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Peer Urban Design Review

1-5 Chester Street Annandale

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1 Introduction

Architectus has been engaged by Inner West Council to undertake a peer review of the Urban Design Study by ae design partnership from May 2019 for the proposal at 1-5 Chester Street, Annandale. Council's objectives for this study are to:

- Consider whether the built form proposed in the Urban Design Report May 2019 by ae design partnership is appropriate.
- If the recommendations are found to be inappropriate, provide reasons to explain why.

The proposal seeks to:

- Retain the existing site zoning IN2 Light Industrial and allow boarding house development as an additional permitted use;
- Introduce a maximum height of building limit of 17m (currently no height limit)
- Allow a maximum FSR of 2.75:1 with a minimum FSR of 0.75:1 associated with non-residential uses and a maximum FSR of 2:1 for a boarding house development. (currently permitted FSR of 1:1).

It is noted that the current May 2019 proposal is broadly similar to the February 2018 proposal which the Inner West Local Planning Panel and Council resolved not to support. A matrix comparing the existing controls and site conditions with the February 2018 and May 2019 proposals is provided with the primary differences relating to the land use zoning and proposed uses on the site, the FSR, heights, setbacks and parking.

Architectus has modelled the May 2019 proposal to check the accuracy of the proposal, in particular with regard to FSR, height and distances and areas.

Architectus' key findings from the review relate to the following issues:

- Land use
- FSR
- Height
- Slope and levels
- Bulk, form and scale

- Setbacks
- Building separation
- Communal open space and deep soil
- Overshadowing
- Movement and access

It should be noted that there are discrepancies between the plans/sections and the artists impression of the May 2019 proposal, and as such the artists impression does not give an accurate picture of the current proposal.

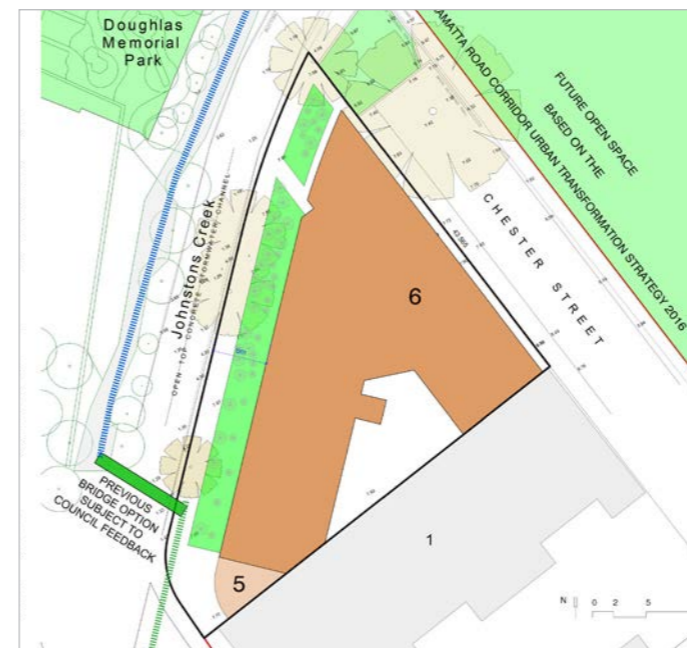
Architectus review considers the urban design compatibility of the scheme, as Council is considering strategic planning issues in their assessment. Nevertheless Architectus review includes an understanding of how the proposal relates to key state and local planning and design legislation, policies and studies, including:

- State government's strategic plans: Greater Sydney Regional Plan, Eastern Harbour City District Plan, and Parramatta Road Corridor Urban Transformation Strategy, and
- State government's residential design policies: SEPP65 Design Quality for Residential Apartment Development and SEPP (Affordable and Rental Housing) 2009
- Council's: Leichhardt Industrial Precinct Planning Study, Camperdown Innovation Precinct Land Use and Strategic Employment Study, and the Leichhardt Local Environment Plan 2013.

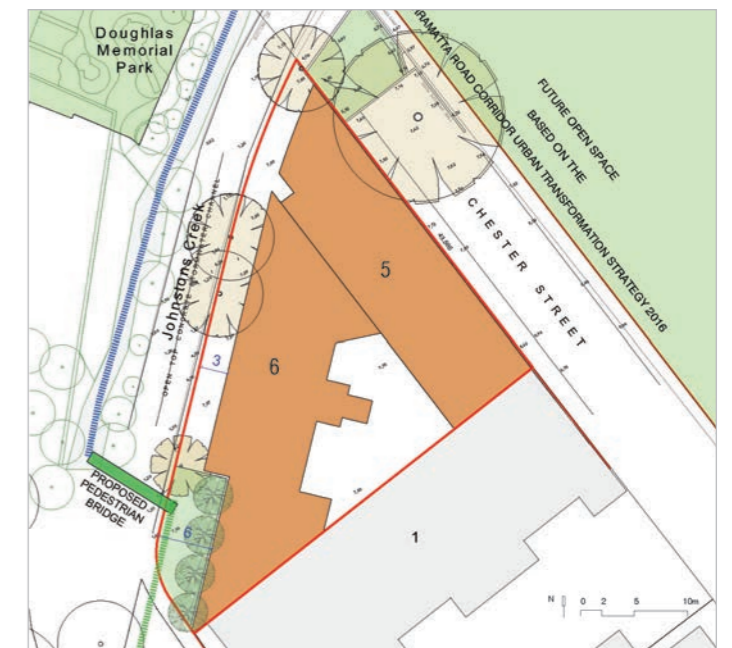
*While the proposal for boarding houses is not covered by state design quality policies, Architectus considers these guides as accepted practice and the proposal should therefore aim to meet these standards. Note: SEPP65 Design Quality for Residential Apartment Development does not apply to boarding houses and SEPP (Affordable and Rental Housing) 2009 controls for boarding houses do not apply to land zoned IN2 Light Industrial.



Aerial view of existing site



Plan of previous February 2018 proposal (Extract from Urban Design Report Sept 2017 by ae design partnership)



Plan of current May 2019 proposal (Extract from Urban Design Report May 2019 by ae design partnership)

2 Comparison of proposals

A matrix of the existing site controls and conditions, compared with the PRUCTS, the former February 2018 proposal and the current May 2019 proposal, is provided below.

The primary differences between the two proposals relate to the land use zoning and proposed uses on the site, the FSR, heights, setbacks, and parking.

Control/condition	Existing	PRUCTS (2016)	Previous proposal (February 2018)	Current proposal (May 2019)
Land use	<p>IN2 Light Industrial Zone</p> <p>Existing use is a part one and part two storey industrial building, which provides car repair services, with 4 workers on site.</p> <p>Existing surrounding uses include one and two storey single residential terrace dwellings to the north and east of the site and two or three storey industrial warehouse buildings to the south and west.</p>	<p>R3 Medium Density Residential with a focus residential development on students, key workers, and affordable housing. Site is not recommended for rezoning until after 2023.</p>	<p>R3 Medium Density Residential</p> <p>Residential flat building is proposed with:</p> <ul style="list-style-type: none"> – 9 one bedroom, 24 two bedroom, 6 three bedroom units – 2 live work (SOHO) units - 8 jobs – 26 car spaces 	<p>Retain IN2 Light Industrial Zone; and include a local provision which allows boarding houses for affordable student housing as an additional permitted use</p> <p>Mixed use building is proposed with:</p> <ul style="list-style-type: none"> – 980sqm of non-residential floor space on the lower ground and ground floor to accommodate creative offices and high technology industrial uses targeted at the innovation, health, and education sectors. – 83 boarding house rooms for student accommodation, as a form of affordable housing
FSR	<p>1:1 permissible FSR</p> <p>Existing building occupies approx FSR of 0.64:1</p>	<p>FSR of 1.6:1</p>	<p>Increase FSR to 2.6:1</p>	<p>Allow a maximum FSR of 2.75:1 with a minimum FSR of 0.75:1 associated with non-residential uses and a maximum FSR of 2:1 for a boarding house development.</p> <p>Based on Architectus testing of the floorplans, the proposal is achieving:</p> <ul style="list-style-type: none"> – 0.86:1 FSR for industrial uses (non-residential FSR) – 1.67:1 FSR for residential uses (boarding and ancillary uses) – Total FSR of 2.5:1 (See Section 4 Testing for schedule and floor plans)
Height	<p>No height limit.</p>	<p>17m (4 storeys)</p>	<p>Establish a height limit on the site of 17m (and 6 storeys)</p>	<p>Establish a height limit on the site of 17m (and 6 storeys)</p>
Slope and levels	<ul style="list-style-type: none"> – The highest point of the site is at approx RL 8.5 and the lowest approx RL 4.3 which is an approx difference of 4.2m across the site. – Neighbouring sites across Johnstons Creek are sitting at approx RL 3.7 		<p>Ground level (car park entry) at RL 8.50 and lower ground RL 5.45</p>	<p>Ground level (car park entry) at RL 8.50 and lower ground RL 5.45</p>
Open space & deep soil			<p>Rooftop communal open space on level 6</p>	<p>No communal open space and 14% deep soil</p>
Through site links	<p>None</p>	<p>Prioritised north south walking link through site and proposed cycle link along Johnstons Creek</p>	<p>None</p>	<p>None</p>
Setbacks	<p>Chester Street and Johnstons Creek - 0m</p>		<ul style="list-style-type: none"> – Chester Street - 0m – Johnstons Creek - 3m at ground, 0m at lower ground 	<ul style="list-style-type: none"> – Chester street - approx 1m – Johnstons Creek - 6m at ground, 3.2m at basement
Bulk, form, scale	<p>Existing building is 1 and 2 storeys.</p>		<p>Proposed built form is 5 storeys along Chester Street and 6 storeys along Johnstons Creek</p>	<p>Proposed built form is 6 storeys along Chester Street and Johnstons Creek with small area of 5 storeys in most southern corner.</p>
Site coverage	<p>71%</p>		<p>Unknown</p>	<p>80.5% (1,108sqm) - In an industrial precinct with large floorplates, site coverage is quite high, as such the proposed site coverage is appropriate.</p>
Parking	<p>Surface carparking</p>		<p>26 car spaces and 1 basement level</p>	<ul style="list-style-type: none"> – 18 car spaces on a single basement level to service the employment uses – No parking for boarding houses as student accommodation – Note: plans show 3 levels of basement (if required)

3 Key findings

Key issues with the current proposal from May 2019 are provided below along with Architectus' preliminary recommendations.

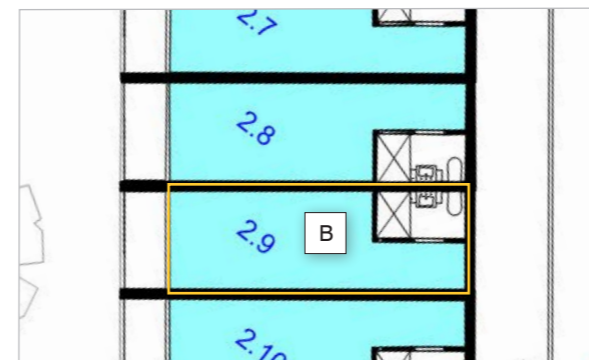
Issue	Appropriateness of May 2019 proposal	Justification	Preliminary recommendation
Land use	<p><u>Urban Design</u></p> <ul style="list-style-type: none"> The proposed typology for a mixed use building is atypical and not considered appropriate. The proposed industrial uses which are individual 'creative offices' have limited street frontage and appear more as home offices. There is also no large vehicle access to service these uses [A] Compatibility of residential uses and industrial uses in this form may cause land use conflicts (as described further under Bulk and form). The boarding house unit sizes (approx min 18sqm) are similar to what is being delivered across Sydney. The amount of communal space is acceptable however no communal open space is not (further discussed in Open Space and Deep soil). <p><u>Planning</u></p> <ul style="list-style-type: none"> The proposed typology for industrial uses would not deliver on the state government and Council's vision for the Camperdown precinct or the objectives for the IN2 Light Industrial zone in LLEP2013. The proposed boarding house uses align with the PRCUTS recommended land use for the site however not with the proposed timeline. 	<p><u>Urban Design</u></p> <ul style="list-style-type: none"> Floorplates should be as flexible as possible to ensure buildings can respond to changes to market demand over time. Businesses generally require a street frontage and front door. Industrial floorspace and its ability to function should be protected. 15-20% of student housing FSR is typically for common areas SEPP (Affordable and Rental Housing) requires minimum 12sqm for single occupant boarding house. Example of boarding house unit in Sydney is shown below and compared to the proposal [B] <p><u>Planning</u></p> <ul style="list-style-type: none"> The Parramatta Road Corridor Urban Transformation Strategy (PRCUTS) in conjunction with the Greater Sydney Regional Plan and the Eastern Harbour City District Plan underline the importance of the Camperdown Precinct as part of the Camperdown Ultimo Collaboration area with a focus on the biotechnology sector. While the PRCUTS recommends that the site be zoned R3 Medium Density Residential (with a focus on key workers, affordable housing and student housing), the site is not proposed for residential development until after 2023, as it is outside the boundary of the PRCUTS Implementation Plan for 2016-2023. The proposed typology would be unlikely to meet the objectives of the IN2 Light Industrial zone in the LLEP2013, such as 'to support and protect industrial land for industrial uses'. 	<ul style="list-style-type: none"> Architectus is not opposed to a mix of uses on the site (including residential uses) provided that the site can: <ul style="list-style-type: none"> deliver the employment uses envisioned for the Camperdown Precinct ensure residential uses are well separated to prevent compatibility issues that would detract from the future employment potential of the precinct. Architectus is however concerned with the proposed mixed use typology which is atypical. The model should be checked, as from Architectus' experience: <ul style="list-style-type: none"> Industrial uses prefer to have flexible large floorplates and street frontage. A large industrial floorplate also allows residential uses to be well separated. Council should know that a final design could vary considerably and be satisfied appropriate controls will ensure a high quality boarding house outcome. Council should seek to be satisfied that the uses proposed are the right typology which can be delivered on the site, achieve the vision for the Camperdown Precinct and provide flexibility to meet future needs.



Ground plan showing industrial units with out street frontage
(Extracts from Urban Design Report May 2019 by ae design partnership)



Level 1 plan showing boarding houses



Zoom in of boarding house typical unit



Architectus example of boarding housing with proposal typical unit size overlaid
(1-2 Cottonwood Crescent & 2 Lachlan Avenue, Macquarie Park)

Key findings

Issue	Appropriateness of May 2019 proposal	Justification	Preliminary recommendation
FSR	<ul style="list-style-type: none"> - The supporting floor plans do not demonstrate the FSR proposed. - The proposal should at minimum replace the existing industrial FSR on site. 	<ul style="list-style-type: none"> - Architectus testing of the floorplans, demonstrate that they are achieving industrial FSR however not the residential FSR or the total proposed FSR. Floorspace has been calculated based on the floorplans provided (see Section 4). - The amount of industrial floorspace is to be increased where possible. - The existing development achieves an FSR of 0.75:1. The existing controls allow an FSR of 1:1. 	<ul style="list-style-type: none"> - The proposed total FSR is not being achieved under the current scheme, according to Architectus' testing. Architectus recommends that the applicant provides a schedule so the calculations and be checked. - Architectus recommends a range for industrial FSR is applied (say 0.75:1 - 1:1) that is separate to any residential capacity, to allow for flexible good design and encourage industrial floorspace to be maximised. - Through further testing, Architectus can determine and recommend the appropriate residential and total FSR for the site.
Height	<ul style="list-style-type: none"> - The proposed max height of up to 17m for the site is appropriate however the proposed 6 storeys cannot be achieved in the proposed typology. - The floor to floor levels of 3.1m for the industrial uses are too low and not appropriate. 	<ul style="list-style-type: none"> - The PRCUTS recommends a height of 17m, with a building of only 4 storeys, to create a gradual transition in heights from Camperdown Triangle Towards low density residential dwellings along Johnston Creek. - The industrial uses require larger floor to floor heights (minimum 4m and up to 6m) than those proposed (3.1m). This means maximum 5 storeys could be achieved within the height limit of 17m. 	<ul style="list-style-type: none"> - The proposed 17m height limit may be appropriate for the site, however 6 storeys is not, as it cannot be achieved within the height limit. - The need for rooftop communal open space with solar access should also be considered as it relate to the height limits. - The floor to floor height for levels with industrial uses should be increased to allow flexibility in potential uses. - Through further testing, Architectus can confirm the appropriate height for the site. - Council should be aware that the height is likely to be a contentious issue with the low scale neighbours west of Johnston Creek.

Key findings

Issue	Appropriateness of May 2019 proposal	Justification	Preliminary recommendation
Bulk form and scale	<ul style="list-style-type: none"> The continuous perimeter building is not appropriate for the sites context, as it provides a poor interface with its neighbours with regard to overlooking, scale transition, building and land use separation. 	<ul style="list-style-type: none"> Interface to Johnstons creek frontage: Dwellings to the west are of a low scale with back gardens facing the site: <ul style="list-style-type: none"> The 6 storey street wall does not provide a good scale transition to its neighbours. The 4 levels of residences oriented to this frontage will directly overlook the neighbours from a short distance which will result in poor amenity impacts. Oblique views may also be blocked. Note: The renders do not show the preferred option - appear to show Option 2 from the May 2019 Urban Design Report, which includes some height variation (5 and 6 storeys) along Johnstons Creek frontage [C]. Interface to Chester Street frontage: The PRCUTS highlights the importance of relating building height to street width and intended character. <ul style="list-style-type: none"> A 5 storey street wall on Chester Street is not achievable under the height limit of 17m The street wall on Chester Street provides minimal separation (11m) to the opposite site (1-19 Booth Street). The opposite site has an existing DA (D/2019/125) under assessment for a 6 storey mixed use building built to boundary on Chester Street. The interface of residential uses (on site) fronting Chester Street and industrial/commercial uses (on adjacent site) needs to be carefully managed to prevent land use compatibility conflicts. Interface to adjoining site to south east: Development on the site must carefully considers its relationship with the adjacent site at 17 Chester Street to prevent land use conflicts between industrial and residential uses and allow the adjacent lot to also redevelop in the future. <ul style="list-style-type: none"> The separation and orientation of the building to the adjacent site is not appropriate. While the boarding house units front Chester Street and Johnstons Creek, the south east facing corridor overlooks the adjacent lot at a short distance which has the potential to cause conflicts with the neighbouring industrial uses, such as noise from trucks. The overlooking may also inhibit the future redevelopment of that site. 	<ul style="list-style-type: none"> The proposed bulk, form and scale of the development is too large for the sites context. The continuous perimeter building interfaces poorly with its neighbours. The built form should be revised to be less bulky and intrusive on neighbours. This could be done by setting back the residential component from Chester Street and breaking down the street wall on Johnstons Creek frontage and reorientating the building to optimise visual and acoustic privacy to the Johnstons Creek frontage and the adjacent industrial lot at 17 Chester Street. An indicative design of 17 Chester Street should be developed to ensure both sites can redevelop in a cohesive way.



Plan of section cut location showing continuous 6 storey perimeter building and 0m separation at south of site to adjacent site (15 Chester Street) (Extracts from Urban Design Report May 2019 by ae design partnership)



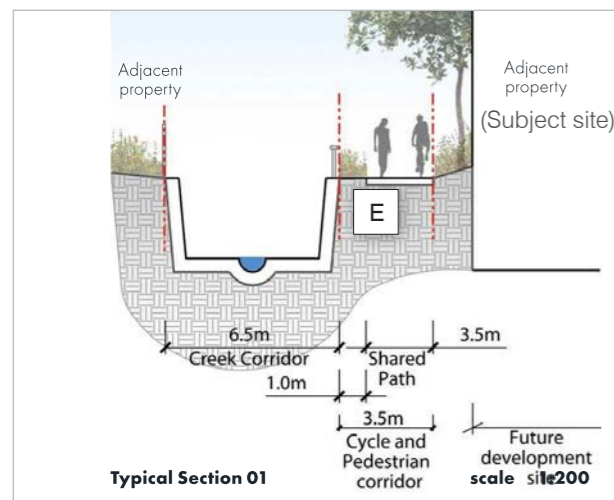
Artists impression of Johnstons Creek frontage showing variation in height of buildings to plan



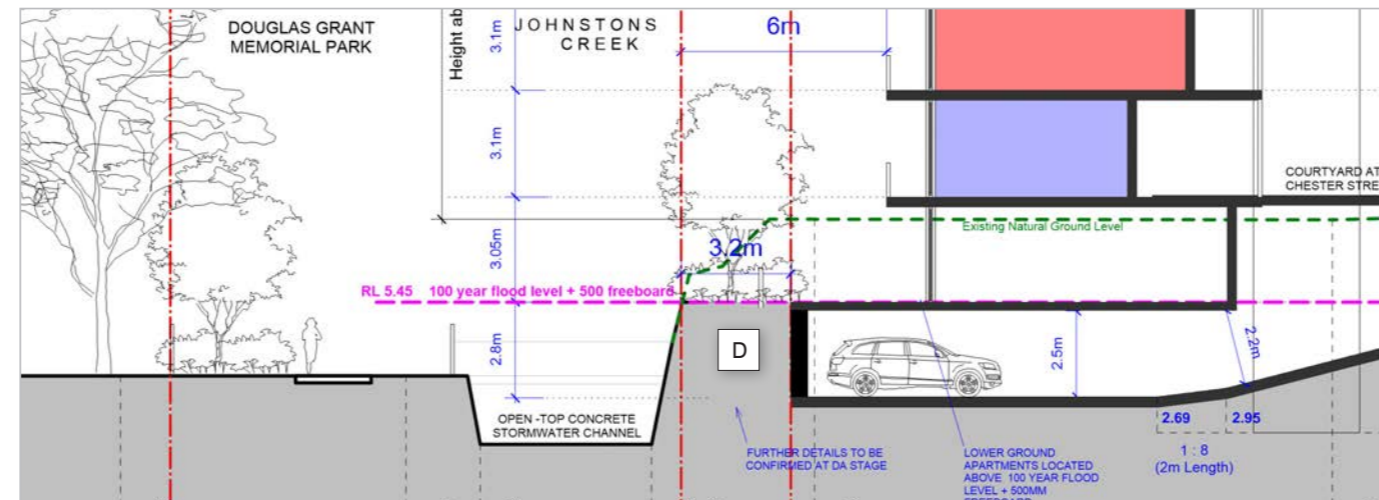
Artists impression of Chester Street frontage showing the 5 storey street wall (Extracts from Urban Design Report May 2019 by ae design partnership)

Key findings

Issue	Appropriateness of May 2019 proposal	Justification	Preliminary recommendation
Setbacks	<ul style="list-style-type: none"> The proposed 1m setback to Chester Street is appropriate for the existing context. The proposed 0m side setback to adjacent neighbour is appropriate for the Chester Street frontage. The proposed 6m setback to Johnstons Creek is appropriate however the use and design of the space is not. 	<ul style="list-style-type: none"> A continuous street wall along Chester Street is in keeping with the existing context. PRCUTS identifies an open space and movement corridor along Johnstons Creek between Booth Street and Parramatta Road. Council's Streetscape improvements draft Master Plan also proposed a 3.5m shared pedestrian and cycle path in front of the site. To deliver on this, the site should be able to provide a through site link along Johnstons Creek. 	<ul style="list-style-type: none"> The proposed 6m setback to Johnstons Creek is an appropriate width however the use and design of the space should be revised so that it can include an open air through site pedestrian link (to be incorporated into a site specific DCP for the site). Continuing this link along the creek is dependent on neighbouring sites redeveloping, as such this should not be a primary frontage for the industrial uses.
Slope and levels	<ul style="list-style-type: none"> The terrain level on the Johnstons Creek frontage is lifted up to RL 5.45 to be above the 100 year flood level (according to the section), which is approx 2m higher than the terrain level on the opposite side of the creek [D]. This is not appropriate as it results in a poor interface with the creek and the properties west of the creek including Douglas Grant Park. 	<ul style="list-style-type: none"> Developments should optimise the interface with the natural environment. By lifting the terrain, the difference in topography either side of the creek is exacerbated. The site feels disconnected from the creek frontage and its neighbours. Douglas Grant Park is a key local public space and it is important that adjacent properties contribute to providing an attractive frontage to this space with good passive surveillance. Council's proposed shared path shows the same terrain level either side of the creek [E] Note: There is an inconsistency in ground heights between the section shown and the render. The render appears lower as the basement carpark is visible [F]. 	<ul style="list-style-type: none"> The terrain on the Johnstons Creek frontage should be lowered to match the terrain height of the properties and park west of the creek, as per Council's Section of the proposed share path and thus provide a better interface with the creek. Note the basement level of the development needs to be appropriately screened so it doesn't provide a blank wall to this frontage.
Lot size/site amalgamation	<ul style="list-style-type: none"> The site is constrained by its small size (1,377sqm) and irregular shape. The proposal in its current form is not considered appropriate for the lot. 	<ul style="list-style-type: none"> The scale of the current proposal is too large for the small site resulting in interface issues with neighbours (as discussed in Bulk, Form and Scale) Note: It is understood the site is unlikely to amalgamate with its neighbours who are strata titled. 	<ul style="list-style-type: none"> As the site is constrained by its small size and irregular shape, development on the site must carefully consider its relationship with its neighbours. Through further testing Architectus can determine the scale of development that can be accommodated on the site. Council should be aware, that testing may also show, that the site would be able to achieve a better outcome and greater floorspace if amalgamated with its neighbour.



Section of proposed shared path on subject site (Extract from Council's Streetscape improvements draft Master Plan - Annandale, Camperdown, Leichhardt, Petersham)

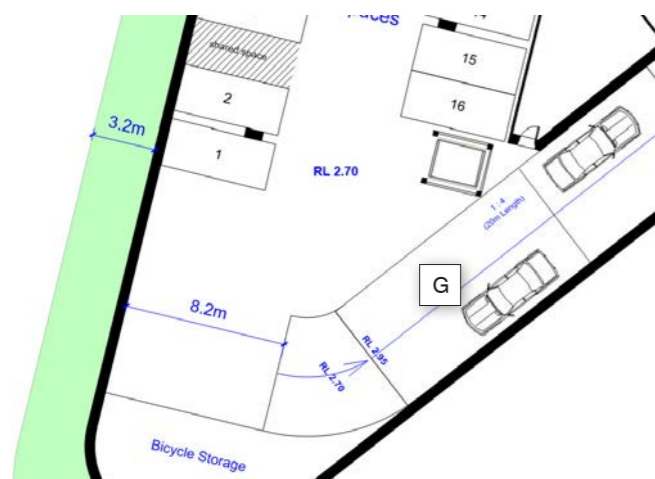


Section of proposal showing difference in terrain level either side of the creek (Extract from Urban Design Report May 2019 by ae design partnership)



Artists impression of Johnstons Creek frontage showing lower terrain level to section

Issue	Appropriateness of May 2019 proposal	Justification	Preliminary recommendation
Communal open space and deep soil	<ul style="list-style-type: none"> The proposal does not include any communal open space for the boarding houses which is not considered appropriate. The area of deep soil in the landscape setback is appropriate. 	<ul style="list-style-type: none"> SEPP65 is best practice for residential design and the ADG recommends communal open space to have a minimum area equal to the 25% of the site and for deep soil to be 7% of the site. 	<ul style="list-style-type: none"> The proposal should lock in a provision to ensure 25% of the site is provided as communal open space. This could be provided on the roof where it would have the best solar access. Access to the roof, however will increase the height of the building, and should be incorporated into the overall height of the development. The basement should be setback to the building line so that a greater area of deep soil can be provided in the landscape setback.
Movement and access	<p><u>Pedestrian</u></p> <ul style="list-style-type: none"> The proposed 'creative office' units should be accessed from the Chester Street frontage as this is the primary frontage for the development. <p><u>Vehicular</u></p> <ul style="list-style-type: none"> The turn at the bottom of the carpark ramp seems very tight and if the carpark is to be setback 6m from the Johnstons Creek frontage that will most likely not work. [G] It is noted, it may be acceptable for the basement to step out into the setback below basement level. The proposal does not provide include truck access. 	<ul style="list-style-type: none"> Industrial uses prefer street frontage and front door. Industrial uses require truck access to site. 	<ul style="list-style-type: none"> The industrial units typology should be reviewed (as described under Land Use) and ensure the industrial uses have a primary frontage and can be accessed from Chester Street. Configuration of carpark should be revised.
Overshadowing	<ul style="list-style-type: none"> Based on Architectus testing the proposal has limited impact on overshadowing to existing neighbouring residential properties however some overshadowing to the neighbouring industrial site at 15 Chester Street. 	<ul style="list-style-type: none"> ADG recommends residential developments achieve a minimum 50% direct sunlight to the principal usable part of the communal open space for a minimum of 2 hours between 9am and 3pm 21 June (midwinter). 	<ul style="list-style-type: none"> The proposal does not adversely impact existing residential zoned land by overshadowing, however it does impact the neighbouring site (15 Chester Street) which is proposed for residential uses in the PRUCTS (after 2023). Architectus recommends the proponent develops an indicative design on the neighbouring site to test the impacts of overshadowing on this site.



Basement plan highlighting tight turn at the bottom of the ramp

4 Testing

Architectus has massed up the May 2019 proposal and based on this tested the calculations and the overshadowing impacts (mid winter) to neighbouring properties.



Architectus' model of proposal on aerial with existing industrial buildings massed up. Note: Lower ground level is below terrain in model views.



9am June 21



10am June 21



11am June 21



12pm June 21



1pm June 21



2pm June 21



3pm June 21

Architectus' testing of proposal's overshadowing impacts to neighbouring properties in mid winter

The below floorplans have been redrawn by Architectus to calculate floorspace in the May 2019 proposal

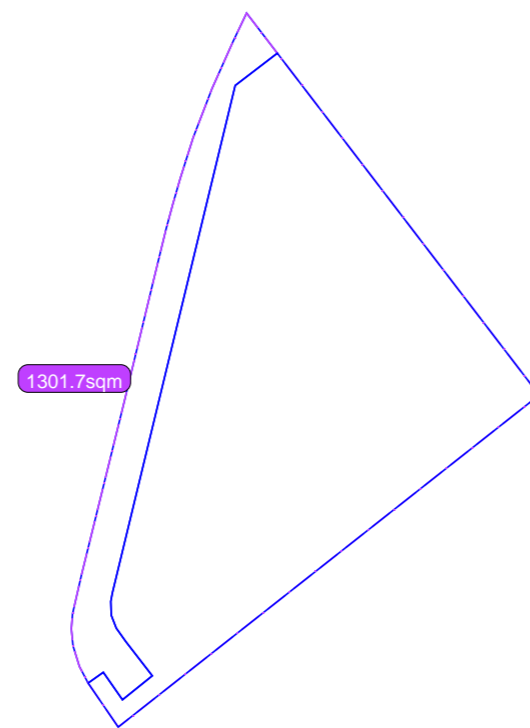
Total Site Area: 1,375.5 sqm

Total FSR: 2.5: 1

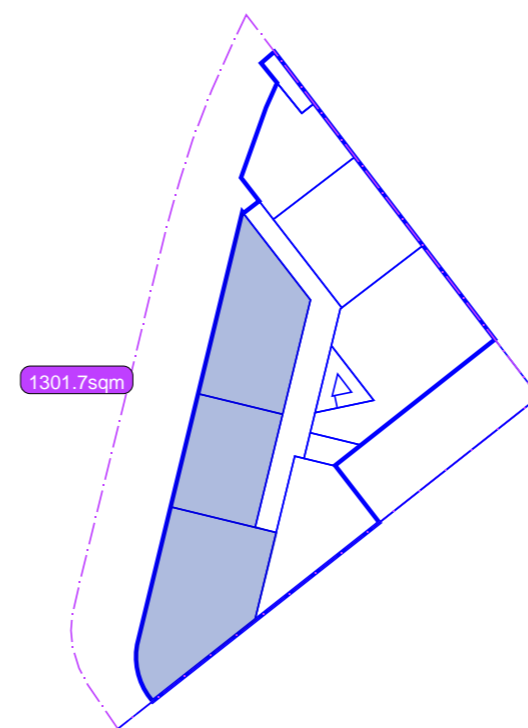
non-residential FSR: 0.86: 1

boarding & ancillary uses FSR: 1.67: 1

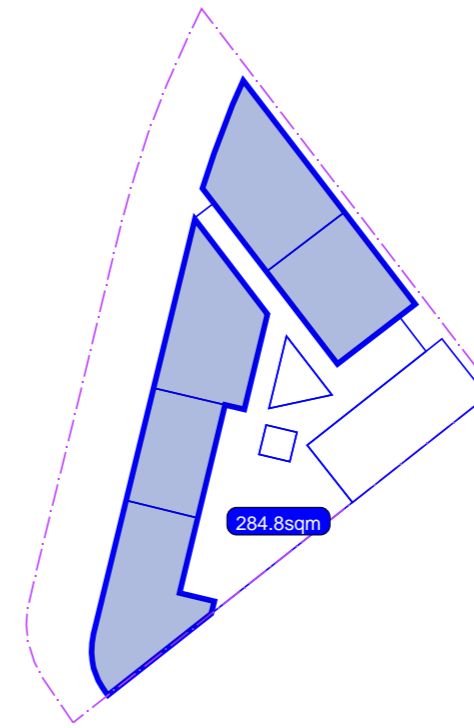
Level	Name	Total Area*
Lower ground	Creative offices	389.7 sqm
	Storage area	313.7 sqm
Ground level (Chester street)	Creative offices	486.6 sqm
Levels 2-4	Boarding rooms	1,501.5 sqm
	Communal room & kitchen	224.1 sqm
Level 5	Boarding rooms	450.8 sqm
	Communal room & kitchen	47.0 sqm
	Manager Accommodation	47.3 sqm
TOTAL		3,460.7sqm
	non-residential	1,190 sqm
	boarding & ancillary uses	2,298 sqm



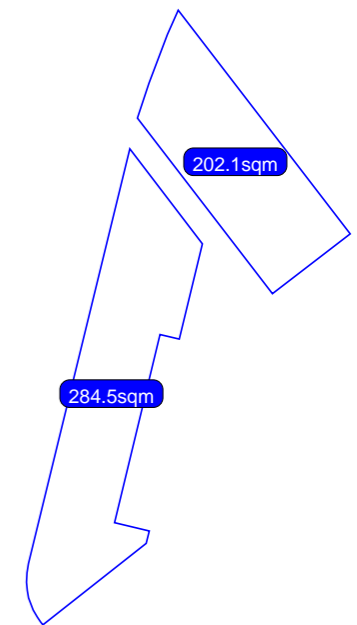
Basement plan



Lower ground plan



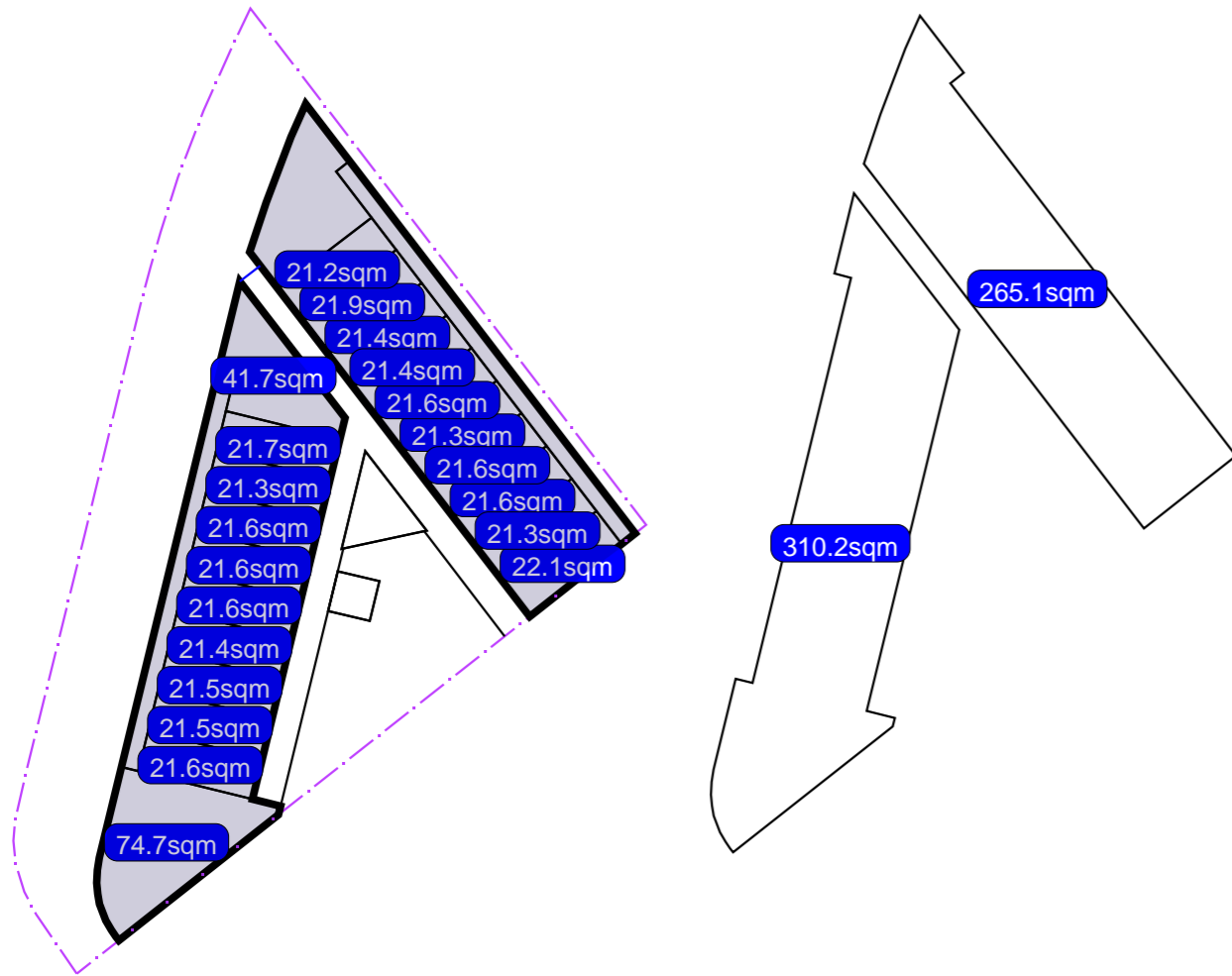
Ground and level 1 plan



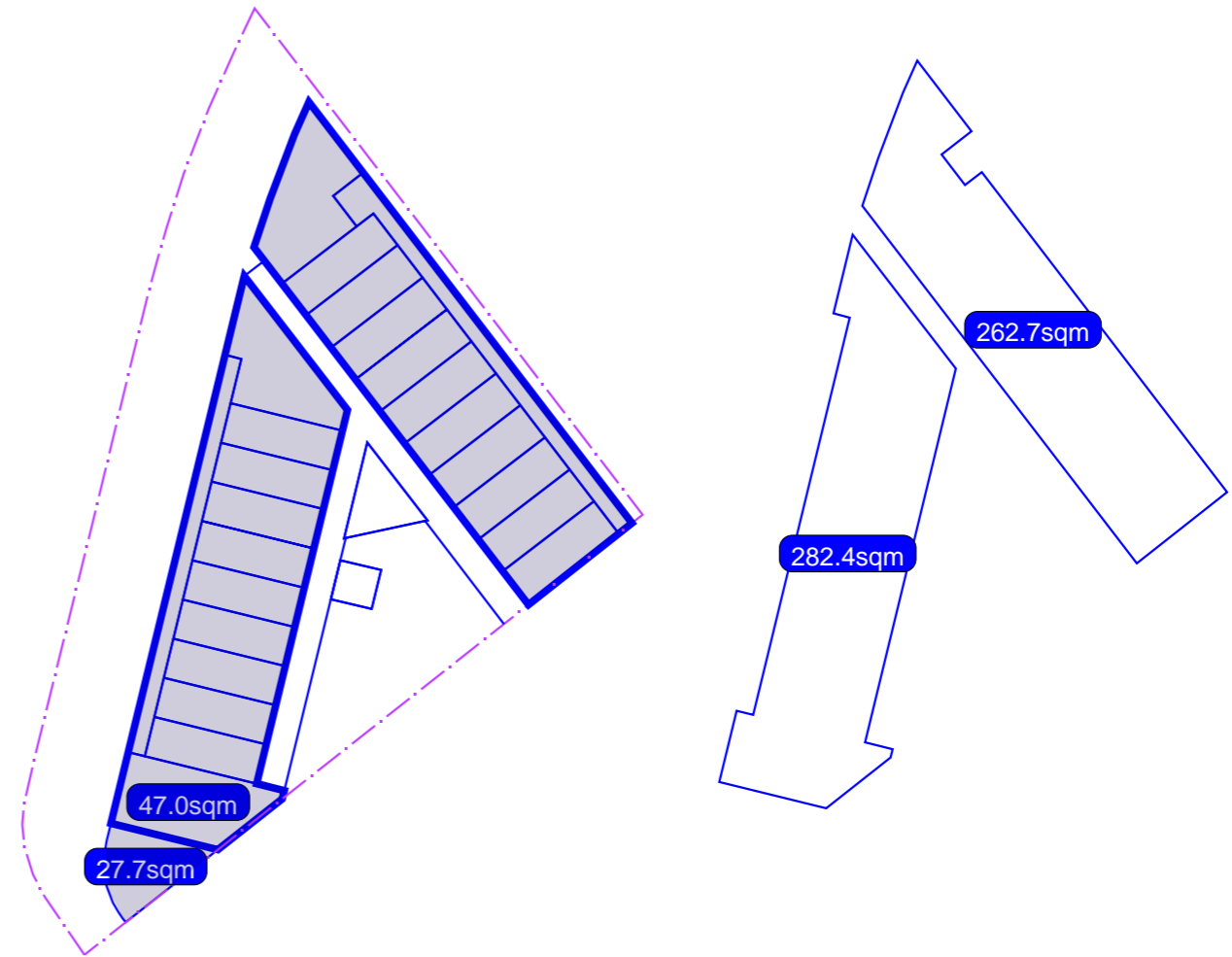
202.1sqm

284.5sqm

* Note: area calculations includes centreline of internal wall cavities and excludes circulation space (hallways, stairwells and lifts), carparking balconies and paved open spaces.



Level 2 - 4 plan



Level 5 plan

5 Conclusion

Architectus believes that the May 2019 proposal is not appropriate as it currently stands and Council should not support it. In saying this, there is merit in the proposal and a refined proposal could be found to be appropriate. Key issues which need to be addressed include:

Land use

Architectus is not opposed to a mix of uses on the site (including residential uses) provided that the site can:

- deliver the employment uses envisioned for the Camperdown Precinct
- ensure residential uses are well separated to prevent compatibility issues that would detract from the future employment potential of the precinct.

Architectus is however concerned with the proposed mixed use typology which is atypical. The model should be checked, as from Architectus' experience Industrial uses prefer to have flexible large floorplates and street frontage. A large industrial floorplate also allows residential uses to be well separated.

Council should know that a final design could vary considerably and be satisfied appropriate controls will ensure a high quality boarding house outcome.

Council should seek to be satisfied that the uses proposed are the right typology which can be delivered on the site, achieve the vision for the Camperdown Precinct and provide flexibility to meet future needs.

Bulk, scale and form

The proposed bulk, form and scale of the development is too large for the sites context. The continuous perimeter building interfaces poorly with its neighbours.

Interface to Johnstons creek frontage: Dwellings to the west are of a low scale with back gardens facing the site:

- The 6 storey street wall does not provide a good scale transition to its neighbours.
- The 4 levels of residences oriented to this frontage will directly overlook the neighbours from a short distance which will result in poor amenity impacts. Oblique views may also be blocked.

Interface to Chester Street frontage: The PRCUTS highlights the importance of relating building height to street width and intended character.

- A 5 storey street wall on Chester Street is not achievable under the height limit of 17m

- The street wall on Chester Street provides minimal separation (11m) to the opposite site (1-19 Booth Street). The opposite site has an existing DA (D/2019/125) under assessment for a 6 storey mixed use building built to boundary on Chester Street. The interface of residential uses (on site) fronting Chester Street and industrial/commercial uses (on adjacent site) needs to be carefully managed to prevent land use compatibility conflicts.

Interface to adjoining site to south east: Development on the site must carefully considers its relationship with the adjacent site at 17 Chester Street to prevent land use conflicts between industrial and residential uses and allow the adjacent lot to also redevelop in the future.

- The separation and orientation of the building to the adjacent site is not appropriate. While the boarding house units front Chester Street and Johnstons Creek, the south east facing corridor overlooks the adjacent lot at a short distance which has the potential to cause conflicts with the neighbouring industrial uses, such as noise from trucks. The overlooking may also inhibit the future redevelopment of that site.

The built form should be revised to be less bulky and intrusive on neighbours. This could be done by setting back the residential component from Chester Street and breaking down the street wall on Johnstons Creek frontage and reorientating the building to optimise visual and acoustic privacy to the Johnstons Creek frontage and the adjacent industrial lot at 17 Chester Street. An indicative design of 17 Chester Street should be developed to ensure both sites can redevelop in a cohesive way.

Height

The proposed 17m height limit may be appropriate for the site, however 6 storeys is not, as it cannot be achieved within the height limit.

The floor to floor height for levels with industrial uses should be increased to allow flexibility in potential uses. The need for rooftop communal open space with solar access should also be considered as it relate to the height limits. Through further testing, Architectus can confirm the appropriate height for the site.

Council should be aware that the height is likely to be a contentious issue with the low scale neighbours west of Johnston Creek.

FSR

The proposed total FSR is not being achieved under the current scheme, according to Architectus' testing. Architectus recommends that the applicant provides a schedule so the calculations and be checked.

Architectus recommends a range for industrial FSR is applied (say 0.75:1 - 1:1) that is separate to any residential capacity, to allow for flexible good design and encourage industrial floorspace to be maximised.

Through further testing, Architectus can determine and recommend the appropriate residential and total FSR for the site.

Landscaping and links

The proposed 6m setback to Johnstons Creek is an appropriate width however the use and design of the space should be revised so that it can include an open air through site pedestrian link (to be incorporated into a site specific DCP for the site). Continuing this link along the creek is dependent on neighbouring sites redeveloping, as such this should not be a primary frontage for the industrial uses.

The terrain on the Johnstons Creek frontage should be lowered to match the terrain height of the properties and park west of the creek, as per Council's Section of the proposed share path and thus provide a better interface with the creek. Note the basement level of the development needs to be appropriately screened so it doesn't provide a blank wall to this frontage.

Overshadowing

The proposal does not adversely impact existing residential zoned land by overshadowing, however it does impact the neighbouring site (15 Chester Street) which is proposed for residential uses in the PRUCTS (after 2023). Architectus recommends the proponent develops an indicative design on the neighbouring site to test the impacts of overshadowing on this site.

6 Alternate scenario

In response to our views of the May 2019 proposal, Architectus has provided built form testing for an alternate scenario for the site.

The alternate scenario includes two layout options for the site.

Both layout options are based on the same structuring principles:

- Mixed use development with large floorplate industrial uses on lower levels and boarding house uses above
- Publicly accessible through site link along Johnstons Creek
- Allow oblique views only to the west to minimise overlooking of neighbours.

The difference between the two options relates to the orientation of the south western portion of the boarding houses (Level 1-3).

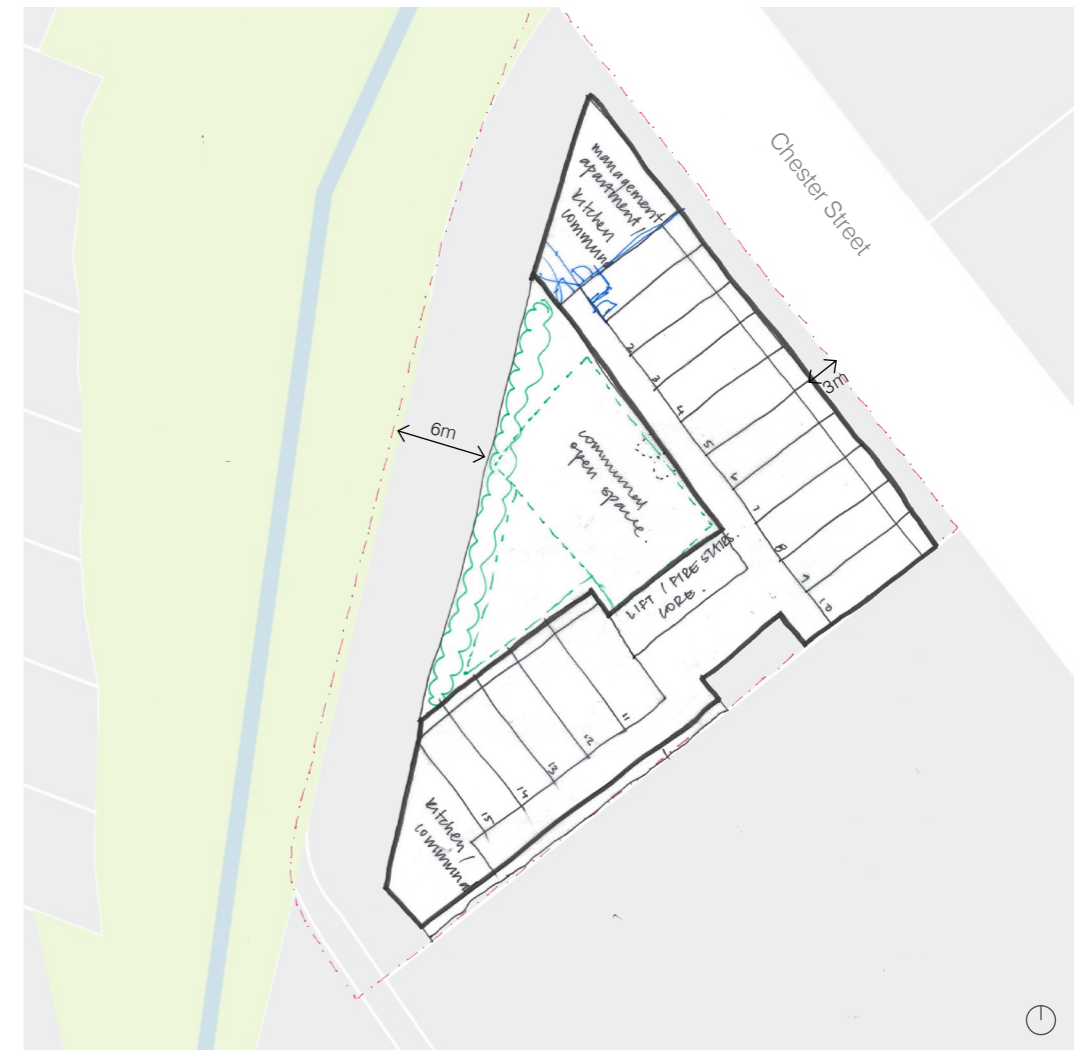
A comparison of the two options is provided below. Architectus preferred layout is Option 2. Built form testing and recommended controls for the site have been developed based on the preferred option and are described on the pages following.



Site layout option 1 - boarding house level plan

Pros and cons

- + Least overlooking of low scale neighbours to the west
- South facing apartments have limited solar access
- Apartment at ground required to be removed to allow access to communal open space in southern corner

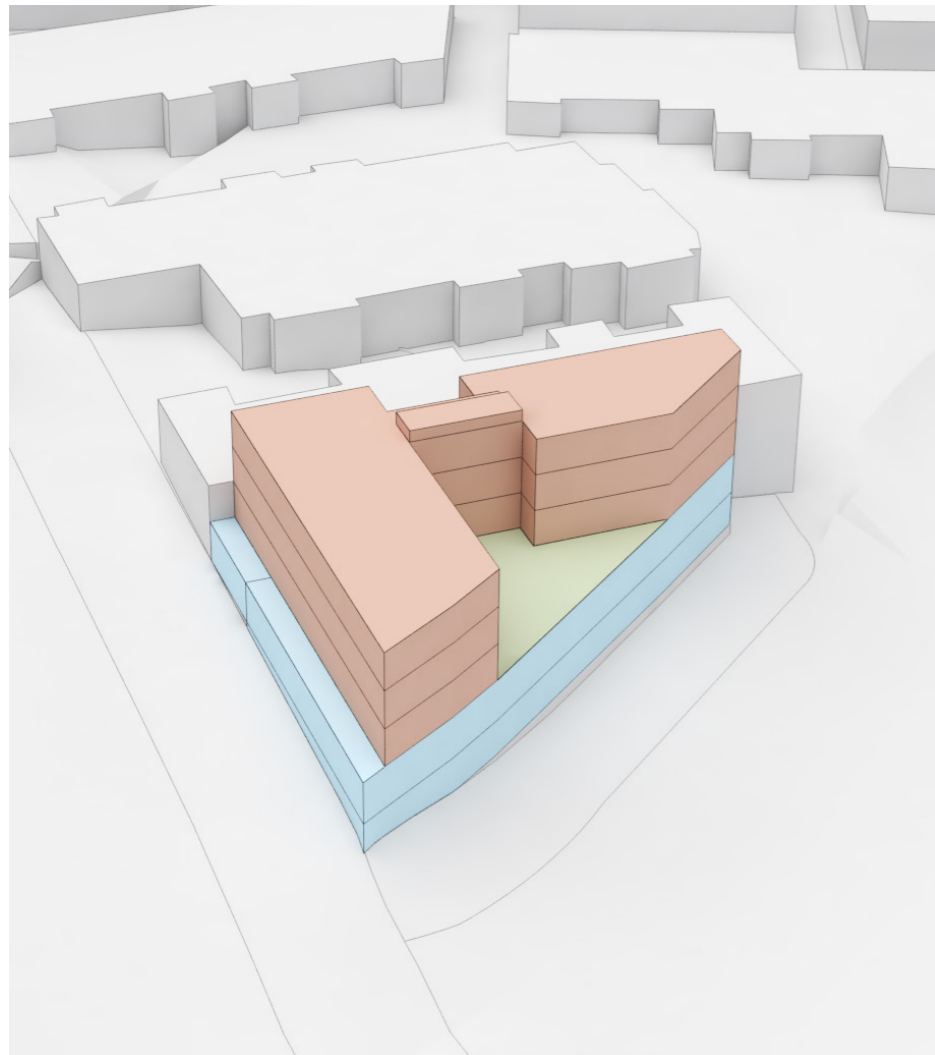


Site layout option 2 (preferred) - boarding house level plan

Pros and cons

- Some overlooking of neighbours to the west
- More overshadowing of neighbour to the south
- + Good solar access to apartments
- + Large central communal open space
- + West facing apartments provide passive surveillance over through site link

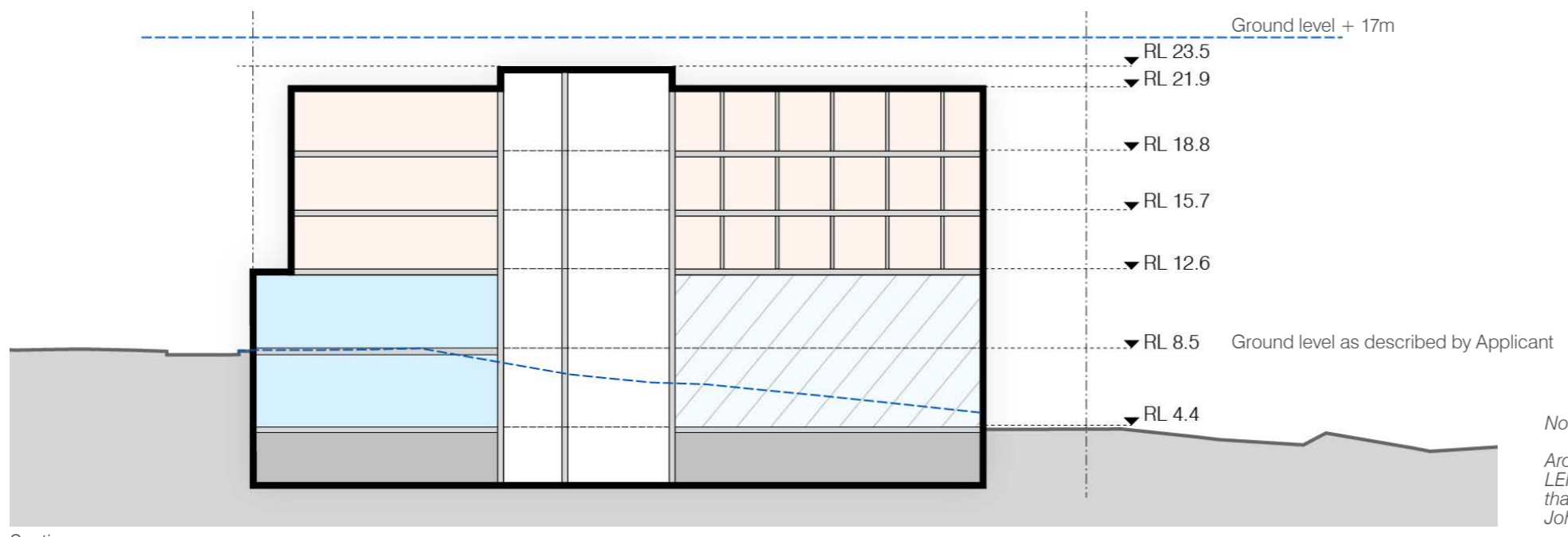
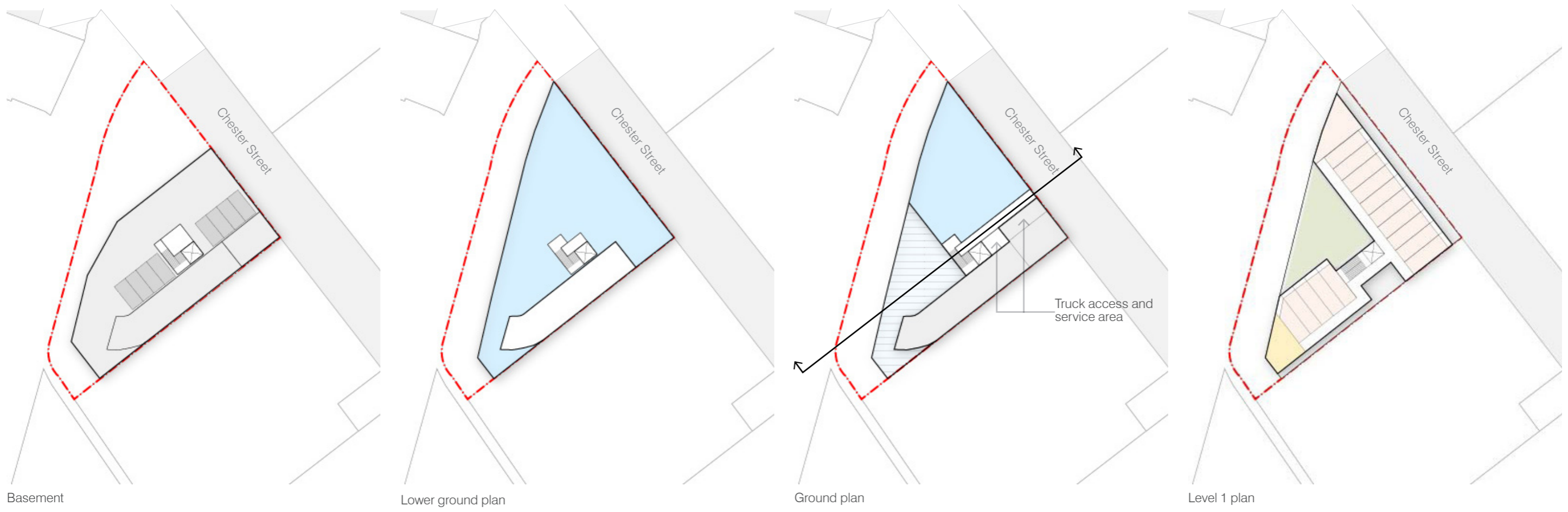
Preferred option



3D view

Land use	Large format industrial floorplate (double height with mezzanine) at ground and lower ground with 3 storeys of boarding houses above
FSR	1.65:1 total FSR 0.65:1 industrial FSR 1:1 residential FSR (approx 45 boarding rooms)
Height	17m (5 storeys)
Bulk, scale, form	Large floorplate industrial podium with 2 residential buildings above with a central communal open space
Setbacks	6m landscape setback to Johnstons Creek 3m setback for residential uses on Chester Street frontage
Slope and levels	+23.5 RL - Lift over-run +21.9 RL - Roof +18.8 RL - Level 3 +15.7 RL - Level 2 +12.6 RL - Level 1 +8.5 RL - Ground +4.4 RL - Lower ground
Communal open space and deep soil	Communal open space at Level 1 (180sqm) = 26% of the develop-able site area* Deep soil (410sqm) = 30% of site area
Movement and access	<ul style="list-style-type: none"> - Industrial uses and boarding house lobby accessed from Chester Street - Truck and vehicular access from eastern edge of site with truck reversing into site. Ground level waste collection and service area. - Parking has been shown in a basement with 8-10 spaces, as this was requested by Council <p>Note: Parking and servicing provision shown is one potential solution considered at a high level only. This will need to be further developed through detailed design. This may increase the amount of floorspace from the design shown.</p>
Overshadowing	The site causes some overshadowing to the adjacent site to the south (15 Chester Street) - see diagrams overleaf, however we have tested an indicative design on the neighbouring site and the neighbouring site would be able to achieve ADG requirements for sunlight.

* This is calculated as the site area minus the 6m landscape setback (870sqm)

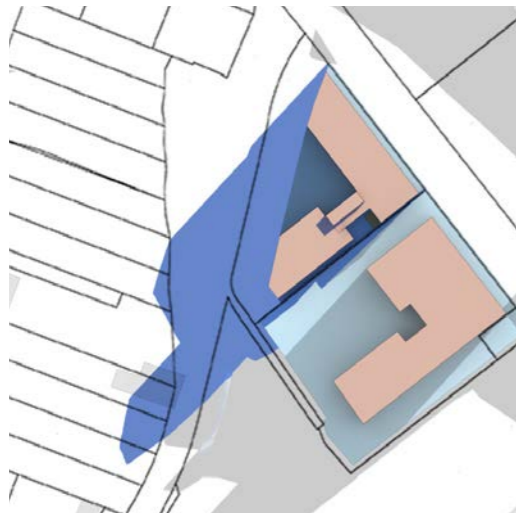


Note:
 Architectus is not certain that the ground level described by the applicant is appropriate to LEP definitions based on the survey work available as the ground level. It is recommended that further survey work is completed to confirm a view on 'natural ground level' towards Johnston's Creek

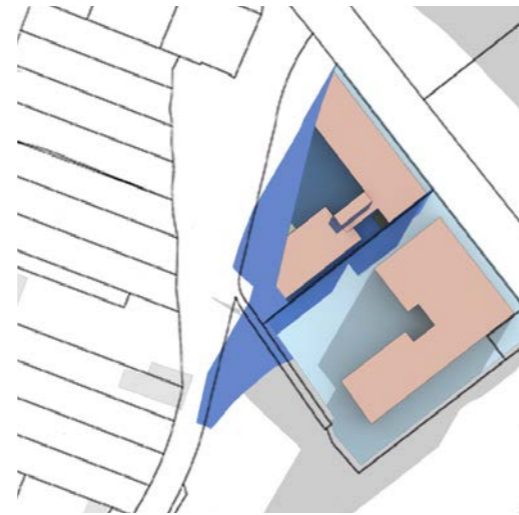
Section

Solar testing

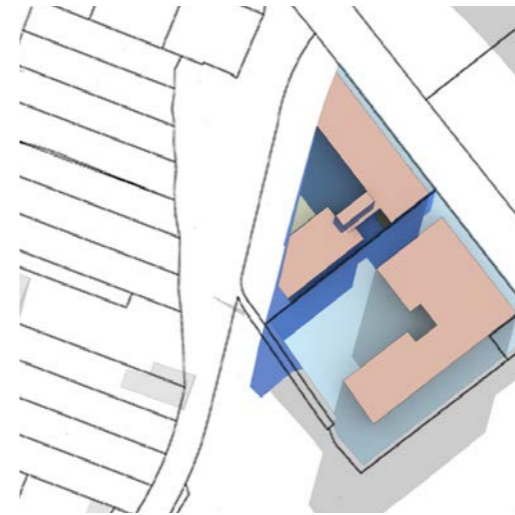
Architectus has tested the overshadowing impacts on the site to its neighbour to the south (15 Chester Street). An indicative design of the neighbouring site shows that both sites would be able to redevelop and achieve ADG solar requirements.



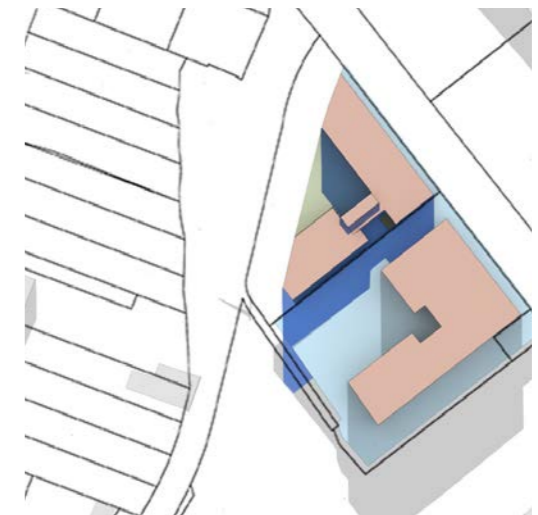
9am June 21



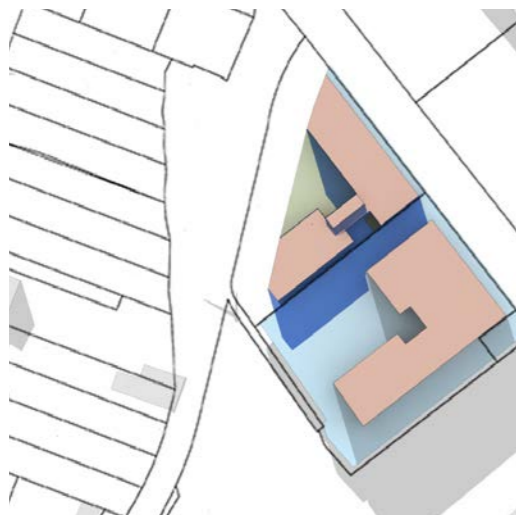
10am June 21



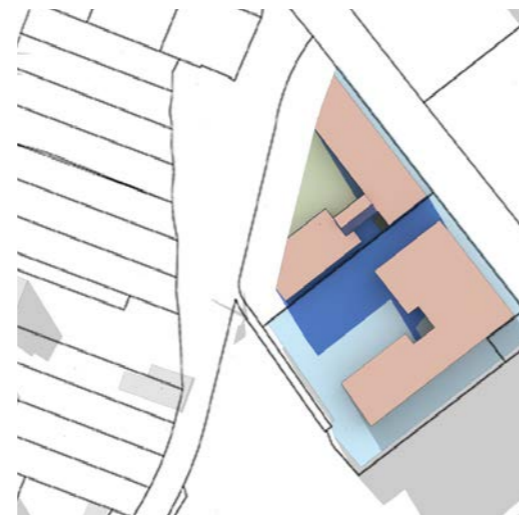
11am June 21



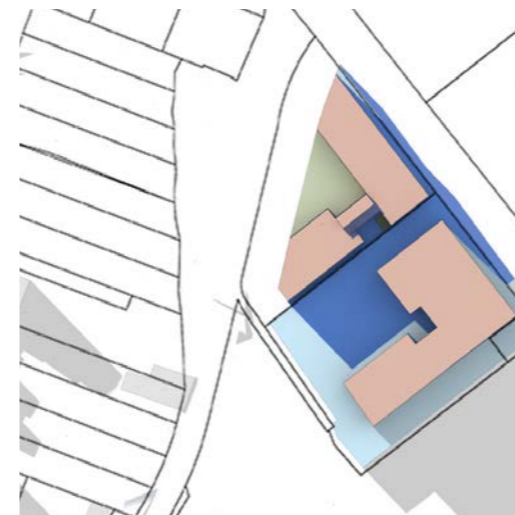
12pm June 21



1pm June 21



2pm June 21



3pm June 21

■ Site overshadowing

7 Recommendations for controls

Architectus' recommendations for LEP and DCP controls, based on the built form testing in the alternate scenario, are as follows:

Recommendations towards LEP controls

Land use

We understand that the proponent is seeking to retain the existing IN2 Light Industrial Zone and include a local provision which allows boarding houses for affordable student housing as an additional permitted use.

In allowing a mix of uses on the site, Council should be satisfied that the uses and typology proposed can be delivered on the site, achieve the vision for the Camperdown Precinct and provide flexibility to meet future needs, including the employment floorspace is adequately provided in the precinct.

Our analysis shows that for this specific site, looking at the design issues only, boarding houses and light industrial/creative uses could be accommodated with adequate design controls and provide an appropriate response to the local context.

FSR

Based on our testing the site is achieving 1.65:1 total FSR and we therefore recommend that the controls include a **minimum 0.75:1 for industrial uses** and a **maximum 1:1 for boarding house uses**, with a **total permissible FSR of 2:1**. *(Note: FSR for industrial use subject to detailed design of access and services.)*

This could be described as an 'area' on the FSR map or alternatively on the Special Provisions Map. This responds to the following key considerations:

- To ensure as far as possible that the industrial component is delivered to be consistent with the zone objectives.
- To accord with the alternate scenario provided by Architectus
- By separating the FSR of different land uses, there is a clear expectation set for development as to the needs for both.
- Providing a range for the industrial FSR provides flexibility while encouraging industrial floorspace to be maximised on the site.

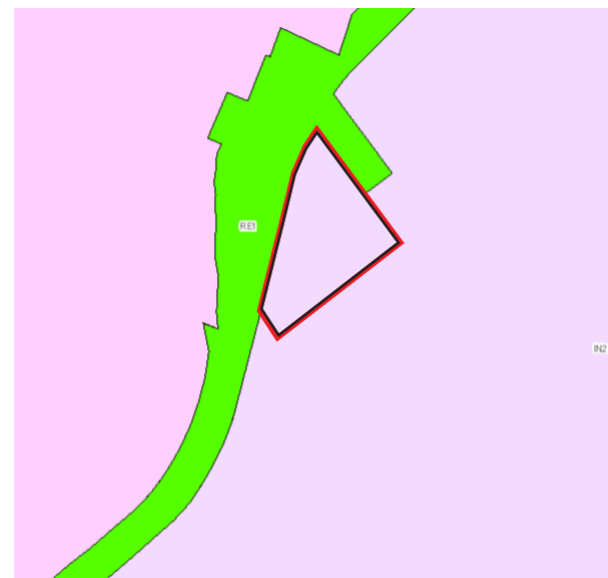
Height

A maximum building height of **17m (5 storeys)**. This height is based on the PRCUTS recommendation of 17m which we consider to be appropriate.

This allows for a larger floor to floor height for the industrial uses to provide flexibility for different uses.

Our proposed height controls are based on the following floor to floor heights shown in the alternate scenario, which we consider minimums for best practice:

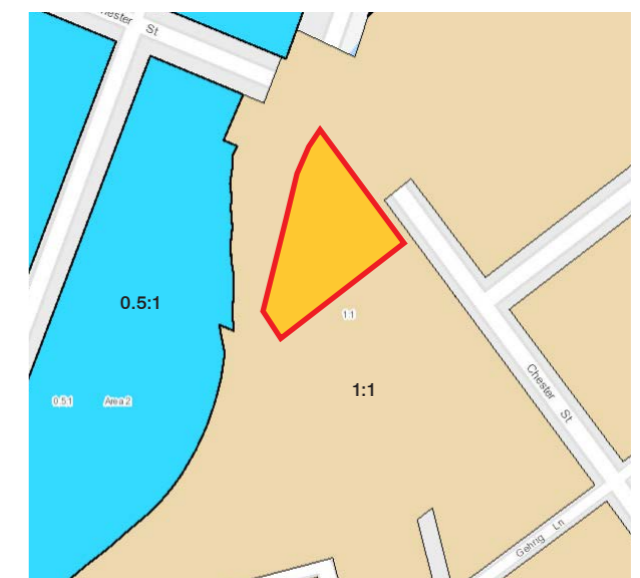
- 4.1m for ground level (or 6m for double height with mezzanine for industrial levels)
- 3.1m for residential levels (total 9.3m)
- Lift over run (approx 1.6m)



Proposed land use zoning



Proposed maximum height



Proposed floor space ratio

Recommendations towards DCP controls

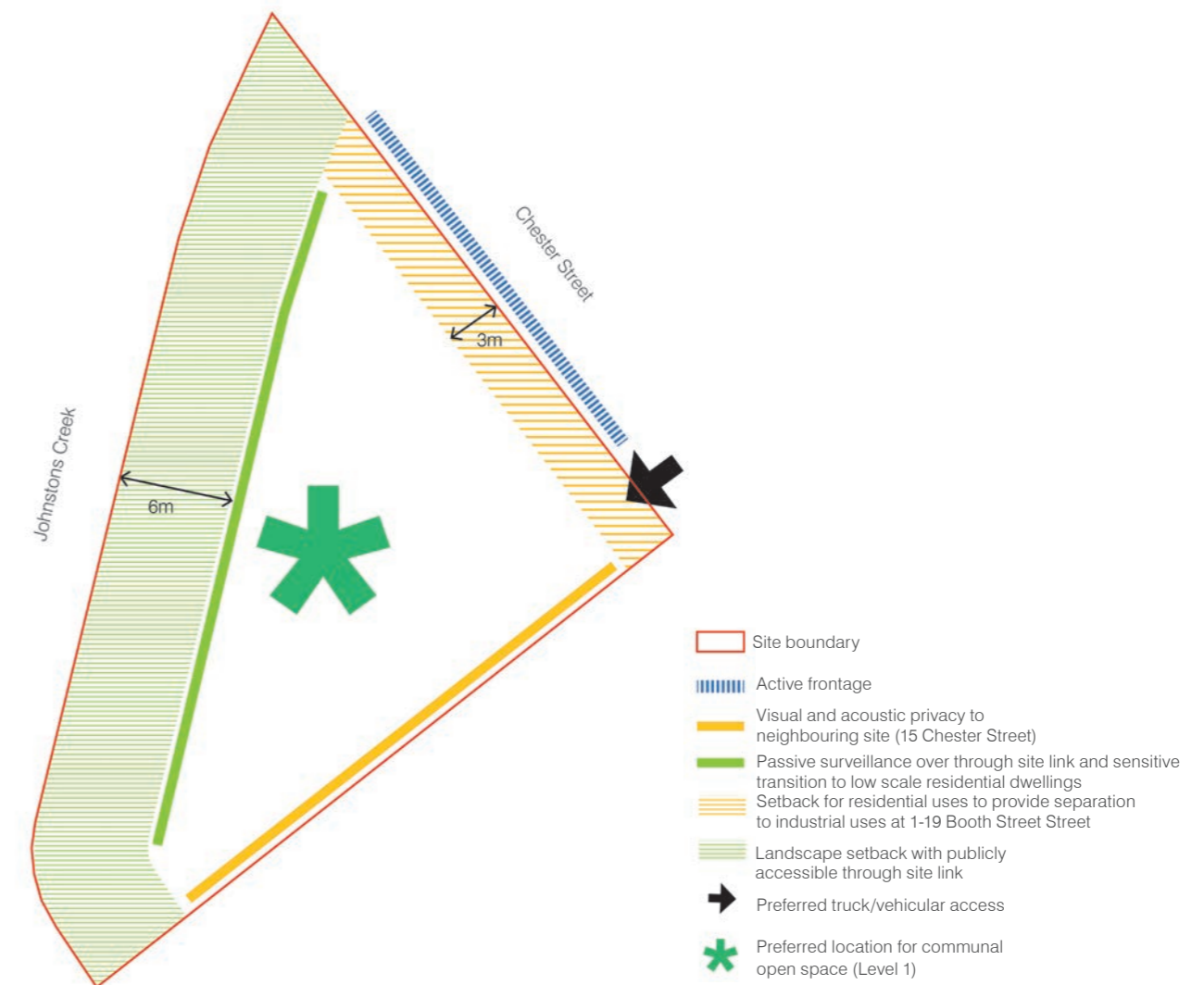
Architectus recommends that a site specific DCP is developed and establish design principles and controls to guide development of the site.

Architectus has provided some key principles for the layout of the site as shown in the diagram opposite. Specifically Architectus recommends the proponent considers the following:

- **Publicly accessible through site link** is provided along Johnstons Creek frontage. Council should determine whether the link should be dedicated to Council or be developed and maintained on private land.
- **Active frontage on Chester Street** with front door and primary access for industrial/creative uses.
- Industrial/creative uses should provide an attractive **frontage to Johnstons Creek** with windows at ground and lower ground level to provide passive surveillance over the through site link.
- **Ground floor** should provide a double height industrial space of as large dimension as possible to provide flexibility for future industrial use.
- Industrial uses require **access and loading** for a medium rigid vehicle for industrial flexibility plus any Council requirements for garbage and recycling vehicles. **Minimise impacts of servicing** on the active Chester Street frontage.
- Council may need to include some provisions in the DCP to ensure **good internal design of the boarding uses** as the SEPP (Affordable Rental Housing) 2009 does not apply to the IN2 Light Industrial Zone.
- Residential lobby access from Chester Street
- Residential uses should be well separated from industrial uses to prevent land use compatibility issues with regard to **visual and acoustic privacy**.

To do this, Architectus recommends:

- Residential uses are provided above a large floorplate industrial podium
- 3m setback for residential uses on Chester Street frontage to provide separation to neighbouring industrial uses at 1-19 Booth Street.
- Residential uses are oriented away from eastern boundary and neighbouring industrial uses at 15 Chester Street.
- The **sensitive interface to neighbouring low scale residential dwellings** to the west of the creek should be carefully managed. Architectus' alternate scenario breaks up the wall along this frontage to provide a better transition to its neighbours, by having two residential components separated by a central communal open space.
- **Communal open space** is provided for the boarding house uses (25% as required in the ADG and in accordance with the design criteria and guidance in the ADG).
- **Deep soil** should be provided (minimum 8% as required by the ADG)
- **Minimise overshadowing** to neighbouring sites. An indicative design of the neighbouring site at 15 Chester Street should be provided to test the impacts of overshadowing on this site and ensure the two sites develop in a holistic way.



Key principles for the layout of the site

architectus™