to forming a position.

Response As noted above, the garages have been removed from the proposal and replaced with open car parking bays below the upper floor.

8. STREET WALLS AND FENCES – R-CODES 5.2.4 / LPP7.1.1 CLAUSE 5.7

- RFI**
- Proposed unit 3 front fence with a maximum solid wall height of 2m in lieu of 1.8m permitted.
 - Proposed unit 3 front fence is within the ROW widening area.
- Please provide amended plans to address these issues.

Response The street fence for unit 3 has been amended to no greater than 1.8m and relocated to not encroach the required right of way widening area.

9. SIGHT LINES – R-CODES 5.2.5

- RFI**
- Proposed unit 3 driveway setback 0.6m in lieu of 1m from the side boundary for sight lines.
- Please provide amended plans to address this issue.

Response The unit 3 driveway has been amended to achieve a 1.0m setback from the side boundary.

10. LANDSCAPING – R-CODES 5.3.2 / LPP7.1.1 CLAUSE 5.9

- RFI**
- Proposed 10.5% deep soil zone areas in lieu of 12% required.
 - Proposed 15.5% mature canopy coverage in lieu of 30%

It is noted that there is an existing mature tree in the north eastern corner of the site that does not appear to be in conflict with the unit 3 building envelope. Could you please confirm whether it would be feasible to retain this existing tree.

Response A landscaping plan is attached with submission, demonstrating an improved landscape treatments. The unit 2 and 3 driveways are tapered to increase the area of DSA within the front setback and to accommodate new tree plantings. Native or endemic species are used throughout to minimise water consumption and to benefit local ecosystems. Across the development site a total 13.2% deep soil zone is now achieved.

The feasibility of retaining the tree within the north-east corner of the site is not considered feasible in light of the required right of way widening and proposed street wall. The footing of the street wall is likely to result in considerable damage to the structural root system of the tree, and risk significantly increased risk of tree failure. In the circumstances it is considered a better long-term option to replace the tree.

There are limited opportunities for planting of additional trees on site to further increase mature canopy coverage, as a considerable portion of open space does not achieve appropriate dimensions to accommodate healthy tree growth. The tree variety initially proposed within the unit 3 street setback area has been replaced with a larger variety to provide more substantial canopy growth to the right of way. As noted in the City's built form policy, the landscaping requirements are not deemed-to-comply unless WAPC approval has been granted. The proposed landscaping is considered to achieve well above the R-Codes deemed-to-comply requirements, providing a positive outcome with canopy cover across the site to avoid large areas of uninterrupted hardstand and built form.

11. URBAN DESIGN STUDY – LPP7.1.1 CLAUSE 5.12

- RFI** *An Urban Design Study is required to be submitted and must consider all of the Local Housing Objectives of Clause 1.9 of the Built Form Policy. The urban design study shall incorporate drawings, 3D studies, and diagrams which interpret the development site's context into opportunities and constraints to generate early design parameters. The elements of the urban design study are based on Appendix 1 – Design Principles of the Built Form Policy. Please refer to the attached Urban Design Study template to assist in satisfying this requirement. The City's Built Form Policy seeks to facilitate development which enhances and preserves the established streetscape.*

11. URBAN DESIGN STUDY – LPP7.1.1 CLAUSE 5.12

Response An urban design study has been prepared and is attached to this submission.

12. ADDITIONAL INFORMATION

RFI *Please be advised that the application has been referred to the City's Technical Services team in relation to the manoeuvring space proposed for the unit 3 garage. Once comments have been received you will be contacted via email to address any concerns raised.*

Response No comments were received, however the crossover and sight lines have been amended to meet the City's requirements.

RFI *Please provide top of wall heights for all proposed retaining walls.*

Response The plans have been updated to include top of wall heights.

13. DESIGN REVIEW PANEL COMMENTS

RFI The proposed plans have been reviewed by a member of the City's DRP numerous times; 22 March 2021, 8 April 2021 (meeting), and the latest comments received from Dan on 14 May 2021. The plans have undergone significant improvement to address the concerns raised; majority of the latest DRP comments are supportive, comments noting potential improvements are as follows;

- *The depth of the porch to the rendered planter which seems overly generous and could be reduced slightly to further increase landscaping opportunities in the primary street area. The surface treatment to this area could also be changed to a more pedestrian finish (such as cobblestones or similar), differentiating it from the driveway finish to improve way-finding and soften the large expanse of concrete in the primary street area.*
- *The planter adjacent to the porch appears quite narrow and could be widened to allow for more flexibility in planting options.*
- *The brickwork hit-miss pattern proposed would be improved if it was a more consistent grid pattern as per the reference images provided on the Materials and Colours Plan.*
- *Consider colouring the lower rendered walls, including the guest wall fronting Franklin Street, in grey or cement dado to provide a darker/heavier expression of lower elements. This would form a base for the lighter upper floor and tie in with the contemporary development opposite.*
- *The vertical pillar is not annotated on the upper floor plan.*
- *The area of balcony in front of the WIR is narrow and does not serve a functional purpose. Not providing a different expression here to signify entry appears to be a missed opportunity. Consider a narrow planter bed in this location, with the blade wall terminating at the top of the planter. This would also provide improved amenity to the balcony.*

Response The following adjustments have been made to address the above suggestions;

- Porch depth reduced to allow for increased landscaping in the street setback area.
- Alternate paving provided for porch area to distinguish it from the driveway.
- Planter box opposite porch has been increased in depth.
- Brickwork hit and miss pattern amended to a consistent pattern.
- Lower rendered walls amended to cement dado.
- Upper floor plan updated to indicate vertical pillar.
- Balcony in front of WIR amended to a planter box.

13. COMMUNITY CONSULTATION (OBJECTIONS)

Site area

- *Concerns that the development does not comply with the R Codes Clause 5.1.1 (Site Area) which requires an average lot size of 300 square metres for an R30 site.*

13. COMMUNITY CONSULTATION (OBJECTIONS)

- Concerns that the proposed three grouped dwelling development would be out of context with existing development along Franklin Street.

Response The streetscape interaction is two side by side dwellings, which matches numerous other infill development examples along Franklin Street. The third dwelling will only be visible from the right of way and therefore will not impact on streetscape character or amenity. The site areas have been approved by the WAPC.

Streetscape

- Concerns that the proposed garages would dominate the streetscape.
- Concerns that the increased hardstand and reduced green verge area would have an environmental impact through the retention of latent solar heat as well as result in a poor aesthetic outcome.
- Concerns that the proposed reduced street setback in conjunction with the proposed garage width would be inconsistent with, and dominate, the Franklin Street streetscape.
- Concerns in relation to overshadowing of Franklin Street as a result of the reduced street setback.

Response The garages have been removed and replaced with open car bays and improved ground floor interaction. The design has been amended to increase landscaping within the street setback area as far as practical (accounting for vehicle access requirements), and the street tree is to be retained. Street setbacks have also been increased and are consistent with adjacent properties.

Lot boundary setback

- Concerns in relation to the impacts of building bulk, overlooking and access to sunlight and ventilation for the adjoining western property as a result of the proposed Unit 1 upper floor lot boundary setback departures.
- Concerns in relation to the impacts of building bulk and access to natural sunlight and ventilation for the adjoining eastern properties as a result of the proposed Unit 3 ground floor lot boundary setback departure.
- Concerns that the Unit 3 upper floor walls would not be setback from the adjoining eastern property 2 metres behind the ground floor building line.

Response The development will have minimal impact on sunlight access given its southern boundary is to Franklin Street. The setbacks provided are consistent with that typically provided within an R30 area and will be sufficient to allow for daylight and ventilation between buildings. Impacts of building bulk have been addressed through building articulation and reduced building heights.

The unit 3 ground floor lot boundary setback of 1.0m is sufficient to mitigate impacts at the ground level and will not have any significant impacts on the adjacent property; visual privacy is addressed through the dividing fence. Maintaining an upper floor setback of 2.0m behind the ground floor as the unit 3 presents to a right of way with no existing established streetscape. Generally a nil setback to the ground floor is considered appropriate when fronting a right of way to improve effective use of space on a shallow lot and improve interaction and surveillance with the right of way.

Open space

- Concerns that the overall building bulk and number of dwellings proposed would result in an overdevelopment of the site.
- Concerns that the reduced open space impacts the amount of landscaping and greenery that is able to be provided on-site.

Response The building footprint has been reduced and all dwellings now meet deemed-to-comply requirements for open space. Across all three dwellings the net open space is 5% greater

13. COMMUNITY CONSULTATION (OBJECTIONS)

	than that required. Five trees have been incorporated into the development, occupying locations where there is sufficient space to allow for healthy growth to maturity.
Building height	<ul style="list-style-type: none"> Concerns that the proposed building height departures in conjunction with all other departures results in an overdevelopment of the site.
Response	The roof form and building height of the development has been amended to reduce building heights. The greatest variation is not 0.3m and is located centrally on site. Majority of the development now complies with building height requirements, and it is noted that as of 2 July 2021 the building height allowances will increase by 1.0m, which will result in the entire development being lower than the permitted building height.
Car parking	<ul style="list-style-type: none"> Concerns that Unit 3 does not provide any on-site visitor car parking and that this would increase the number of cars parked along the Franklin Street verge.
Response	There is no requirement for visitor parking. Visitors will be able to park within Franklin Street and access the dwelling via the pedestrian access way.
Retaining walls	<ul style="list-style-type: none"> Query how the difference in natural ground level between the subject site and adjoining western property would be dealt with where there are no boundary walls or retaining proposed.
Response	Retaining will be provided to address the level difference, wall locations and heights have been indicated on the revised plans.
Visual privacy	<ul style="list-style-type: none"> Concerns that the Unit 3 upper floor bedroom 3 and sitting room windows overlook the adjoining eastern properties outdoor living areas and pools and reduce privacy for these dwellings. Request that these windows be fixed and screened to a height of 1.65 metres above finished floor level. Concerns that the Unit 3 design and setbacks results in significant privacy issues and overlooking into the backyards of the properties to the north on the opposite side of the right of way (laneway). Request that all north facing windows be obscured.
Response	All windows fully comply with the deemed-to-comply requirements for visual privacy.
Bin storage	<ul style="list-style-type: none"> Concerns that the Unit 3 bin storage area is located adjacent to the adjoining eastern properties outdoor living area.
Response	This is a common and acceptable outcome within a residential setting.
ESD	<ul style="list-style-type: none"> Concerns that no consideration has been given to compliance with the Built Form Policy requirements relating to Environmentally Sustainable Design.
Response	An environmental sustainability design assessment has been undertaken for the proposal to ensure the development meets the City's requirements.
Dividing fence	<ul style="list-style-type: none"> Request that the new dividing fence along the eastern lot boundary match the height and colour of the existing Colourbond fence.
Response	Not is not a planning matter and is to be resolved between the property owners.
Dilapidation report	<ul style="list-style-type: none"> Request that the developer pay for and supply the adjoining eastern property owner with a dilapidation report from a company of their choice prior to works commencing, and agree to remedy and damage to this property during construction.
Response	This is considered excessive and would be unusual for a relatively small-scale development with minimal changes to site levels.



CONCLUSION

The proposed development has undergone considerable design change to improve its streetscape interface and reduce impacts to adjacent properties. The revised design is supported by the City's Design Review Panel and will represent a considerable improvement from that currently existing on site. The development will be a welcome addition to the locality, we look forward to working with the City to reach an amicable and timely solution in development approval.

Should you have any question in relation to the details provided in this submission, please contact Steven DePiazzi on [redacted] or [redacted]

Yours sincerely,

Steven DePiazzi | **Senior Urban Planner**
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Summary of Submissions:

The tables below summarise the comments received during the first advertising period of the proposal (22 January 2021 – 5 February 2021), together with Administration’s response to each comment.

Comments Received in Support:	Administration’s Response:
<p><u>Gentrification</u></p> <p>The existing property at No. 14 Franklin Street is an eye sore and redevelopment is welcomed.</p>	<p>Noted.</p>
<p><u>Car Parking</u></p> <p>Support the proposed double garages given that the number of cars parked along Franklin Street is already a concern, especially when there are weddings or funerals at the nearby church.</p>	<p>Noted.</p>

Comments Received in Objection:	Administration’s Response:
<p><u>Lot Boundary Setback</u></p> <ul style="list-style-type: none"> • Impacts of building bulk, overlooking and access to sunlight and ventilation for the adjoining western property as a result of the proposed Unit 1 first floor lot boundary setback departures. • Impacts of building bulk and access to natural sunlight and ventilation for the adjoining eastern properties as a result of the proposed Unit 3 ground floor lot boundary setback departure. 	<p>21.3 percent of the Unit 1 first floor façade facing the western lot boundary is proposed to be glazed to reduce the appearance of blank solid walls and associated building bulk. The recessed section of the first floor wall with a setback of 1.5 metres from the western lot boundary is proposed to be finished using a contrasting darker colour to reduce the appearance of building bulk in line with comments provided by the DRP member.</p> <p>The 2.2 metre deemed-to-comply setback requirement is a result of the proposed maximum wall height of 3.7 metres and the provision of a window to the kitchen.</p> <p>A wall height of 3.5 metres without this window would require a 1.0 metre setback from the eastern lot boundary as per the R Codes deemed-to-comply standard. The kitchen window assists in effectively reducing the bulk and scale of the proposed wall and would not create visual privacy issues as it would be screened by the 1.8 metre high dividing fence.</p> <p>Reducing the wall height by 0.2 metres and removing the kitchen window would result in a lot boundary setback consistent with the deemed-to-comply standard of the R Codes but it would not result in any meaningful reduction in building bulk or impact on the adjoining property to the east.</p> <p>The Unit 3 eastern façade uses articulation, glazing and contrasting colours and materials to provide visual interest and reduce the appearance of building bulk.</p> <p>The proposed development would not result in any departures to the deemed-to-comply standards of the R Codes relating to visual privacy or solar access for adjoining properties.</p>

Summary of Submissions:

Comments Received in Objection:	Administration's Response:
<ul style="list-style-type: none"> The Unit 3 first floor walls would not be setback from the adjoining eastern property 2 metres behind the ground floor building line. 	<p>The requirement for first floor walls to be setback 2 metres behind the ground floor building line only applies to the street setback of the front façade, not the facades that orientate towards side lot boundaries. The Unit 3 first floor setbacks with a minimum setback of 2.0 metres to the eastern lot boundary satisfy the deemed-to-comply provisions of the R Codes relating to lot boundary setbacks.</p>
<p><u>Site Area</u></p> <ul style="list-style-type: none"> The development does not comply with the R Codes Clause 5.1.1 (Site Area) which requires an average lot size of 300 square metres for an R30 site. The proposed three grouped dwelling development would be out of context with existing development along Franklin Street. 	<p>The Western Australian Planning Commission (WAPC) conditionally approved a subdivision application on 11 February 2021 for the subject site. The proposed lots shown on the subject development plans reflect this subdivision approval.</p> <p>Grouped Dwellings are a permitted use within the Residential Zone under the City's Local Planning Scheme No. 2. There are existing grouped dwelling developments and subdivided lots along Franklin Street in a side by side as well as battleaxe configuration. This includes Nos. 6, 6A & 6B, 8 & 8A, 12 & 12A, 13 & 13A, 20, 20A & 20B (with a similar lot configuration to that at No. 14 Franklin Street), and 22A & 22B Franklin Street.</p>
<p><u>Visual Privacy</u></p> <ul style="list-style-type: none"> The Unit 3 first floor bedroom 3 and sitting room windows overlook the two adjoining eastern properties outdoor living areas and pools and reduce privacy for these dwellings. Request that these windows be fixed and screened to a height of 1.65 metres above finished floor level. The Unit 3 design and setbacks result in significant privacy issues and overlooking into the backyards of the properties to the north on the opposite side of the right of way (laneway). Request that all north facing windows be obscured. 	<p>The Unit 3 first floor bedroom 3 window would be setback 4.5 metres from the eastern lot boundary in line with the deemed-to-comply standard of the R Codes relating to visual privacy.</p> <p>The Unit 3 first floor sitting room window would be setback 7.5 metres from the eastern lot boundary, exceeding the 6 metre deemed-to-comply standard in the R Codes.</p> <p>The Unit 3 first floor master bedroom window would be setback 11.6 metres from the rear boundary of the properties on the opposite side of the right of way to the north, exceeding the 4.5 metre deemed-to-comply standard.</p> <p>Notwithstanding that the abovementioned setbacks satisfy the deemed-to-comply standards of the R Codes, Administration communicated the neighbours' requests for these windows to be screened to the applicant. The applicant ultimately declined on the basis that the windows were setback sufficiently from the boundary.</p>
	<p>Where a development satisfies the deemed-to-comply setback provisions of the R Codes relating to visual privacy the City is unable to mandate the provision of a greater setback or screening devices.</p>

Summary of Submissions:

Comments Received in Objection:	Administration's Response:
<p><u>Impact on Franklin Street Streetscape</u></p> <ul style="list-style-type: none"> The proposed garages would dominate the streetscape. The proposed reduced street setback in conjunction with the proposed garage width would be inconsistent with, and dominate, the Franklin Street streetscape. The increased hardstand and reduced green verge area would have an environmental impact through the retention of latent solar heat as well as result in a poor aesthetic outcome. Overshadowing of Franklin Street as a result of the reduced street setback. 	<p>Following the conclusion of the first round of community consultation the applicant submitted amended plans removing Units 1 and 2 garage doors facing Franklin Street. These covered parking spaces (defined as garages under the R Codes) would have the appearance of a carport structure as viewed from Franklin Street and would significantly reduce the appearance of building bulk and would ensure that they do not dominate the streetscape.</p> <p>The proposed parking spaces would not be inconsistent with or have an adverse impact on the immediate streetscape which includes open air car parking spaces in the street setback area and double garage doors such as those on the two adjoining properties to the east at Nos. 12 and 12A Franklin Street.</p> <p>Following the conclusion of the first round of community consultation the applicant submitted amended plans reducing the aggregate width of crossovers to Franklin Street from 8.6 metres to 6.0 metres, being the minimum width permitted under the deemed-to-comply standards of the R Codes. This would reduce the amount of handstand area in the primary street setback and allow for soft landscaping to be provided.</p> <p>Franklin Street being to the south of the proposed development is ideal because it ensures that the adjoining properties to the east and west would not be adversely impacted by overshadowing and remain open to the northern aspect and associated winter sunlight.</p>
<p><u>Open Space</u></p> <ul style="list-style-type: none"> The overall building bulk and number of dwellings proposed would result in an overdevelopment of the site. The reduced open space impacts the amount of landscaping and greenery that is able to be provided on-site. 	<p>The proposed development would be consistent with the building bulk and scale that is permissible for an R30 site capable of accommodating three grouped dwellings and a two storey height limit permitted under the City's Built Form Policy.</p> <p>The development would provide 9.9 percent of the site as deep soil zone and planting areas, and 19.4 percent as canopy coverage at maturity.</p> <p>The development would contribute additional canopy coverage that falls outside of the lot boundaries, in addition to the 19.4 percent canopy coverage at maturity that would be provided on-site. This canopy that falls outside of the site boundaries would equate to 6.0 percent of additional canopy coverage.</p> <p>The landscaping provided by the development would be sufficient to satisfy the local housing objectives of the Built Form Policy and would benefit the locality.</p>

Summary of Submissions:

Comments Received in Objection:	Administration's Response:
<p><u>Building Height</u></p> <p>The proposed building height departures in conjunction with all other departures results in an overdevelopment of the site.</p>	<p>The development did propose departures to the deemed-to-comply provisions of the Built Form Policy relating to building height during the first round of community consultation.</p> <p>Following the conclusion of the first round of community consultation the applicant submitted amended plans which reduced the maximum building height from 7.3 metres to 6.4 metres as viewed from Franklin Street.</p> <p>Council resolved to adopt Amendment 3 to the Built Form Policy at its Ordinary Meeting on 22 June 2021, in anticipation of amendments to the R Codes that took effect on 2 July 2021. These amendments increased the deemed-to-comply building heights by 1 metre for all roof types and the proposed development no longer proposes departures as a result.</p>
<p><u>Visitor Car Parking</u></p> <p>Unit 3 does not provide any on-site visitor car parking. This would increase the number of cars parked along the Franklin Street verge.</p>	<p>The development proposes less than four dwellings and is not required to provide dedicated on-site visitor car parking under the deemed-to-comply provisions of the R Codes. Unit 3 is provided with two on-site car parking spaces which would be sufficient to satisfy the anticipated car parking demand generated by the dwelling.</p>
<p><u>Bin Location</u></p> <p>The Unit 3 bins are located adjacent to the adjoining eastern properties outdoor living area.</p>	<p>The R Codes and Built Form Policy do not seek to control the location of where bins for a dwelling are placed. The applicant has removed the location of the bin placement in amended plans. There is adequate space on the site to place bins for this dwelling. The City's Health Services team would investigate if any complaints were to be received in relation to offensive bin odour.</p>
<p><u>Dividing Fence</u></p> <p>Request that the new dividing fence along the eastern lot boundary match the height and colour of the existing Colourbond fence.</p>	<p>Dividing fences are a civil matter between the two property owners. Administration has relayed the request to the applicant/owner for their information and encouraged them to liaise with adjoining property owners in relation to dividing fences prior to commencement of the development.</p>
<p><u>Dilapidation Report</u></p> <p>Request that the developer pay for and supply the adjoining eastern property owner with a dilapidation report from a company of their choice prior to works commencing, and agree to remedy and damage to this property during construction.</p>	<p>The City would not require developers to obtain dilapidation reports for nearby properties for a development of this scale that is not considered as significant and is not seen to have a likely adverse impact on surrounding structures as per the provisions of the City's Policy No. 7.5.23 – Construction Management Plans.</p>

Summary of Submissions:

Comments Received in Objection:	Administration's Response:
	<p>Administration has relayed the request to the applicant who has advised that the request for dilapidation reports to be prepared is considered excessive and would be unusual for a relatively small-scale development with minimal changes to site levels.</p> <p>The development does not propose significant excavation or a basement level and the condition of adjacent properties is unlikely to be adversely impacted by building works.</p> <p>If any concerns were raised by surrounding residents during the construction phase of the development the City would investigate these accordingly. It would also be available to the adjoining property owners to seek their own dilapidation report prior to the commencement of the development.</p>
<p><u>Retaining Walls</u></p> <p>Query how the difference in natural ground level between the subject site and adjoining western property would be dealt with where there are no boundary walls or retaining proposed.</p>	<p>The applicant has confirmed that the existing retaining wall along the western lot boundary of the subject site is proposed to be retained and strengthened if required by the building certifier. The demolition plan included in Attachment 2 does not indicate that the existing retaining wall is proposed to be removed.</p>
<p><u>Environmentally Sustainable Design</u></p> <ul style="list-style-type: none"> No consideration has been given to compliance with the Built Form Policy requirements relating to Environmentally Sustainable Design. 	<p>The applicant has submitted a lifecycle assessment report which is included in Attachment 8. The reports demonstrate that the development would incorporate sustainability initiatives including a solar water heater, LED lights, water efficient appliances and fixtures, water wise native plants and a rooftop solar PV array. The proposed sustainability initiatives would effectively satisfy the local housing objectives of the Built Form Policy relating to environmentally sustainable design.</p>

Note: Submissions are considered and assessed by issue rather than by individual submitter.

The tables below summarise the comments received during the second advertising period of the proposal (9 June 2021 – 16 June 2021), together with the Administration's response to each comment.

Comments Received in Support:	Administration's Response:
<p><u>Gentrification</u></p> <p>Reiterate support for the removal of the existing dilapidated building and replacement with new dwellings that will complement the surrounding suburb.</p>	<p>Noted.</p>

Summary of Submissions:

Comments Received in Support:	Administration's Response:
<p><u>Car Parking</u></p> <ul style="list-style-type: none"> • Reiterate support for the two on-site car parking spaces being provided per dwelling. • Supportive of the amended open carport design for Units 1 and 2. 	<p>Noted.</p>
<p><u>Amendments to Unit 1 and 2 Front Façade Designs</u></p> <p>Supportive of the proposed changes to the design of Units 1 and 2 fronting Franklin Street.</p>	<p>Noted.</p>
<p><u>Streetscape</u></p> <ul style="list-style-type: none"> • The development will be a positive development for the street and will be a good example of maintaining amenity of the surrounding houses and imposing minimum impact on the streetscape. • Supportive of the modern but understated aesthetic of the units. • Supportive of the use of recycled brickwork in the design. 	<p>Noted.</p>
<p><u>Infill Development</u></p> <p>Supportive of the development and its contribution to urban infill in the City of Vincent.</p>	<p>Noted.</p>
Comments Received in Objection:	Administration's Response:
<p><u>Lot Boundary Setback</u></p> <ul style="list-style-type: none"> • Reiterated concerns in relation to the impacts of building bulk, overlooking and access to sunlight and ventilation for the adjoining western property as a result of the proposed Unit 1 first floor lot boundary setback departures. • Reiterated concerns in relation to the impacts of building bulk and access to natural sunlight and ventilation for the adjoining eastern properties as a result of the proposed Unit 3 ground floor lot boundary setback departure. 	<p>Responded to in table above relating to the first round of community consultation.</p>
<p><u>Site Area</u></p> <p>Reiterated concerns that the development does not comply with the R Codes Clause 5.1.1 (Site Area) which requires an average lot size of 300 square metres for an R30 site.</p>	<p>Responded to in table above relating to the first round of community consultation.</p>

Summary of Submissions:

Comments Received in Objection:	Administration's Response:
<p><u>Visual Privacy</u></p> <p>Reiterated concerns that the Unit 3 first floor bedroom 3 and sitting room windows overlook two the adjoining eastern properties outdoor living areas and pools and reduce privacy for these dwellings. Maintained request that these windows be fixed and screened to a height of 1.65 metres above finished floor level.</p>	<p>Responded to in table above relating to the first round of community consultation.</p>
<p><u>Impact on Franklin Street Streetscape</u></p> <p>Reiterated concerns in relation to overshadowing of Franklin Street as a result of the reduced street setback.</p>	<p>Responded to in table above relating to the first round of community consultation.</p>
<p><u>Open Space</u></p> <p>Reiterated concerns that the overall building bulk and number of dwellings proposed would result in an overdevelopment of the site.</p>	<p>Responded to in table above relating to the first round of community consultation.</p>
<p><u>Retaining Walls</u></p> <p>Reiterate concerns in relation to how the difference in natural ground level between the subject site and adjoining western property would be dealt with where there are no boundary walls or retaining proposed.</p>	<p>Responded to in table above relating to the first round of community consultation.</p>
Comments Neither in Support or Objection but Raising Concerns:	Administration's Response:
<p><u>Removal of Existing Tree On-Site</u></p> <p>There is a large fruit bearing pear tree in the south western corner of the subject site which is not depicted for retention on the proposed plans. Suggested that the pear tree be retained because it would be a visual asset to the new development.</p>	<p>The tree is not included on the City's Trees of Significance Inventory and does not require development approval to be removed under the City's LPS2.</p> <p>The development would provide 9.9 percent of the site as deep soil zone and planting areas, and 19.4 percent as canopy coverage at maturity which would be sufficient to satisfy the local housing objectives of the Built Form Policy and would benefit the locality.</p>

Summary of Submissions:

The tables below summarise the comments received during the first advertising period of the proposal (22 January 2021 - 5 February 2021), together with the Applicant's response to each comment.

Comments Received in Support:	Applicant's Response:
<u>Gentrification</u> <ul style="list-style-type: none"> The existing property at No. 14 Franklin Street is an eye sore and redevelopment is welcomed. 	No response provided.
<u>Car Parking</u> <ul style="list-style-type: none"> Support the proposed double garages given that the number of cars parked along Franklin Street is already a concern, especially when there are weddings or funerals at the nearby church. 	No response provided.
Comments Received in Objection:	Applicant's Response:
<u>Lot Boundary Setback</u> <ul style="list-style-type: none"> Concerns in relation to the impacts of building bulk, overlooking and access to sunlight and ventilation for the adjoining western property as a result of the proposed Unit 1 upper floor lot boundary setback departures. Concerns in relation to the impacts of building bulk and access to natural sunlight and ventilation for the adjoining eastern properties as a result of the proposed Unit 3 ground floor lot boundary setback departure. Concerns that the Unit 3 upper floor walls would not be setback from the adjoining eastern property 2 metres behind the ground floor building line. 	<p>The development will have minimal impact on sunlight access given its southern boundary is to Franklin Street. The setbacks provided are consistent with that typically provided within an R30 area and will be sufficient to allow for daylight and ventilation between buildings. Impacts of building bulk have been addressed through building articulation and reduced building heights.</p> <p>The unit 3 ground floor lot boundary setback of 1.0m is sufficient to mitigate impacts at the ground level and will not have any significant impacts on the adjacent property; visual privacy is addressed through the dividing fence. Maintaining an upper floor setback of 2.0m behind the ground floor as the unit 3 presents to a right of way with no existing established streetscape. Generally a nil setback to the ground floor is considered appropriate when fronting a right of way to improve effective use of space on a shallow lot and improve interaction and surveillance with the right of way.</p>
<u>Site Area</u> <ul style="list-style-type: none"> Concerns that the development does not comply with the R Codes Clause 5.1.1 (Site Area) which requires an average lot size of 300 square metres for an R30 site. Concerns that the proposed three grouped dwelling development would be out of context with existing development along Franklin Street. 	The streetscape interaction is two side by side dwellings, which matches numerous other infill development examples along Franklin Street. The third dwelling will only be visible from the right of way and therefore will not impact on streetscape character or amenity. The site areas have been approved by the WAPC.
<u>Visual Privacy</u> <ul style="list-style-type: none"> Concerns that the Unit 3 upper floor bedroom 3 and sitting room windows overlook the adjoining eastern properties outdoor living areas 	All windows fully comply with the deemed-to-comply requirements for visual privacy.

Summary of Submissions:

Comments Received in Objection:	Applicant's Response:
<p>and pools and reduce privacy for these dwellings. Request that these windows be fixed and screened to a height of 1.65 metres above finished floor level.</p> <ul style="list-style-type: none"> Concerns that the Unit 3 design and setbacks results in significant privacy issues and overlooking into the backyards of the properties to the north on the opposite side of the right of way (laneway). Request that all north facing windows be obscured. 	
<p><u>Impact on Franklin Street Streetscape</u></p> <ul style="list-style-type: none"> Concerns that the proposed garages would dominate the streetscape. Concerns that the increased hardstand and reduced green verge area would have an environmental impact through the retention of latent solar heat as well as result in a poor aesthetic outcome. Concerns that the proposed reduced street setback in conjunction with the proposed garage width would be inconsistent with, and dominate, the Franklin Street streetscape. Concerns in relation to overshadowing of Franklin Street as a result of the reduced street setback. 	<p>The garages have been removed and replaced with open car bays and improved ground floor interaction. The design has been amended to increase landscaping within the street setback area as far as practical (accounting for vehicle access requirements), and the street tree is to be retained. Street setbacks have also been increased and are consistent with adjacent properties.</p>
<p><u>Open Space</u></p> <ul style="list-style-type: none"> Concerns that the overall building bulk and number of dwellings proposed would result in an overdevelopment of the site. Concerns that the reduced open space impacts the amount of landscaping and greenery that is able to be provided on-site. 	<p>The building footprint has been reduced and all dwellings now meet deemed-to-comply requirements for open space. Across all three dwellings the net open space is 5% greater than that required. Five trees have been incorporated into the development, occupying locations where there is sufficient space to allow for healthy growth to maturity.</p>
<p><u>Building Height</u></p> <ul style="list-style-type: none"> Concerns that the proposed building height departures in conjunction with all other departures results in an overdevelopment of the site. 	<p>The roof form and building height of the development has been amended to reduce building heights. The greatest variation is not 0.3m and is located centrally on site. Majority of the development now complies with building height requirements, and it is noted that as of 2 July 2021 the building height allowances will increase by 1.0m, which will result in the entire development being lower than the permitted building height.</p>
<p><u>Visitor Car Parking</u></p> <ul style="list-style-type: none"> Concerns that Unit 3 does not provide any on-site visitor car parking and that this would increase the number of cars parked along the Franklin Street verge. 	<p>There is no requirement for visitor parking. Visitors will be able to park within Franklin Street and access the dwelling via the pedestrian access way.</p>
<p><u>Bin Storage</u></p> <ul style="list-style-type: none"> Concerns that the Unit 3 bin storage area is located adjacent to the 	<p>This is a common and acceptable outcome within a residential setting.</p>

Summary of Submissions:

Comments Received in Objection:	Applicant's Response:
adjoining eastern properties outdoor living area.	
<u>Dividing Fence</u>	
<ul style="list-style-type: none"> Request that the new dividing fence along the eastern lot boundary match the height and colour of the existing Colourbond fence. 	This is not a planning matter and is to be resolved between the property owners.
<u>Dilapidation Report</u>	
<ul style="list-style-type: none"> Request that the developer pay for and supply the adjoining eastern property owner with a dilapidation report from a company of their choice prior to works commencing, and agree to remedy and damage to this property during construction. 	This is considered excessive and would be unusual for a relatively small-scale development with minimal changes to site levels.
<u>Retaining Walls</u>	
<ul style="list-style-type: none"> Query how the difference in natural ground level between the subject site and adjoining western property would be dealt with where there are no boundary walls or retaining proposed. 	Retaining will be provided to address the level difference, wall locations and heights have been indicated on the revised plans.
<u>Environmentally Sustainable Design</u>	
<ul style="list-style-type: none"> Concerns that no consideration has been given to compliance with the Built Form Policy requirements relating to Environmentally Sustainable Design. 	An environmental sustainability design assessment has been undertaken for the proposal to ensure the development meets the City's requirements.

Note: Submissions are considered and assessed by issue rather than by individual submitter.

Summary of Submissions:

The tables below summarise the comments received during the second advertising period of the proposal (9 June 2021 – 16 June 2021), together with the Applicant’s response to each comment.

Comments Received in Support:	Applicant’s Response:
<p><u>Gentrification</u></p> <ul style="list-style-type: none"> Reiterate support for the removal of the existing dilapidated building and replacement with new dwellings that will complement the surrounding suburb. 	No response provided.
<p><u>Car Parking</u></p> <ul style="list-style-type: none"> Reiterate support for the two on-site car parking spaces being provided per dwelling. Supportive of the amended open carport design for Units 1 and 2. 	No response provided.
<p><u>Amendments to Unit 1 and 2 Front Façade Designs</u></p> <ul style="list-style-type: none"> Supportive of the proposed changes to the design of Units 1 and 2 fronting Franklin Street. 	No response provided.
<p><u>Streetscape</u></p> <ul style="list-style-type: none"> The development will be a positive development for the street and will be a good example of maintaining amenity of the surrounding houses and imposing minimum impact on the streetscape. Supportive of the modern but understated aesthetic of the units. Supportive of the use of recycled brickwork in the design. 	No response provided.
<p><u>Infill Development</u></p> <ul style="list-style-type: none"> Supportive of the development and its contribution to urban infill in the City of Vincent. 	No response provided.
Comments Received in Objection:	Applicant’s Response:
<p><u>Lot Boundary Setback</u></p> <ul style="list-style-type: none"> Reiterated concerns in relation to the impacts of building bulk, overlooking and access to sunlight and ventilation for the adjoining western property as a result of the proposed Unit 1 upper floor lot boundary setback departures. Reiterated concerns in relation to the impacts of building bulk and access to natural sunlight and ventilation for the adjoining eastern properties as a result of the proposed Unit 3 ground floor lot boundary setback departure. 	Refer to previous response.

Summary of Submissions:

Comments Received in Objection:	Applicant's Response:
<p><u>Site Area</u></p> <ul style="list-style-type: none"> Reiterated concerns that the development does not comply with the R Codes Clause 5.1.1 (Site Area) which requires an average lot size of 300 square metres for an R30 site. 	<p>Refer to previous response.</p>
<p><u>Visual Privacy</u></p> <ul style="list-style-type: none"> Reiterated concerns that the Unit 3 upper floor bedroom 3 and sitting room windows overlook the adjoining eastern properties outdoor living areas and pools and reduce privacy for these dwellings. Maintained request that these windows be fixed and screened to a height of 1.65 metres above finished floor level. 	<p>Refer to previous response.</p>
<p><u>Impact on Franklin Street Streetscape</u></p> <ul style="list-style-type: none"> Reiterated concerns in relation to overshadowing of Franklin Street as a result of the reduced street setback. 	<p>Refer to previous response.</p>
<p><u>Open Space</u></p> <ul style="list-style-type: none"> Reiterated concerns that the overall building bulk and number of dwellings proposed would result in an overdevelopment of the site. 	<p>Refer to previous response.</p>
<p><u>Retaining Walls</u></p> <ul style="list-style-type: none"> Reiterate concerns in relation to how the difference in natural ground level between the subject site and adjoining western property would be dealt with where there are no boundary walls or retaining proposed. 	<p>The intention is to keep the existing retaining wall on the west boundary, strengthen it (if required by engineer), render it, and build the new carport wall on top of it to minimize impact to that neighbour.</p>
Comments Neither in Support or Objection but Raising Concerns:	Applicant's Response:
<p><u>Removal of Existing Tree On-Site</u></p> <ul style="list-style-type: none"> There is a large fruit bearing pear tree in the south western corner of the subject site which is not depicted for retention on the proposed plans. Suggested that the pear tree be retained because it would be a visual asset to the new development. 	<p>Retention of the pear tree was investigated and it was not considered viable to retain the tree. The works proposed for the vehicular access conflict with the tree location, leaving insufficient space to accommodate its retention. Even in the event modifications were made to avoid the base of the tree, the extent of works within the immediate vicinity would severely compromise its health and likely result in failure.</p>

2020

Early Design LCA Report

LOT 119 #14 (UNIT 1, 2, & 3) FRANKLIN ST, LEEDERVILLE
AUTHOR/S: JAY WHITEHEAD AND DR KRISHNA LAWANIA

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Report No.
2289

Energy efficiency

1/14 Franklin St, Leederville

19/12/2020

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Energy Assessment Report

1. Purpose

The report details an assessment of the building referenced below (the Proposed Building) to verify its compliance with Performance Requirement P2.6.1 of the National Construction Code (NCC).

Address:	1/14 Franklin St, Leederville
Client reference:	Flynn

This report also provides calculations and information relevant to Performance Requirement P2.6.2 and WA Performance Provisions WA2.2.

2. Method to assess compliance with P2.6.1

This assessment uses the comparative analysis described in Step 1 and 2 below to assess whether the Proposed Building has a calculated annual energy consumption not more than that for a Comparison Building built using DtS Provisions.

Following this path, it is possible to determine whether the Proposed Building provides the same level of energy efficiency as that resulting from the use of the DtS Provisions. If it is found that the annual energy consumption of the Proposed Building is equal to or better than the DtS Provision, it can be concluded that the Proposed Building satisfies the NCC Performance Requirements pursuant to Part 1.05(d) of the NCC (comparison with DtS).

Step 1

The Comparison Building, which complies with the DtS Provisions 3.12.1 to 3.12.4, is modelled using NatHERS software to calculate the annual energy consumption. This becomes the acceptance criteria that the Proposed Building must meet.

Step 2

The annual energy consumption for the Proposed Building is then calculated using the same software and settings. The annual energy consumption of the Proposed Building cannot be greater than the acceptance criteria outlined above.

Box 1: What is NaTHERS software and why is it used for this assessment?

NaTHERS software is nationally accepted software for determining if a building complies with the NCC's DtS provisions using a star rating. The software models the expected indoor temperatures based on data specific to the dwelling. The software will then model how much cooling or heating occupants may need to stay comfortable during a typical year. The results are provided in the form of energy consumption per unit area megajoules per meter squared (MJ/m²) and this is converted into a star rating. For this assessment, we are using the energy consumption results only.

J2

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3. Assessment results

The annual energy consumption was calculated as described above and the Proposed Building's calculated annual energy consumption was equal to or less than that of the Comparison Building.

Annual energy consumption	Proposed Building	Comparison Building
Total (MJ/m ²):	106.9	111.6
Heating adjusted total (MJ/m ²):	80.6	83.6
Cooling adjusted total (MJ/m ²):	26.3	28.0

4. Assessment details

The Comparison and Proposed buildings shared the following assessment characteristics. However, as noted, the Comparison Building is required to comply with the DtS and this may have led to some of the building elements being modified accordingly (eg. cavity insulation).

Conditioned area (m ²):	162.9
Unconditioned area (m ²):	13.2
Garage (m ²):	32.7
Climate zone:	13 Perth Airport
Exposure:	suburban
Software used:	FR5 Ver:5.2.11 (3.13) Engine Ver:3.13
Zoning:	NatHERS Technical note 1.2.
Solar absorptance of ext. surfaces:	Medium or as specified in the drawings.
Shading:	As per attached plans.
Orientation:	As per attached plans.
Floor plan and location of glazing:	As per attached plans.
Ceiling height:	As per attached plans.
Number of storeys:	As per attached plans.
Roof pitch, cladding and roof lights:	As per attached plans.
External walls:	As per attached plans.
Separating walls:	As per attached plans.
Intermediate floors:	As per attached plans.
External non-glazed doors:	As per attached plans.
Floor and floor coverings:	As per attached plans.
Internal heat gains:	As per NatHERS Software Protocol.

Refer to the attached NCC glazing calculator in Appendix 3 for evidence of the Comparison Building's compliance with the relevant DtS Provisions.

5. Assessor details

This annual energy consumption was calculated by an assessor who completed training in the use of NatHERS software. The referenced software was running in regulation mode or equivalent in accordance with NatHERS Principles for Ratings in Regulation Mode.

Assessor:	Jay Whitehead
Relevant qualifications:	Graduate Diploma in Building Surveying Associate Degree in Building Surveying Certificate IV in NatHERS Assessment

6. Applicable DtS Provisions

The Proposed Building will comply with the following NCC Part 3.12 DtS Provisions where applicable.

3.12.5.1 to 3.12.5.4 for insulation of services
3.12.5.5 for artificial lighting
3.12.5.6 for heated water supply systems
3.12.5.7 for swimming pool heating and pumping
3.12.5.8 for spa pool heating and pumping
WA 2.3.1 for water use efficiency
WA 2.3.2 for swimming pool covers and blankets
WA 2.3.3 for heated water use efficiency

7. Assumptions and limitations

The report's conclusions and calculations are based on the attached drawings, and the application of the Applicable DtS Provisions in section 6.

The energy values quoted in this report are for compliance purposes only and are not a prediction of actual energy use.


Changes to the drawings or assumptions could affect the assessment.

8. Additional comments

Nil additional comments.

9. Conclusion

The Proposed Building satisfies performance requirements P2.6.1, P2.6.2 and WA Performance Provisions WA2.2.

Authorised by:	Jay Whitehead, Registered Building Surveyor
Company:	Sirap Consulting Pty Ltd t/a J2 Building Consultants Registered Building Surveying Contractor (Reg. No. 2015)
Contact details:	jay@j2bc.com.au 0407 864 982
Date:	19/12/2020
Signature:	

J2

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Appendix 1: Building Specifications

Full details of the building specifications can be found in the attached plans with further information and/or any adjustments noted in the tables below.

External walls

As per attached plans.

Internal walls:

As per attached plans.

Roof and ceilings:

R4.1 bulk insulation to:

- to all house and garage ceilings
- recessed ceilings
- bulkheads
- dropped ceilings to robes

Nil insulation to ceilings under suspended slabs.

Light fittings will form an effective seal with the ceiling, be installed in accordance with manufacturer's requirements and not reduce the insulation coverage.

Self-closing dampers to all exhaust fans.

Floors:

As per attached plans.

Glazing:

Single clear glass UNO on plans

Other:

NA.

Appendix 2: Artificial lighting calculations

The lamp power density or illumination power density of artificial lighting, excluding heaters that emit light, must not exceed the allowance of:

- (i) 5 W/m² in a Class 1 building; and
- (ii) 4 W/m² on a verandah, balcony or the like attached to a Class 1 building; and
- (iii) 3 W/m² in a Class 10a building associated with a Class 1 building.

The artificial lighting density is calculated below and is within allowances.

Building type	Area (m ²)	Allowance (W)	Actual (W)	Pass
Class 1 buildings	212	1060	570	✓
Verandah, balcony etc.	18	72	30	✓
Class 10a buildings	36	108	30	✓

Perimeter lighting covered by 3.12.5.5(d) will be controlled by a daylight sensor or have an average light source efficacy of not less than 40 Lumens/W.

Appendix 3: Worksheets

Attachment A: comparison building glazing and shading.

printed 19/12/2020

NCC VOLUME TWO GLAZING CALCULATOR (first issued with NCC 2014) ©

For compliance purposes only - comparison building glazing. Climate zone **5**

FLOOR WEIGHTED CONSTANTS C_u 13.464 C_{SHGC} 0.122

CONSTANT REDUCED BY **15%**

ADJUSTED CONSTANT 0.104

ALLOWANCES C_u (only) 13.5 C_{SHGC} x Area 10.7

Floor Construction Area **103m²**

Direct contact

Air Movement Suspended Wall insulation option chosen for 3.12.1.4 **Table 3.12.1.3b Climate zone 5 Option (b)(ii)**

Area of storey **103m²**

Area of glazing **30.7m²** (30% of area of storey)

Number of rows for table below **6** (as currently displayed)

GLAZING ELEMENTS, ORIENTATION SECTOR, SIZE and PERFORMANCE CHARACTERISTICS										SHADING		CALCULATION DATA		CALCULATED OUTCOMES - OK (if inputs are valid)				
Glazing element		Orientation		Size			Performance		P&H or device		Exposure		Size		Conductance - PASSED		Solar heat gain - PASSED	
ID	Description (optional)	Facing sector	Height (m)	Width (m)	Area (m ²)	Total System U-Value (AFRC)	Total System SHGC (AFRC)	P (m)	H (m)	P/H	Es	Area used (m ²)	U x area / winter access	Element share of % of allowance used	SHGC x Es x area	Element share of % of allowance used		
1		W	2.15	1.51		3.60	0.37	0.65	2.66	0.12	1.08	3.25	1.42	11% of 100%	1.3	12% of 98%		
2		W	1.20	1.51		3.60	0.37				1.30	1.82	0.80	6% of 100%	0.9	8% of 98%		
3		W	2.15	1.51		3.60	0.37				1.30	3.25	1.42	11% of 100%	1.6	15% of 98%		
4		W	2.15	2.81		3.60	0.37				1.30	6.04	2.65	20% of 100%	2.9	28% of 98%		
5		W	2.15	2.81		3.60	0.37				1.30	6.04	2.65	20% of 100%	2.9	28% of 98%		
6		N	2.15	4.82		3.60	0.37	3.00	2.40		1.25	10.35	4.54	34% of 100%	0.9	9% of 98%		

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Attachment A: comparison building glazing and shading.

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For compliance purposes only - comparison building glazing. Climate zone **5**

CONSTANTS C_u 12.118 C_{SHGC} 0.110

CONSTANT REDUCED BY **15%**

ADJUSTED CONSTANT 0.094

ALLOWANCES C_u (only) 12.1 C_{SHGC} x Area 10.2

Floor Construction Area **109m²**

Direct contact

Air Movement Suspended Wall insulation option chosen for 3.12.1.4 **Table 3.12.1.3b Climate zone 5 Option (b)(ii)**

Area of storey **109m²**

Area of glazing **19.4m²** (18% of area of storey)

Number of rows for table below **7** (as currently displayed)

GLAZING ELEMENTS, ORIENTATION SECTOR, SIZE and PERFORMANCE CHARACTERISTICS										SHADING		CALCULATION DATA		CALCULATED OUTCOMES - OK (if inputs are valid)				
Glazing element		Orientation		Size			Performance		P&H or device		Exposure		Size		Conductance - PASSED		Solar heat gain - PASSED	
ID	Description (optional)	Facing sector	Height (m)	Width (m)	Area (m ²)	Total System U-Value (AFRC)	Total System SHGC (AFRC)	P (m)	H (m)	P/H	Es	Area used (m ²)	U x area / winter access	Element share of % of allowance used	SHGC x Es x area	Element share of % of allowance used		
1		S	0.51	2.07		5.50	0.50				0.68	1.06	0.65	5% of 98%	0.4	4% of 87%		
2		W	0.52	0.53		5.50	0.50				1.30	0.27	0.17	1% of 98%	0.2	2% of 87%		
3		S	2.41	3.01		5.50	0.50				0.68	7.25	4.44	37% of 98%	2.5	28% of 87%		
4		W	1.20	0.90		5.50	0.50				1.30	1.08	0.66	6% of 98%	0.7	8% of 87%		
5		W	1.81	2.81		5.50	0.50				1.30	5.07	3.11	26% of 98%	3.3	37% of 87%		
6		N	1.55	1.51		5.50	0.50				0.82	2.34	1.43	12% of 98%	1.0	11% of 87%		
7		N	1.55	1.51		5.50	0.50				0.82	2.34	1.43	12% of 98%	1.0	11% of 87%		

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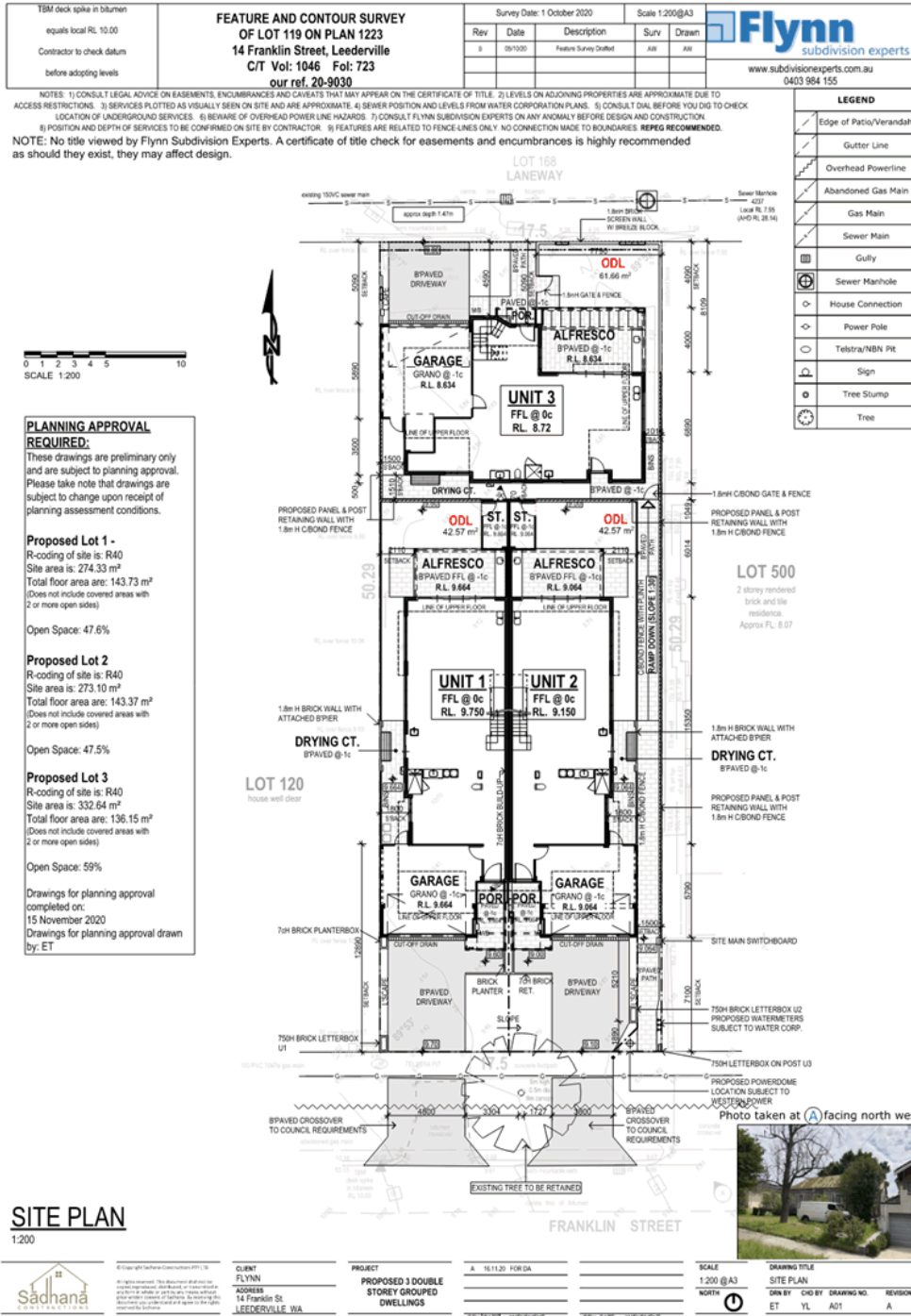
page 1 of 1



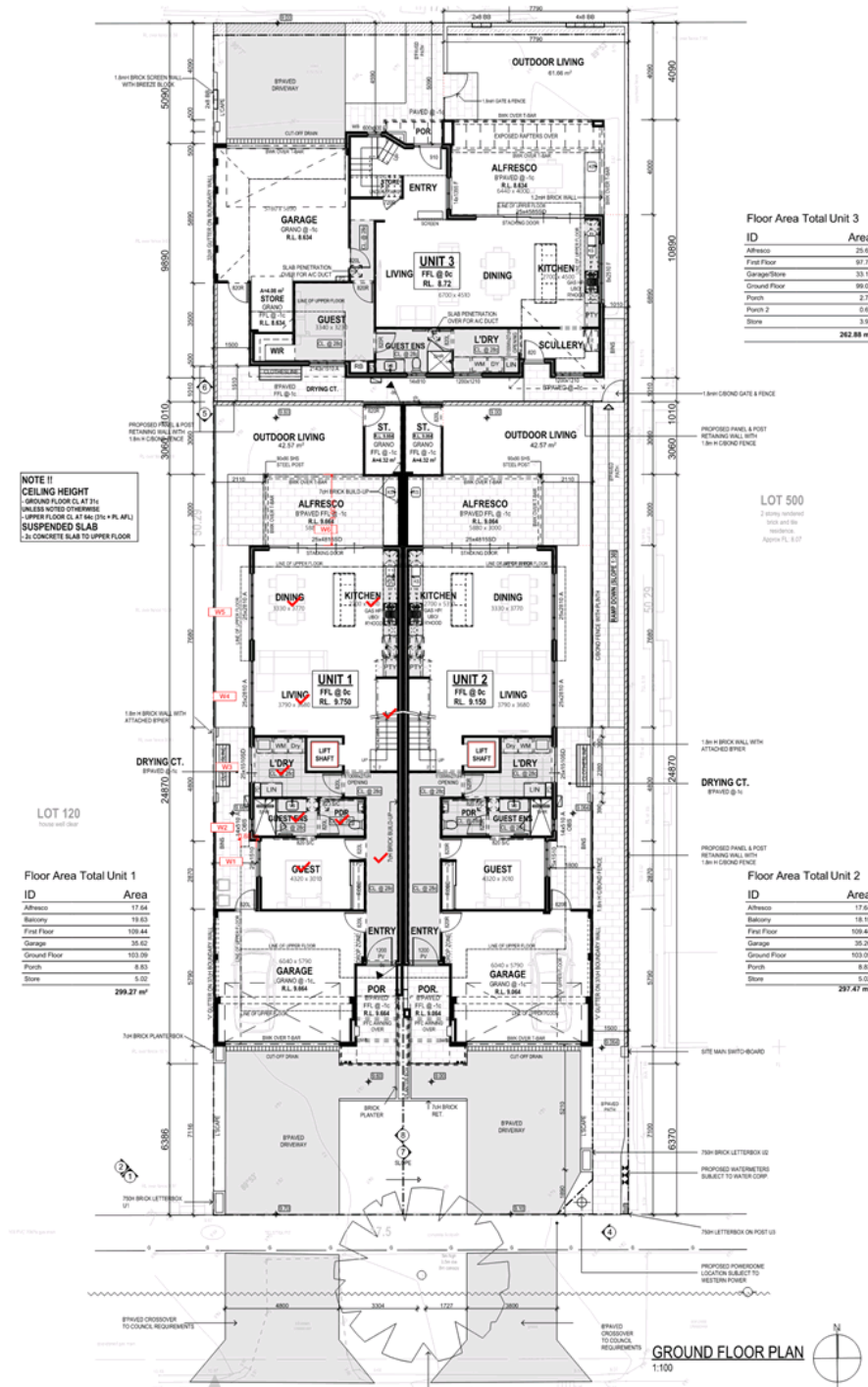
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Appendix 4: Plans



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DATE	10/07/2021	
BY	JACKSON	
CHECKED BY	JACKSON	
PROJECT	1000 AND LESS RESIDENTIAL	
SCALE	AS SHOWN	
TITLE	GROUND FLOOR PLAN	
REVISIONS		
NO.	DATE	DESCRIPTION
1	10/07/2021	ISSUED FOR PERMIT



Report No.
2289

Energy efficiency

2/14 Franklin St, Leederville

19/12/2020

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Energy Assessment Report

1. Purpose

The report details an assessment of the building referenced below (the Proposed Building) to verify its compliance with Performance Requirement P2.6.1 of the National Construction Code (NCC).

Address:	2/14 Franklin St, Leederville
Client reference:	Flynn

This report also provides calculations and information relevant to Performance Requirement P2.6.2 and WA Performance Provisions WA2.2.

2. Method to assess compliance with P2.6.1

This assessment uses the comparative analysis described in Step 1 and 2 below to assess whether the Proposed Building has a calculated annual energy consumption not more than that for a Comparison Building built using DtS Provisions.

Following this path, it is possible to determine whether the Proposed Building provides the same level of energy efficiency as that resulting from the use of the DtS Provisions. If it is found that the annual energy consumption of the Proposed Building is equal to or better than the DtS Provision, it can be concluded that the Proposed Building satisfies the NCC Performance Requirements pursuant to Part 1.05(d) of the NCC (comparison with DtS).

Step 1

The Comparison Building, which complies with the DtS Provisions 3.12.1 to 3.12.4, is modelled using NatHERS software to calculate the annual energy consumption. This becomes the acceptance criteria that the Proposed Building must meet.

Step 2

The annual energy consumption for the Proposed Building is then calculated using the same software and settings. The annual energy consumption of the Proposed Building cannot be greater than the acceptance criteria outlined above.

Box 1: What is NaTHERS software and why is it used for this assessment?

NaTHERS software is nationally accepted software for determining if a building complies with the NCC's DtS provisions using a star rating. The software models the expected indoor temperatures based on data specific to the dwelling. The software will then model how much cooling or heating occupants may need to stay comfortable during a typical year. The results are provided in the form of energy consumption per unit area megajoules per meter squared (MJ/m²) and this is converted into a star rating. For this assessment, we are using the energy consumption results only.

3. Assessment results

The annual energy consumption was calculated as described above and the Proposed Building's calculated annual energy consumption was equal to or less than that of the Comparison Building.

Annual energy consumption	Proposed Building	Comparison Building
Total (MJ/m ²):	95.7	100.8
Heating adjusted total (MJ/m ²):	69.9	74.0
Cooling adjusted total (MJ/m ²):	25.8	26.8

4. Assessment details

The Comparison and Proposed buildings shared the following assessment characteristics. However, as noted, the Comparison Building is required to comply with the DtS and this may have led to some of the building elements being modified accordingly (eg. cavity insulation).

Conditioned area (m ²):	162.9
Unconditioned area (m ²):	13.2
Garage (m ²):	32.7
Climate zone:	13 Perth Airport
Exposure:	suburban
Software used:	FR5 Ver:5.2.11 (3.13) Engine Ver:3.13
Zoning:	NatHERS Technical note 1.2.
Solar absorptance of ext. surfaces:	Medium or as specified in the drawings.
Shading:	As per attached plans.
Orientation:	As per attached plans.
Floor plan and location of glazing:	As per attached plans.
Ceiling height:	As per attached plans.
Number of storeys:	As per attached plans.
Roof pitch, cladding and roof lights:	As per attached plans.
External walls:	As per attached plans.
Separating walls:	As per attached plans.
Intermediate floors:	As per attached plans.
External non-glazed doors:	As per attached plans.
Floor and floor coverings:	As per attached plans.
Internal heat gains:	As per NatHERS Software Protocol.

Refer to the attached NCC glazing calculator in Appendix 3 for evidence of the Comparison Building's compliance with the relevant DtS Provisions.

5. Assessor details

This annual energy consumption was calculated by an assessor who completed training in the use of NatHERS software. The referenced software was running in regulation mode or equivalent in accordance with NatHERS Principles for Ratings in Regulation Mode.

Assessor:	Jay Whitehead
Relevant qualifications:	Graduate Diploma in Building Surveying Associate Degree in Building Surveying Certificate IV in NatHERS Assessment

6. Applicable DtS Provisions

The Proposed Building will comply with the following NCC Part 3.12 DtS Provisions where applicable.

3.12.5.1 to 3.12.5.4 for insulation of services
3.12.5.5 for artificial lighting
3.12.5.6 for heated water supply systems
3.12.5.7 for swimming pool heating and pumping
3.12.5.8 for spa pool heating and pumping
WA 2.3.1 for water use efficiency
WA 2.3.2 for swimming pool covers and blankets
WA 2.3.3 for heated water use efficiency

7. Assumptions and limitations

The report's conclusions and calculations are based on the attached drawings, and the application of the Applicable DtS Provisions in section 6.

The energy values quoted in this report are for compliance purposes only and are not a prediction of actual energy use.


Changes to the drawings or assumptions could affect the assessment.

8. Additional comments

Nil additional comments.

9. Conclusion

The Proposed Building satisfies performance requirements P2.6.1, P2.6.2 and WA Performance Provisions WA2.2.

Authorised by:	Jay Whitehead, Registered Building Surveyor
Company:	Sirap Consulting Pty Ltd t/a J2 Building Consultants Registered Building Surveying Contractor (Reg. No. 2015)
Contact details:	jay@j2bc.com.au 0407 864 982
Date:	19/12/2020
Signature:	

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Appendix 1: Building Specifications

Full details of the building specifications can be found in the attached plans with further information and/or any adjustments noted in the tables below.

External walls

As per attached plans.

Internal walls:

As per attached plans.

Roof and ceilings:

R4.1 bulk insulation to:

- to all house and garage ceilings
- recessed ceilings
- bulkheads
- dropped ceilings to robes

Nil insulation to ceilings under suspended slabs.

Light fittings will form an effective seal with the ceiling, be installed in accordance with manufacturer's requirements and not reduce the insulation coverage.

Self-closing dampers to all exhaust fans.

Floors:

As per attached plans.

Glazing:

Single clear glass UNO on plans

Other:

NA.

Appendix 2: Artificial lighting calculations

The lamp power density or illumination power density of artificial lighting, excluding heaters that emit light, must not exceed the allowance of:

- (i) 5 W/m² in a Class 1 building; and
- (ii) 4 W/m² on a verandah, balcony or the like attached to a Class 1 building; and
- (iii) 3 W/m² in a Class 10a building associated with a Class 1 building.

The artificial lighting density is calculated below and is within allowances.

Building type	Area (m ²)	Allowance (W)	Actual (W)	Pass
Class 1 buildings	212	1060	570	✓
Verandah, balcony etc.	18	72	30	✓
Class 10a buildings	36	108	30	✓

Perimeter lighting covered by 3.12.5.5(d) will be controlled by a daylight sensor or have an average light source efficacy of not less than 40 Lumens/W.

Appendix 3: Worksheets

Attachment A: comparison building glazing and shading.

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NCC VOLUME TWO GLAZING CALCULATOR (first issued with NCC 2014) ©

For compliance purposes only - comparison building glazing.

Climate zone: **5**

FLOOR WEIGHTED CONSTANTS: C_{u1} 13.464, C_{SHGC} 0.122

CONSTANT REDUCED BY: **15%**

ADJUSTED CONSTANT: 0.104

ALLOWANCES: C_{u1} (only) 13.5, $C_{SHGC} \times \text{Area}$ 10.7

Floor Construction Area: **1** Direct contact **103m²**

Air Movement: **Std** Suspended

Wall insulation option chosen for 3.12.1.4: **Table 3.12.1.3b Climate zone 5 Option (b)(ii)**

Area of storey: **103m²**

Area of glazing: **30.7m²** (30% of area of storey)

Number of rows for table below: **6** (as currently displayed)

GLAZING ELEMENTS, ORIENTATION SECTOR, SIZE and PERFORMANCE CHARACTERISTICS										SHADING			CALCULATION DATA			CALCULATED OUTCOMES - OK (if inputs are valid)			
Glazing element		Orientation		Size			Performance		P&H or device			Exposure		Size		Conductance - PASSED		Solar heat gain - PASSED	
ID	Description (optional)	Facing sector	Height (m)	Width (m)	Area (m ²)	Total System U-Value (AFRC)	Total System SHGC (AFRC)	P (m)	H (m)	PH	Es	Area used (m ²)	U x area / winter access	Element share of % of allowance used	SHGC x Es x area	Element share of % of allowance used			
1		E	2.15	1.51		3.30	0.37	0.65	2.66	0.12	0.98	3.25	1.41	11% of 99%	1.2	12% of 90%			
2		E	1.20	1.51		3.30	0.37				1.19	1.82	0.79	6% of 99%	0.8	8% of 90%			
3		E	2.15	1.51		3.30	0.37				1.19	3.25	1.41	11% of 99%	1.4	15% of 90%			
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Attachment A: comparison building glazing and shading.

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For compliance purposes only - comparison building glazing.

Climate zone: **5**

CONSTANTS: C_{u1} 12.118, C_{SHGC} 0.110

CONSTANT REDUCED BY: **15%**

ADJUSTED CONSTANT: 0.094

ALLOWANCES: C_{u1} (only) 12.1, $C_{SHGC} \times \text{Area}$ 10.2

Floor Construction Area: **1** Direct contact **109m²**

Air Movement: **Std** Suspended

Wall insulation option chosen for 3.12.1.4: **Table 3.12.1.3b Climate zone 5 Option (b)(ii)**

Area of storey: **109m²**

Area of glazing: **19.4m²** (18% of area of storey)

Number of rows for table below: **7** (as currently displayed)

GLAZING ELEMENTS, ORIENTATION SECTOR, SIZE and PERFORMANCE CHARACTERISTICS										SHADING			CALCULATION DATA			CALCULATED OUTCOMES - OK (if inputs are valid)			
Glazing element		Orientation		Size			Performance		P&H or device			Exposure		Size		Conductance - PASSED		Solar heat gain - PASSED	
ID	Description (optional)	Facing sector	Height (m)	Width (m)	Area (m ²)	Total System U-Value (AFRC)	Total System SHGC (AFRC)	P (m)	H (m)	PH	Es	Area used (m ²)	U x area / winter access	Element share of % of allowance used	SHGC x Es x area	Element share of % of allowance used			
1		S	0.51	2.07		6.30	0.59				0.68	1.06	0.65	5% of 98%	0.4	4% of 99%			
2		E	0.52	0.53		6.30	0.59				1.19	0.27	0.17	1% of 98%	0.2	2% of 99%			
3		S	2.41	3.01		6.30	0.59				0.68	7.25	4.44	37% of 98%	2.9	29% of 99%			
4		E	1.20	0.90		6.30	0.59				1.19	1.08	0.66	6% of 98%	0.8	8% of 99%			
5		E	1.81	2.81		6.30	0.59				1.19	5.07	3.11	26% of 98%	3.6	35% of 99%			
6		N	1.55	1.51		6.30	0.59				0.82	2.34	1.43	12% of 98%	1.1	11% of 99%			
7		N	1.55	1.51		6.30	0.59				0.82	2.34	1.43	12% of 98%	1.1	11% of 99%			

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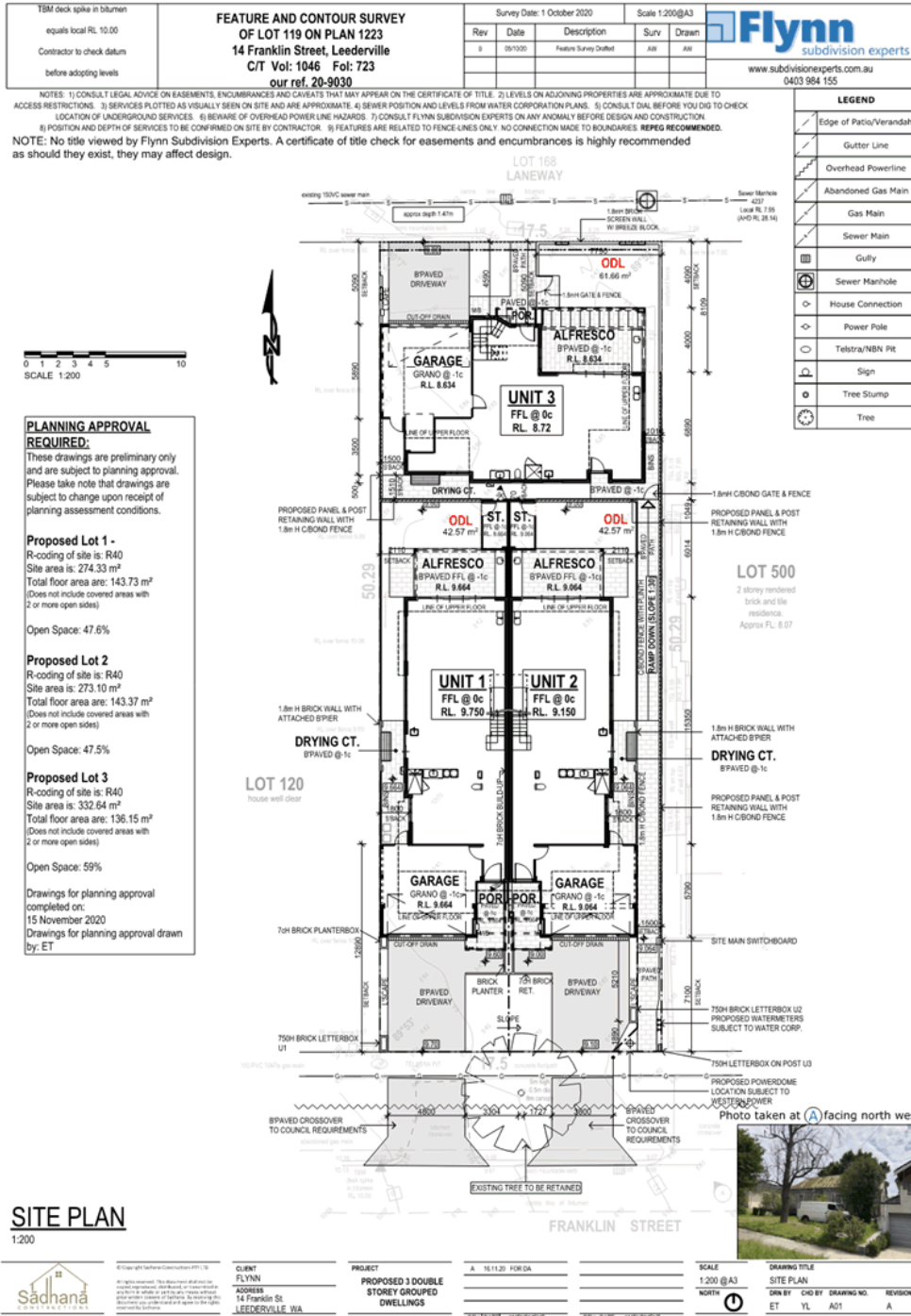
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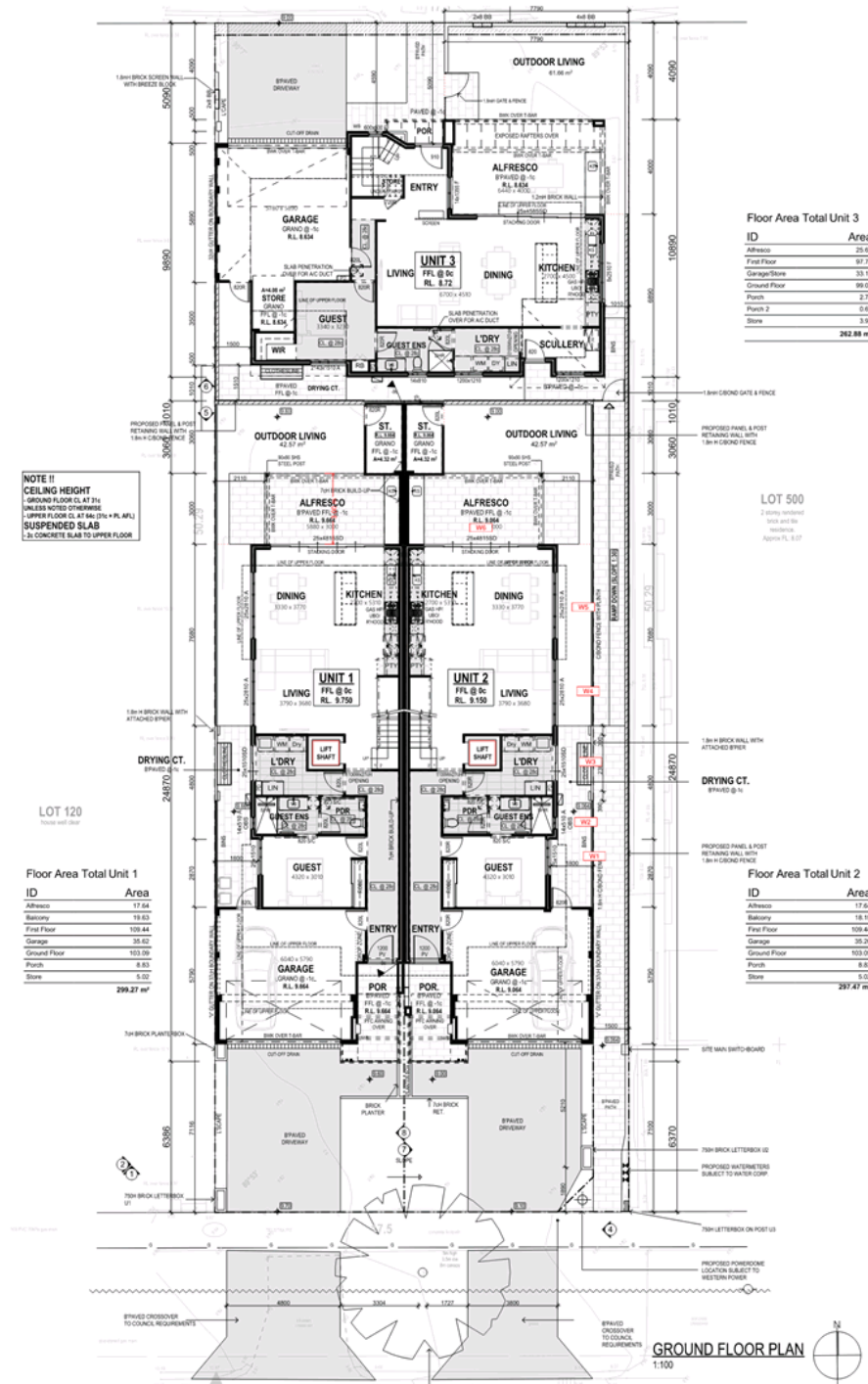


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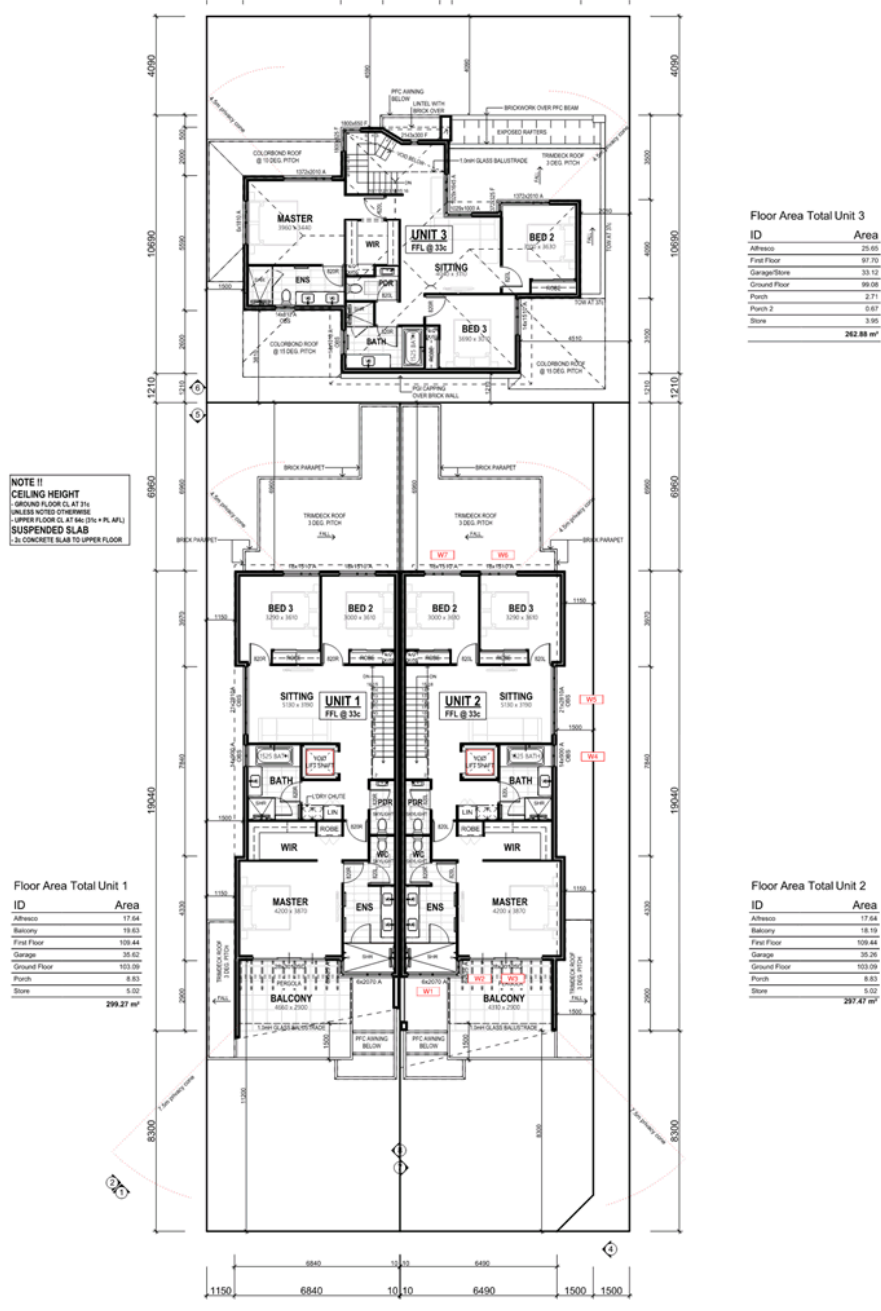
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NO.	REVISION	DATE	BY	CHKD
1	ISSUED FOR PERMIT	17/07/2021	JL	AL
2	ISSUED FOR PERMIT	17/07/2021	JL	AL
3	ISSUED FOR PERMIT	17/07/2021	JL	AL
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50	ISSUED FOR PERMIT	17/07/2021	JL	AL



FIRST FLOOR PLAN
1:100



PROJECT: J2 BUILDING CONSULTANTS
 DRAWING NO: J2-01-01
 DATE: 15/07/2021
 SCALE: AS SHOWN
 DRAWN BY: JACQUELINE DE
 CHECKED BY: JACQUELINE DE
 PROJECT MANAGER: JACQUELINE DE
 ARCHITECT: SIRAP CONSULTING PTY LTD
 15/150 STATION STREET, SYDNEY NSW 1588
 TEL: 02 9550 1234
 FAX: 02 9550 1235
 WWW.SIRAPCONSULTING.COM.AU



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21/12/2020

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2. Method to assess compliance with P2.6.1

This assessment uses the comparative analysis described in Step 1 and 2 below to assess whether the Proposed Building has a calculated annual energy consumption not more than that for a Comparison Building built using DtS Provisions.

Following this path, it is possible to determine whether the Proposed Building provides the same level of energy efficiency as that resulting from the use of the DtS Provisions. If it is found that the annual energy consumption of the Proposed Building is equal to or better than the DtS Provision, it can be concluded that the Proposed Building satisfies the NCC Performance Requirements pursuant to Part 1.05(d) of the NCC (comparison with DtS).

Step 1

The Comparison Building, which complies with the DtS Provisions 3.12.1 to 3.12.4, is modelled using NatHERS software to calculate the annual energy consumption. This becomes the acceptance criteria that the Proposed Building must meet.

Step 2

The annual energy consumption for the Proposed Building is then calculated using the same software and settings. The annual energy consumption of the Proposed Building cannot be greater than the acceptance criteria outlined above.

Box 1: What is NaTHERS software and why is it used for this assessment?

NaTHERS software is nationally accepted software for determining if a building complies with the NCC's DtS provisions using a star rating. The software models the expected indoor temperatures based on data specific to the dwelling. The software will then model how much cooling or heating occupants may need to stay comfortable during a typical year. The results are provided in the form of energy consumption per unit area megajoules per meter squared (MJ/m²) and this is converted into a star rating. For this assessment, we are using the energy consumption results only.

3. Assessment results

The annual energy consumption was calculated as described above and the Proposed Building's calculated annual energy consumption was equal to or less than that of the Comparison Building.

Annual energy consumption	Proposed Building	Comparison Building
Total (MJ/m ²):	80.9	90.2
Heating adjusted total (MJ/m ²):	61.0	62.4
Cooling adjusted total (MJ/m ²):	19.9	27.8

4. Assessment details

The Comparison and Proposed buildings shared the following assessment characteristics. However, as noted, the Comparison Building is required to comply with the DtS and this may have led to some of the building elements being modified accordingly (eg. cavity insulation).

Conditioned area (m ²):	148.5
Unconditioned area (m ²):	11.3
Garage (m ²):	35.0
Climate zone:	13 Perth Airport
Exposure:	suburban
Software used:	FR5 Ver:5.2.11 (3.13) Engine Ver:3.13
Zoning:	NatHERS Technical note 1.2.
Solar absorptance of ext. surfaces:	Medium or as specified in the drawings.
Shading:	As per attached plans.
Orientation:	As per attached plans.
Floor plan and location of glazing:	As per attached plans.
Ceiling height:	As per attached plans.
Number of storeys:	As per attached plans.
Roof pitch, cladding and roof lights:	As per attached plans.
External walls:	As per attached plans.
Separating walls:	As per attached plans.
Intermediate floors:	As per attached plans.
External non-glazed doors:	As per attached plans.
Floor and floor coverings:	As per attached plans.
Internal heat gains:	As per NatHERS Software Protocol.

Refer to the attached NCC glazing calculator in Appendix 3 for evidence of the Comparison Building's compliance with the relevant DtS Provisions.

5. Assessor details

This annual energy consumption was calculated by an assessor who completed training in the use of NatHERS software. The referenced software was running in regulation mode or equivalent in accordance with NatHERS Principles for Ratings in Regulation Mode.

Assessor:	Jay Whitehead
Relevant qualifications:	Graduate Diploma in Building Surveying Associate Degree in Building Surveying Certificate IV in NatHERS Assessment

6. Applicable DtS Provisions

The Proposed Building will comply with the following NCC Part 3.12 DtS Provisions where applicable.

3.12.5.1 to 3.12.5.4 for insulation of services
3.12.5.5 for artificial lighting
3.12.5.6 for heated water supply systems
3.12.5.7 for swimming pool heating and pumping
3.12.5.8 for spa pool heating and pumping
WA 2.3.1 for water use efficiency
WA 2.3.2 for swimming pool covers and blankets
WA 2.3.3 for heated water use efficiency

7. Assumptions and limitations

The report's conclusions and calculations are based on the attached drawings, and the application of the Applicable DtS Provisions in section 6.

The energy values quoted in this report are for compliance purposes only and are not a prediction of actual energy use.


Changes to the drawings or assumptions could affect the assessment.

8. Additional comments

Nil additional comments.

9. Conclusion

The Proposed Building satisfies performance requirements P2.6.1, P2.6.2 and WA Performance Provisions WA2.2.

Authorised by:	Jay Whitehead, Registered Building Surveyor
Company:	Sirap Consulting Pty Ltd t/a J2 Building Consultants Registered Building Surveying Contractor (Reg. No. 2015)
Contact details:	jay@j2bc.com.au 0407 864 982
Date:	21/12/2020
Signature:	

J2

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Appendix 1: Building Specifications

Full details of the building specifications can be found in the attached plans with further information and/or any adjustments noted in the tables below.

External walls

As per attached plans.

Internal walls:

As per attached plans.

Roof and ceilings:

R4.1 bulk insulation to:

- to all house and garage ceilings
- recessed ceilings
- bulkheads
- dropped ceilings to robes

Nil insulation to ceilings underneath suspended slabs.

Light fittings will form an effective seal with the ceiling, be installed in accordance with manufacturer's requirements and not reduce the insulation coverage.

Self-closing dampers to all exhaust fans.

Floors:

As per attached plans.

Glazing:

Single clear glass UNO on plans

Other:

NA.

Appendix 2: Artificial lighting calculations

The lamp power density or illumination power density of artificial lighting, excluding heaters that emit light, must not exceed the allowance of:

- (i) 5 W/m² in a Class 1 building; and
- (ii) 4 W/m² on a verandah, balcony or the like attached to a Class 1 building; and
- (iii) 3 W/m² in a Class 10a building associated with a Class 1 building.

The artificial lighting density is calculated below and is within allowances.

Building type	Area (m ²)	Allowance (W)	Actual (W)	Pass
Class 1 buildings	197	985	570	✓
Verandah, balcony etc.	26	104	30	✓
Class 10a buildings	37	111	60	✓

Perimeter lighting covered by 3.12.5.5(d) will be controlled by a daylight sensor or have an average light source efficacy of not less than 40 Lumens/W.

Appendix 3: Worksheets

Attachment A: comparison building glazing and shading.

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NCC VOLUME TWO GLAZING CALCULATOR (first issued with NCC 2014) ©

For compliance purposes only - comparison building glazing. Climate zone **5**

FLOOR WEIGHTED CONSTANTS C_u 13.464 C_{SHGC} 0.122
CONSTANT REDUCED BY **15%**
 ADJUSTED CONSTANT 0.104
 ALLOWANCES C_u (only) 13.5 C_{SHGC} x AREA 10.3

Floor Construction Area **99m²**
 Direct contact **99m²**
 Air Movement Suspended
Std Area of storey **99m²**
 Area of glazing **21.4m²** (22% of area of storey)


Wall insulation option chosen for 3.12.1.4
Table 3.12.1.3b Climate zone 5 Option (b)(ii)

Number of rows for table below **9** (as currently displayed)

GLAZING ELEMENTS, ORIENTATION SECTOR, SIZE AND PERFORMANCE CHARACTERISTICS						SHADING			CALCULATION DATA			CALCULATED OUTCOMES - OK (if inputs are valid)					
Glazing element						P&H or device			Exposure			Conductance - PASSED		Solar heat gain - PASSED			
ID	Description (optional)	Facing sector	Height (m)	Width (m)	Area (m ²)	Total System U-Value (AFRC)	Total System SHGC (AFRC)	P (m)	H (m)	PH	Es	Area used (m ²)	U x area / winter access	Element share of % of allowance used	SHGC x Es x area	Element share of % of allowance used	
1		N	0.60	0.60		5.30	0.70					0.82	0.36	0.23	2% of 99%	0.2	3% of 64%
2		N	2.40	0.30		5.30	0.70					0.82	0.72	0.45	3% of 99%	0.4	6% of 64%
3		E	1.20	1.36		5.30	0.70	6.44	1.55	4.16	0.24	1.63	1.02	8% of 99%	0.3	4% of 64%	
4		N	2.15	4.59		5.30	0.70	2.81	2.49	1.13	0.25	9.86	6.18	46% of 99%	1.7	26% of 64%	
5		E	0.69	2.51		5.30	0.70				1.19	1.73	1.08	8% of 99%	1.4	22% of 64%	
6		S	1.20	1.21		5.30	0.70	0.60	1.46	0.41	0.38	1.45	0.91	7% of 99%	0.4	6% of 64%	
7		S	1.20	1.21		5.30	0.70				0.68	1.45	0.91	7% of 99%	0.7	10% of 64%	
8		S	1.20	0.81		5.30	0.70				0.68	0.98	0.61	5% of 99%	0.5	7% of 64%	
9		S	2.14	1.51		5.30	0.70	0.60	2.40	0.25	0.46	3.24	2.03	15% of 99%	1.0	16% of 64%	

IMPORTANT NOTICE AND DISCLAIMER IN RESPECT OF THE GLAZING CALCULATOR
 The Glazing Calculator has been developed by the ABCB to assist in developing a better understanding of glazing energy efficiency parameters. While the ABCB believes that the Glazing Calculator, if used correctly, will produce accurate results, it is provided "as is" and without any representation or warranty of any kind, including that it is fit for any purpose or of merchantable quality, or functions as intended or at all. Your use of the Glazing Calculator is entirely at your own risk and the ABCB accepts no liability of any kind.

If inputs (including air movement levels) are valid



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Attachment A: comparison building glazing and shading.

printed 21/12/2020

NCC VOLUME TWO GLAZING CALCULATOR (first issued with NCC 2014) ©

For compliance purposes only - comparison building glazing. Climate zone **5**

CONSTANTS C_u 12.118 C_{SHGC} 0.110
CONSTANT REDUCED BY **15%**
 ADJUSTED CONSTANT 0.094
 ALLOWANCES C_u (only) 12.1 C_{SHGC} x AREA 9.2

Floor Construction Area **98m²**
 Direct contact **98m²**
 Air Movement Suspended
Std Area of storey **98m²**
 Area of glazing **16.9m²** (17% of area of storey)


Wall insulation option chosen for 3.12.1.4
Table 3.12.1.3b Climate zone 5 Option (b)(ii)

Number of rows for table below **12** (as currently displayed)

GLAZING ELEMENTS, ORIENTATION SECTOR, SIZE AND PERFORMANCE CHARACTERISTICS						SHADING			CALCULATION DATA			CALCULATED OUTCOMES - OK (if inputs are valid)					
Glazing element						P&H or device			Exposure			Conductance - PASSED		Solar heat gain - PASSED			
ID	Description (optional)	Facing sector	Height (m)	Width (m)	Area (m ²)	Total System U-Value (AFRC)	Total System SHGC (AFRC)	P (m)	H (m)	PH	Es	Area used (m ²)	U x area / winter access	Element share of % of allowance used	SHGC x Es x area	Element share of % of allowance used	
1		N	1.37	2.01		6.70	0.57					0.82	2.76	1.51	16% of 76%	1.3	15% of 91%
2		W	1.80	0.83		6.70	0.57					1.30	1.49	0.81	9% of 76%	1.1	13% of 91%
3		N	1.80	0.65		6.70	0.57					0.82	1.17	0.64	7% of 76%	0.5	6% of 91%
4		N	2.14	0.30		6.70	0.57	0.60	2.49	0.24	0.49	0.64	0.35	4% of 76%	0.2	2% of 91%	
5		E	1.03	1.65		6.70	0.57				1.19	1.69	0.92	10% of 76%	1.1	14% of 91%	
6		N	1.03	1.00		6.70	0.57	0.60	1.37	0.44	0.38	1.03	0.56	6% of 76%	0.2	3% of 91%	
7		W	1.37	0.33		6.70	0.57				1.30	0.45	0.24	3% of 76%	0.3	4% of 91%	
8		N	1.37	2.01		6.70	0.57					0.82	2.76	1.51	16% of 76%	1.3	15% of 91%
9		E	1.20	1.51		6.70	0.57	0.60	1.20	0.50	0.65	1.82	0.99	11% of 76%	0.7	8% of 91%	
10		W	1.20	1.01		6.70	0.57	0.60	1.55	0.39	0.82	1.22	0.66	7% of 76%	0.6	7% of 91%	
11		S	1.20	0.81		6.70	0.57				0.68	0.98	0.53	6% of 76%	0.4	4% of 91%	
12		W	0.52	1.81		6.70	0.57				1.30	0.93	0.51	6% of 76%	0.7	8% of 91%	

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If inputs (including air movement levels) are valid



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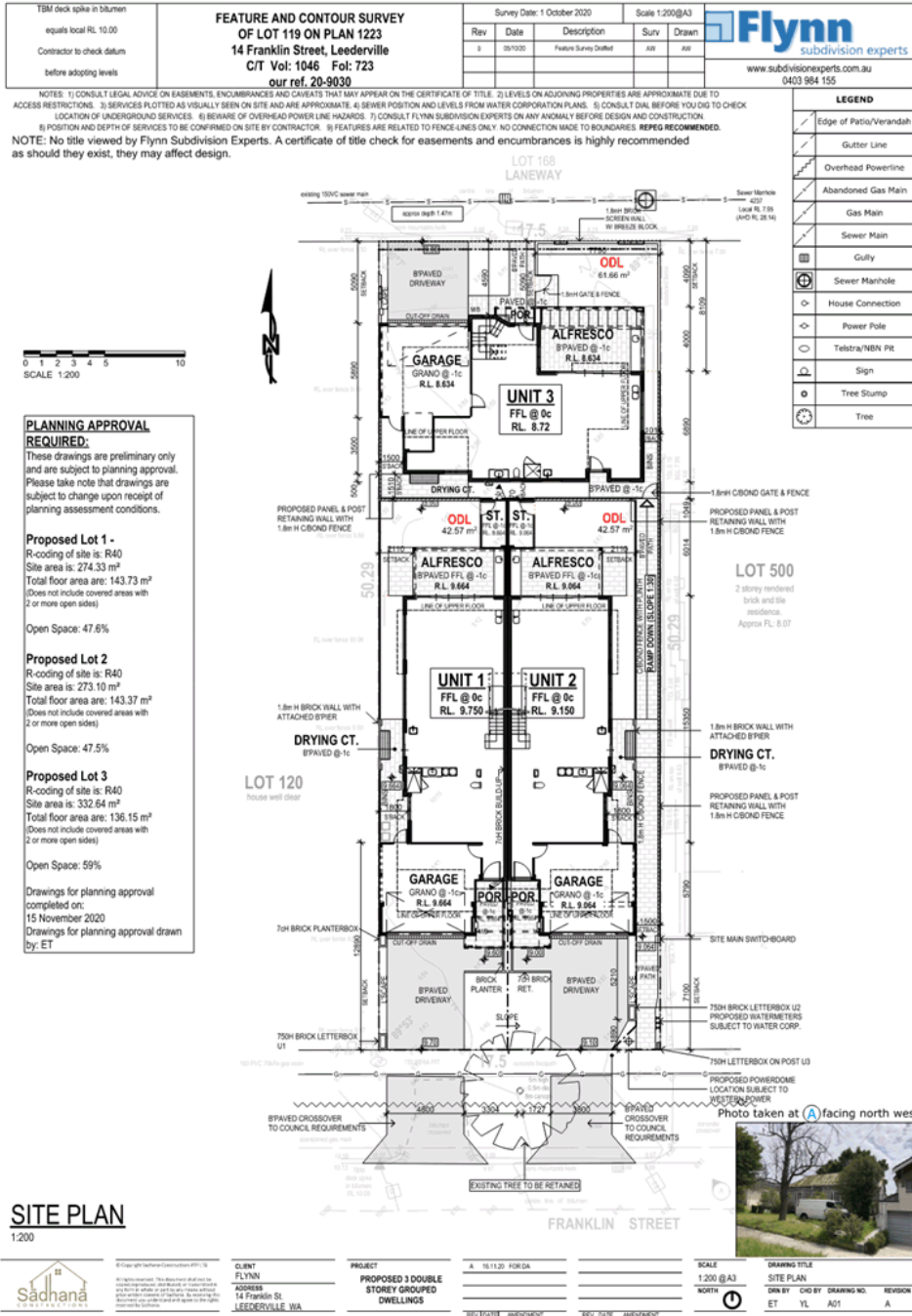
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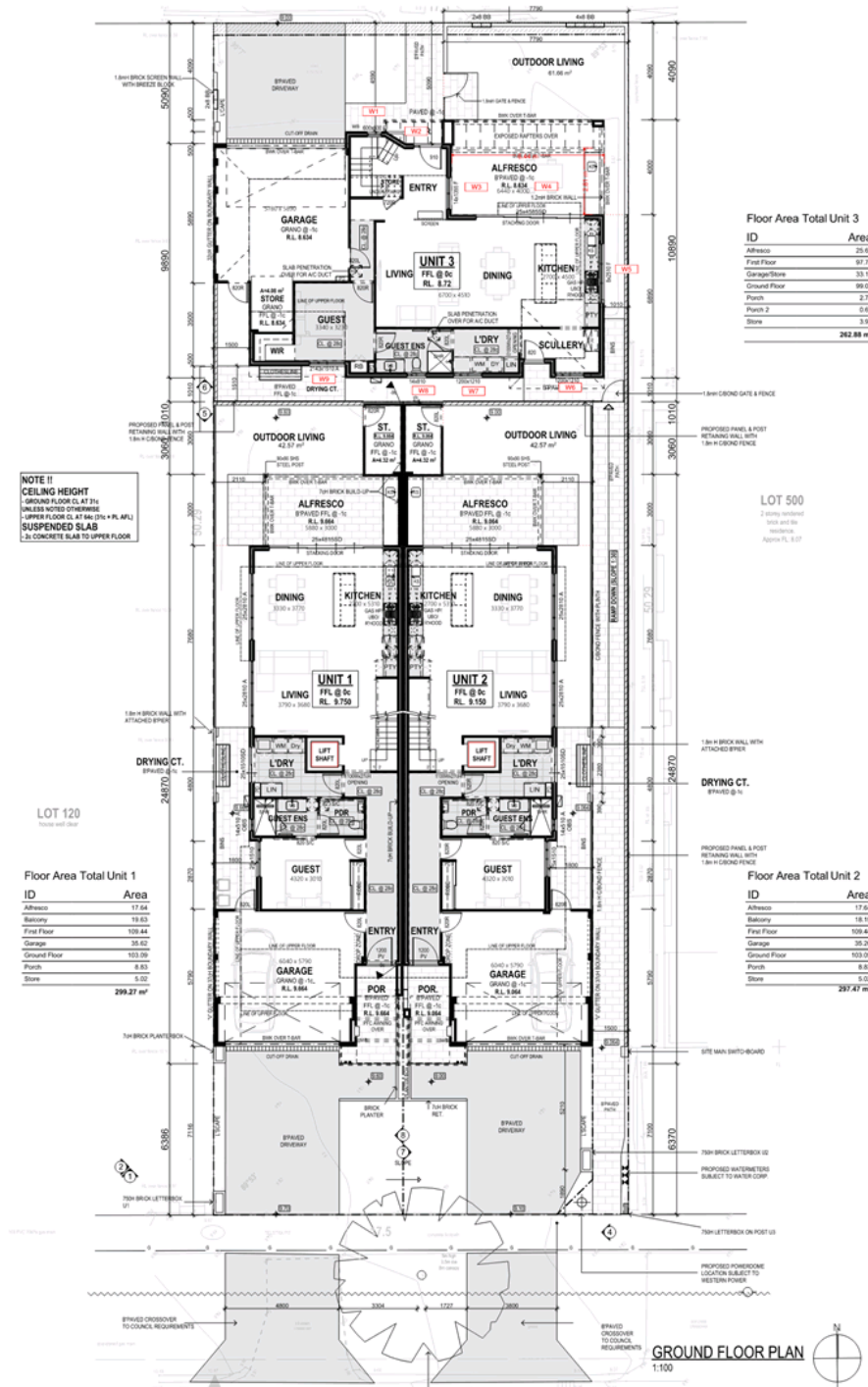
page 1 of 1

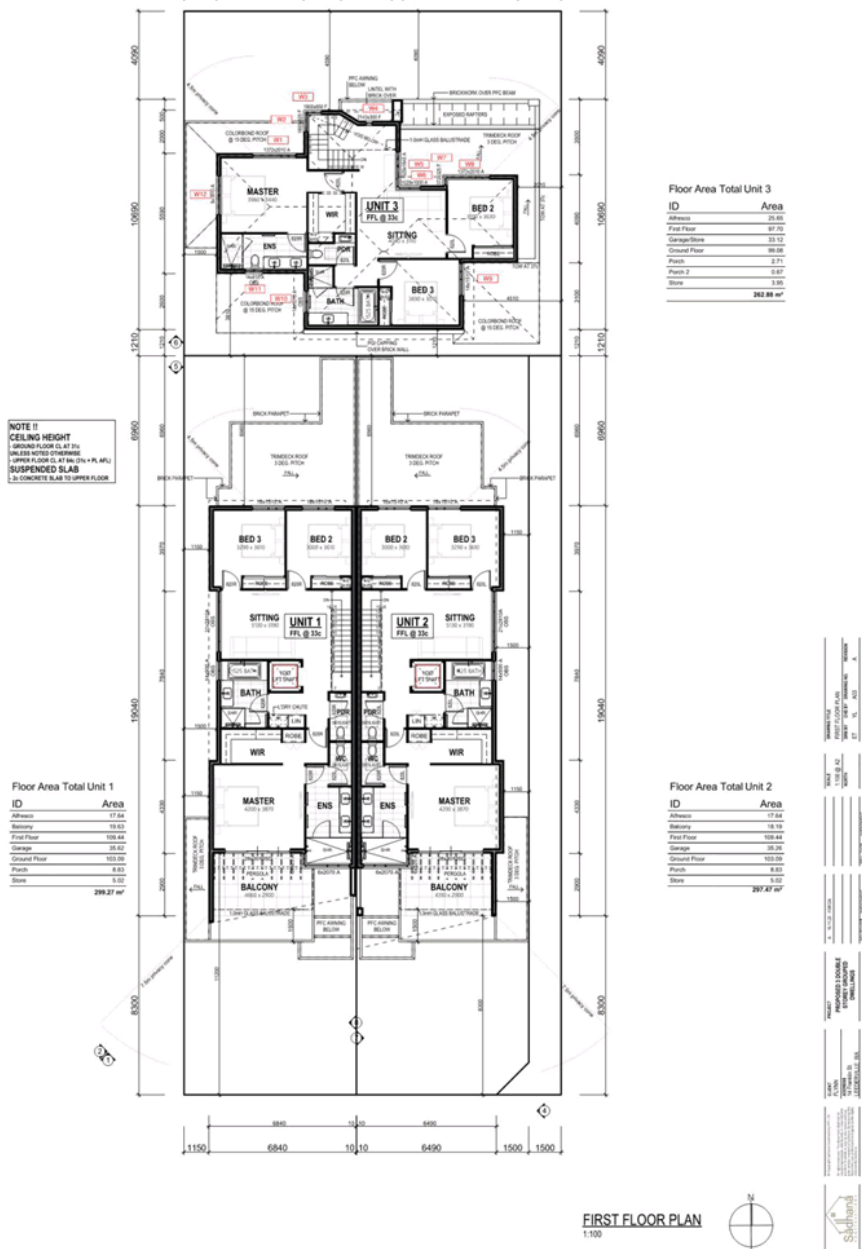


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Appendix 4: Plans









**Early Design Life Cycle Assessment (LCA) Report
Construction of Three Grouped Dwellings (Unit 1, 2 & 3)
at Lot 119 #14 Franklin Street, Leederville, WA 6007**

Globally, the construction and use of buildings is responsible for almost one third of the resource consumption, energy consumption, greenhouse gas (GHG) emissions, and solid waste generation which are rapidly growing due to population and economic growth. The Australian building sector alone is responsible for Australia's 20% total energy consumption and 23% GHG emissions.

Under the National House Energy Rating Scheme (NatHERS), the Australian Building Codes Board (ABCB) has introduced the mandatory minimum energy efficiency standards for housing sector through the National Construction Code (NCC). Primarily, these regulations focus on achieving thermal comfort for occupants through a reduction in the space heating and cooling energy requirements. However, the minimum energy efficiency standards alone are not adequate to address the sustainability aspects. Various studies suggest that the sustainability assessment, which integrates the energy, economic, social, and environmental factors together has a potential to assist in decision making for sustainable housing options.

Without the shift in paradigm, the implementation of principles and guidelines of sustainable development into the housing sector is difficult because of the complexity of the houses, and due to the facts that the houses are not just the assembly of raw materials, but they are complex products of various materials, and technologies that are assembled to meet the unique requirements, and there is no single solution for sustainable house. The operational heating, and cooling energy consumption of a house is highly influenced by the thermal performance of its envelope (walls, windows, roof, floor etc.) because the bulk of this energy is utilized to compensate for the energy losses or gains through the envelope, and thus the envelope holds the key to energy, and GHG emissions reduction opportunities. Even minor improvements in thermal performance of envelope materials provide significant energy and GHG emissions reduction opportunities. The houses are responsible for greenhouse gas emissions due to energy consumed during various life cycle stages for raw material extraction, processing, transportation, manufacturing, fabrication, assembly, construction, operation, maintenance, and the end of the life demolition and disposal. The houses last much longer and thus have significant environmental repercussions over a long period of time, and hence it is important to implement the principles and guidelines of the sustainability from the inception stage itself so that the goals of sustainable development are achieved by minimizing the resource consumption and environmental impacts during the entire life cycle stages.

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The construction materials such as aluminium, steel, cement, concrete, glass, plastics, and paint are energy and carbon intensive materials and demonstrate different levels of thermal performance under the same geometrical design and climatic conditions. Due to relatively long lifespan, the houses have the largest long-term GHG mitigation potential, which will have multiple benefits to economy and society both in terms of cost-saving and resource conservation. To achieve this target, the overall approach must shift from the use of non-renewable resources to renewable resources and from the minimization of waste to reuse and recycling of waste and estimation of GHG emissions should be realistic and representative.

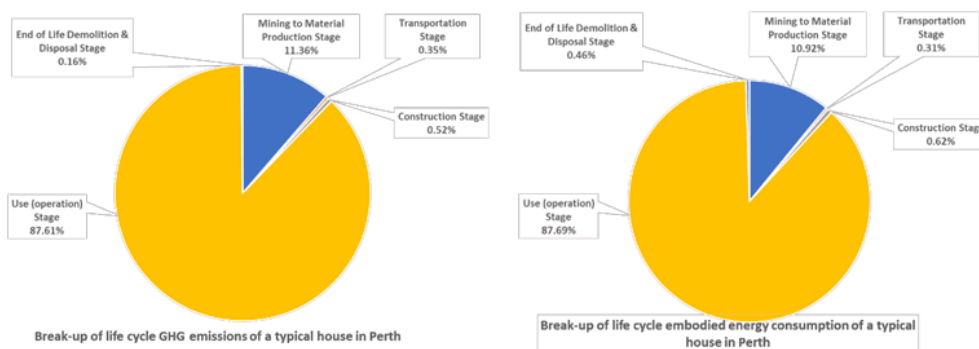
There is a growing consensus that the Australian housing sector must take initiatives in adopting the sustainable building materials and methods of construction. With the growing demand for housing in a resource constraint and competitive market, the concept of life cycle assessment steps in for addressing the sustainability challenge. The objective of this early design life cycle assessment is to determine and compare the environmental impacts associated with the two grouped dwellings with prevailing industry average values and to ensure that they help in achieving Western Australia's goals of sustainable development.

The lot for proposed development with southerly aspect is rectangular in shape with 17.5m wide frontage on Franklin Street, Leederville. There are single & double storey dwellings in the vicinity of the proposed development. The proposed development consists of two south facing double storey grouped dwellings (Unit 1 & 2) and one north facing double storey dwelling. The land is sloping from south to north with almost 1m level difference between franklin street and laneway. The land is also sloping from west to east with an average level difference of 1m. A paved common path is proposed along the eastern boundary to access Unit 3 from franklin street.

The above referenced two grouped dwellings (Unit 1 & 2) are identical and typical 4 bedroom, 2 bathroom, 2 car garage (4x2x2) double storey houses and the third dwelling (Unit 3) has a different layout but still a typical 4 bedroom, 2 bathroom, 2 car garage (4x2x2) double storey house and all made of double brick walls at both the floors, timber cladding on first floor, single glazed windows, concrete ground slab and suspended floor slab, and colorbond roof sheeting. The environmental impacts have been assessed over a life cycle of 50 years. The proposed location falls under Climate Zone 5 i.e. warm temperate and generally the houses in this zone requires low heating and cooling energy.

The life cycle greenhouse gas (GHG) emissions and embodied energy (EE) consumption impacts associated with the construction and use stages of above dwellings have been estimated using Life Cycle Assessment (LCA) approach in accordance with ISO 14040-44.

A recent research on sustainability assessment of Western Australian houses for different envelope materials found that the life cycle GHG emissions from mining to material production, transportation, construction, use, and end of life demolition and disposal stages for a typical double brick house in Perth are 467tonnes CO₂ e-. Similarly, the life cycle embodied energy consumption from mining to material production, transportation, construction, use, and end of life demolition and disposal stages are 6.5TJ. It is found that the Use stage i.e. operational energy is the biggest contributor to the life cycle GHG emissions and embodied energy consumption followed by the mining to material stage while all other stages together contribute to less than 2% of the life cycle GHG emissions and embodied energy consumption. The break-ups of life cycle GHG emissions and embodied energy consumption are presented in following images.



Considering the above, the main emphasis during design stage should be on selecting the construction materials and developing climate responsive layouts. As the use stage has been found to be the major contributor to the GHG and embodied energy consumption, the efforts to analyse and minimize the impacts associated with the operation energy must be given the priority followed by the mining to material production.

Various Australian research studies suggest that of the total life cycle energy consumption of a typical house, the operational energy has the largest share (80%-90%), while the share of initial embodied energy of materials is quite low (10%-20%) and the end of the life demolition energy has a little or negligible share. Further, the studies suggest that the operational energy demand for a typical house in Perth for Heating, Cooling, Lighting, Home Appliances, and

Water heating vary between 9%-12%, 9%-12%, 10%-11%, 25%-27%, and 40%-42% of the total energy demand. Even though, the energy demands for Home appliances and Water heating are significant, but the associated environmental impacts are quite low because natural gas is used as the primary source of energy. Also, with the increased use of LED lights, energy saving appliances, and roof top solar water heaters, the associated impacts are minimized. The use of reverse cycle air-conditioning units that operates purely on electricity is increasing. Due to this vary fact, the operational energy for lighting, home appliances and hot water have been excluded from this study.

The life cycle energy analysis (LCEA), a predecessor to LCA, was conducted using NatHERS accredited software to estimate the annual operational energy demand for heating and cooling for conditioned areas. The total life cycle heating and cooling energy demands for Unit 1, 2 and 3 were estimated as **870.70GJ**, **779.48GJ**, and **600.68GJ** respectively. The equivalent GHG emissions and embodied energy consumption have been estimated as **240.89tonnes CO₂ e-**, **215.66tonnes CO₂ e-**, and **166.19tonnes CO₂ e-** and **1.92TJ**, **1.71TJ**, and **1.32TJ** respectively, which are lower than the GHG emissions and embodied energy consumptions of a typical reference dwelling in Perth.

Though the south facing orientation of Unit 1 & 2 and north facing orientation of Unit 3 does not fall within the most ideal or preferred category (east-west orientation) which is a low hanging fruit, but the north-south or south-north orientations are also considered as good. The lot is a narrow one and the north facing daytime living areas that flow to outdoor spaces for these units provide good access to northern sun with minimum potential of overshadowing. The north facing frontage of Unit 3 is almost double of Unit 1 or 2 and hence the operational energy demand for heating and cooling is significantly lower than Unit 1 and 2. It is further observed that Unit 1 has less exposure to rising sun as eastern face is completely blocked by Unit 2, the operational energy demand for heating is substantially higher as compared to Unit 2 and 3. Overall, Amongst all the Units, Unit 3 is outperforming due to higher exposure of its daytime habitable areas to north.

To mitigate the adverse impacts associated with the operational energy, the rooftop solar PV is proposed. The annual solar radiation falling on Australia is approximately 58 million petajoules (PJ), which is approximately 10,000 times Australia's annual energy consumption. Grid connected 6.6kWp rooftop solar PV system has been considered as a substitute for grid electricity which can feed excess electricity into the grid. The inclusion of storage system is outside the scope of this study. The roof areas of the grouped dwellings are adequate to accommodate the solar panels of up to 6.6kW_p (i.e. around 32 m²) capacity.

The average yearly electricity production data of 6.6kW_p roof top solar PV systems in Perth is 10MWh i.e. 36GJ. The amount of electricity that would be generated by 6.6kW_p roof top solar PV during the life cycle of the house is 500MWh (1.8TJ). The integration of a 6.6kW_p solar PV would not only completely reduce the use of grid electricity for heating and cooling but with the help of smart home solutions, the excess electricity can be utilized for home appliances before feeding to the grid.

The next contributor to GHG emissions and embodied energy consumption is mining to material production stage. As this early stage of development, only preliminary architectural Plans and elevations are available and hence all the materials/fixtures/finishes cannot be accurately identified for preparation of detailed life cycle inventories (LCI) which is a prerequisite for estimation of associated GHG emissions and embodied energy consumption associated with the mining to material production stage. However, most of the major energy intensive materials such as concrete, bricks, steel, aluminium, glass, cement, gypsum board etc. have been estimated to prepare LCI. The Australian Unit Process (AUP) database has been used for the inputs. As more than 80% of the proposed materials have recycling potential, the embodied energy is not a major concern. Both the grouped dwellings (Unit 1 & 2) are identical in terms of dimension and specification, but Unit 3 is different. Based on the LCI, the life cycle GHG emissions for the dwellings have been found to be **76.48tonnes CO₂ e-**, **76.48tonnes CO₂ e-**, and **68.97tonnes CO₂ e-** respectively, which are consistent with the published data and industry average. The reason for these values being higher than the referenced typical dwelling in Perth is due to the fact that the referenced dwelling is a single storey one and these dwellings are two storey ones. The concrete slabs consisting of concrete and steel reinforcement have been proposed for upper floor. Both these materials are highly energy intensive with very high carbon footprints (concrete - embodied energy 1.3GJ/tonnes and GHG emission 133kg CO₂ e-/tonnes. Steel - embodied energy 43.9GJ/tonnes and GHG emission 3.18tonnes CO₂ e-/tonnes). However, with proper and careful project and construction management, the amount of C&D waste can be minimized that will not only reduce the associated GHG emission but will save embodied energy consumption as well.

Conclusion: Based on the preliminary life cycle assessment findings, it is found that the life cycle energy demand, GHG emissions, and embodied energy consumption are consistent with the current industry averages and the proposed dwellings will not have any adverse impacts on environment. Moreover, with the integration of grid connected roof top solar PV, solar water heater, LED lights, water efficient/WELS rated appliances and fixtures, and water wise native plants for landscaping, the environmental impacts associated with the operational

energy will be significantly reduced that in turn will help in achieving the goals of sustainable development.

A handwritten signature in black ink that reads "K. Lawania". The signature is written in a cursive style with a circled initial 'K'.

Dr. Krishna Lawania

ME (Structural Dynamics), PhD (Sustainable Construction)

FIEAust CPEng NER, RPEQ, PMP, ACI Arb

PG Cert – Cons. Law, LEED Green Associate

Determination Advice Notes:

1. This is a development approval issued under the City of Vincent Local Planning Scheme No. 2 and the Metropolitan Region Scheme only. It is not a building permit or an approval to commence or carry out development under any other law. It is the responsibility of the applicant/owner to obtain any other necessary approvals and to commence and carry out development in accordance with all other laws.
2. If the development the subject of this approval is not substantially commenced within a period of 2 years, or another period specified in the approval after the date of determination, the approval will lapse and be of no further effect.
3. In relation to advice note 2, a further two years is added to the date by which the development shall be substantially commenced, pursuant to Schedule 4, Clause 4.2 of the Clause 78H Notice of Exemption from Planning Requirements During State of Emergency signed by the Minister for Planning on 8 April 2020. For further information regarding the Ministerial direction, please contact the City on (08) 9273 6000.
4. Where an approval has so lapsed, no development must be carried out without the further approval of the local government having first been sought and obtained.
5. No verge trees shall be removed. The verge trees shall be retained and protected from any damage including unauthorised pruning.
6. With reference to Condition 2.1, the owners of the subject land shall obtain the consent of the owners of relevant adjoining properties before entering those properties in order to make good the boundary walls.
7. With reference to Condition 4, Clause 5.4.1 C1.2 Visual Privacy requirements of the R Codes states that screening devices such as obscure glazing, timber screens, external blinds, window hoods and shutters are to be at least 1.6 metres in height, at least 75 percent obscure, permanently fixed, made of durable material and restrict view in the direction of the overlooking into any adjoining property.
8. With reference to Condition 6, the City encourages landscaping methods and species selection which do not rely on reticulation.
9. With reference to Condition 7, no further consideration shall be given to the disposal of stormwater 'offsite' without the submission of a geotechnical report from a qualified consultant. Should approval to dispose of stormwater 'offsite' be subsequently provided, detailed design drainage plans and associated calculations for the proposed stormwater disposal shall be lodged together with the building permit application working drawings.
10. An Infrastructure Protection Bond together with a non-refundable inspection fee shall be lodged with the City by the applicant, prior to commencement of all building/development works, and shall be held until all building/development works have been completed and any disturbance of, or damage to the City's infrastructure, including verge trees, has been repaired/reinstated to the satisfaction of the City. An application for the refund of the bond must be made in writing. This bond is non-transferable.
11. The movement of all path users, with or without disabilities, within the road reserve, shall not be impeded in any way during the course of the building works. This area shall be maintained in a safe and trafficable condition and a continuous path of travel (minimum width 1.5 metres) shall be maintained for all users at all times during construction works. Permits are required for placement of any material within the road reserve.
12. If an applicant or owner is aggrieved by this determination there is a right of review by the State Administrative Tribunal in accordance with the *Planning and Development Act 2005* Part 14. An application must be made within 28 days of the determination.

Determination Advice Notes:

13. All new crossovers to lots are subject to a separate application to be approved by the City. All new crossovers shall be constructed in accordance with the City's Standard Crossover Specifications, which specify that the portion of the existing footpath traversing the proposed crossover (subject to the Footpath being in good condition as determined by the Infrastructure and Environment Services Directorate), must be retained. The proposed crossover levels shall match into the existing footpath levels. Should the footpath not be in satisfactory condition, it must be replaced with in-situ concrete panels in accordance with the City's specification for reinstatement of concrete paths.
14. The applicant is advised that any future strata title of the property must be consistent with this approval and the lot sizes demonstrated in the application.
15. In reference to Condition 10, ceding of the Right of Way widening will be required at the time of any future subdivision, survey strata subdivision or built strata subdivision.
16. In reference to Condition 11, the open 'carports' as depicted on the approved development plans without garage doors are integral to the acceptability of the built form outcome of Units 1 and 2 as viewed from Franklin Street, ensuring that an open streetscape is maintained and that the development would not be dominated by garage doors.