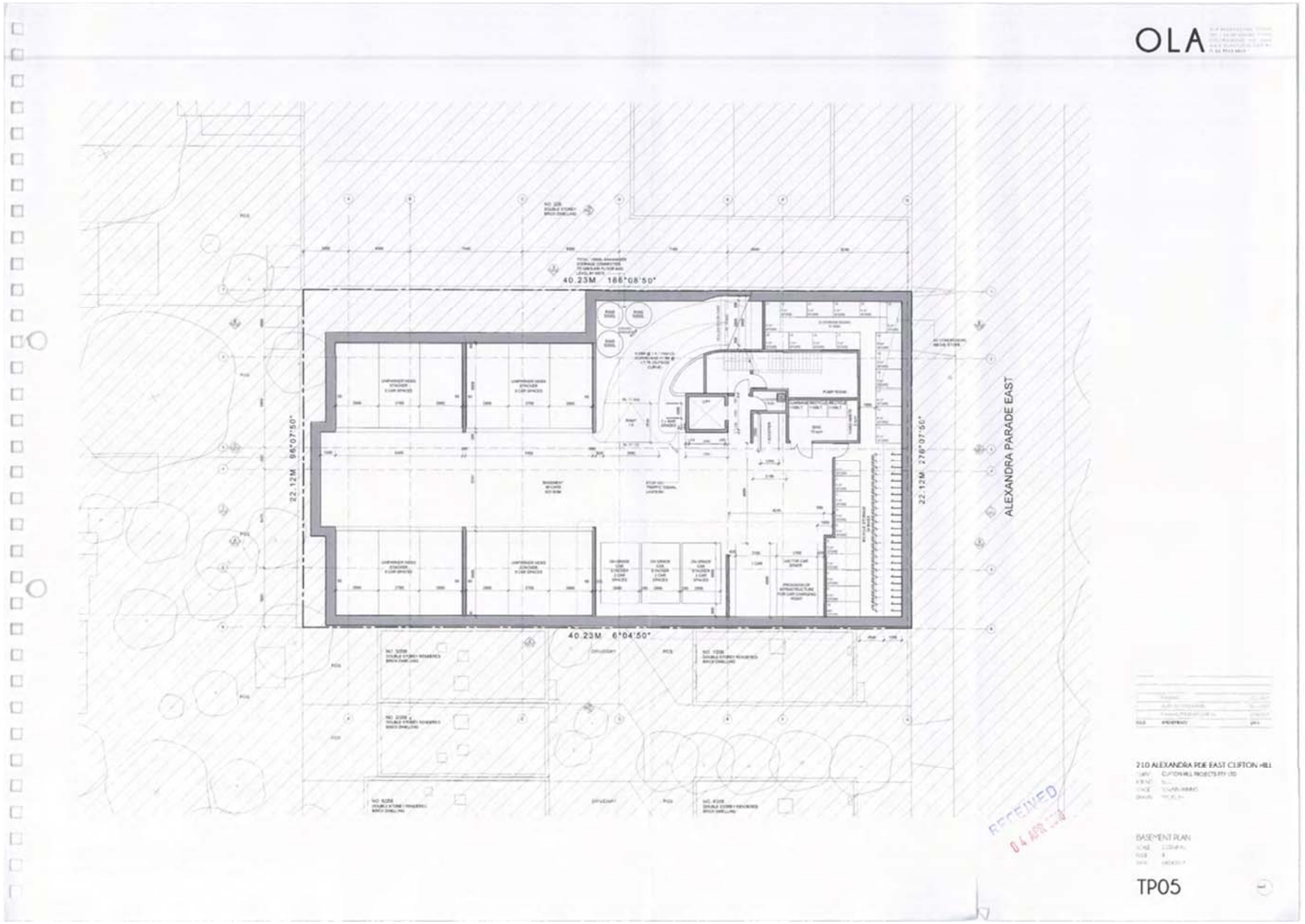
Attachment 1 - Site Location Map - 210 Alexandra Parade East, Clifton Hill

SUBJECT LAND: 210 Alexandra Parade East, Clifton Hill

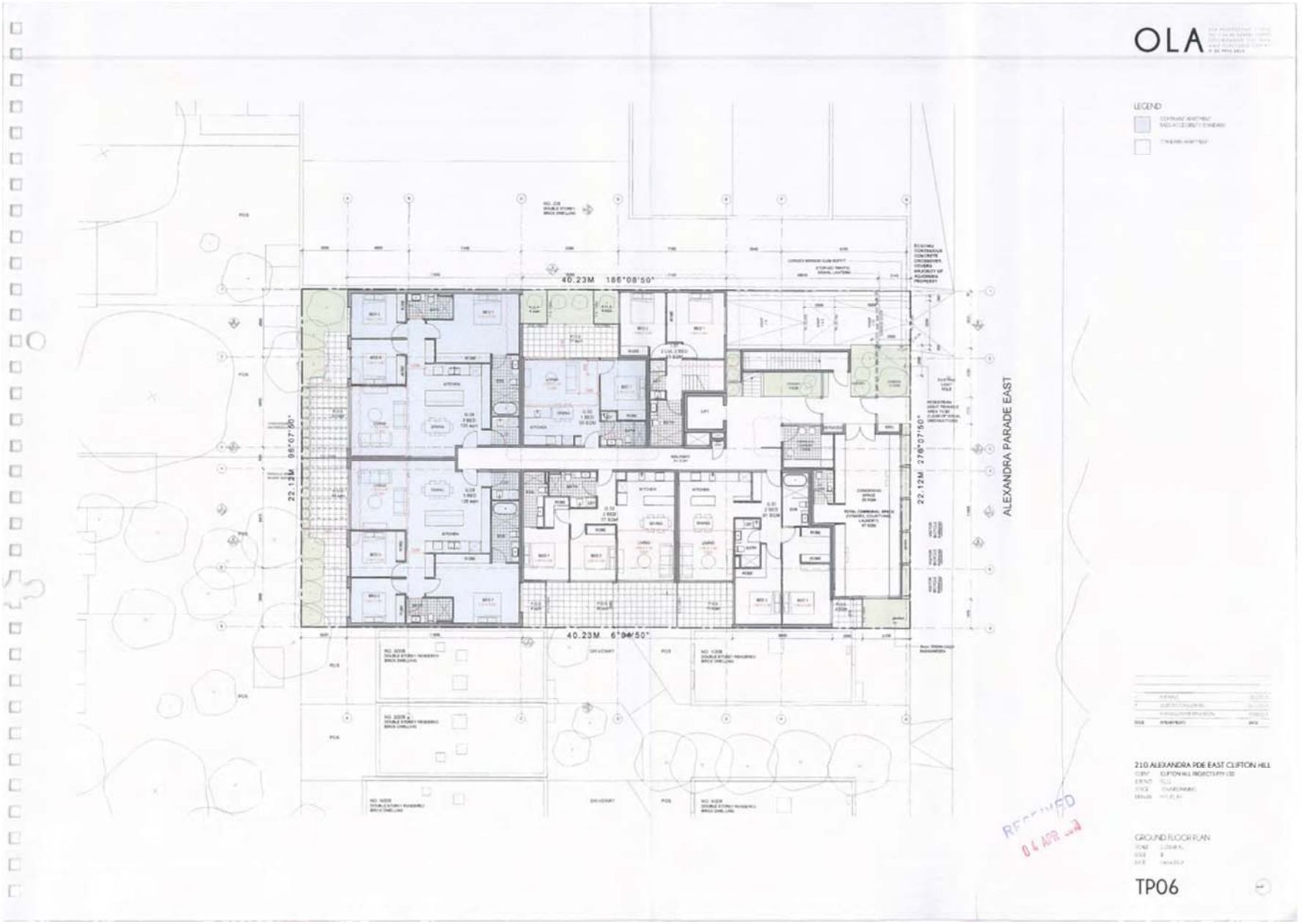
⇧ North

★ Subject Site

Attachment 2 - Proposed floor plans, Elevations, Perspectives and Shadow Diagrams - 210 Alexandra Parade East, Clifton Hill



Attachment 2 - Proposed floor plans, Elevations, Perspectives and Shadow Diagrams - 210 Alexandra Parade East, Clifton Hill



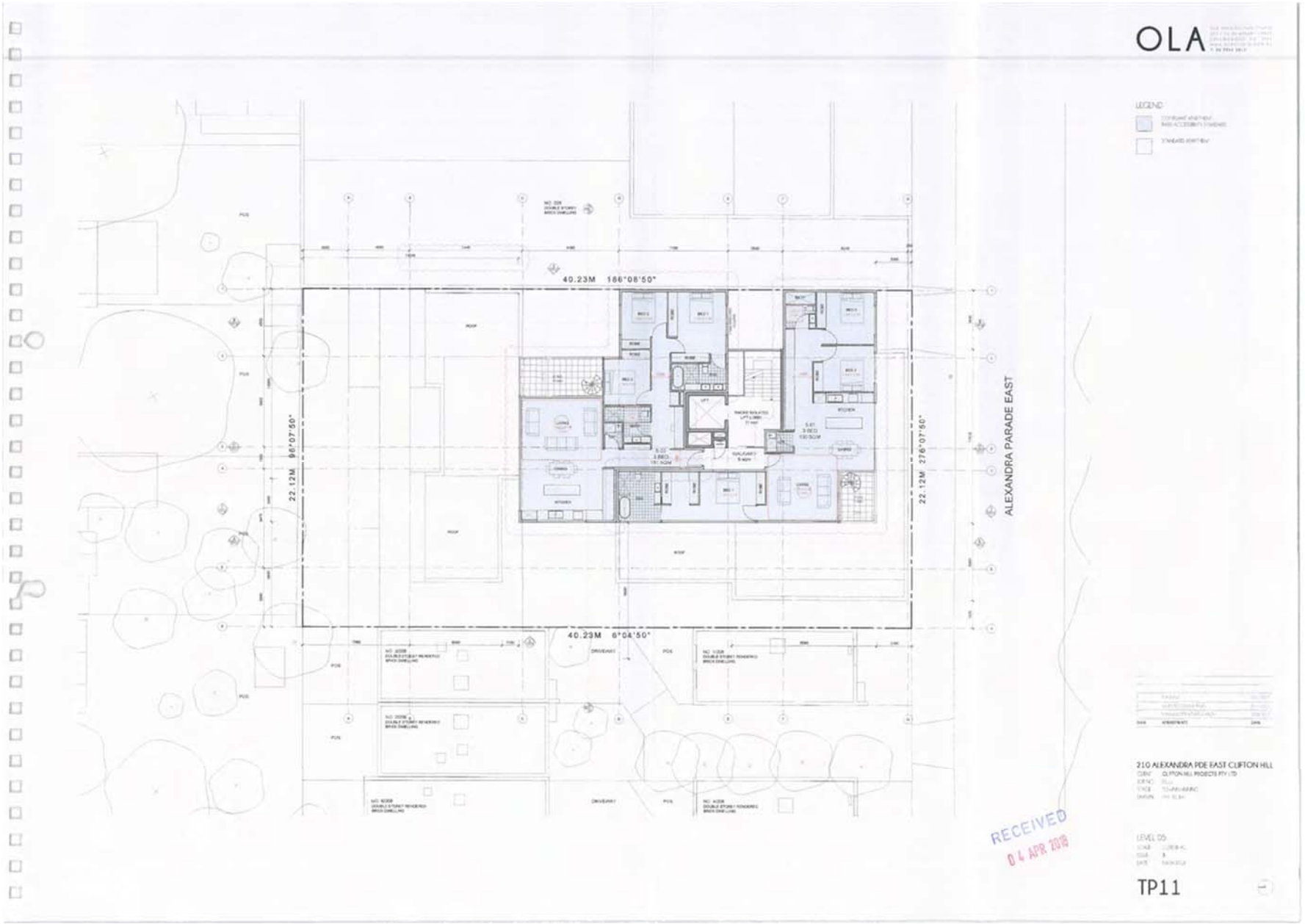
Attachment 2 - Proposed floor plans, Elevations, Perspectives and Shadow Diagrams - 210 Alexandra Parade East, Clifton Hill

Attachment 2 - Proposed floor plans, Elevations, Perspectives and Shadow Diagrams - 210 Alexandra Parade East, Clifton Hill

Attachment 2 - Proposed floor plans, Elevations, Perspectives and Shadow Diagrams - 210 Alexandra Parade East, Clifton Hill

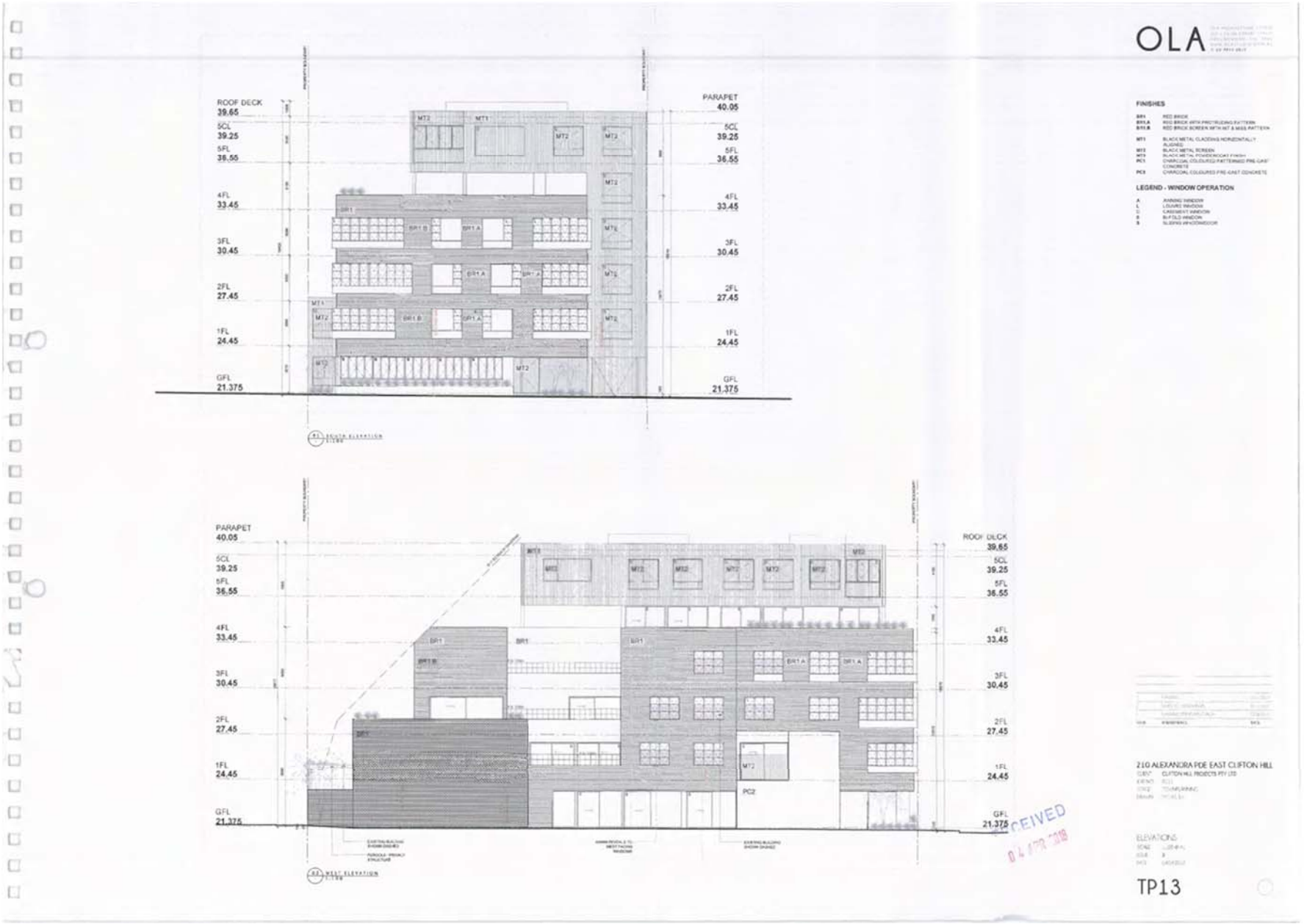
Attachment 2 - Proposed floor plans, Elevations, Perspectives and Shadow Diagrams - 210 Alexandra Parade East, Clifton Hill

Attachment 2 - Proposed floor plans, Elevations, Perspectives and Shadow Diagrams - 210 Alexandra Parade East, Clifton Hill

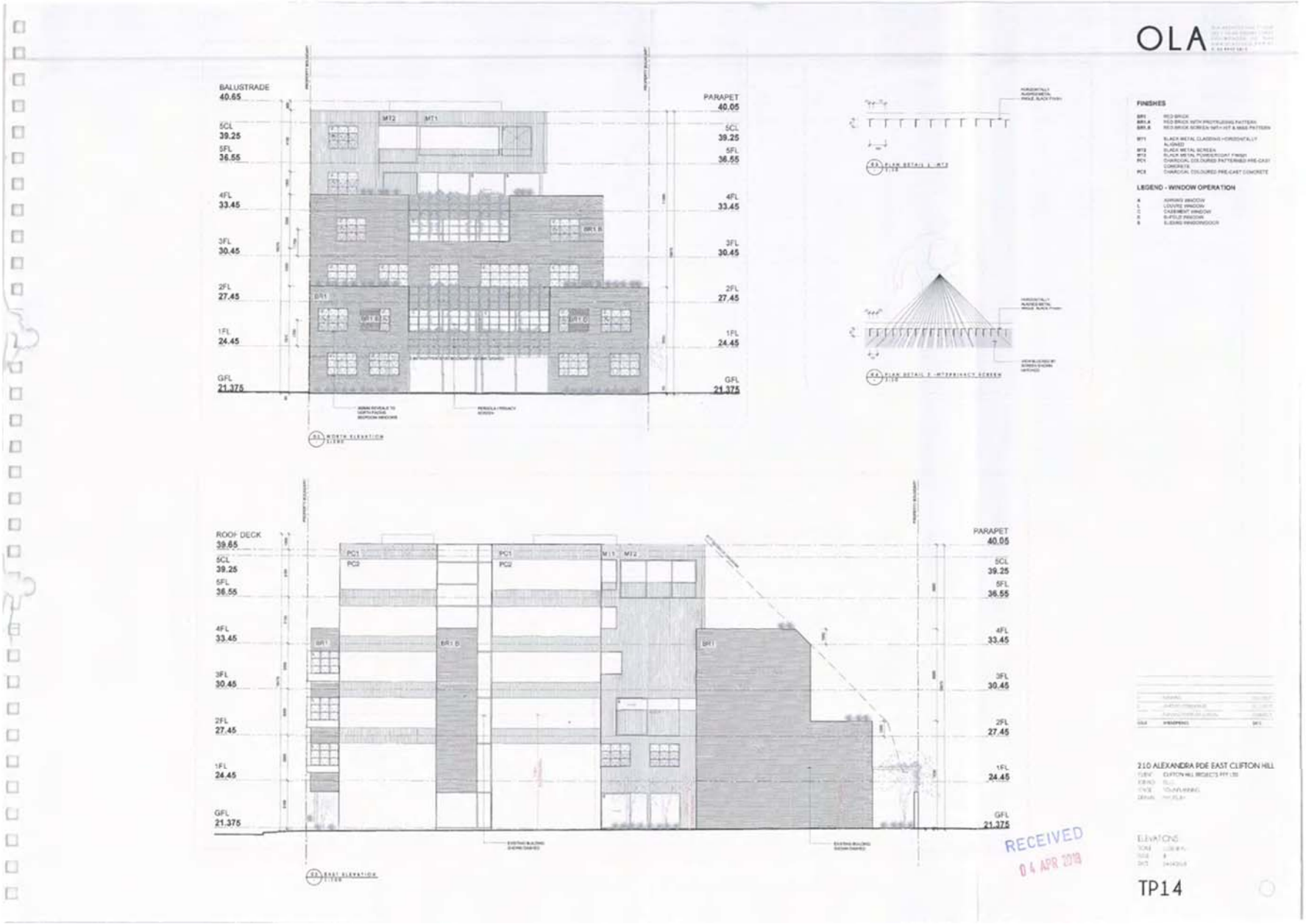


Attachment 2 - Proposed floor plans, Elevations, Perspectives and Shadow Diagrams - 210 Alexandra Parade East, Clifton Hill

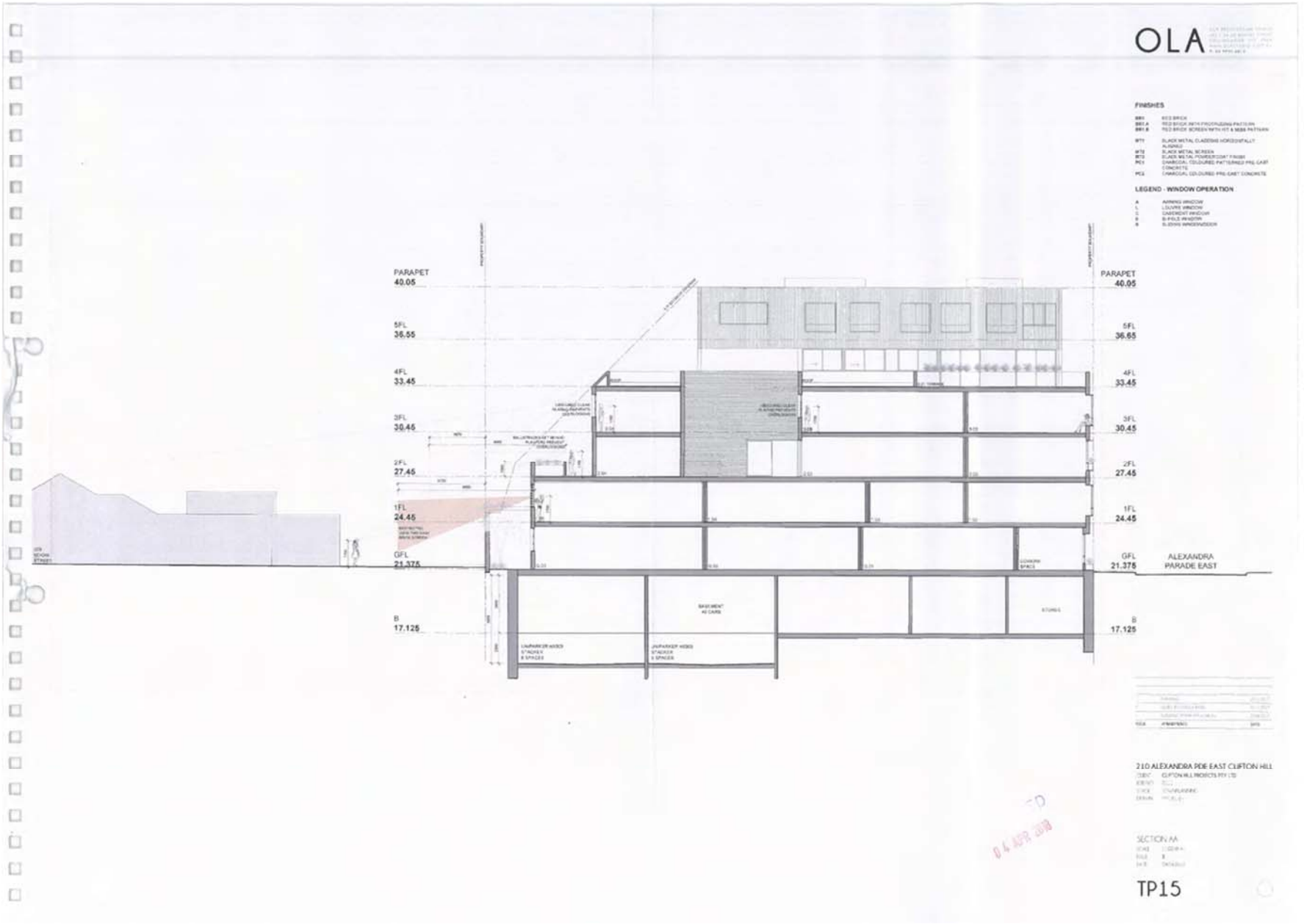
Attachment 2 - Proposed floor plans, Elevations, Perspectives and Shadow Diagrams - 210 Alexandra Parade East, Clifton Hill



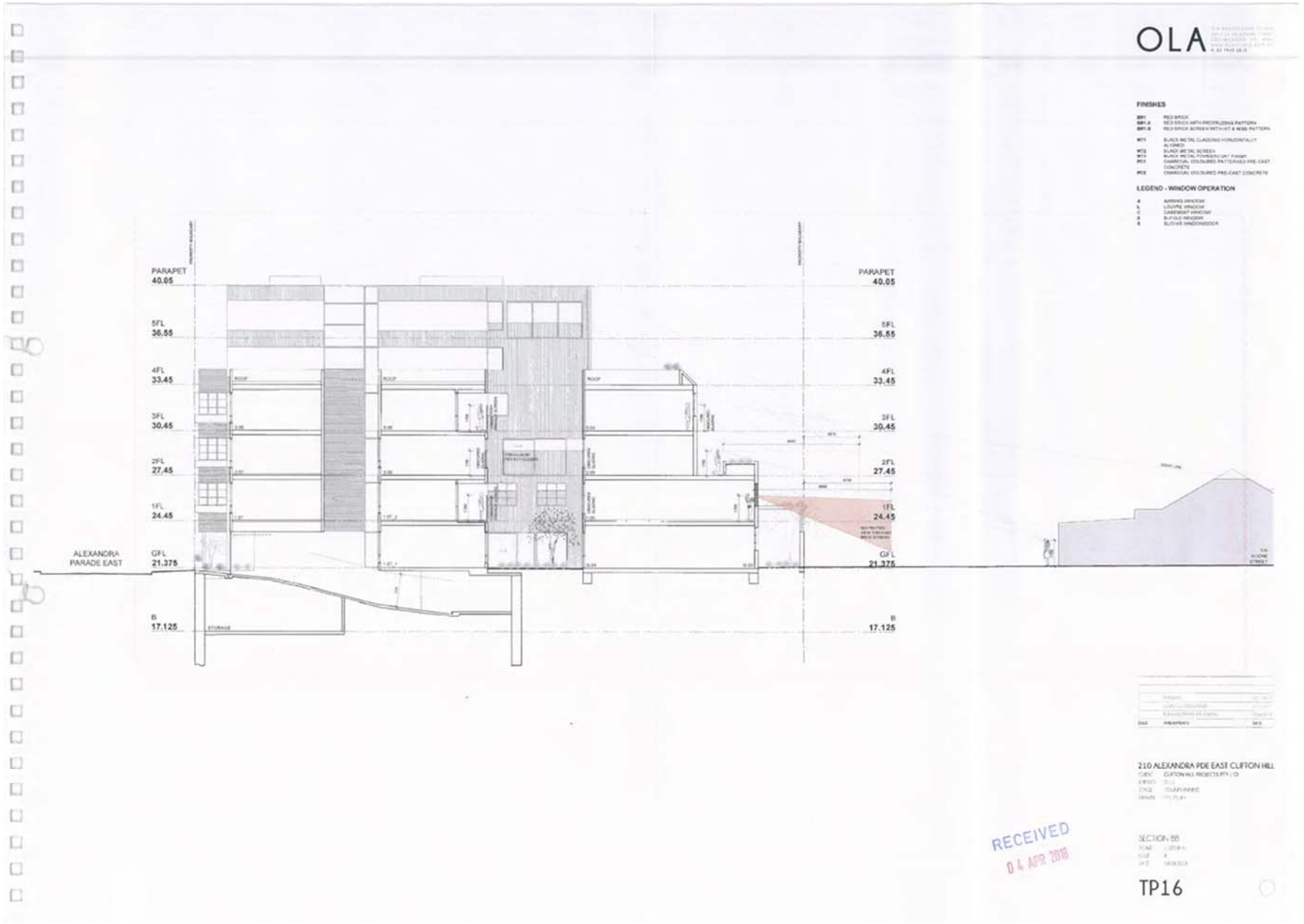
Attachment 2 - Proposed floor plans, Elevations, Perspectives and Shadow Diagrams - 210 Alexandra Parade East, Clifton Hill



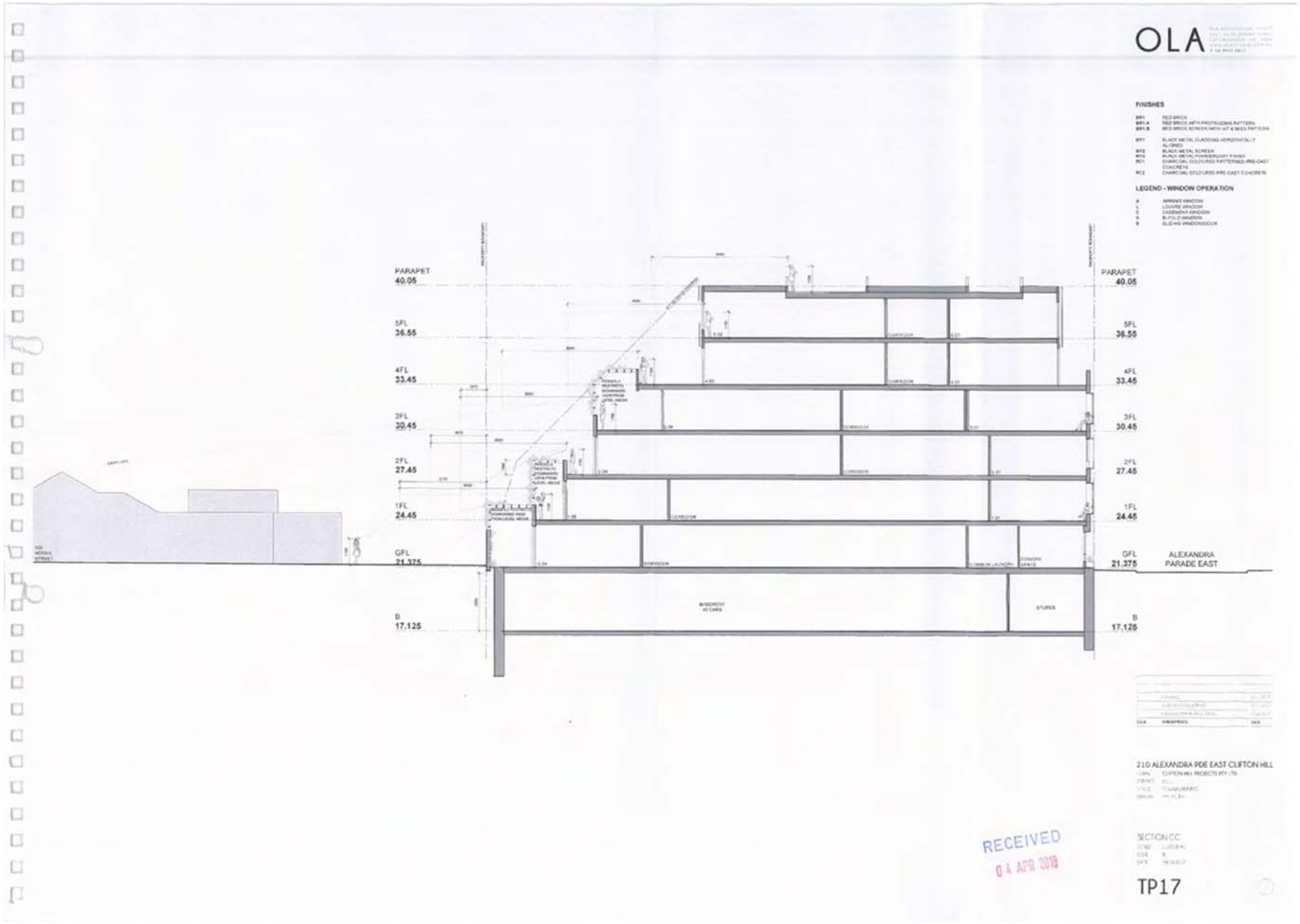
Attachment 2 - Proposed floor plans, Elevations, Perspectives and Shadow Diagrams - 210 Alexandra Parade East, Clifton Hill



Attachment 2 - Proposed floor plans, Elevations, Perspectives and Shadow Diagrams - 210 Alexandra Parade East, Clifton Hill

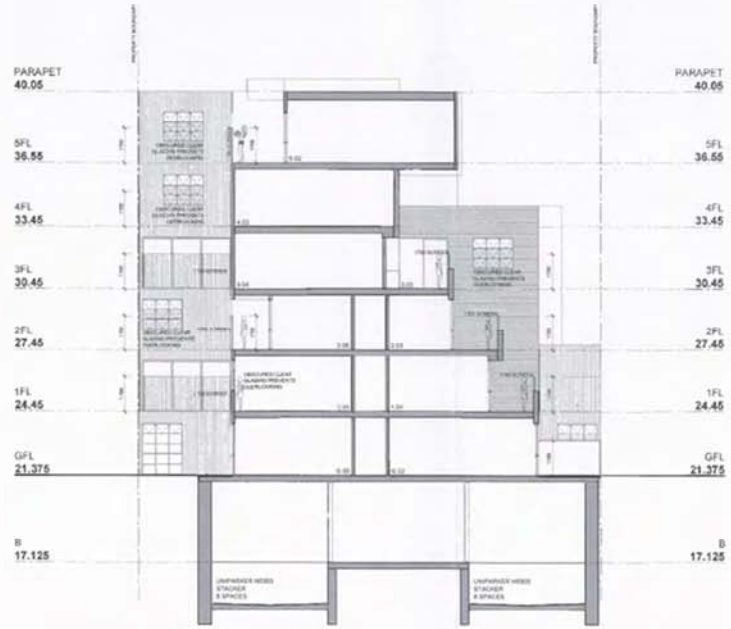


Attachment 2 - Proposed floor plans, Elevations, Perspectives and Shadow Diagrams - 210 Alexandra Parade East, Clifton Hill



Attachment 2 - Proposed floor plans, Elevations, Perspectives and Shadow Diagrams - 210 Alexandra Parade East, Clifton Hill

OLA



FINISHES

LEGEND - WINDOW OPERATION

210 ALEXANDRA PDE EAST CLIFTON HILL

SECTION DD

TP18

RECEIVED
04 APR 2018

Attachment 2 - Proposed floor plans, Elevations, Perspectives and Shadow Diagrams - 210 Alexandra Parade East, Clifton Hill

SUMMARY OF REFINEMENTS

Reduction of 900mm to parapet height and introduction of setback along Alexandra Parade East south façade on levels 4 & 5.

Integrated design solution with upper form of building to tie in with the eastern façade's original black metal vertical cladding. Simplification of building colours and material palette.

OLA

210 ALEXANDRA PDE EAST

PERSPECTIVES - SOUTH VIEW FROM ALEXANDRA PDE EAST

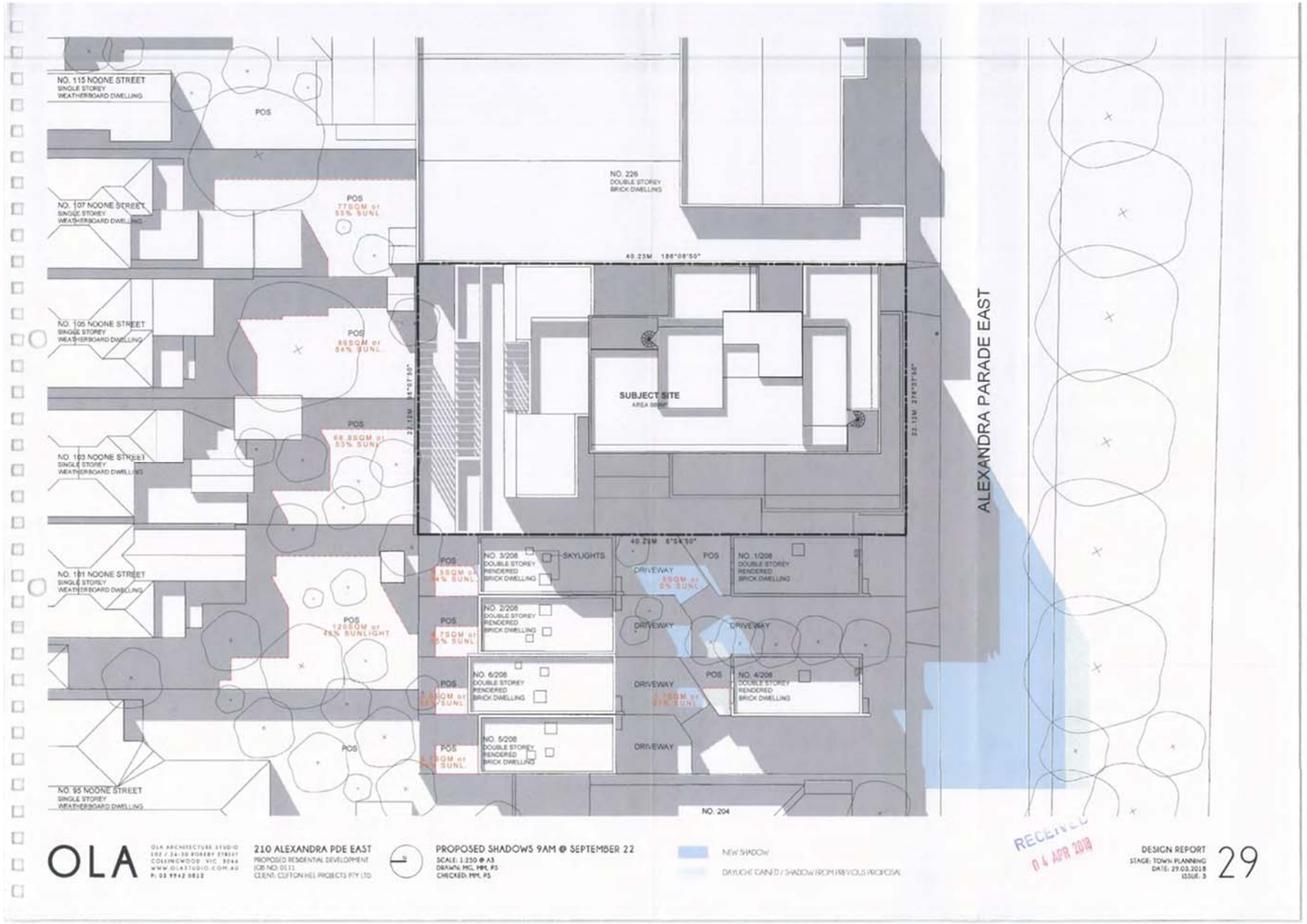
RECEIVED

DESIGN REPORT

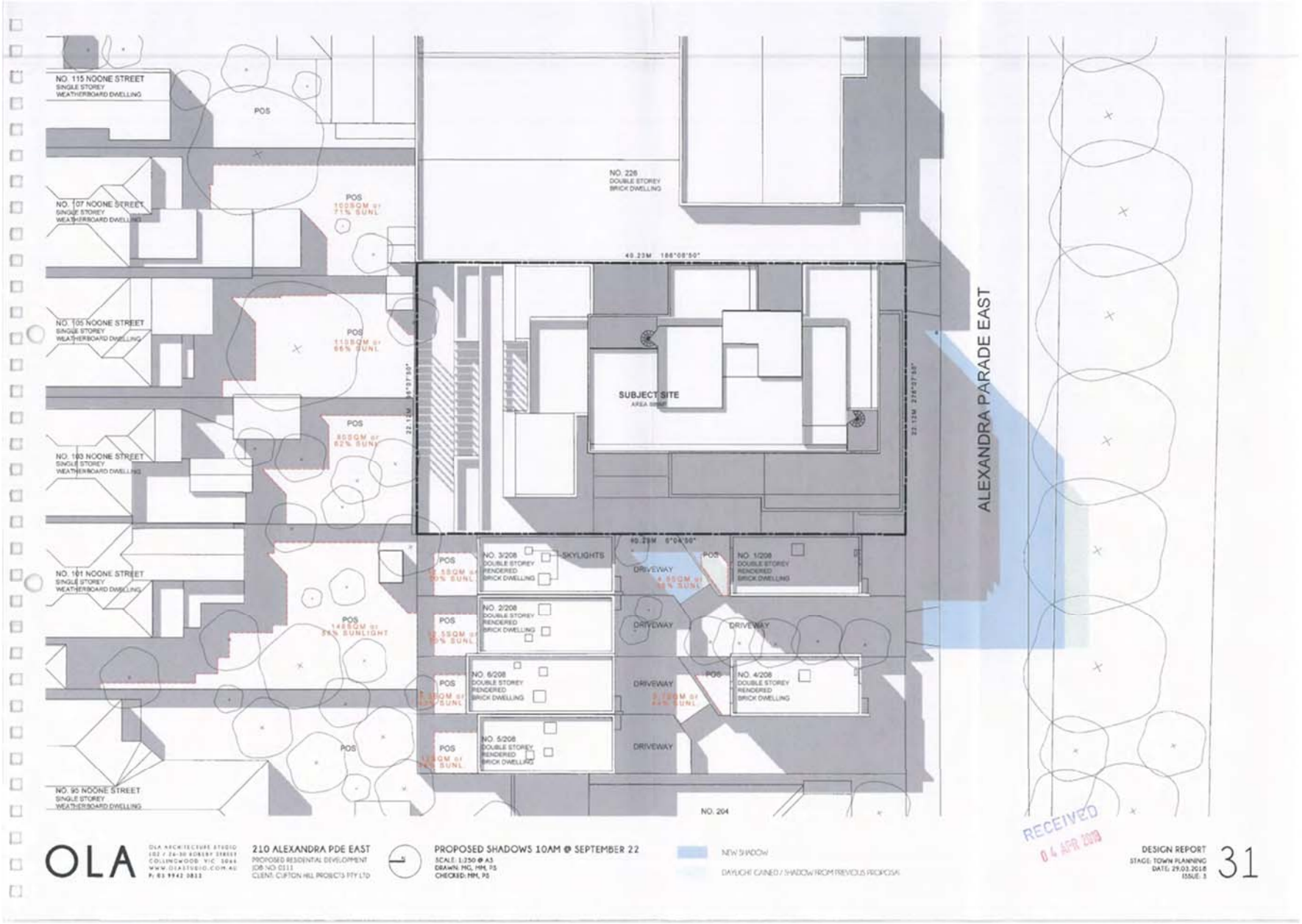
18

Attachment 2 - Proposed floor plans, Elevations, Perspectives and Shadow Diagrams - 210 Alexandra Parade East, Clifton Hill

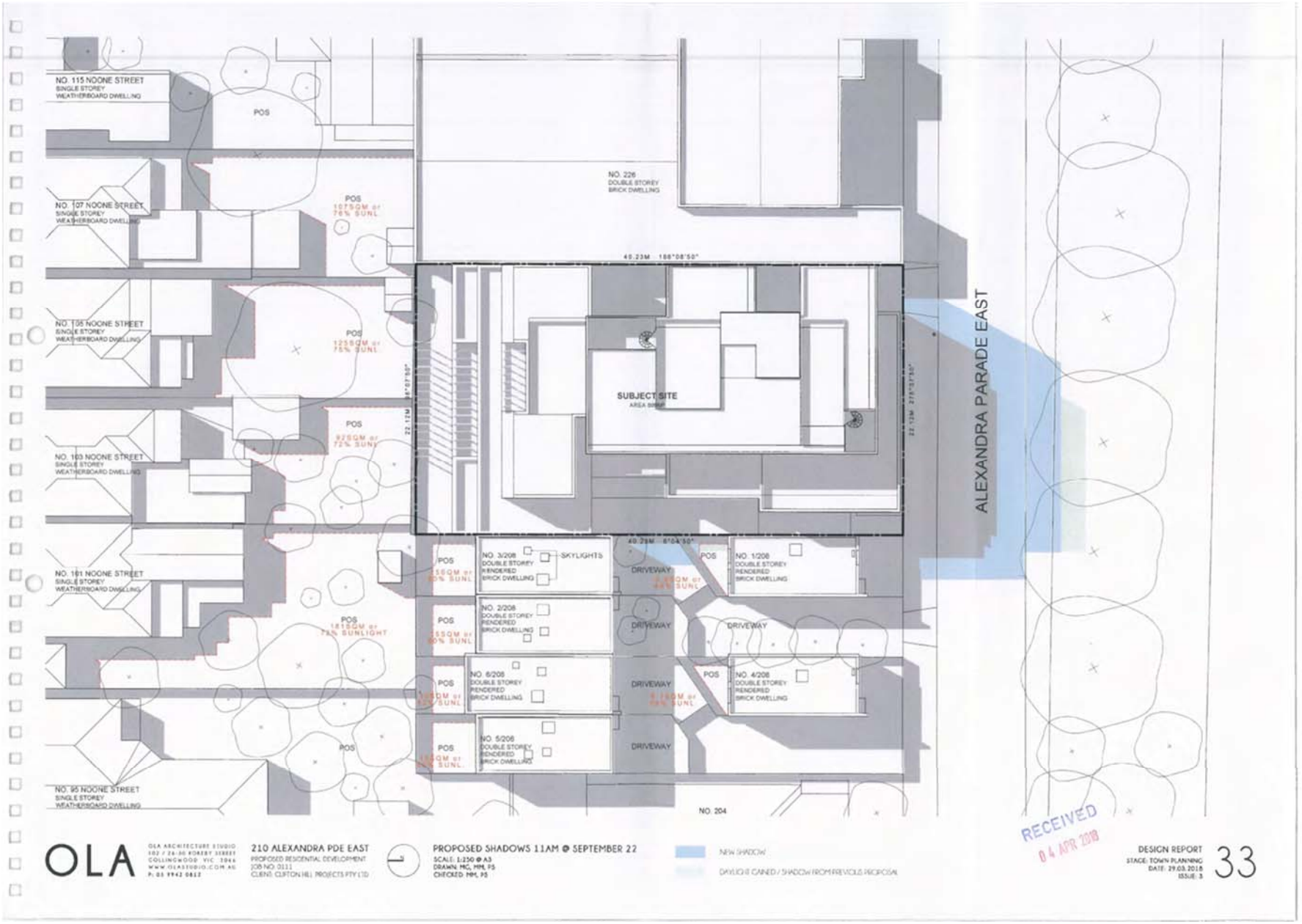
Attachment 2 - Proposed floor plans, Elevations, Perspectives and Shadow Diagrams - 210 Alexandra Parade East, Clifton Hill



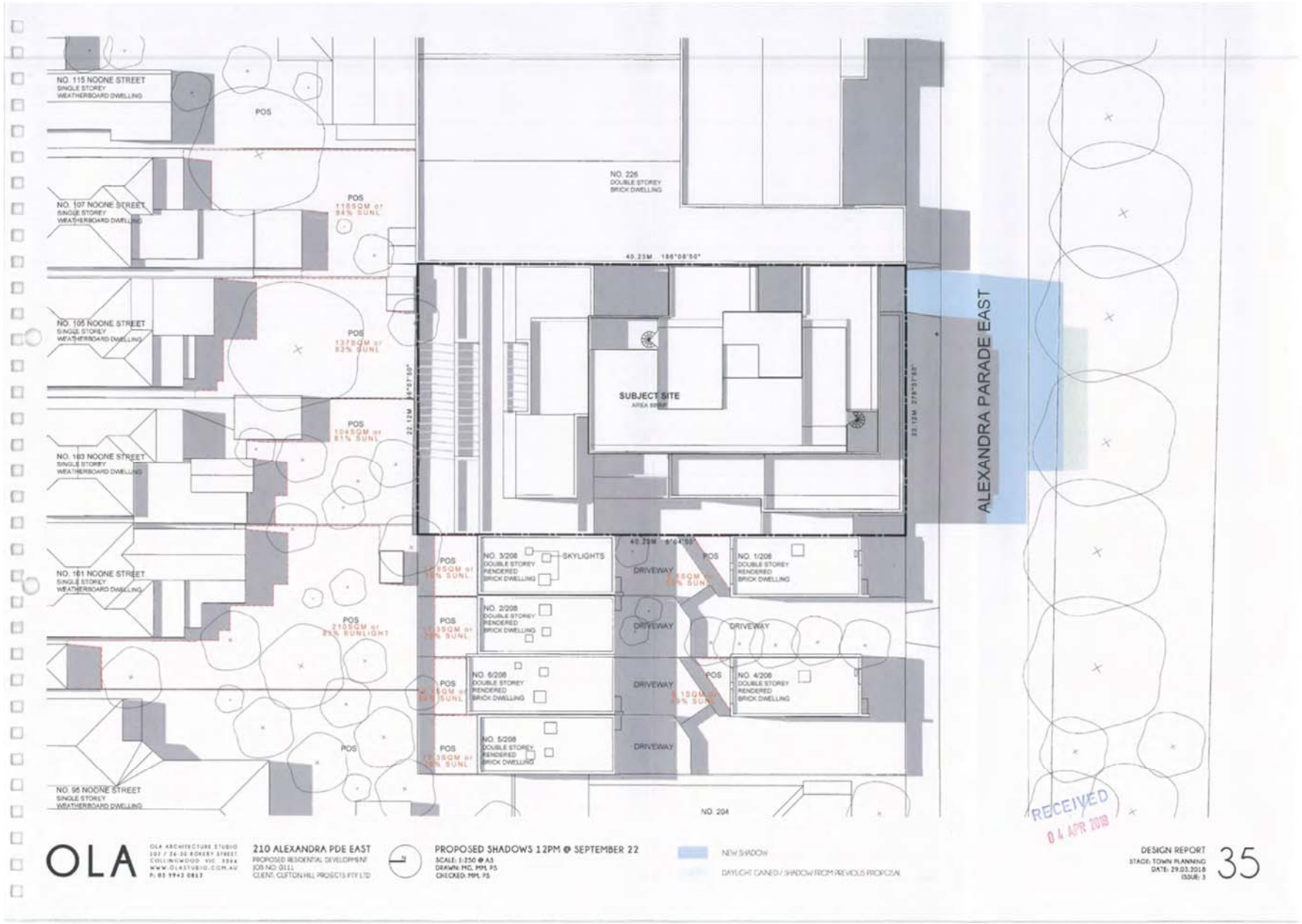
Attachment 2 - Proposed floor plans, Elevations, Perspectives and Shadow Diagrams - 210 Alexandra Parade East, Clifton Hill



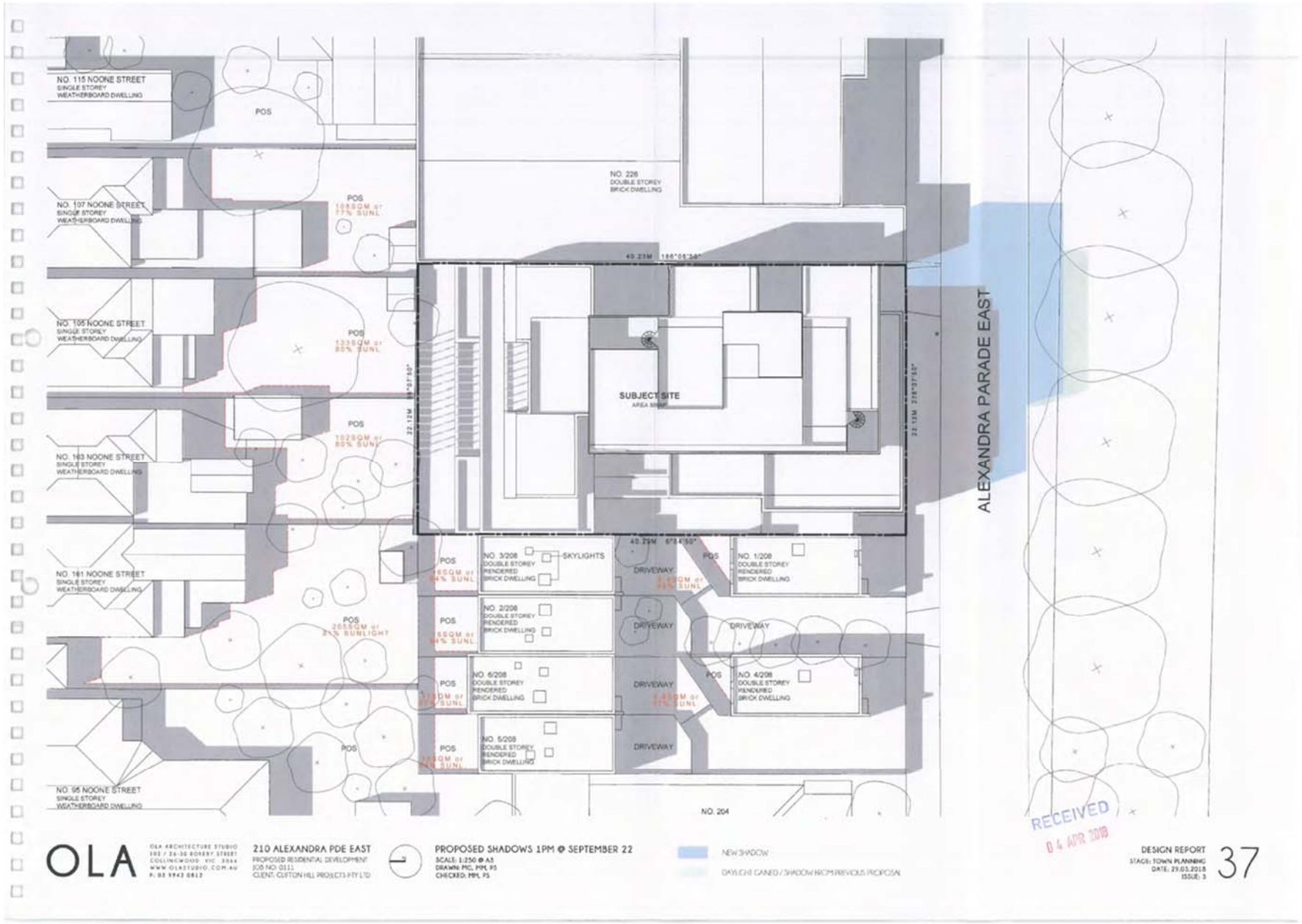
Attachment 2 - Proposed floor plans, Elevations, Perspectives and Shadow Diagrams - 210 Alexandra Parade East, Clifton Hill



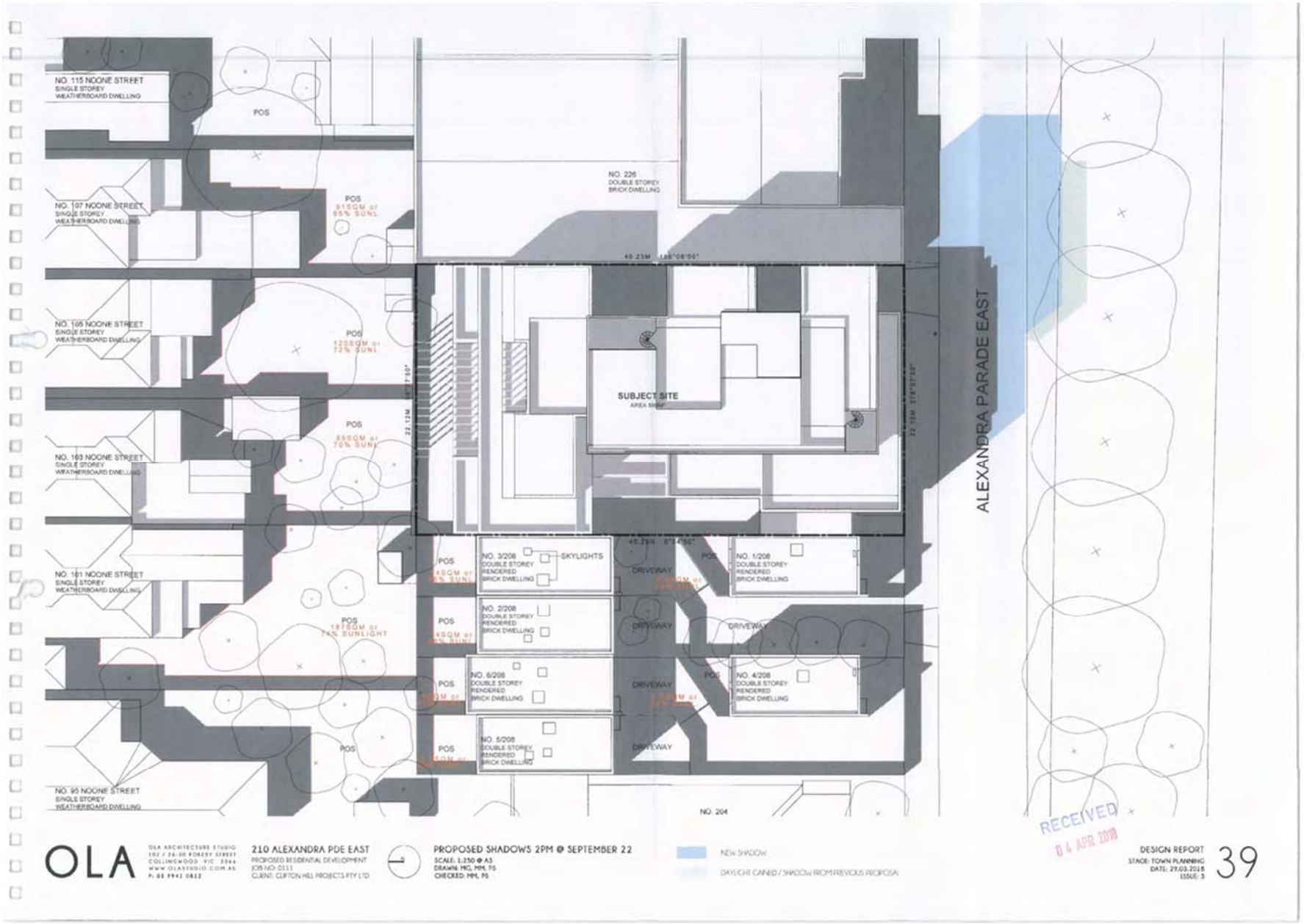
Attachment 2 - Proposed floor plans, Elevations, Perspectives and Shadow Diagrams - 210 Alexandra Parade East, Clifton Hill



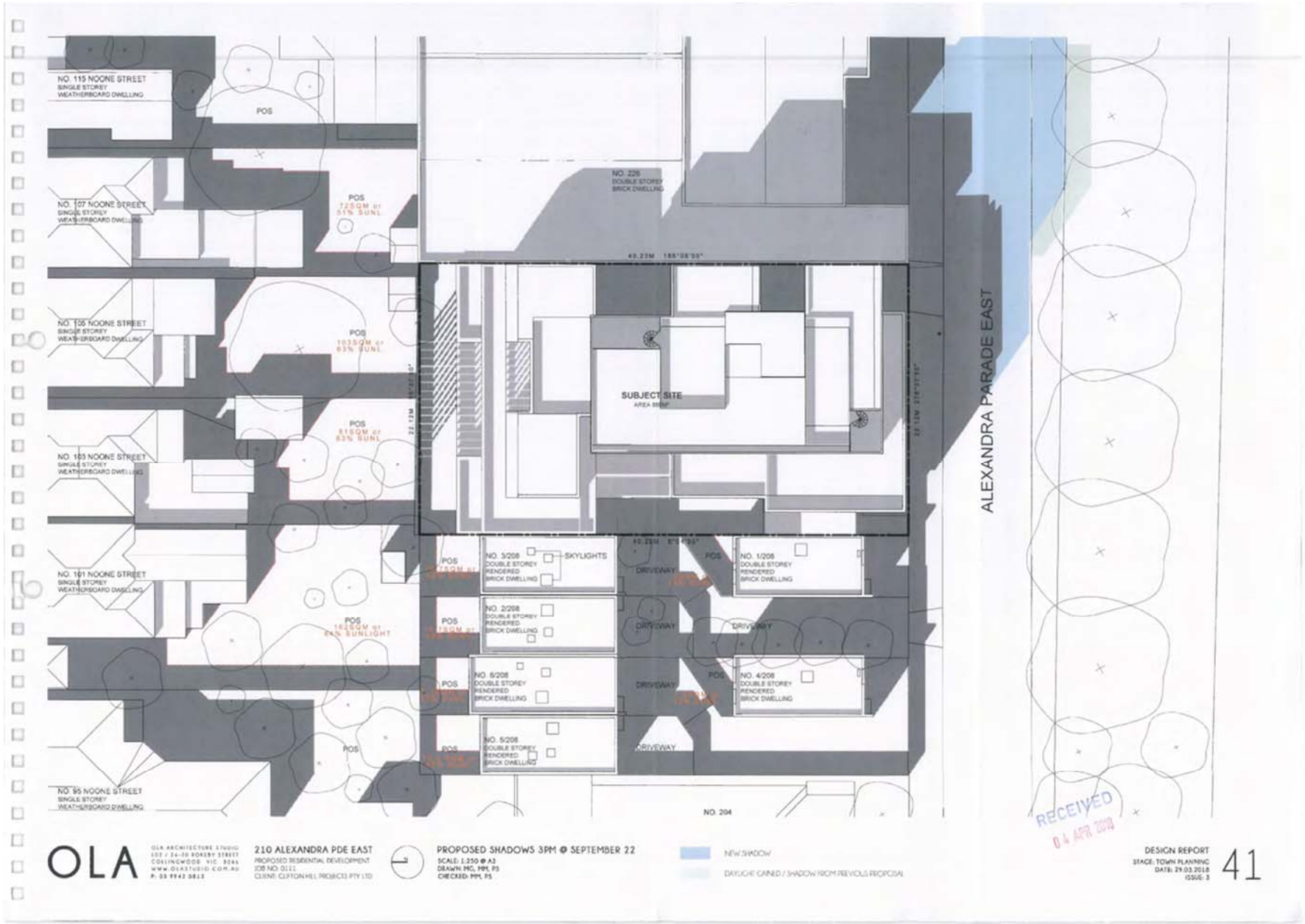
Attachment 2 - Proposed floor plans, Elevations, Perspectives and Shadow Diagrams - 210 Alexandra Parade East, Clifton Hill



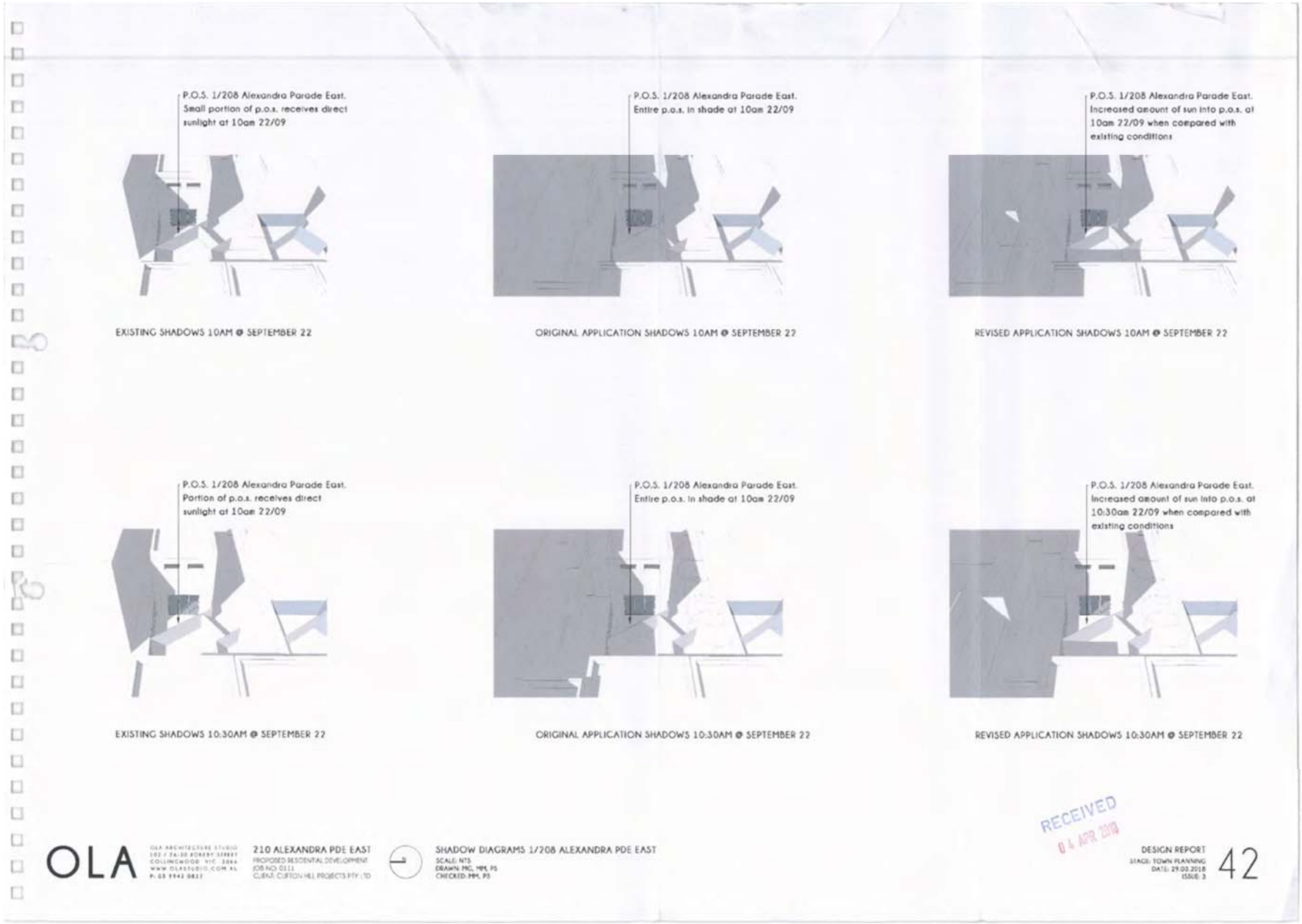
Attachment 2 - Proposed floor plans, Elevations, Perspectives and Shadow Diagrams - 210 Alexandra Parade East, Clifton Hill



Attachment 2 - Proposed floor plans, Elevations, Perspectives and Shadow Diagrams - 210 Alexandra Parade East, Clifton Hill



Attachment 2 - Proposed floor plans, Elevations, Perspectives and Shadow Diagrams - 210 Alexandra Parade East, Clifton Hill



Attachment 3 - Urban Design comments

CITY OF YARRA

MeMO

TO:	**Patrick Sutton**
FROM	**David Pryor**
DATE**:**	**11 December 2017**
SUBJECT:	**210 Alexandra Parade East, Clifton Hill**
APPLICATION NO:	**PLN17/0693**
DESCRIPTION:	Construction of a six-storey residential building

Urban design advice has been sought in relation to:
- presentation of the building (including height of the street wall, overall height, integration with the street, colours and materials);
- Whether the proposed development provides acceptable interfaces with adjoining lots.

COMMENTS SUMMARY

This proposal is supported in principle, subject to the improvements outlined below, including the following:

1. reduce the bulk of the building to either a) a 4-storey form or b) a 5-storey composition with the top three levels set back at least 3m from the front, with option b) preferably utilising existing walls;
2. simplify the form by reducing the number of stepped tiers on the west and north sides of the building;
3. ensure that items 1 and 2 result in a net reduction in the visual and shadow impacts on residential neighbours;
4. review the design of the rear of the building to more effectively articulate it into two halves.

Site and Context

The site sits in a small pocket of land zoned MUZ, adjoined by land zoned NRZ1 to the west and north. No HOs or DDOs apply. Under Clause 21.08, the site is within a Non Residential area, where proposals should “improve the interface of development with the street”.

Despite the proximity of the freeway, the street is reasonably quiet, with no through traffic, but with pedestrians and cyclists often present as a result of the footbridge which connects at Groom St.

The footbridge offers a panoramic overview of Clifton Hill, characterised by low rise development amongst which older red-brick buildings have a significant presence, including the one on the subject site, which is two storeys tall. Other buildings along Alexander Pde East vary between one and three storeys. Adjoining the site to the north, a long-established row of single-storey houses runs along the south side of Noone St.

Attachment 3 - Urban Design comments

Figure 1: View from footbridge, showing characterful brick buildings, and trees visible above rooftops

Built Form and Massing

The proposed 6-storey building would stand out in a streetscape where 2-storey construction currently predominates. Despite the architectural differentiation of the two top levels, they are not set back from the front boundary, and would therefore fully impact on the streetscape. Further, when viewed from the footbridge, the upper levels would have significant impact even if they were set back.

The development would also impact on Noone St, from where its six storey form would dominate over the single storey dwellings in the foreground.

It is recommended that the height of the development be reduced to 4 storeys. Alternatively, consideration could be given to a 5-storey composition with the top three levels set back at least 3m from the front.

The main 4-storey red-brick form of the proposal roughly aligns with the front of the existing building, being set back about 3.8m from the east boundary and 1.9m from the west. Construction within these setbacks is pulled back from the front boundary by about 2.3m and 5.0m respectively. This arrangement is supported. It is also compatible with the partial retention of the existing building.

Consideration should be given to retaining the front section of the existing building. Despite its lack of heritage status, it is characterful and well-scaled, creating an opportunity to integrate with the neighbourhood. The side setbacks, together with the western neighbour's setback from the street, enable the existing building to be appreciated in the round.

Figure 2: Scale, character and 3D visibility of existing building

Attachment 3 - Urban Design comments

In the event of a 6-storey development being approved, it is recommended that, as a minimum, the two-storey upper form be set back from the front boundary.

Interfaces with Adjoining Properties

Despite the proposed setbacks, the proposal would clearly present as a six storey building when viewed from residential properties to the north and west. From these properties, each of the three step-backs would generally be visible, as would the full height of the top storey.

The proposal casts additional shadow across private open space of residences to the west until about 11am at the equinox. Although not highlighted on p31 of the Design Report, this impact includes the communal open space between units 1 and 4 at #208.

The reduction in height recommended above would reduce the building's visual impact on its residential neighbours, and the simplification recommended below should be configured so as to further reduce this impact as well as to avoid additional overshadowing of the private and communal spaces adjoining Unit 1/2008 Alexandra Pde East.

The recess which bisects the north elevation at Levels 1 to 3 helps to break down the mass presenting to the northern neighbours. This articulation would be more effective if the two halves were more strongly differentiated from each other in their massing, materials and design details.

Street Interface

I support the placement of a communal (cowork) space occupying much of the ground floor frontage. This activates the street while providing a buffer to more private spaces and helping to build community. It would be better still to add individual entries to ground level dwellings directly from the street, providing finer grain activation.

The garden at the southwest corner of the site could provide useful screening to Apartment G01 and a positive interface with the neighbouring dwelling. However, these outcomes would be more effectively achieved if the basement were pulled back from this corner, facilitating plant (and tree) growth.

The garage door should be shown on the ground floor plan.

Building Design and Finishes

The front of the building presents a well-composed arrangement of forms. Towards the northwest corner of the site however, there are multiple steps from both the north and west sides of the proposed build form, which would present poorly. The setbacks at Level 4 are well integrated into the overall design of the building, but the same cannot be said of the setbacks at Levels 2 and 3. It is recommended that, in conjunction with the height reduction recommended above, the multiple steps in the building's form be revised to achieve a more coherent and compelling composition, while ensuring that this does not exacerbate the development's impact on its neighbours.

It is recommended that the setback of Bed 2 of Unit 4.01 be increased relative to Level 5 above, to more effectively achieve the effect of Level 5 "floating" above the rest of the building.

The drawings and finishes schedule should include re-used existing bricks, consistent with the Design Report (page 7). Other than this, and the above recommendation to differentiate the two halves at the rear of the building, the proposed colours and materials are supported.

Attachment 3 - Urban Design comments

The freeway creates the risk of buildings being sealed closed to minimise noise, resulting in a lack of activation, animation and natural ventilation. The proposed wintergardens are supported as a way of minimising this problem.

The above advice is limited to urban design issues, and does not address ESD, amenity or heritage, for example.

Attachment 4 - Engineering comments (original advive)

CITY OF YaRRA

MEMO

To:	**Patrick Sutton**	
From:	**Artemis Bacani**	
Date:	**2 January 2018**	
Subject:	**Application No:**	**PLN17/0693**
	Description:	**Multi-Storey Residential Development**
	Site Address:	**210 Alexandra Parade East, Clifton Hill**

I refer to the above Planning Application received on 27 November 2017 and the accompanying Traffic Engineering Assessment prepared by Traffix Group in relation to the proposed development at 210 Alexandra Parade East, Clifton Hill. Council's Engineering Services unit provides the following information:

CAR PARKING PROVISION

Proposed Development

Under the provisions of Clause 52.06-5 of the Yarra Planning Scheme, the development's parking requirements are as follows:

Proposed Use	Quantity/ Size	Statutory Parking Rate	No. of Spaces Required	No. of Spaces Allocated
One-bedroom dwelling	4	1 space per dwelling	4	4
Two-bedroom dwelling	6	1 space per dwelling	6	6
Three-bedroom dwelling	16	2 spaces per dwelling	32	32
Residential visitors	26 dwellings	1 space per 5 dwellings	5	0
		Total	47 Spaces	42 Spaces

The development would have a parking shortfall of five residential visitor spaces. To reduce the number of car parking spaces required under Clause 52.06-5 (including to reduce to zero spaces), the application for the car parking reduction must be accompanied by a Car Parking Demand Assessment.

Car Parking Demand Assessment

In reducing the number of parking spaces required for the proposed development, the Car Parking Demand Assessment would assess the following:

- *Parking Demand for Residential Visitors*.
  Peak parking for residential visitors generally occurs on weekday evenings and at weekends. The applicant proposes to accommodate all residential visitor parking off-site, since the site will be containing mostly mechanical parking - not practical for use by residential visitors. For mixed use and multi-unit residential developments that are located along or near activity centres, we would normally encourage applicants to provide some residential visitor parking

Attachment 4 - Engineering comments (original advive)

on-site. In this instance, the proposed car parking arrangement cannot practically allow for residential visitor parking to be accommodated on the property. In the context of the surrounding area, the demand of one residential visitor parking space off-site should not be detrimental to existing on-street parking conditions in the area.

- *Availability of Public Transport in the Locality of the Land*.
  The site is within walking distance of bus services operating along Hoddle Street. The site is also within walking distance of the Clifton Hill railway station.

- *Multi-Purpose Trips within the Area*.
  Visitors to the site might combine their visit by engaging in other activities or business whilst in the area.

- *Convenience of Pedestrian and Cyclist Access*.
  The site is within walking distance of shops, businesses, essential facilities and public transport services. The site also has very good connectivity to the Principal Bicycle Network.

Appropriateness of Providing Fewer Spaces than the Likely Parking Demand
Clause 52.06 lists a number of considerations for deciding whether the required number of spaces should be reduced. For the subject site, the following considerations are as follows:

- *Availability of Car Parking*.
  Traffix Group had conducted spot parking occupancy surveys of the surrounding area on Thursday 18 May 2017 and Saturday 20 May 2017 at 12:00pm, 7:00pm, and 8:00pm. The survey area encompassed entire length of Alexandra Parade East, Rutland Street and Groom Street (Alexandra Parade East to Noone Street). The times and extent of the survey are considered appropriate. A parking inventory of 100 publicly available parking spaces was identified. The results indicate that peak parking occupancy was observed at 8:00pm on both the Thursday and Saturday, with no fewer than seven and 11 spaces vacant respectively within the study area. The data suggests that any short-stay parking overflow from the site could be accommodated on-street.

- *Access to or Provision of Alternative Transport Modes*.
  The site has very good access to public transport and the on-road bicycle network. Car share pods are located within walking distance of the site and provide an alternative option of transport for residents and visitors. A GoGet car share pod is located in Groom Street, south of Roseneath Street, approximately 180 metres south-west of the site.

- *Relevant Local Policy or Incorporated Document*.
  The proposed development is considered to be in line with the objectives contained in Council's *Strategic Transport Statement*. The site is ideally located with regard to sustainable transport alternatives and the reduced provision of on-site car parking would potentially discourage private motor vehicle ownership and use.

- *Other Relevant Considerations*.
  All occupants of the new dwellings will be ineligible to apply for on-street resident and visitor parking permits.

Adequacy of Car Parking
From a traffic engineering perspective, the waiver of parking is considered appropriate in the context of the development and the surrounding area. The short-stay parking overflow from the site should not adversely impact on existing parking conditions in the surrounding area.

Engineering Services has no objection to the reduction in the car parking requirement for this site.

Attachment 4 - Engineering comments (original advive)

TRAFFIC GENERATION

The traffic generation for the site adopted by Traffix Group is as follows:

Proposed Use	Adopted Traffic Generation Rate	Daily Traffic	Peak Hour	
			AM	PM
Residential Dwellings	5.0 trips per dwelling per day (26 dwellings) Peak hour volume is 10% of daily volume	130	13	13

The volume of traffic generated by the development in the peak hours is not unduly high and could be accommodated on the local road network without adversely impacting on its operation.

DEVELOPMENT LAYOUT DESIGN

Layout Design Assessment

Item	Assessment
Access Arrangements	
Development Entrance via Alexandra Parade East	The width of the development's entrance is 3.6 metres wide which satisfies *Design standard 1* – Accessways of Clause 52.06-9.
Provision of a Passing Area	A passing area is not provided given that the accessway is less than 50 metres long. Vehicle movements into and out of the site will be managed by a stop-go signalling system.
Headroom Clearance	The headroom clearance of the entrance has not been dimensioned.
Visibility	The visibility triangle is provided on the western side of the accessway. Since a visibility triangle cannot be achieved on the eastern side of the accessway, a convex mirror will be provided on the west side of the accessway to improve pedestrian visibility.
Ramped Accessway Width	The ramped accessway has a carriageway width of 3.0 metres and additional 300 mm wide kerbs on either side. This satisfies the Australian/New Zealand Standard AS/NZS 2890.1:2004.
Car Parking Modules and Mechanical Parking	
At-grade Car Spaces	The 2.7 metre by 4.9 metre at-grade car spaces satisfies D*esign standard 2 – Car parking spaces*.
Clearance to Walls	A minimum clearance of 300 mm has been provided for car spaces adjacent to walls.
Car Stacker Device	The development would be accommodating the Nussbaum Uniparker N5303 shuffle type stacker. This model has a minimum platform width of 2.6 metres.
Vehicle Clearance Height	The stacker model selected by the applicant has a vehicle clearance height of 1.8 metres for at least 25 per cent of platforms to satisfy *Design standard 4: Mechanical parking*.
Aisle Width	The aisle width within the basement car park level satisfies *Design standard 2*.

Car Parking Modules and Mechanical Parking

Attachment 4 - Engineering comments (original advive)

Floor to Ceiling Height	A minimum floor to ceiling height of 3.85 metres has been provided within the basement car park level. The largest model type has a height envelope of 3.75 metres. The development's floor to ceiling height can accommodate this device.
Blind Aisle Extensions	The blind aisle extensions of 1.0 metre satisfy AS/NZS 2890.1:2004.
Gradients	
Ramp Grade for First 5.0 metres inside Property – Precinct 4.1	The ramp grade for the first 5.0 metres inside the building line is 1 in 10 which satisfies *Design standard 3: Gradients*.
Ramp Grades and Changes of Grades	The ramp grades and the changes of grade for the ramped accessway also satisfy *Design standard 3*.
Curved Ramp	Swept path diagram not provided.
Waste Management	
Access into Site for Refuse Collection Vehicle	The swept path diagrams for a refuse collection vehicle entering and exiting the site are considered satisfactory.

Design Items to be Addressed

Item	Details
Headroom Clearance – Development Entrance	The headroom clearance at the entrance is to be dimensioned on the drawings.
Ground Clearance Check – Internal Ramps	The applicant is to provide ground clearance checks along the inside radii of the curved ramps using the B99 design vehicle. The ground clearance checks must provide the ramp grades and lengths of each ramp grade section.

ENGINEERING CONDITIONS

Civil Works

- Upon the completion of all building works and connections for underground utility services, the footpath immediately outside the property's Alexandra Parade East road frontage must be stripped and re-sheeted to Council's satisfaction and at the Permit Holder's expense.
- The footpath must have a cross-fall of 1 in 40 or unless otherwise specified by Council.
- The existing vehicle crossing is to be demolished and reconstructed to Council's satisfaction and at the Permit Holder's cost. The new vehicle crossing must satisfy the ground clearance check for a B99 design vehicle.
- The edge of the vehicle crossing's splay is to have a minimum lateral clearance of 1.0 metre from the edge of any power/light poles.
- The half-width road pavement of Alexandra Parade East (from north kerb to centre line) from the western limit and eastern limit of the development stripped and re-sheeted to Council's satisfaction. The costs associated with these road works shall be borne by the developer.

Road Asset Protection

- Any damaged roads, footpaths and other road related infrastructure adjacent to the development site as a result of the construction works, including trenching and excavation

Attachment 4 - Engineering comments (original advive)

for utility service connections, must be reconstructed to Council's satisfaction and at the developer's expense.

Construction Management Plan

- A Construction Management Plan must be prepared and submitted to Council. The Plan must be approved by Council prior to the commencement of works. A detailed dilapidation report should detail and document the existing and post construction conditions of surrounding road infrastructure and adjoining private properties.

Impact of Assets on Proposed Development

- Any services poles, structures or pits that interfere with the proposal must be adjusted, removed or relocated at the owner's expense after seeking approval from the relevant authority.
- Areas must be provided inside the property line and adjacent to the footpath to accommodate pits and meters. No private pits, valves or meters on Council property will be accepted.

Car Stacker Device

- The car stacker devices must be installed, operated and maintained in accordance with the manufacturer's specifications and requirements.
- No pipes, ducting or protrusions from the ceiling or walls are to be installed above or within the space clearance envelopes for the car stacker devices.

NON-PLANNING ADVICE FOR THE APPLICANT
Legal Point of Discharge

The applicant must apply for a Legal Point of Discharge under Regulation 610 – Stormwater Drainage of the *Building Regulations 2006* from Yarra Building Services unit. Any storm water drainage within the property must be provided and be connected to the nearest Council pit of adequate depth and capacity (legal point of discharge), or to Council's satisfaction under Section 200 of the *Local Government Act 1989* and Regulation 610.

Protection of Basement

The Permit Holder/developer is responsible for the management and protection of their building from groundwater.

The developer needs to ensure that the basement car park and any portions of the development at or below natural surface level have a level of protection to minimise the seepage of subterranean water (groundwater) or any rainfall run-off from penetrating the walls or floors of the site.
In the event that any contaminated groundwater seeps through the walls of the basement, this water must not be discharged into Council's stormwater drainage system under any circumstances. Any contaminated groundwater that is present within the site must be treated and disposed of in accordance with a Trade Waste Agreement and as per EPA guidelines and Melbourne Water/City West Water guidelines.

It is also the Permit Holder's onus and responsibility to ensure that rainfall run-off does not enter the property in the event of a heavy storm. Adequate measures should be in place to prevent backwash from entering the property.

ADDITIONAL COMMENTS PROVIDED BY CONSTRUCTION MANAGEMENT
General Comments

Attachment 4 - Engineering comments (original advive)

- All road pavement reinstatements must be consolidated as single full-width area of reinstatement to reduce further construction joints in the pavement.

- All redundant pits/services to be removed and reinstated to Council's satisfaction.

Construction Difficulty Notes

- Power lines along the north side of Alexandra Parade East will impact on any potential crane lifting works. It is recommended that a section of the power line is brought underground to facilitate any future crane lifting during the construction works.

Regards

Artemis Bacani
Civil Roads Engineer
Engineering Services Unit

Attachment 5 - Engineering comments relating to amended plans.

CITY OF YaRRA

MEMO

To:	**John Theodosakis**	
From:	**Artemis Bacani**	
Date:	**11 July 2018**	
Subject:	**Application No:**	**PLN17/0693**
	Description:	**Amendment to Basement Level**
	Site Address:	**210 Alexandra Parade East, Clifton Hill**

I refer to the above Planning Application received on 9 July 2018 in relation to the proposed development at 210 Alexandra Parade East, Clifton Hill. Council's Civil Engineering unit provides the following information:

DEVELOPMENT LAYOUT DESIGN

Amended Proposal

Item	Assessment
Car Parking Modules and Mechanical Parking	
At-grade Car Spaces	The 2.7 metre by 4.9 metre at-grade car spaces satisfies D*esign standard 2 – Car parking spaces*.
Clearance to Walls	A minimum clearance of 420 mm has been provided for car spaces adjacent to walls.
On-Grade Car Stacker Device	The applicant has not provided the car stacker specification or model.

Design Items to be Addressed

Item	Details
On-Grade Car Stacker Device	The car stacker specification/model must be submitted to the Civil Engineering unit for assessment and approval.

N.B. - The Engineering Conditions and Non-Planning Advice as per our engineering referral comments of 2 January 2018 are relevant and pertinent to this development application.

Attachment 6 - ESD Referral Advice

Sustainable Management Plan (SMP)
Referral Response by Yarra City Council

ESD in the Planning Permit Application Process

Yarra City Council's planning permit application process includes Environmentally Sustainable Development (ESD) considerations. This is now supported by the ESD Local Policy Clause 22.17 of the Yarra Planning Scheme, entitled *Environmentally Sustainable Development*.

The Clause 22.17 requires all eligible applications to demonstrate best practice in ESD, supported by the Built Environment Sustainability Scorecard (BESS) web-based application tool, which is based on the Sustainable Design Assessment in the Planning Process (SDAPP) program.

As detailed in Clause 22.17, this application is a 'large' planning application as it meets the category *Residential 1. Ten or more dwellings*.

What is a Sustainable Management Plan (SMP)?
An SMP is a detailed sustainability assessment of a proposed design at the planning stage. An SMP demonstrates best practice in the 10 Key Sustainable Building Categories and;

- Provides a detailed assessment of the development. It may use relevant tools such as BESS and STORM or an alternative assessment approach to the satisfaction of the responsible authority; and
- Identifies achievable environmental performance outcomes having regard to the objectives of Clause 22.17 (as appropriate); and
- Demonstrates that the building has the design potential to achieve the relevant environmental performance outcomes, having regard to the site's opportunities and constraints; and
- Documents the means by which the performance outcomes can be achieved.

An SMP identifies beneficial, easy to implement, best practice initiatives. The nature of larger developments provides the opportunity for increased environmental benefits and the opportunity for major resource savings. Hence, greater rigour in investigation is justified. It may be necessary to engage a sustainability consultant to prepare an SMP.

Assessment Process:

The applicant's town planning drawings provide the basis for Council's ESD assessment. Through the provided drawings and the SMP, Council requires the applicant to demonstrate best practice.
The following comments are based on the review of the architectural drawings, prepared by *OLA Architects* (received 04.04.2018) and the accompanying SMP, prepared by *GIW Environmental Solutions* (prepared 08.11.2017).

Attachment 6 - ESD Referral Advice

Table of Contents

Attachment 6 - ESD Referral Advice

Sustainable Management Plan (SMP)
Referral Response by Yarra City Council

Assessment Summary:

Responsible Planner:		John Theodosakis	
ESD Advisor:		Euan Williamson	
Date:	09.07.2018	Planning Application No:	PLN17/0693
Subject Site:		210 Alexandra Parade East, Clifton Hill	
Site Area:	Approx. 882m^2	Site Coverage:	100%
Project Description:		Six storey building comprising (26) dwellings.	
Pre-application meeting(s):		None.	

The standard of the ESD is close to meeting Council's Environmental Sustainable Design (ESD) standards. Should a permit be issued, the following ESD commitments (1) and deficiencies (2) should be conditioned as part of a planning permit to ensure Council's ESD standards are fully met.

Furthermore, it is recommended that all ESD commitments (1), deficiencies (2) and the outstanding information (3) are addressed in an updated SMP report and are clearly shown on Condition 1 drawings. ESD improvement opportunities (4) have been summarised as a recommendation to the applicant.

(1) Applicant ESD Commitments:

- Minimum 6.9 Star average NatHERS Star rating for dwellings. (*See note below)*
- A STORM report with a 113% STORM score has been submitted that demonstrates best practice and relies on ~417m^2 of roof connected to a 15,000 litre rainwater tank and 155m^2 of terraces connected to 25m^2 of raingardens.
- Good access to natural ventilation to most dwellings.
- Reasonable shading through screens, balconies and building articulation.
- Energy efficient hydronic heating provided and any future cooling systems to be within one star of the most efficient available.
- Energy efficient lighting, and common area & external lighting to have motion sensor controls.
- Water efficient fixtures and taps.
- A 10 kW solar PV array to contribute to onsite electricity demands.
- Electric vehicle charging facilities.
- Water efficient native vegetation.
- 26 bike parking space in the basement.
- Green wall (creeper provided) to southern façade adjacent to co-working space.

(2) Application ESD Deficiencies:

- Good access to daylight to most bedrooms, but standard is short of the 80% minimum living area criteria in BESS. Dwellings on the two side boundaries will have a restricted access to development if surrounding lots are developed to a similar intensity. Overall the standard of daylight should be improved to meet the BESS living area daylight factor standard in a minimum of 80% of dwellings. Consider strategies to improve daylight access to living rooms, such as: - Increasing glazing area to lower level living area windows, - Increasing glazing head height to lower living area windows, - Using a lighter grey colour with improved reflectance to brickwork / materials of lightcourts and balconies adjacent to living areas. Please update the SMP and daylight information to reflect the amended plans.

(3) Outstanding Information:

- Operability to some windows is not clearly shown (lightcourts, etc). Ensure that all habitable windows have an operable function to enable natural ventilation.
- Please update the SMP and NatHERS ratings to reflect the amended plans.

Attachment 6 - ESD Referral Advice

Sustainable Management Plan (SMP)
Referral Response by Yarra City Council

- Please note that the 300mm specification of raingardens describes the overflow reservoir volume, not the depth of the garden substrate. Consider whether 100mm raingardens might be more suitable. Please update the STORM report to reflect the amended plans and altered catchment areas.

(4) ESD Improvement Opportunities

- Consider gas boosted solar hot water.
- Consider rainwater tank for irrigation as well.
- Recommend providing a composting system for each dwelling.
- Consider recycled materials such as insulation and flooring.
- Consider concrete and steel with a recycled component.
- Recommend FSC accredited timber throughout the project.

Further Recommendations:
The applicant is encouraged to consider the inclusion of ESD recommendations, detailed in this referral report. Further guidance on how to meet individual planning conditions has been provided in reference to the individual categories. The applicant is also encouraged to seek further advice or clarification from Council on the individual project recommendations.

Attachment 6 - ESD Referral Advice

1. Indoor Environment Quality (IEQ)

Objectives:

- to achieve a healthy indoor environment quality for the wellbeing of building occupants.
- to provide a naturally comfortable indoor environment will lower the need for building services, such as artificial lighting, mechanical ventilation and cooling and heating devices.

Issues	Applicant's Design Responses	Council Comments	CAR*
Natural Ventilation and Night Purging	Good access to natural ventilation to most dwellings.	Operability to some windows is not clearly shown. Ensure that all habitable windows have an operable function to enable natural ventilation.	3
Daylight & Solar Access	Good access to daylight to most bedrooms, but is short of the 80% minimum living area standard in BESS. Dwellings on the two side boundaries will have a restricted access to development if surrounding lots are developed to a similar intensity.	Overall the standard of daylight should be improved to meet the BESS living area daylight factor standard in a minimum of 80% of dwellings. Consider strategies to improve daylight access to living rooms, such as: - Increasing glazing area to lower level living area windows. - Increasing glazing head height to lower living area windows. - Using a lighter grey colour with improved reflectance to brickwork / materials of lightcourts and balconies adjacent to living areas. Please update the SMP and daylight information to reflect the amended plans.	4
External Views	External views from all dwellings.	-	1
Hazardous Materials and VOC	No information has been provided.	Consider low VOC internal finishes, sealants and paints, carpets and flooring, wall and ceiling coverings and zero formaldehyde content in engineered timber projects.	4
Thermal Comfort	Good thermal comfort is determined through a combination of good access to ventilation, balanced passive heat gains and high levels of insulation. The application proposes: - Good access to natural ventilation - Small areas of glazing exposed to solar gain - Good thermal efficiency standards.	Please refer to section on, *NCC Energy Efficiency Requirements Exceeded* and *Effective Shading*	1

*** Council Assessment Ratings:**

1 – Design Response is SATISFACTORY; 2 – Design Response is NOT SATISFACTORY
3 – MORE INFORMATION is required; 4 – ESD IMPROVEMENT OPPORTUNITIES

Attachment 6 - ESD Referral Advice

References and useful information:
SDAPP Fact Sheet: 1. Indoor Environment Quality
Good Environmental Choice Australia Standards www.geca.org.au
Australian Green Procurement www.greenprocurement.org
Residential Flat Design Code www.planning.nsw.gov.au
Your Home www.yourhome.gov.au

Attachment 6 - ESD Referral Advice

2. Energy Efficiency

Objectives:

- to ensure the efficient use of energy
- to reduce total operating greenhouse emissions
- to reduce energy peak demand
- to minimize associated energy costs.

Issues	Applicant's Design Responses	Council Comments	CAR*
NCC Energy Efficiency Requirements Exceeded	Minimum 6.9 Star average NatHERS Star rating for dwellings.	Please update the SMP and NatHERS ratings to reflect the amended plans.	3
Hot Water System	6 Star gas instantaneous hot water, or minimum 80% efficiency to all dwellings.	Consider gas boosted solar hot water.	4
Peak Energy Demand	Peak demand reduced through various initiatives.	-	1
Effective Shading	Reasonable shading through screens, balconies and building articulation. No dwellings exceed the 30MJ/m^2 cooling load BADS standard.	Please update the SMP and NatHERS ratings to reflect the amended plans.	3
Efficient HVAC system	Energy efficient hydronic heating provided and any future cooling systems to be within one star of the most efficient available.	-	1
Efficient Lighting	Energy efficient lighting, and common area & external lighting to have motion sensor controls.	-	1
Electricity Generation	A 10 kW solar PV array to contribute to onsite electricity demands.	-	1
Other	-	-	-

*** Council Assessment Ratings:**

1 – Design Response is SATISFACTORY; 2 – Design Response is NOT SATISFACTORY
3 – MORE INFORMATION is required; 4 – ESD IMPROVEMENT OPPORTUNITIES

References and useful information:
SDAPP Fact Sheet: 2. Energy Efficiency
House Energy Rating www.makeyourhomegreen.vic.gov.au
Building Code Australia www.abcb.gov.au
Window Efficiency Rating Scheme (WERS) www.wers.net
Minimum Energy Performance Standards (MEPS) www.energyrating.gov.au
Energy Efficiency www.resourcesmart.vic.gov.au

Attachment 6 - ESD Referral Advice

3. Water Efficiency

Objectives:

- to ensure the efficient use of water
- to reduce total operating potable water use
- to encourage the collection and reuse of rainwater and stormwater
- to encourage the appropriate use of alternative water sources (e.g. grey water)
- to minimise associated water costs.

Issues	Applicant's Design Responses	Council Comments	CAR*
Minimising Amenity Water Demand	Water efficient taps and fittings throughout, including: - 4 Star toilets - 5 Star tapware - 3 Star showers <7.5 litres/min - 5 Star dishwashers (if supplied)	-	1
Water for Toilet Flushing	15,000 litre rainwater tank proposed to flush toilets on ground and level 1.	-	1
Water Meter	Water (hot & cold) metering for individual dwellings.	-	1
Landscape Irrigation	Water efficient native vegetation.	Consider rainwater tank for irrigation as well.	4
Other	-	-	-

*** Council Assessment Ratings:**

1 – Design Response is SATISFACTORY; 2 – Design Response is NOT SATISFACTORY
3 – MORE INFORMATION is required; 4 – ESD IMPROVEMENT OPPORTUNITIES

References and useful information:
SDAPP Fact Sheet: 3. Water Efficiency
Water Efficient Labelling Scheme (WELS) www.waterrating.gov.au
Water Services Association of Australia www.wsaa.asn.au
Water Tank Requirement www.makeyourhomegreen.vic.gov.au
Melbourne Water STORM calculator www.storm.melbournewater.com.au
Sustainable Landscaping www.ourwater.vic.gov.au

Attachment 6 - ESD Referral Advice

4. Stormwater Management

Objectives:

- to reduce the impact of stormwater runoff
- to improve the water quality of stormwater runoff
- to achieve best practice stormwater quality outcomes
- to incorporate Water Sensitive Urban Design principles.

Issues	Applicant's Design Responses	Council Comments	CAR*
STORM Rating	A STORM report with a 113% STORM score has been submitted that demonstrates best practice and relies on ~417m^2 of roof connected to a 15,000 litre rainwater tank and 155m^2 of terraces connected to 25m^2 of raingardens.	Please note that the 300mm specification of these raingardens describes the overflow reservoir volume, not the depth of the garden substrate. Consider whether 100mm raingardens might be more suitable. Please update the STORM report to reflect the amended plans and altered catchment areas.	3
Discharge to Sewer	-	-	-
Stormwater Diversion	-	-	-
Stormwater Detention	-	-	-
Stormwater Treatment	-	-	-
Others	-	-	-

*** Council Assessment Ratings:**

1 – Design Response is SATISFACTORY; 2 – Design Response is NOT SATISFACTORY
3 – MORE INFORMATION is required; 4 – ESD IMPROVEMENT OPPORTUNITIES

References and useful information:
SDAPP Fact Sheet: 4. Stormwater Management
Melbourne Water STORM calculator www.storm.melbournewater.com.au
Water Sensitive Urban Design Principles www.melbournewater.com.au
Environmental Protection Authority Victoria www.epa.vic.gov.au
Water Services Association of Australia www.wsaa.asn.au
Sustainable Landscaping www.ourwater.vic.gov.au

Attachment 6 - ESD Referral Advice

5. Building Materials

Objectives:

- to minimise the environmental impact of materials used by encouraging the use of materials with a favourable lifecycle assessment.

Issues	Applicant's Design Responses	Council Comments	CAR*
Reuse of Recycled Materials	No information has been provided.	Consider recycled materials such as insulation and flooring.	4
Embodied Energy of Concrete and Steel	No information has been provided.	Consider concrete and steel with a recycled component.	4
Sustainable Timber	No information has been provided.	Recommend FSC accredited timber throughout the project.	4
Design for Disassembly	No information has been provided.	Consider a small pallet of materials and construction techniques that can assist in disassembly.	4
Other	-	-	-

*** Council Assessment Ratings:**

1 – Design Response is SATISFACTORY; 2 – Design Response is NOT SATISFACTORY
3 – MORE INFORMATION is required; 4 – ESD IMPROVEMENT OPPORTUNITIES

References and useful information:
SDAPP Fact Sheet: 5. Building Materials
Building Materials, Technical Manuals www.yourhome.gov.au
Embodied Energy Technical Manual www.yourhome.gov.au
Good Environmental Choice Australia Standards www.geca.org.au
Forest Stewardship Council Certification Scheme www.fsc.org
Australian Green Procurement www.greenprocurement.org

Attachment 6 - ESD Referral Advice

6. Transport

Objectives:

- to minimise car dependency
- to ensure that the built environment is designed to promote the use of public transport, walking and cycling.

Issues	Applicant's Design Responses	Council Comments	CAR*
Minimising the Provision of Car Parks	Car parking proposed in basement.	-	1
Bike Parking Spaces	26 bike parking space in the basement.	-	1
End of Trip Facilities	-	-	NA
Car Share Facilities	No information has been provided.	-	1
Electric vehicle charging	Future infrastructure for electric vehicle charging	-	1

*** Council Assessment Ratings:**

1 – Design Response is SATISFACTORY; 2 – Design Response is NOT SATISFACTORY
3 – MORE INFORMATION is required; 4 – ESD IMPROVEMENT OPPORTUNITIES

References and useful information:
SDAPP Fact Sheet: 6. Transport
Off-setting Car Emissions Options www.greenfleet.com.au
Sustainable Transport www.transport.vic.gov.au/doi/internet/icy.nsf
Car share options www.yarracity.vic.gov.au/Parking-roads-and-transport/Transport-Services/Carsharing/
Bicycle Victoria www.bv.com.au

Attachment 6 - ESD Referral Advice

7. Waste Management

Objectives:

- to ensure waste avoidance, reuse and recycling during the design, construction and operation stages of development
- to ensure long term reusability of building materials.
- to meet Councils' requirement that all multi-unit developments must provide a Waste Management Plan in accordance with the *Guide to Best Practice for Waste Management in Multi-unit Developments 2010*, published by Sustainability Victoria.

Issues	Applicant's Design Responses	Council Comments	CAR*
Construction Waste Management	A CWMP with a minimum 80% recycling/reuse target for construction and demolition waste.	-	1
Operational Waste Management	Space for general waste, hard waste and recycling bins.	Recommend providing a composting system for each dwelling.	4
Storage Spaces for Recycling and Green Waste	Area for bins and hard waste can be identified on the plans.	-	1
Others	-	-	-

*** Council Assessment Ratings:**

1 – Design Response is SATISFACTORY; 2 – Design Response is NOT SATISFACTORY
3 – MORE INFORMATION is required; 4 – ESD IMPROVEMENT OPPORTUNITIES

References and useful information:
SDAPP Fact Sheet: 7. Waste Management
Construction and Waste Management www.sustainability.vic.gov.au
Preparing a WMP www.epa.vic.gov.au
Waste and Recycling www.resourcesmart.vic.gov.au
Better Practice Guide for Waste Management in Multi-Unit Dwellings (2002) www.environment.nsw.gov.au
Waste reduction in office buildings (2002) www.environment.nsw.gov.au

Attachment 6 - ESD Referral Advice

8. Urban Ecology

Objectives:

- to protect and enhance biodiversity
- to provide sustainable landscaping
- to protect and manage all remnant indigenous plant communities
- to encourage the planting of indigenous vegetation.

Issues	Applicant's Design Responses	Council Comments	CAR*
On Site Topsoil Retention	There is no productive topsoil on this site.	-	NA
Maintaining / Enhancing Ecological Value	Landscaping on terraces and ground floor will marginally improve the ecological value of the site.	-	1
Heat Island Effect	No specific information has been submitted.	-	1
Other	67m^2 of communal space including co-working space.	-	-
Green wall	Green wall (creeper provided) to southern façade adjacent to co-working space.		

*** Council Assessment Ratings:**

1 – Design Response is SATISFACTORY; 2 – Design Response is NOT SATISFACTORY
3 – MORE INFORMATION is required; 4 – ESD IMPROVEMENT OPPORTUNITIES

References and useful information:
SDAPP Fact Sheet: 8. Urban Ecology
Department of Sustainability and Environment www.dse.vic.gov.au
Australian Research Centre for Urban Ecology www.arcue.botany.unimelb.edu.au
Greening Australia www.greeningaustralia.org.au
Green Roof Technical Manual www.yourhome.gov.au

Attachment 6 - ESD Referral Advice

9. Innovation

Objective:

- to encourage innovative technology, design and processes in all development, which positively influence the sustainability of buildings.

Issues	Applicant's Design Responses	Council Comments	CAR*
Significant Enhancement to the Environmental Performance	-	-	-
Innovative Social Improvements	-	-	-
New Technology	-	-	-
New Design Approach	-	-	-
Others	-	-	-

*** Council Assessment Ratings:**

1 – Design Response is SATISFACTORY; 2 – Design Response is NOT SATISFACTORY
3 – MORE INFORMATION is required; 4 – ESD IMPROVEMENT OPPORTUNITIES

References and useful information:
SDAPP Fact Sheet: 9. Innovation
Green Building Council Australia www.gbca.org.au
Victorian Eco Innovation lab www.ecoinnovationlab.com
Business Victoria www.business.vic.gov.au
Environment Design Guide www.environmentdesignguide.com.au

Attachment 6 - ESD Referral Advice

10. Construction and Building Management

Objective:

- to encourage a holistic and integrated design and construction process and ongoing high performance

Issues	Applicant's Design Responses	Council Comments	CAR*
Building Tuning	Comprehensive commissioning and tuning of all major appliances and services.	-	1
Building Users Guide	A Building Users Guide explaining optimal usage of building services and sustainability features within the development.	-	1
Contractor has Valid ISO14001 Accreditation	ISO14001 accreditation weighed positively in tender selection criteria.	-	1
Construction Management Plan	An Environmental Management Plan will be developed by the building contractor to monitor and control activities undertaken during construction.	-	1
Others	-	-	-

*** Council Assessment Ratings:**

1 – Design Response is SATISFACTORY; 2 – Design Response is NOT SATISFACTORY
3 – MORE INFORMATION is required; 4 – ESD IMPROVEMENT OPPORTUNITIES

References and useful information:
SDAPP Fact Sheet: 10. Construction and Building Management
ASHRAE and CIBSE Commissioning handbooks
International Organization for standardization – ISO14001 – Environmental Management Systems
Keeping Our Stormwater Clean – A Builder's Guide www.melbournewater.com.au

Attachment 6 - ESD Referral Advice

Sustainable Management Plan (SMP)
for planning applications being considered by Yarra Council

Applicant Response Guidelines

Project Information:

Applicants should state the property address and the proposed development's use and extent. They should describe neighbouring buildings that impact on or may be impacted by the development. It is required to outline relevant areas, such as site permeability, water capture areas and gross floor area of different building uses. Applicants should describe the development's sustainable design approach and summarise the project's key ESD objectives.

Environmental Categories:

Each criterion is one of the 10 Key Sustainable Building Categories. The applicant is required to address each criterion and demonstrate how the design meets its objectives.

Objectives:

Within this section the general intent, the aims and the purposes of the category are explained.

Issues:

This section comprises a list of topics that might be relevant within the environmental category. As each application responds to different opportunities and constraints, it is not required to address all issues. The list is non-exhaustive and topics can be added to tailor to specific application needs.

Assessment Method Description:

Where applicable, the Applicant needs to explain what standards have been used to assess the applicable issues.

Benchmarks Description:

The applicant is required to briefly explain the benchmark applied as outlined within the chosen standard. A benchmark description is required for each environmental issue that has been identified as relevant.

How does the proposal comply with the benchmarks?

The applicant should show how the proposed design meets the benchmarks of the chosen standard through making references to the design brief, drawings, specifications, consultant reports or other evidence that proves compliance with the chosen benchmark.

ESD Matters on Architectural Drawings:

Architectural drawings should reflect all relevant ESD matters where feasible. As an example, window attributes, sun shading and materials should be noted on elevations and finishes schedules, water tanks and renewable energy devices should be shown on plans. The site's permeability should be clearly noted. It is also recommended to indicate water catchment areas on roof- or site plans to confirm water re-use calculations.

Attachment 7 - Contract Services Unit advice - Waste

Theodosakis, John

From: Orr, Patrick
Sent: Monday, 30 July 2018 2:50 PM
To: Theodosakis, John
Subject: TRIM: RE: July 2018 - 210 Alexandra Parade East, Clifton Hill

HP TRIM Record Number: D18/131497

Hi John,

The waste management plan for 210 Alexandra Pde, Clifton Hill authored by Leigh Design and dated 18/07/2018 is satisfactory from a City Works branch's perspective.

Regards,

Patrick Orr
Contract Management Officer
City Works
Yarra Operations Depot, Clifton Hill

City of Yarra PO Box 168 Richmond 3121
T:(03) 9205 5554 **F:**(03) 8417 6666
E: patrick.orr@yarracity.vic.gov.au

Please consider the environment before you print this email!

From: Theodosakis, John
Sent: Monday, 30 July 2018 1:17 PM
To: Orr, Patrick
Subject: FW: July 2018 - 210 Alexandra Parade East, Clifton Hill

Hi Patrick,

Within the link below you will find a WMP in response to your concerns of the original WMP.

Please review this and let me know if this satisfies your concerns.

Many thanks

John

John Theodosakis
Senior Statutory Planner

City of Yarra PO BOX 168 Richmond VIC 3121
T: (03) 9205 5307 **F**: (03) 8417 6666
E: John.Theodosakis@yarracity.vic.gov.au **W**: www.yarracity.vic.gov.au

Attachment 8 - Acoustic advice from SLR

20 July 2018

640.10090.05470 210 Alexandra Pde 20180720.docx

City of Yarra
P.O. Box 168
Richmond VIC 3121

Attention: John Theodosakis

Dear John

210 Alexandra Parade, Clifton Hill
Development Application Acoustical Review
PLN 17/0693

SLR Consulting Pty Ltd (SLR) has been retained by the City of Yarra to provide a review of the acoustic assessment report for the residential development proposed for 210 Alexandra Parade, Clifton Hill.

Details of the report are as follows:

- Title: 210 Alexandra Parade East, Clifton Hill
- Reference: Rp 001 R04 20170345
- Date: 3 November 2017
- Prepared for: Clifton Hill Projects Pty Ltd
- Prepared by: Marshall Day Acoustics

The report was prepared to address noise impacts to and from the proposed development.

1 Background Information

(Sections 1 to 4 of the report and attached plan)

The acoustically significant aspects of the proposal are described in these sections of the report and summarised below:

- The project comprises a six level residential development with 26 apartments and basement carparking with car stackers.
- The site is exposed to traffic noise from the Eastern Freeway and Hoddle Street entry ramp.
- A communal or co-working space is proposed for the ground level.
- The adjacent building to the east is identified as a storage facility. MDA note that there does not appear to be significant roof mounted plant.

SLR Comment: *The main source of environmental noise to and from the development have been identified (road traffic and noise from the car stackers). The nearest potentially impacted residential receiver is identified later in the report as 208 Alexandra Parade East.*

SLR Consulting Australia Pty Ltd Suite 2, 2 Domville Avenue Hawthorn VIC 3122 Australia
T: +61 3 9249 9400 F: +61 3 9249 9499 E: melbourne@slrconsulting.com
www.slrconsulting.com ABN 29 001 584 612

Attachment 8 - Acoustic advice from SLR

2 Road Traffic Noise

2.1 Design Targets

(Section 6.1 of the acoustic report)

Road traffic noise design targets are identified as:

- 35 dBA Leq in bedrooms between 2200h and 0700h
- 40 dBA Leq in living rooms between 0700h to 2200h
- 45 dBA Leq in common areas

MDA state that compliance with these targets is likely to result in compliance with the Better Apartments Design Standards (BADs), which apply to the site due to its proximity to a road carrying more than 40,000 vehicles.

***SLR Comment**: Agreed. Compliance with the BADs targets is mandatory for this site, and the targets proposed by MDA should ensure that they are met.*

2.2 Measurements

(Section 5.0, 5.2 of the acoustic report)

Unattended noise logging of road traffic was conducted from 6-13 June 2017 with the noise logger microphone protruding from the upper level of the two storey building currently on the site. The microphone is noted to be directly exposed to noise from the Eastern Freeway. A photo of the logger microphone is provided in the report.

Traffic noise impacts are summarised in the report, and MDA note that the minimum level at night is in the order of 60 dBA Leq, and that the level increases to approximately 70 dBA Leq by 6 am. Noise levels during the day period are observed to be reasonably constant.

The measured noise level for the period 0600h to 0630h (70 dBA Leq) has been used to determine façade treatments for the night period and the noise level measured between 1800h and 1830h (71 dBA Leq) has been used for the day period. The octave band spectra for these measurements are provided in the report. MDA note that the BADs level for the night period would be 3 to 4 dB lower than the level they have used, and that the BADs level for the day period is comparable with the level they have used.

***SLR Comment**: The measurement location is clearly documented and appropriate for quantifying road noise impacts to the subject site. The noise levels used in the assessment are appropriate.*

2.3 Assessment and Façade Upgrade Advice for Traffic Noise

(Sections 8 of the acoustic report)

Upgraded glazing is proposed for the south east and west facades. If lightweight walls are proposed for any part of the façade MDA advise that they are to be reviewed by the acoustical consultant.

Attachment 8 - Acoustic advice from SLR

SLR Comment: *We have carried out indicative independent calculations of road traffic noise to apartments using the MDA measurement data and taking into consideration the proposed glazing. Our calculations suggest that the advice provided in the report will enable the BADs targets to be met.*

3 Car Stackers and Other Centralised Mechanical Plant

3.1 Design Targets

(Sections 6.2 of the acoustic report)

Project mechanical plant is proposed to be assessed to SEPP N-1. The SEPP N-1 Zoning Levels are proposed to be used as noise limits on the project due to the fact that the background noise data obtained is affected by road traffic noise.

MDA also observe that carstackers should achieve sleep disturbance targets of 65 dBA Lmax externally and that structureborne sound to apartments above the equipment will need to be controlled.

SLR Comment:

Agreed. The use of SEPP N-1 Zoning Levels as noise limits during the design phase is reasonable for this project, which is relatively low risk.

3.2 Car Stacker Assessment

(Section 10.1.1 of the acoustic report)

An indicative assessment of noise from the car stacker is provided, and the predicted noise level from the equipment to the nearest dwelling is 35 dBA Leq and 47 dBA Lmax at 208 Alexandra Parade East

SLR Comment: *We have carried out independent indicative calculations of noise from the equipment to the nearest dwelling and our results agree with MDA's.*

3.3 Noise Control Advice

(Section 10.1.3 of the acoustic report)

Acoustic specifications are provided for the car stacker and carpark roller door. The specified levels are the same as used by MDA in their calculations of impacts.

Conceptual advice is also provided for installing the car stackers to minimise structureborne sound to the apartments within the building.

SLR Comment: *The advice provided is clear and can be expected to result in compliance with the noise limits and targets.*

Attachment 8 - Acoustic advice from SLR

4 Summary

The acoustic report prepared for 210 Alexandra Parade West, Clifton Hill addresses the acoustic issues on this project.

Yours faithfully,

Checked/
Authorised by: JA

Dianne Williams
Associate - Acoustics