CITY OF PARRAMATTA

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Our Reference	RZ/2/201 – 361- 365 North Rocks Road, NORTH ROCKS 2151
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2 March 2021

Dear Mr. Workman

I refer to the abovementioned planning proposal (proposal) lodged with Council in June 2021 for 361-365 North Rocks Road, North Rocks. In November and December 2021, Council officers issued informal advice relating to urban design and traffic matters in addition to meetings outlining other issues relating to the proposal. Following previous meetings and correspondence, this request for additional information letter is being issued to detail the matters that need to be addressed to enable Council officers to complete the assessment of the proposal.

Assessment of Strategic Merit

As you are aware, the subject site is not contained within a growth precinct as identified in Council's Local Strategic Planning Statement (LSPS) and is therefore being considered under the Housing Diversity Precincts criteria (HDP). Accordingly, the housing diversity and affordable housing components are crucial to demonstrating strategic merit, and the Proposal must also meet acceptable urban design and community infrastructure standards.

In light of the need to achieve these outcomes, please see attached our detailed comments on the proposal that identify a number of matters that require the provision of further information/justification/amendment of the proposal. If these matters can be addressed to Council officer satisfaction, we will be in a position to report and recommend a suitable scheme for Council's consideration and endorsement.

Next Steps

Following your review of the matters identified in this letter, Council officers will arrange a meeting on the week commencing **7 March 2022** to discuss your initial response and any queries you may have. Consequently, a response to the additional information request is required by **23 March 2022** to enable it to be fully assessed and for our proposed reporting timeframes to be met, however these can be discussed in further detail as part of the upcoming meeting. It is expected that the proposal will be reported to the Local Planning Panel for advice in mid May 2022 and to Council for its consideration in June 2022.

I trust this information is of assistance.

Yours sincerely

CITY OF PARRAMATTA

ATTACHMENT 1

Key Issue	Council Officer Recommendation
1. Housing Diversity Precincts Criteria	
1.1 The proposal must demonstrate urban design merit via an urban design capability test that demonstrates the proposed built form is compatible with surround development and neighbourhoods.	• The proposal is not consistent with the criteria due to outstanding urban design issues detailed below (Key Issue 2).
1.2 Be at least 1 ha and located either: - entirely within a 10-minute walk of a Strategic or Local Centre, or - within the GPOP area, having a 30-minute door-to-door access to employment in Parramatta CBD, Westmead or Sydney Olympic Park.	• The proposal is consistent with the criteria as it is adjacent to the North Rocks Local Centre.
1.3 For sites greater than 2ha in size – require the on-site provision of quality parks, sportsgrounds or play spaces as detailed in the Community Infrastructure Strategy (CIS).	• The proposal is not consistent with the criteria as a variation is proposed. While the CIS requires 20% of the site to be dedicated as public open space (2.5ha), only ~15% of the site (oval and village square ~2ha) is proposed to be dedicated. • While the provision of an oval is broadly supported, the layout and location of open space areas in the site is not supported due to poor legibility. The provision of perimeter roads to open spaces would improve access and legibility for users, and clearly delineate between public spaces from private land. Furthermore, public open spaces should not be located at the extremities of the site, noting in particular the location of community gardens in the north-east portion of the site which is constrained by the existing electrical sub-station.

1.4 Be predominantly low-rise, two to three storeys.	• The proposal is not consistent with the criteria. The proposal has indicated that 'the proposal is predominantly low-rise with only 23% of the site area containing buildings above three storeys'. The proposal does not provide a full analysis of site area calculations (e.g. site area of townhouses or open space), thus the information is not sufficient to satisfy this criteria Council officers recommend using % gross floor area (%GFA) as a more appropriate means of measuring the predominance of low scale housing typologies as per the criteria.
1.5 Propose one or more of the following housing types: -attached or detached dwelling houses -terrace housing -semi-detached housing -villas -townhouses -manor homes -co-housing (maximum 3 storeys) -seniors housing (maximum 3 storeys) -new age boarding houses (maximum 3 storeys)	• The proposal is consistent with this criteria as the proposal entails townhouse development and seniors housing. However, the seniors housing exceeds the 3 storeys maximum building height.
1.6 Residential flat buildings may be permitted in Housing Diversity Precincts, but only where: -The built form is compatible with the surrounding neighbourhood and meets the urban design test as per clause 1; and -Other housing types are also provided in the precinct as per clause 1;and -They contain at least 5 – 10% permanent rental housing (subject to viability) however where viable, Council's aspiration is for a higher provision.	• The proposal is not consistent with this criteria. The urban design test has not been met in terms of compatibility with surrounding neighbourhood. The proposal does not include dedication of permanent affordable rental housing to Council.

1.7 The proposal must have strategic merit in relation to: access (including to a regular public transport service); constraints; topography; environment and amenity.	• The proposal is not consistent with this criteria, considering that future residents will not have access to regular public transport service and the proposal requires a new privately operated bus shuttle to connect to express bus services. • The proposal has not fully addressed site constraints as further detailed in this letter (refer to assessment in relation to bushfire and vegetation constraints). • The proposal has not fully addressed environmental issues (e.g. natural areas, tree canopy and flooding and water management). • In terms of amenity, the proposal has not demonstrated adequate amenity (building amenity e.g. solar access, quality private and public open space).

CITY OF PARRAMATTA

2. Urban Design

2.1 Street and Block Layout - The proposed internal street system creates an inwardly focused development) and is characterised by a high occurrence of cul-de-sacs which also terminate short of providing adjacent buildings with sufficient street address.

Two-way access at North Rocks Rd, supplemented only with a separate one-way entry (Duncan Pl) and exit (North Rocks Rd), further exacerbates the perception and function of an inwardly focused development.

The street and block layout must be amended to address the indicative issues and principles represented in **Figure 1**.

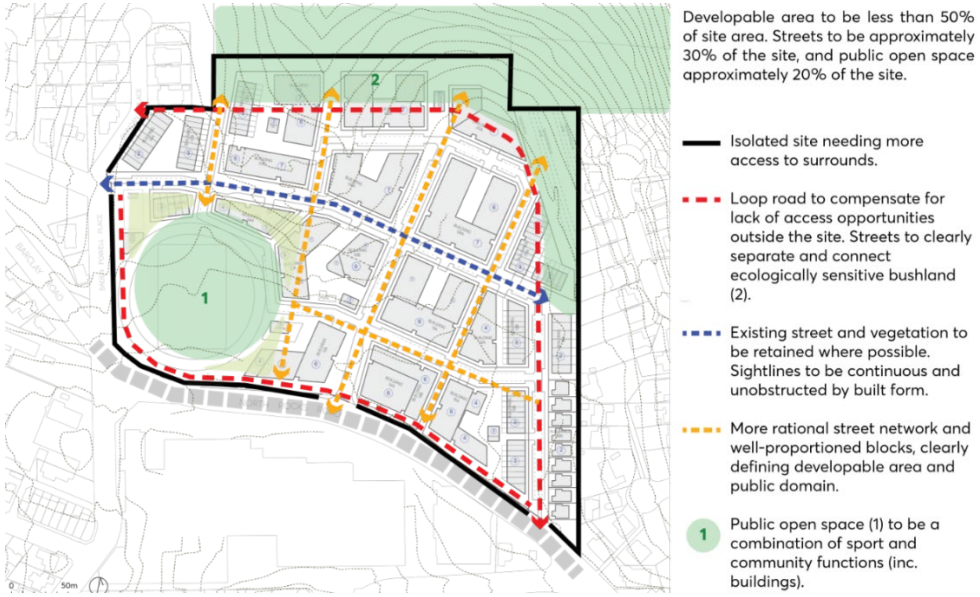


Figure 1: Indicative Street and Block Layout Issues and Principles

- The internal street network should be further extended to create more permeable blocks.
- Full streets are to be provided where possible to increase permeability and improve integration with the surrounding system of streets and spaces.

	• An internal loop road may be introduced to enhance access opportunities, utilising the existing access road to the south to provide accessibility to the development area, while also creating separation to North Rocks Rd (refer to Figure 1 suggested enhanced access system). • A street should separate the northern edge of the development from the ecologically sensitive Crown Lands, providing enhanced and unencumbered public access to this resource. • Council officers typically apply a 20m road reserve for any new streets. This width may vary subject to topography, street hierarchy, street wall height and depth of setback. However, considering the site's topography, the proposed density, associated street wall heights and 3m setbacks, streets less than 20m width will not satisfy objectives for built form and public domain outcomes, including adequate solar access to sustain the existing and proposed street trees. This will need to be balanced with considerations to retain existing streets/ street alignments which contribute to the existing character of the site. • Visual connections from streets to open space and to sky should not be interrupted and/or blocked by built form. The proposal is to be amended to optimise these visual connections as per **Figure 1**.

2.2 Open space – Public open space is to be provided as part of any large proposal, commensurate to the proposed density and in accordance with the requirements of the Community Infrastructure Strategy (CIS)**.**	• The Parramatta Community Infrastructure Strategy (CIS) applies two benchmark approaches for the provision of open space:
	  • a minimum 20% of the land area is for public open space; and
	  • a minimum 3ha of open space is provided per 1,000 people, whereby
	  1ha / 1,000 people for parks
	  1ha / 1,000 people for active open space
	  1ha / 1,000 people for natural areas or other open spaces
	• The percentage of open space as it relates to site area and future population is to be provided, consistent with the requirements set out in the CIS.

	• The 1.84ha 'Oval' and 0.16ha 'Village Green' are proposed to be dedicated to Council (~15%). As above, Council's CIS requires that 20% of a site be dedicated to Council as public open space (consistent with the 20-35% identified as best-practice for high density urban infill), being approximately 2.5 hectares. Amend the proposal to be consistent with the requirement.
Proposed documentation (Urban Design Report) suggests 42% site cover (buildings and road surface) or impermeable surface, and 58% 'permeable' green space (100% publicly accessible), composed of footpaths (but not streets), oval, retail plaza and private communal space and rear yards of townhouses. This is an inaccurate calculation of publicly accessible open space.	• Provide a clear and correct calculation of open space. The proposal should clearly identify and delineate between what open space is: ○ Private open space, ○ Privately owned publicly accessible 24/7 open space, and ○ Public open space (proposed council owned, on deep soil) ○ Deep soil calculations for private areas as per the DCP and ADG
The main open spaces (oval, retail plaza and park) are not directly accessible from the street network and located at the extremities of the site which in turn, may be perceived as private space. While some pocket parks support the retention of existing trees, as a collection of spaces they appear fragmented and or residual.	• A cohesive and legible public open space network with pedestrian and cycle connections between each park is to be provided. Ensure public open space areas are directly accessible from the street network and are clearly legible to community members.
Pedestrian links identified as public open space will only provide incidental recreational opportunities and risk causing disturbance to adjacent units. The plan proposes to occupy these links with ancillary structures which interrupts visual connections along the link and creates the perception these spaces are private.	• It should be clarified who will own/manage these pedestrian links. If these links are to be made publicly accessible, they should not be obstructed by ancillary structures.

The Crown lands are an identified high hazard bush fire zone and would not ordinarily form part of the site's calculations of public open space.	• The Crown lands to the rear will not form part of cumulative public open space calculations.
All public open space and environmentally sensitive areas should be legibly separated from development using streets or a generous public pedestrian connection.	• Development should not back directly onto to public space and environmentally sensitive areas. The street network will need to be amended to ensure clear separation between future development and open space areas and optimise community access to public facilities.
2.3 Site Coverage, Tree Retention and Deep Soil Network The proposal needs to demonstrate that compliant building envelopes can be achieved.	• To ensure that the proposal can facilitate compliant building envelopes, provide an accurate representation and calculation of deep soil zones for both individual development lots and the entire site. The deep soil zones of each development lot should form a contiguous part of the soil network across the entire site.
The ADG requires sites over 1,500m2 to provide 7% of the developable site area to have a minimum 6m wide deep soil zone. ADG does not override DCP setbacks or deep soil controls, which require 30% of the site area to have a minimum 4m wide deep soil zone.	• It is recommended that a combination of 4m and 6m wide deep soil zones are provided to meet DCP controls and ADG objectives. Council officers will assess the appropriate setbacks for every planning proposal depending on and in respect to each individual site context, in particular noting the proposed street hierarchy and existing opportunities to optimise the provision of deep soil zones.
The proposal should optimise opportunities for deep soil zones.	• All streets and pedestrian links dividing large street blocks are to be on deep soil. These links should be orientated downhill to facilitate positive groundwater movement.
The proposal will need to be consistent will need to demonstrate consistency with broad strategic objectives to increase canopy cover consistent with Council's Local Strategic Planning Statement.	• Arborist report and legible tree retention/removal plan must be provided to support the proposal considering Council's broader Local Strategic Planning Statement (LSPS) objectives to increase tree canopy cover LGA wide.

It is noted that a considerable portion of the open space indicated in Site Coverage diagrams (pg.93 of Urban Design Report) will likely be on basement and not contributing to deep soil).	• The full extent of basement coverage is unclear in this proposal and must be clearly indicated in drawings. Any basement structures are to be contained within the building footprint/setbacks; and are not to encroach on deep soil setback areas. All publicly accessible open spaces are to be deep soil with no carparking underneath to ensure adequate growing conditions to protect and sustain new/existing large canopy trees.
2.4 Built form scale and proportion – **T**he design principle for organising built form relative to its topographical context is supported. Higher height may be located in the site's valley where it will be less perceptible from the surrounding context. However, the proposed scheme contradicts this principle by also locating the tallest buildings on the ridge and spur. The submitted CAD drawings are inconsistent with Appendix B (Preliminary SEPP 65 Review).	• The proposal seeks to locate the tallest buildings on the ridge or spur. Amend the proposal to demonstrate an appropriate built form response to the site topography, ensuring a design scheme that is compatible with the character of the surrounding area. • Provide a set of consistent drawings to enable Council officer assessment of preliminary built form feasibility and potential future density, noting the requirements set out in Appendix B.
High-level assessment undertaken by Council officers based on CAD drawings shows several issues as follows: – Bulky building forms have been proposed across the site with poorly proportioned communal open spaces that will not allow for effective air circulation or solar access. Multiple courtyard spaces measure 16m in width where a minimum 18m separation is required as per the Apartment Design Guidelines (ADG).	• Provide amended plans to address several built form issues identified by Council officer review. • Amend plans to reflect appropriately proportioned communal open spaces, noting that a minimum 18m building separation is required by the ADG.
– Building depths up to 26m minimise the ability to achieve necessary apartment amenity. The ADG	• Council officers recommend a maximum 21m building depth is feasible for north-south buildings, and 20m for east-west buildings. As defined by the ADG, building depth

recommends a maximum depth of 18m when planning and testing development controls. This ensures apartments receive adequate daylight and natural ventilation.	dimensions typically include articulation such as projecting balconies, gallery access, eaves, overhangs, sun hoods, blades, and other architectural features.
– Positive spaces should be created between built form, orientating building fronts-to-fronts and backs-to-backs. Buildings must be aligned to create consistent street edge and character. – Every building must demonstrate adequate street address and frontage. A carparking entry point is not considered to provide a reasonable sense of address	• Amend the layout of the townhouse in the north-east portion of the site, noting they show inconsistent street address where building sides, fronts and backs face the street with no apparent clear organisational principle. Ensure all buildings demonstrate adequate street address and frontage.
– A generic application of a 3m setback does not respond to the existing or proposed context.	• Provide appropriate building setbacks that respond to the street hierarchy as well as deep soil requirements. Council officers assesses the appropriate setbacks for every planning proposal depending on and in respect to each individual site context.
	• The proposal must be amended to address the indicative built form issues and principles represented in **Figure 2**.

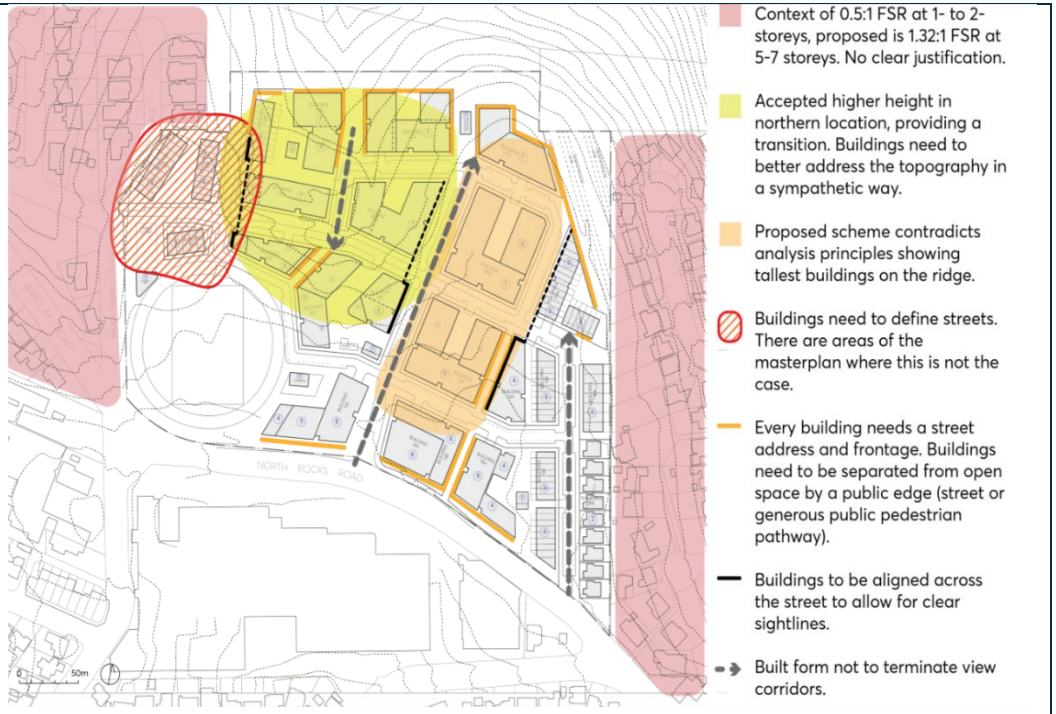


Figure 2: Indicative Built Form Issues and Principles

2.5 Building Envelope and Gross Floor Area (GFA)– Council officers have developed a standard which applies to all Planning Proposals with no exception, to ensure a consistent methodology for determining future planning controls in the Parramatta LGA. The efficiency rate being	• A compliant scheme must be used to calculate potential GFA to ensure correlation/consistency between any future FSR and HOB zoning, noting efficiency rates applied by Council officer to calculate GFA.

used to calculated GFA in this application is considered higher than the identified standard, and only one yield range needs to be submitted. Efficiency rates used by Council officers to calculate GFA are as follows: ○ 75% for a residential floorplate, including any independent living units; ○ 85% for a commercial floorplate, including any community uses; ○ 85% for townhouses; ○ 66% for residential ground floors; and ○ 33% - 50% for active ground floors . It is noted that the submitted GFA table corresponds with the CAD plan, which exhibits several ADG and DCP non-compliances.	
Three RFB sites from the proposed scheme have been tested as an example of how GFA should be calculated to Council's standards (see Appendix A). A summary of this outcome is in Table A below: ***Table A: Indicative GFA and Measured GFA (from envelope plan)***	• To achieve the proposed GFA within a compliant building footprint, up to 2 additional storeys would be required. This would result in built form outcomes even less sympathetic to the existing context and would not be supported. On large sites that will require new streets and/or open spaces, both the gross FSR for the entire site and the net FSR for individual development parcels needs to be defined. An average net FSR of 3.5:1 for RFB sites is considered a considerable leap from the surrounding context.

	Indicative GFA (from Applicant Report)		Compliant Envelope to proposed HOB		Compliant Envelope to proposed GFA	
LOT 05A	GFA (75% eff):	14,473sqm	GFA (75% eff):	12.254sqm	GFA (75% eff):	14,601sqm
Site Area:	Net FSR:	3.6:1	Net FSR:	3.1:1	Net FSR:	3.7:1
3970sqm	Height:	7 storeys	Height:	7 storeys	Height:	9 storeys
LOTS 07A	GFA (75% eff):	10,464sqm	GFA (75% eff):	8,416sqm	GFA (75% eff):	10,550sqm
Site Area:	Net FSR:	3.3:1	Net FSR:	2.7:1	Net FSR:	3.4:1
3137sqm	Height:	7 storeys	Height:	7 storeys	Height:	9 storeys
LOT 08A	GFA (75% eff):	18,718sqm	GFA (75% eff):	14,534sqm	GFA (75% eff):	19,079sqm
Site Area:	Net FSR:	3.5:1	Net FSR:	2.7:1	Net FSR:	3.5:1
5422sqm	Height:	7 storeys	Height:	7 storeys	Height:	9 storeys

Amend the proposal to reflect appropriate density and height that responds to the surrounding context.

- The documentation provided gives little definition of development lot areas to calculate the resultant net FSR. A detailed subdivision plan is to be provided that clearly indicates developable lots, open spaces, and streets. This will enable Council officers assessment of proposed planning controls and ensure that a compliant scheme with satisfactory levels of amenity can be facilitated.

2.6 Local Centre - A small centre on the site is supported but the diagram in p.55 does not provide information on the rationale for its location.	Provide justification for the location of the local centre/village square and how it meets key principles for establishing a successful, accessible community place. These principles include definition, multiple access points and relationship to main movement corridors.
2.9 Visual Impact -The proposal is to consider views to the site from outside of the site. In particular this should include but is not limited to the following:	Provide further information reflecting consideration of key views to the site from different lookout points.

• termination of view corridors north, east and west along North Rocks Road; • view east from Baden Powell Place; • view south from Duncan Place; • view west from Gossell Grove; and • views from M2.	
3. Traffic	
3.1 Bus services - Although TfNSW is generally supportive of increasing the status of route 549 service from a local to suburban service route, the report states that further discussions are required with TfNSW to explore viability. The development also proposes to fund the limited stops service during peak periods for 2-3 years, with the intention for TfNSW to take over bus operation. Based on this, it appears TfNSW does not intend to implement the proposed improvements to route 549 bus service in the future at this stage.	• Increasing route 549 bus services and introducing limited stops 549 bus service to Parramatta during peak periods should be further explored. It is recommended that further discussions be carried out with TfNSW to ensure that the proposed bus improvements can be delivered in the future as this will be critical in improving the development's connection to major public transport.
3.2 Feasibility of initiatives - Other proposed mitigation measures to help improve traffic flow in the surrounding road network are upgrades/changes to North Rocks Rd/Jenkins Rd intersection and North Rocks Rd/Church St intersection. These measures do not appear to be feasible as there is no indication of how this will be funded or constructed.	• Provide details of delivery mechanisms that will enable the delivery of identified roadworks and intersection upgrades. If the identified mitigation measures cannot be implemented, other mitigation measures which can be funded and delivered should be investigated.

3.3 Mode Shift Assumptions - Council does not consider the mode shift assumptions in the Integrated Traffic and Transport Assessment (ITTA) report to be feasible. The ITTA report states that based on the 2016 JTW data, there is an existing mode split of 64% car driver and 3% car passenger. Through a number of measures proposed, the private vehicle mode share is targeted to reduce to 49% car driver (15% reduction) and 5% car passenger (2% increase). This includes a 10% shift towards bus travel. This is not considered to be feasible because: • Lower on-site parking provision would not necessarily result in reduced vehicle ownership, particularly for the apartments, and can lead to parking on nearby residential streets which would generate traffic in addition to the estimated traffic generated by the development • Improvements to public transport services/frequencies are subject to the consideration and approval of another Government agency and there is no guarantee that this can be implemented.	• Amend the ITTA report to reflect appropriate mode shift assumptions.
3.4 Trip generation rates - Council officers are concerned that the use of average trip generation rates for the proposed development on the site will not be an accurate reflection of traffic generation.	• Consult TfNSW to ensure proposed trip generation rates are acceptable and provide outcomes of consultation. This will also be reliant on the viability of proposed public transport service improvements.

3.5 Shuttle bus services - The shuttle bus service provided by the development is only temporary and will not adequately address the permanent traffic impacts. The shuttle bus stop/transit lounge proposed in Barclay Road Commuter car park does not appear to be a suitable location as it will increase interactions between buses, pedestrians and private vehicles which is a safety concern. It is also unclear what upgrades are required when constructing the bus stop and whether these upgrades are feasible at this location. Some upgrades that may be required are to install DDA compliant footpath connections from the shuttle bus stop to M2 bus stop, lighting upgrades, improvements to pavement strength and potential changes to parking layout to improve swept paths of buses.	• The proposal will need to address how transport connectivity to key destinations will be maintained in the long term given the temporary nature of the proposed shuttle bus services. • It is recommended to explore an alternate suitable location for this bus stop/transit lounge and to identify the range of infrastructure upgrades associated with the provision of the lounge.
3.6 Extension of left turn lane North Rocks/Church St- The report also proposes to extend the left turn lane carriageway widening on the northeast approach at North Rocks Road/Church St intersection (by land acquisition and/or widening bridge structure) to improve bus travel time and reliability at the expense of right turn capacity. The report then indicates that this would involve significant works and addresses an existing queuing issue. Council's Traffic and Transport section in general supports the extension of the left turn lane carriageway widening on the northeast approach at North Rocks	• Amend the ITTA report and assessment to confirm that the widening of the identified carriageway will not have adverse impacts on the local road network. The ITTA report should also provide further detail on how this intersection upgrade will ultimately be delivered including details of funding and project timelines, etc.

Road/Church St intersection, subject to no adverse impacts on the local road network.	
3.7 Right turn ban North Rocks/ Jenkins Road - The eastbound right turn ban from North Rocks Road into Jenkins Road is not supported. This would limit the access routes available for local residents living to the south of North Rocks Road, west of Pennant Hills Road and is expected to have adverse impacts on the local road network.	• Amend the ITTA report and assessment accordingly.
3.8 Parking Provision - As this development is not located within the CBD and not in close vicinity to major public transport infrastructure and other commercial areas, the use of maximum parking rates is not considered appropriate for this proposal.	• It is recommended that minimum parking rates be used to determine parking provisions for this development. Minimum parking rates outlined in Table 3.6.2.3 of the Parramatta Development Control Plan (DCP) should be applied when determining parking provisions for this development.

3.9 Intersection of North Rocks Road, North Rocks S.C. Access Road and Proposed Access Road –
• The removal of the mid-block signals east of this intersection and the signalisation of this intersection will require approval to be obtained from TfNSW
• There appears to be insufficient space at the south-eastern corner of the intersection to provide a compliant kerb ramp and footpath
• Swept paths do not demonstrate the following:
  ○ HRVs simultaneously turning right on both approaches of North Rocks Rd and both approaches of the side streets.
  ○ HRVs turning left from North Rocks S.C. Access Rd into North Rocks Rd
	• Amend the ITTA report, swept path plans and intersection design accordingly.

simultaneously with HRVs turning right into North Rocks S.C. Access Road and, 14m Aldi semi turning left from North Rocks S.C. Access Rd into North Rocks Rd simultaneously with a 14m Aldi semi turning right into North Rocks S.C. Access Road	

3.10 New internal roads and site access/egress–
• There is insufficient detail provided in the submitted CAD drawings to assess the new roads proposed (e.g., not to scale, no road widths shown, intersection treatments are not clear, etc.)
• Access into the development is limited to two locations – from Baden Powell Pl and from the Proposed Access Road (new signals).
  ○ The additional traffic on Baden Powell Pl can impact the amenity of local residents
  ○ The number of right turn movements at the intersection of Barclay Rd/Baden Powell Pl is expected to increase, which can have adverse traffic and safety impacts, noting that this intersection is unsignalized.
  ○ Vehicles waiting to turn right on Barclay Road can cause queuing and increased delays for westbound traffic, particularly for bus services as this is a bus route.
  ○ Increased lane changing to avoid queued traffic and increased right turning movements at an unsignalized intersection can also increase the chances of crashes at this location.
	• It is recommended that the CAD drawing be provided to scale and be amended to show more detail (such as kerb alignments, road widths, intersection treatments, footpath widths, etc.).
	
	• It is also recommended that additional access roads be provided into the development. This can help improve traffic flow within the development and provide more opportunities for vehicles to enter/exit the development.

• Egress from the development is also limited to two locations – from the Proposed Access Road (new signals) and near New North Rocks Road (left out only). As the exit near New North Rocks Road is close to signals, traffic stopped due to the signals can impact traffic flow exiting out of the development.	
3.11 Oval • The report states that 50-80 parking spaces will be provided for the oval however, this is not reflected in the submitted CAD plans. • Coach bus parking should also be included to accommodate for special events (such as sports competitions and school events).	• Amend plans to show the proposed 50-80 parking spaces for the oval to demonstrate that these spaces can be spatially accommodated by the masterplan.
3.12 SIDRA modelling – • SIDRA modelling inputs (such as traffic volumes, layouts, phasing diagrams, phasing splits) and outputs for all intersections modelled should be provided for further assessment. • Only one intersection (North Rocks Rd/Church St) is modelled for the 2026 plus development and mitigation measures scenario (Table 7.17). However, the proposed mitigation measures will impact traffic flow in the surrounding road network and therefore, other intersections listed in Table 7.17 should also be modelled for the 2026 plus development and mitigation measures scenario. Details of the modelling undertaken (such as	• Amend the ITTA report to provide SIDRA modelling layouts and outputs for all intersections modelled (including existing and future scenario). • Amend the SIDRA modelling to use 2019 traffic survey data. • Model all intersections listed in Table 7.17 for the 2026 plus development and mitigation measures scenario.

modelling inputs and outputs) should also be provided for review. • It appears 2016 traffic volumes were used in SIDRA modelling however, references were made to a traffic survey undertaken by Matrix on 21 May 2019. It is recommended that the 2019 traffic volumes be used instead as the 2016 traffic volumes may not accurately reflect the current traffic conditions (e.g. due to increased population and dwellings in the surrounding areas).	
4. Planning for Bushfire Protection	
4.1 Mitigation measures - The bush fire report identifies measures (asset protection zone and perimeter road) required to manage bush fire risk to the site. The required bush fire protection measures could influence the layout of the site, and its potential residential yield, and should be included in the analysis and the resulting master plan and planning proposal.	• It is requested you obtain approval of the alternate method of risk assessment 'short fire run methodology' (SFR) used in the bushfire report prior to resubmitting an amended master plan to ensure the asset protection zones are locked in and will not change in the future (as this would result in further change to the master plan). The NSW Rural Fire Service Hills Office is assumed to be the relevant contact.
5. Natural Areas	
5.1 Ecology - The ecological assessment confirms that that site has been largely cleared for agriculture and infrastructure, with the exception of approximately 0.5 hectares of native vegetation (Coastal Shale Sandstone Forest) remaining present along the northern boundary. Whilst this native vegetation primarily consists of canopy trees that are absent of	Removal (including alteration for APZ) of more than 0.25ha bushland triggers biodiversity offsets under the Biodiversity Conservation Act 2016, and some of the bushland on the site is identified in the draft LEP as biodiversity conservation. Both issues should be addressed in the analysis and master plan review. To minimise impacts on existing native vegetation, Council's preferred outcome is that: • The bushland along the northern boundary is conserved and not used to accommodate asset protection zones or roads

hollows and has a cleared understorey, it forms part of a wider corridor with the adjoining land to the north (though bisected by the M2 road corridor) and is included in the Natural Resources (Biodiversity) map under the draft Parramatta LEP 2020.

It is noted that the Coastal Shale Sandstone Forest vegetation will be likely indirectly impacted through Asset Protection Zone (APZ) requirements, including management of understorey vegetation and selective canopy removal to achieve the following (which may trigger the Biodiversity Offsets Scheme):

- *canopy cover does not exceed 15% at maturity;*
- *trees (at maturity) do not touch or overhang the building;*
- *lower limbs should be removed up to a height of 2m above ground;*
- *tree canopies should be separated by 2 to 5m; and*
- *preference should be given to smooth barked and evergreen trees.*

The assessment also identifies potential for a number of threatened fauna and flora species that are known to occur in proximity, particularly *Epacris purpurascens var. purpurascens, Tetratheca glandulosa, Hibbertia superans and Darwinia biflora* that will require targeted surveys if the native vegetation zone is required to be managed as an APZ.

- There are adequate setbacks to the existing native vegetation canopy trees within the northern Asset Protection Zone
- The bushland is edged by streets that contain the development and provide public access to the bushland.

6. **Open Space**	
6.1 Oval - The proposed full-size oval should accommodate both winter (football) and summer (cricket) sports and is to meet the minimum field dimension requirements for community level cricket, being 60m + 5m buffer / runoff zone as measured from the pitch (refer attached guidelines). The oval should also incorporate a circuit path in accordance with the directions of Council's Community Infrastructure Strategy (CIS) for Catchment 2 which covers North Rocks, Carlingford, Dundas, Dundas Valley and Telopea.. Specifically, the CIS identifies opportunities for the provision of trail and path-based recreation within the catchment.	• Please note requirements in relation to site dimensions and embellishment of the oval and refer to attached guidelines.
6.2 Floodlighting – The oval should also incorporate floodlighting to maximise capacity for use by both organised clubs and the wider community, particularly during peak evening use periods consistent with the CIS. Floodlighting should be able to facilitate both competition (100 LUX) and training / community use (50 LUX) requirements whilst minimising potential impacts on nearby private residential properties.	• Please note requirements in relation to the provision of floodlighting to the oval, noting that this will need to be balanced with the need to avoid and mitigate adverse impacts on nearby residential dwellings.
6.3 Pavilion - It is also important that the proposed pavilion includes public amenities that are accessible to the wider community outside formal sporting group use of the oval. Amenities should include a kiosk, storage, change room and toilet facilities.	• Please note requirements in relation to the embellishment of the pavilion and reflect these amenities in an amended concept landscape plan.

6.4 Play and Recreation Precinct – The proposed location of the play areas within a narrow corridor between the oval and North Rocks Road is suboptimal and will likely require undesirable safety fencing. The play spaces could be relocated north of the oval (in place of proposed town houses). This would facilitate the delivery of an **active** recreation hub by co-locating the youth / child play areas with the multipurpose court. This will ensure access to nearby public toilets and also minimise potential noise conflicts between recreational facilities and adjoining private residences.	• Amend the masterplan to relocate the play space areas to a more suitable location away from the road.
6.5 Provision of Multipurpose Courts - Council's CIS also identifies the need for youth recreation facilities, particularly multi-purpose outdoor courts, which are able to accommodate a greater diversity of recreational activities than specialist facilities such as tennis courts. It is also noted that there are 5 existing tennis courts located within 1km at North Rocks Park. The proposed court should therefore be a multi-purpose facility to increase capacity for recreational use consistent with the CIS.	• Amend the masterplan to replace the tennis courts with the provision of multipurpose courts.
6.6 Dedication of Land - Council's Community Infrastructure Strategy requires 20% of a site to be dedicated as public open space, being approximately 2.5 hectares on this site. The proposal falls short of this requirement with only 15% to be dedicated (1.84ha 'Oval' and 0.16ha 'Village Green').	• Council officers acknowledge that the proposal entails the dedication of high quality public open space including the oval. As the proposal falls short of the 20% quantum of open space dedication identified in the CIS, amend the proposal to comply with CIS requirements or provide justification for the proposed shortfall for Council officer consideration.
6.7 Zoning - The proposed R3 zoning is inconsistent with the 'public' purpose of dedicated open space land,	• A matter for consideration after agreement upon the proposed masterplan.

which should be zoned as RE1 (Public Recreation) to more appropriately reflect the intended recreational land use. The interface between public and private domains will also need to be clearly delineated where land to be dedicated to Council is not separated by a road.	
6.8 Deep Soil – There should be no carparking underneath publicly accessible open space to ensure deep soil and opportunities for canopy trees	• Deep soil and basement plans to ensure that carparking is avoided underneath all publicly accessible open space areas and deep soil setback areas.
6.9 Public Open Space Network – Provide a cohesive and legible public open space network including pedestrian/cycle connections between each of the parks. This should include provision of a visual/pedestrian connection to the bushland corridor to the north.	• Amend the plans to reflect visual and pedestrian/cycle connections between each of the open space areas.
6.10 Public Open Space Network – Provide further information in relation to the rationale for the location of the open space and how the open space relates to the topography, the existing vegetation, ecological communities and water management.	• Provide drawings to demonstrate the open space areas, the curtilages for tree retention and ecological communities. They should differentiate the existing open space from proposed, the open space within the site and open space not part of the site.
7. Tree Canopy	
7.1 Preliminary Arborist Report - The significance and retention values of existing trees requires adequate assessment to demonstrate that the proposal	• Provide a preliminary arborist report to support the proposal.

maximises feasible retention and protection of high significance trees, particularly remnants that likely provide important habitat e.g. hollows. The retention and protection of these existing trees is to be maximised consistent with the LSPS and Council tree canopy targets, particularly remnants or those of high significance that typically comprise the most significant canopy cover.	
7.2 Additional Documentation - A significant quantity of tree canopy is illustrated on the drawings but there are no dimensions on the streets, footpaths or the building setbacks related to vegetation, so it is not clear whether there is sufficient deep soil and separation distances to accommodate the tree canopy indicated.	• Provide additional plans (in addition to deep soil and basement plans) to demonstrate that there will be sufficient space for deep soil and opportunities for canopy trees.
8. Flooding and Water Management	
8.1 Overland Flooding - While the site does not appear to be adversely affected by mainstream or overland flow flooding, investigation of overland flooding is to be included in the Flood Study.	• Amend the flood study to include investigation of overland flooding.
8.2 Water Management Strategy - The landscape proposal refers to water sensitive urban design (WSUD) and provision of a wetland garden along the main flow path on the site – which is supported. The site lends itself to integration of water management into the landscape.	• Provide a Water Management Strategy (Strategy) detailing WSUD measures and demonstrating no increased stormwater runoff. The Strategy will need to address how retention of existing roads (in particular the east-west road) will be reconciled with the new, proposed stormwater infrastructure to meet WSUD requirements.

A comprehensive Water Management Strategy / master plan is to be prepared achieving this to contemporary WSUD standards. This includes use of slotted kerbs to roadways, shedding runoff water from all hard surfaces into bioswale gardens and wetlands for retention and biotreatment, extensive use of deep soil, and delaying discharge peaks from the site. As part of the Water Management Strategy, on–site stormwater detention or retention will be required for individual sites and the precinct. Stormwater management will need to ensure runoff is not increased, or concentrated onto adjoining properties, noting that this has been a problem for this site in the past and a bund was constructed along the eastern boundary of the site to reduce this impact. Risk evaluation of the existing bund/detention should be included along with alternative mitigation options.	
8.3 Drainage Infrastructure - It is unclear whether there will be any impact on Council drainage infrastructure. If there is any potential for impact on council drainage infrastructure or need to connect to council drainage infrastructure. Details will need to be submitted to the Council's catchment management section for assessment and approval.	• The Water Management Strategy is to provide an assessment of any potential impacts on Council drainage infrastructure.

9. Sustainability	
9.1 Planning Proposal Report - The Sustainability Strategy is very thorough and includes a number of strategies which are strongly supported, in particular 'Ready for a zero carbon world' and 'Deliver a positive water impact'. The Planning Proposal Report references the Sustainability Strategy. Section 6.3.5 Ecologically Sustainable Development states in relation to the Sustainability Strategy that 'The report outlines sustainable initiatives the proposal can deliver'. It does not commit to the implementing the strategy as a part of the proposal.	• Amend Section 4 Objectives and Intended Outcomes – to strengthen sustainability outcomes that reflect the Sustainability Strategy's '5. Ready for a zero-carbon world' strategy and the zero carbon intention. • Amend Section 6.3.5 to identify the Sustainability Strategy initiatives that will be adopted for the proposal.
10. Economic Development	
10.1 Commercial Space - The indicative retail mix proposed for the subject site indicates the potential for at least two retail tenancies and two non-retail commercial tenancies across approximately 700 sqm. This is considered reasonable given the subject site's proximity to North Rocks Shopping Centre, identified in the Assessment as a sub-regional centre, providing supermarket and specialised retails services. It is assumed the retail provisions in the development will	• The proposal will need to clarify whether the proposed retail and commercial uses are responding to the future demand generated by the development. An assessment will be required against the objectives and requirements of Ministerial Direction 1.1 Business and Industrial Zone.

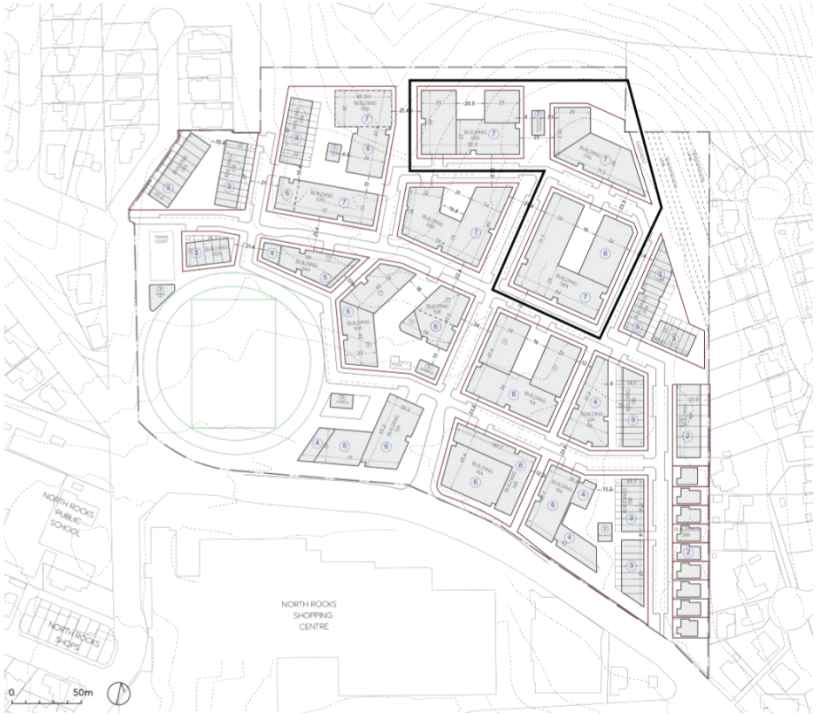
largely service the local population of the subject site and those using the community facilities and will not compete with the retail offering in the shopping centre. The provision of a co-working space is supported however the commercial feasibility of this has not been assessed.	
11. Affordable Housing	
11.1 Nature of Affordable Housing - The proposal mentions an affordable housing provision of 5%. However, the PP is not specific on what this will be. It appears the PP is not offering permanent affordable housing to be dedicated to Council, or affordable housing as defined in the EP&A Act. Please note that 'build to rent' and housing for RIDBC clients is not considered affordable housing, and as defined, affordable housing is not reserved for specific categories of key workers.	• Clarification is sought on the affordable housing component to be dedicated to Council, and where and how this will be provided in the development of the site. It is noted that there are more suitable locations for affordable housing, ideally closer to employment centres where key workers would have convenient access to their job location within walking distance, however it is preferable for affordable housing assets to be provided as opposed to a monetary contribution. Council officers acknowledge that there will be further discussion in this regard when negotiating any planning agreement to support the PP.
12. Community Facilities	
12.1 Community facilities – The proposal includes the provision of a library and community centre within the community hub.	• It is noted that there are planned community facility project upgrades in nearby areas, in particular the redevelopment of the Don Moore community centre as part of the North Rocks Masterplan. Notwithstanding Council officers acknowledge that there will be further discussion in this regard when negotiating any planning agreement to support the PP, noting that the on-site provision of community facilities may be required.

APPENDIX A: Compliant Envelopes and Calculating GFA

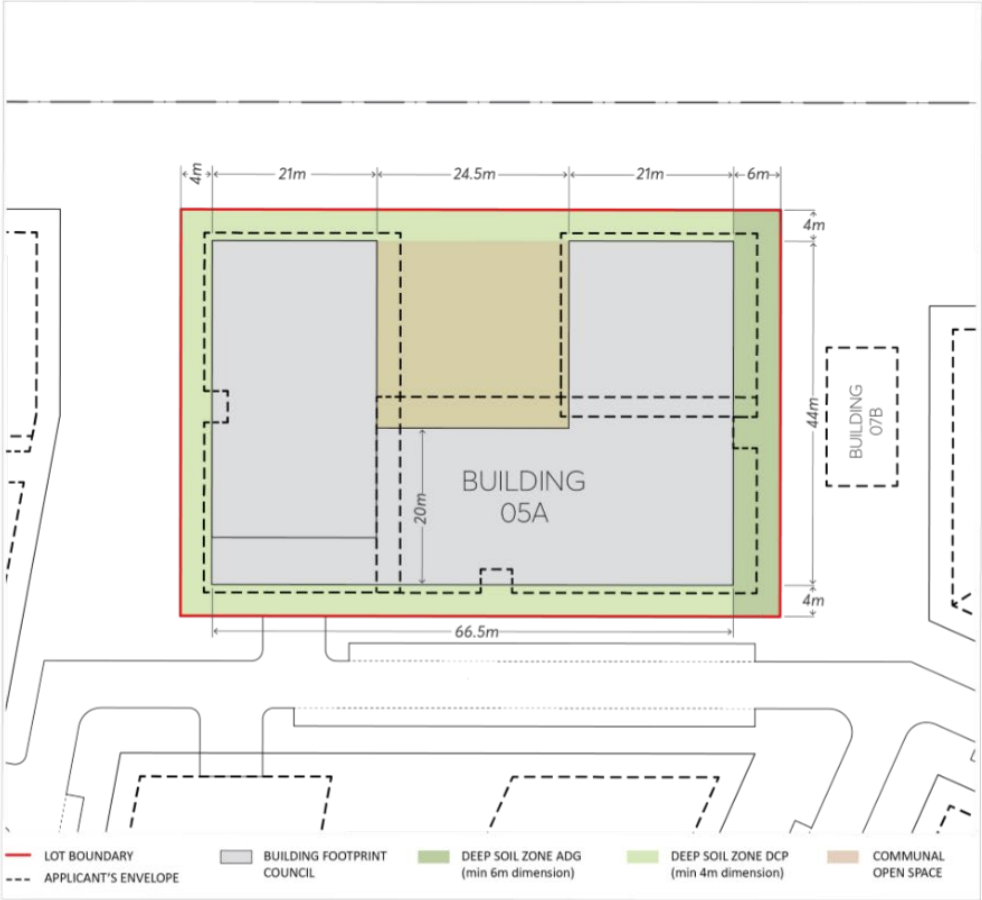
The CAD plan below has been used to test three sites as an example of how GFA should be calculated to Council's standards. The following examples illustrate the outcomes of applying a compliant envelope within the proposed street structure. Development lot boundaries have been assumed from the information presented and Council's standard efficiency rates applied to calculate GFA.

This study does not exhibit support for the proposed street structure, but demonstrates that to achieve the aspired GFA within a compliant building footprint, up to 2 additional storeys would be required. It also demonstrates that the net FSR of development lots is closer to 3.5:1, which is considered unsympathetic to the surrounding context.

Submitted CAD Plan and Selected RFB Sites:



SITE 05A:



LOT 05A Site Area	3970	SQM
Applicant Proposed GFA	14473	SQM

Council Standard Built Form Controls to Proposed Applicant Height				
	GBA	EFF	GFA	HOB
	sqm	%	sqm	m
LEVEL 1	2334	75%	1751	3.6
LEVEL 2	2334	75%	1751	3.1
LEVEL 3	2334	75%	1751	3.1
LEVEL 4	2334	75%	1751	3.1
LEVEL 5	2334	75%	1751	3.1
LEVEL 6	2334	75%	1751	3.1
LEVEL 7	2334	75%	1751	4.0
TOTAL GFA			12254	SQM
FSR			3.09	:1

Council Standard Built Form Controls to Proponent GFA				
	GBA	EFF	GFA	HOB
	sqm	%	sqm	m
LEVEL 1	2334	75%	1751	3.6
LEVEL 2	2334	75%	1751	3.1
LEVEL 3	2334	75%	1751	3.1
LEVEL 4	2334	75%	1751	3.1
LEVEL 5	2334	75%	1751	3.1
LEVEL 6	2334	75%	1751	3.1
LEVEL 7	2334	75%	1751	3.1
LEVEL 8	2334	75%	1751	3.1
LEVEL 9	796	75%	597	4.0
TOTAL GFA			14601	SQM
FSR			3.68	:1

SITE 07A:

LOT 07A Site Area	3137	SQM
Applicant Proposed GFA	10464	SQM

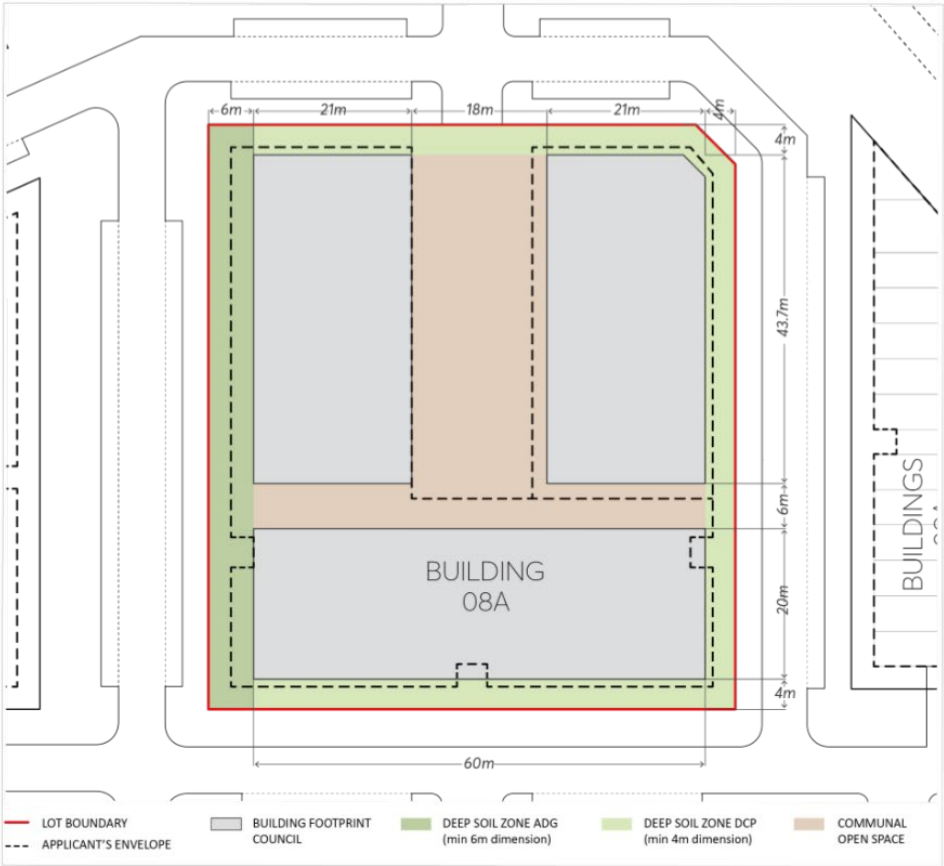
Council Standard Built Form Controls to Proposed Applicant Height

	GBA	EFF	GFA	HOB
	sqm	%	sqm	m
LEVEL 1	1603	75%	1202	3.6
LEVEL 2	1603	75%	1202	3.1
LEVEL 3	1603	75%	1202	3.1
LEVEL 4	1603	75%	1202	3.1
LEVEL 5	1603	75%	1202	3.1
LEVEL 6	1603	75%	1202	3.1
LEVEL 7	1603	75%	1202	4.0
TOTAL GFA			8416	SQM
FSR			2.68	:1

Council Standard Built Form Controls to Proponent GFA

	GBA	EFF	GFA	HOB
	sqm	%	sqm	m
LEVEL 1	1603	75%	1202	3.6
LEVEL 2	1603	75%	1202	3.1
LEVEL 3	1603	75%	1202	3.1
LEVEL 4	1603	75%	1202	3.1
LEVEL 5	1603	75%	1202	3.1
LEVEL 6	1603	75%	1202	3.1
LEVEL 7	1603	75%	1202	3.1
LEVEL 8	1603	75%	1202	3.1
LEVEL 9	1243	75%	932	4.0
TOTAL GFA			10550	SQM
FSR			3.36	:1

SITE 08A:



LOT 08A Site Area	5422	SQM
Applicant Proposed GFA	18718	SQM

Council Standard Built Form Controls to Proposed Applicant Height

	GBA	EFF	GFA	HOB
	sqm	%	sqm	m
LEVEL 1	3030	75%	2273	3.6
LEVEL 2	3030	75%	2273	3.1
LEVEL 3	3030	75%	2273	3.1
LEVEL 4	3030	75%	2273	3.1
LEVEL 5	3030	75%	2273	3.1
LEVEL 6	3030	75%	2273	3.1
LEVEL 7	1199	75%	899	4.0
TOTAL GFA			14534	SQM
FSR			2.68	:1

Council Standard Built Form Controls to Proponent GFA

	GBA	EFF	GFA	HOB
	sqm	%	sqm	m
LEVEL 1	3030	75%	2273	3.6
LEVEL 2	3030	75%	2273	3.1
LEVEL 3	3030	75%	2273	3.1
LEVEL 4	3030	75%	2273	3.1
LEVEL 5	3030	75%	2273	3.1
LEVEL 6	3030	75%	2273	3.1
LEVEL 7	3030	75%	2273	3.1
LEVEL 8	3030	75%	2273	3.1
LEVEL 9	1199	75%	899	4.0
TOTAL GFA			19079	SQM
FSR			3.52	:1

APPENDIX B: Drawing Requirements for Large Proposals

The following information is required by the Urban Design team as part of any large proposal:

- A plan for the site should show the subdivision of the site into streets (and any other public open space), and development lots. The plan should indicate the area and net density of each lot.
- Site sections and diagrammatic street elevations should illustrate how the proposal relates to the topography and any adjustments to natural ground levels.
- Development lots should illustrate built form outlines in plan showing dimensioned setbacks and nominated heights, allowing densities for each development lot to be calculated and nominated with reference designs as noted below. The plan should indicate the area and net density of each lot, and vehicular and pedestrian entry points should be shown.
- Detail of the coverage of basements and deep soil area per block and over the site should be provided, indicating how this is achieved along street edges and within the blocks.
- Street sections, referenced to the plans, should dimension the street reserves in detail, show built profiles to the street at their full height with nominated street setbacks, and illustrate the character of the streets.
- Architectural reference designs on development lots should inform the proposal. They should include typical levels at 1:500 and indicate common circulation spaces, diagrammatic unit plans and balconies. SEPP65/ADG performance for residential uses should be conceptually demonstrated. Setbacks and floor plates should be dimensioned.
- Shadow impact studies of the proposal should be provided.
- All drawings should include scale bars.
- An area schedule should be provided for each development lot showing how the GFA is arrived at. For GFA yield calculations, assume:
    - Residential GFA = 75% of GBA (GBA includes external walls, internal voids and balconies).
    - Commercial GFA = 85% of GBA
    - Ground floor retail or non-residential GFA = 33% of GBA.
- The number of apartments should be indicated, calculated by dividing the GFA by 85m2.
- Gross dwellings per hectare should be indicated.

- Population density should be indicated, calculated by multiplying a rate of persons per dwelling. This rate will depend on the level of density and development type proposed and should be con- firmed with Council.
- A precinct summary schedule should be provided indicating site area, total public space area, total development lot area, total GFA, total Net FSR, total gross FSR, total number of apartments, and gross dwellings per hectare.
- A 3D model should be provided in .3DS format as well as in Sketchup. For all enquiries, contact Tim Zhao, TZhao@parracity.nsw.gov.au