2nd December 2020

City of Canterbury-Bankstown
Civic Tower,
66/72 Rickard Road
Bankstown NSW 220

To: Mitchell Noble
Manager – Spatial Planning

Architecture
Urban Design
Planning
Interior Architecture

30-46 Auburn Road, Regents Park
Peer review of Smith & Tzannes letter titled 'Review of FSR'
(PP_2016_CBANK_001_00) – 30-46 Auburn Rd, Regents Park, dated 17 April, 2020

Dear Mitchell,

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EXECUTIVE SUMMARY

On 26 February 2020, as delegate of the Minister for Planning and Public Spaces, it was determined under section 3.34(7) of the Environmental Planning and Assessment (EP&A) Act 1979 that the Gateway Determination dated 23 September 2016 (since altered) should be altered as follows:

> *1. Delete condition 1(a) and replace with:*
> *a new condition 1(a) "reflect the outcomes of the urban design review by the Department of Planning Industry and Environment with a maximum FSR of 2:1 for the site and maximum building heights of 19 metres along the site's Auburn Road frontage, 38 metres in the north-western corner of the site and 25 metres across the remainder of the site;"*

Pacific Planning submitted a letter of request to the NSW Department of Planning, Industries and Environment (DPIE) seeking a review of this Gateway Determination, requesting amendment to condition 1(a) above to include approval for:

- Maximum FSR – 2.4:1; and
- Maximum Height - 6 storeys – 23m; 8 storeys – 29m; and 12 storeys – 47m

As noted in previous reviews, Architectus identified several key design and amenity issues related to the proposed envelopes that cast significant doubt on the density sought. At a high level these include issues related to solar access to apartments, appropriate setbacks from the boundaries to increase separation from the harsh edges, ensuring adequate building articulation, and providing upper level built form setbacks to ensure an appropriate scale transition to neighbours while reducing the scale of the perceived building mass within the public domain. The Proponent in the letter of appeal responded to our previous doubts by stating that the scheme proposed (loosely based on the McGregor Coxall scheme commissioned by the Department of Planning in 2019) has been refined to DA level to ensure compliance with the design quality principles set out in Schedule 1 of the State Environmental Planning Policy Number 65 – Design Quality of Residential Apartment Development (SEPP 65) and the design criteria outlined in the NSW Apartment Design Guide (ADG).

However, an extensive review of the above proposal by Architectus concluded that a number of key issues relating to Apartment Design Guide (ADG) compliance under SEPP 65 meant that the proposed density and height were not appropriate for the site, recommending that an FSR of 1.75:1 and a maximum height of part 28m (8 storeys) and part 22m (6 storeys) is the maximum appropriate LEP controls for this site.

Architectus Australia Pty Ltd
ABN 90 131 245 684

Nominated Architect
CEO
Ray Brown
NSWARB 6359

In response to this advice, Pacific Planning (the Proponent) have submitted an independent peer review completed by Smith & Tzannes, dated 26 August 2020 which assesses the FSR controls proposed by the McGregor Coxall / MRA concept plan, concluding that the proposed FSR of 2.4:1 and maximum (amended) heights of part 22m (6 storeys) / 41m (12 storeys) / and 29m (8 storeys) is appropriate to meet or exceed the objectives and design criteria of the ADG and provide good overall amenity in regards to solar access, ventilation, privacy, acoustic separation and public domain etc. In their review, they also stated that they are of the opinion that the proposed controls are flexible enough to achieve more than one layout on the site, while adhering to the general layout proposed by McGregor Coxall.

As part of Architectus' review of the above claims and FSR recommendations outlined within the Smith & Tzannes letter, Architectus have completed some additional high level massing and layout options to test the FSR and solar access achieved, while ensuring appropriate setbacks and maximum heights and upper level setbacks are adhered to as per our previous advice. However, as demonstrated by the additional built form studies completed below, Architectus remains unable to support the above claims by the Proponent and the independent review by Smith & Tzannes.

Supplementary to the peer review by Smith & Tzannes, the Proponent has also provided:

- Amended architectural plans prepared by Studio MRA;
- Solar access opinion prepared by Walsh Analysis;
- Natural ventilation opinion prepared by SLR;
- Separate review by Smith & Tzannes that concludes that the analysis and amended layouts prepared are capable of satisfying the ADG objectives and design criteria with respect to solar access and cross ventilation.

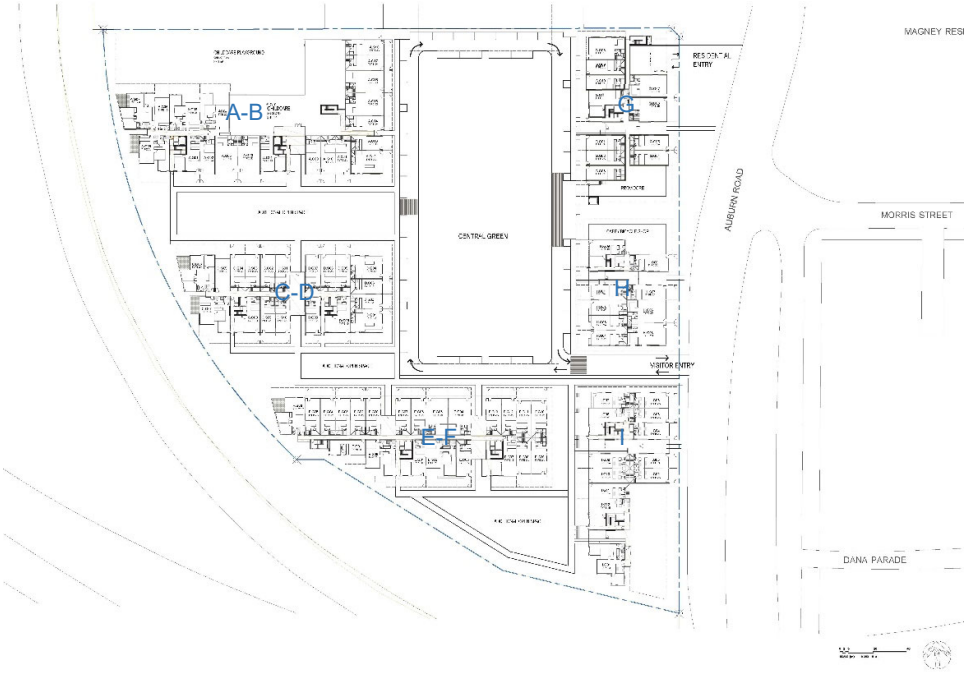


Image: Ground Floor Plan, source: Studio MRA, August 2020

Figure 2: View from the sun, 12pm June 21

Image: View from the sun, 12pm June 21, source: Walsh2 Analysis, September 2020

Architectus has also completed a review of this amended documentation, the results of which are provided in the Appendix to this letter as a comparison to our June 2020 review of the previous floor plans provided. While we agree with Smith & Tzannes that a planning proposal does not need to consider detailed apartment layouts, the lack of clarity and confidence provided around demonstrating that this site can adequately support the proposed density while achieving all the required amenity and design quality has led the review down this more detailed path.

Our conclusion from this review is that while some clarifications relating to ADG compliance and building envelope separation has been provided regarding the envelopes, there remains a number of outstanding ADG and urban design issues particularly related to context, built form, scale, density, setbacks from boundaries, building articulation, sustainability and amenity that have not been addressed or resolved by the Proponent or in the independent review by Smith & Tzannes, and will impact on the maximum FSR and height of buildings sought. We are also doubtful that the revised detailed floor plans can achieve ADG compliance as claimed, particularly when assessed on a building by building basis, as required by the ADG Design Criterion. For example, Architectus is largely concerned that a high number of apartments on the western side of the site (housing up to nearly 70% of the entire site's yield under the current proposal) fail to meeting ADG's solar access requirements. A number of these ADG issues associated with the amended plans are evaluated and outlined in the Appendix of this review.

As a result, Architectus has demonstrated that the FSR of 2.4:1 and heights proposed cannot be achieved and stands by its previous recommendation that a maximum FSR of 1.75:1 and maximum building heights of 22m (6 storeys) and 28m (8 storeys) are appropriate to ensure a high quality design and residential amenity outcome.

REVIEW AND RECOMMENDATIONS

1. Item / Issue: Proposed building heights

Gateway Determination – *"…maximum building heights 19 metres along the site's Auburn Road frontage, 38 metres in the north-western corner of the site and 25 metres across the remainder of the site."*

Proponent request – Maximum height – 6 storeys (23 metres); 8 storeys (29 metres); and 12 storeys (47 metres).

Smith & Tzannes recommendation – Maximum height – 6 storeys (22 metres); 8 storeys (29 metres); and 12 storeys (41 metres).

Architectus Recommendations

Based on previous advice dated June 15th 2020, the following recommendations regarding building heights remain as per the following:

- 6 to 8 storey maximum across the whole site.
- 6 storey (22m) maximum along Auburn Road, (with a 4 or 5 storey street wall height and upper level setback of 3m).
- 8 storey (28m) maximum across the remainder of the site with an upper level setback of 3m along all frontages facing internal streets and the central area of open space.
- If 12 storeys was to proceed in the north-west corner of the site, 41m would be an appropriate maximum height in metres, in accordance with the Bankstown LEP 2015, Section 5.6, where roof features including lift overruns may exceed this maximum height with development consent.
- Architectus recommends a control is introduced to ensure the desired maximum number of storeys listed above is not exceeded under the height plane.
- As per the Bankstown LEP 2015, Clause 5.6, roof features including lift overruns and accessible roof terraces that do not contribute to GFA may exceed the specified maximum height with development consent.

The recommended heights in metres above are based on Architectus' high level review, however it is recommended that the Proponent look into these proposed heights further to address the identified issues, particularly related to the proposed ground levels and interface with the neighbouring sites and existing topography.

Architectus Review & Rationale Behind Recommendations

Alternative Gateway heights for 6 and 8 storey sections

- Architectus recognises the adoption of a number of assumptions by Smith & Tzannes in relation to the building envelope, particularly in relation to clarifications regarding ceiling heights, inclusions for structure and services at mid-floors and welcome the adoption of the 3.3 metre floor to floor ground floor height. These measures would serve to increase the overall environmental amenity of future development and provide a greater level of accuracy in determining overall building height.
- The Proponent request for revised heights which includes a provision for an additional 3.8 metres above the top floor building envelopes to facilitate a roof terrace for 6 and 8 storey envelopes are unwarranted. While Architectus understands the amenity and benefits outlined by Smith & Tzannes regarding rooftop terraces, they are not essential to the provision of communal open space across the development. Nevertheless, as per clause 5.6 of the Bankstown LEP, accessible roof terraces could deemed to be permitted with consent beyond the height limit as long as it does not include internal floor space and create additional overshadowing that is unreasonable. Therefore, it is not a reasonable argument to request additional height to allow for accessible roof terraces.

- Where possible, it is preferred that communal open space be provided at ground floor with a high level of solar access amenity with good passive surveillance and be supported by deep soil planting and landscape.
- The additional 3.8 metres proposed to accommodate lift access to the roof level would not be deemed necessary and that the last floor served by lifts would be the top floor of the residential dwelling significantly reducing the need for a lift overrun structure of 3.8 metres to 1.5 metres maximum as indicated in Fig 1 of the review by Smith & Tzannes.
- As such, the recommendations for 6 storeys (22m) and 8 storey (28m) built form envelopes provided by Architectus under the previous review (June 2020) still apply, which allows flexibility to provide ground level retail along Auburn Road and enough tolerance to allow for adjustments to the existing ground surface where required. In addition, considering the Bankstown LEP 2015, Section 5.6, permits roof features including lift overruns to exceed the maximum height with development consent, the proposed height in metres provides more than enough height for flexibility.

12 storey limit in north-west corner

- As indicated in previous advice provided by Architectus, the highest building heights should generally have some relationship to the hierarchy of centres as well as local context. The draft Canterbury-Bankstown Local Strategic Planning Statement: Connective City 2036 (Draft LSPS) identifies a hierarchy of 34 centres in Canterbury-Bankstown LGA to help better plan for growth. Within this draft strategy Regents Park is classified as a 'Small Village Centre.' Regents Park is only classified at a local council level. There is no classification at the District or Metropolitan level.
- As defined within the North Central Local Area Plan (LAP) by Bankstown City Council, November 2015, the subject site falls within the Regents Park Urban Neighbourhood Precinct which is recognised as an extension to the Regents Park Small Village Centre. Within this LAP, an indicative height distribution map for Regents Park Urban Neighbourhood Precinct is included which proposes a maximum height of 6 storeys fronting Auburn Road, and a maximum height of 8 storeys across the remainder of the site.
- While Architectus stands behind the recommendation to not exceed 8 storeys across the site, if 12 storeys was permitted in the north-west corner of the site, Architectus notes that Smith & Tzannes have followed the Architectus advice for building heights in the north-west corner for up to 12 storeys of 41m. Note, as per the Bankstown LEP 2015, Section 5.6, roof features including lift overruns may exceed this maximum height with development consent.
- 12 storeys at the north-west corner creates overshadowing impacts on Building C-D which is further discussed in the Solar Access analysis section below. As demonstrated by the solar heat mapping provided in Section 2 below, a 12 storey component impacts solar access as it produces additional overshadowing of about 40% to the northern façade of Building C-D when compared to a 6 storey building. This increased impact on Building C-D of a 12 storey built form compared to 6 storeys is contributing to the building's non-compliance with the ADG solar requirements.
- Under objective 4A-1 of the ADG, the assessment for apartments receiving sunlight to habitable rooms, primary windows and open space stipulates that 70% of apartments "*in a building* receive a minimum of 2 hours direct sunlight between 9 am and 3 pm," which is contrary to the reviews by Walsh2 Analysis and Smith & Tzannes that assume that compliance may be calculated as an aggregation of apartments across multiple buildings within a development site, and have completed their solar compliance reviews on this assumption.

The advice provided previously under Architectus review dated 16th May 2020 was not considered under the Smith & Tzannes review and is still applicable to the current scheme:

Ground level interface with neighbouring sites

- *The ground level interface with the surrounding uses (industrial / rail / regional road) is poor and needs further consideration.*
- *Currently it appears there is a 2 or 3 metre height variance between the proposed ground level of the new development and neighbouring site. Cut to fill also appears to be quite flat on the site, with little attempt to relate to the natural topography. Specifically:*
  - *The ground floor level of Building E-F is located approximately 2 – 2.5m below the southern boundary. This will create poor outlook and internal amenity for the ground floor units, particularly at the south-west corner.*
  - *The ground level of Building A-B is proposed to be raised approximately 2 – 2.5m above the northern boundary.*
  - *The northern edge of Building G fronting Auburn Road extends to a level difference of about 2m above the level of the footpath.*
  - *The significant level change between boundaries proposed limits the opportunity for any future integration of the local street network with the neighbouring site to the north.*
- *Further work is to be completed by the Proponent to improve the quality of the ground level interfaces by providing a closer relationship to existing ground levels and an appropriate level change transition to neighbouring sites.*

Auburn Road elevation

- *Further to the discussion above about relationship to the natural topography, the elevation along Auburn Road feels uncomfortable in the way that Building G is not lowered to follow the fall of the street.*
- *As per previous advice, Architectus agrees with 6 storeys along Auburn Road, but recommends an upper level setback be applied to the top one or two storeys fronting Auburn Road to provide an appropriate scale transition to the area of low density residential across Auburn Road.*

Street wall height

- *Architectus recommends an upper level setback of 3m to the top storey along all frontages facing streets including the internal streets and central area of open space, to reduce the overall bulk, and create a human scaled comfortable environment.*

2. Item / Issue: Proposed floor space ratio (FSR)

Gateway Determination – *"…a maximum FSR of 2:1 for the site."*
Proponent request – Maximum FSR of 2.4:1 for the site.

Smith & Tzannes claim in their review that there is sufficient flexibility in the adaptation of the McGregor Coxall scheme to accommodate an FSR of 2.4:1, while achieving good design on a precinct, building and apartment level. An alternate built form configuration for the site adapted from the McGregor Coxall proposal to accommodate an FSR of 2.4:1 was suggested in the letter by Smith & Tzannes.

Architectus Recommendations

- Architectus has consistently maintained in previous advice (since 2015) that 1.75:1 is the maximum FSR suitable for this site (with a maximum building height of 6 to 8 storeys) to ensure a high design quality and amenity of buildings. Throughout the various peer reviews, Architectus has tested alternative layout and built form massing options, including an additional layout illustrated in this review as suggested by Smith & Tzannes. None of the

built form options tested by Architectus have exceeded an FSR of 1.75:1 (unless design quality and residential amenity was to be significantly compromised).

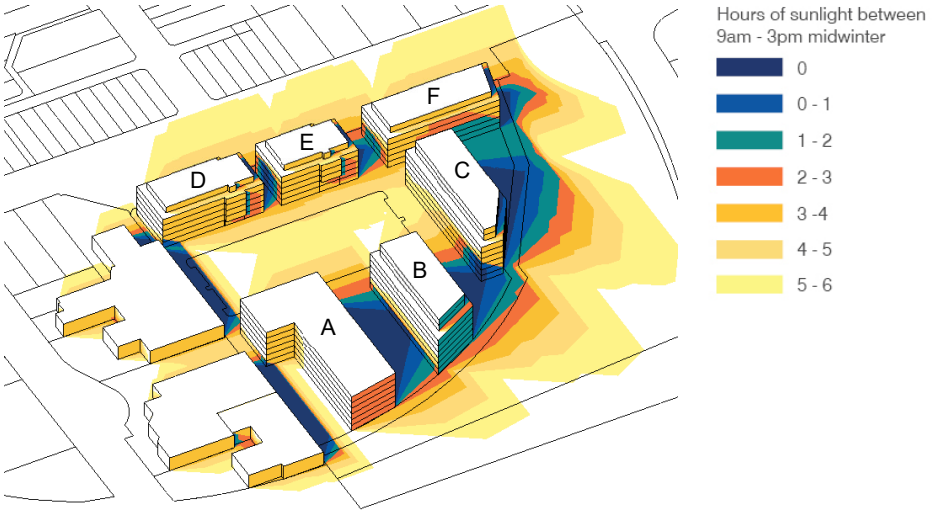
- Architectus stands by its initial recommendation that an FSR of 2.4:1 for the site is inappropriate for the site owing to compliance issues related to the ADG and urban design issues of the proposal.
- It is of Architectus' opinion that 1.75:1 is the maximum FSR appropriate for the site (with a 6 to 8 storey maximum height limit).

Architectus Review & Rationale Behind Recommendations

- To further test the appropriate density for the site, Architectus has developed additional high-level options adapted from the McGregor Coxall and Smith & Tzannes alternative proposal which seek to provide better built form and public domain outcomes for the site:

Option 1a – FSR 1.75:1 (Council FSR recommendation) *(Adapted from McGregor Coxall proposal – 22.4m deep footprints, maximum 8 storeys)*

- Increasing setbacks to building envelopes perpendicular to the existing rail line. Setback increased from 3 metres to 6 metres along the train line.
- Providing upper level setbacks to reduce perceived scale and increase vertical articulation.
- Ensuring a transition to lower scale development with a 5-storey street wall along Auburn Road and an upper level storey, set back 3 metres to all sides to minimise visual impact.
- Building height A reduced to 6 storeys to maintain solar access to northern face of Building B.
- Results in an FSR of 1.77:1 (using 80% efficiency as per yield figure (Gross Building Area to Gross Floor Area) recommended in McGregor Coxall's peer review addendum dated 9 October, 2019). *Note: using 76% efficiency as recommended in Architectus' response to the McGregor Coxall review, dated 18 December, 2019, results in an FSR of 1.68:1 for this option).*

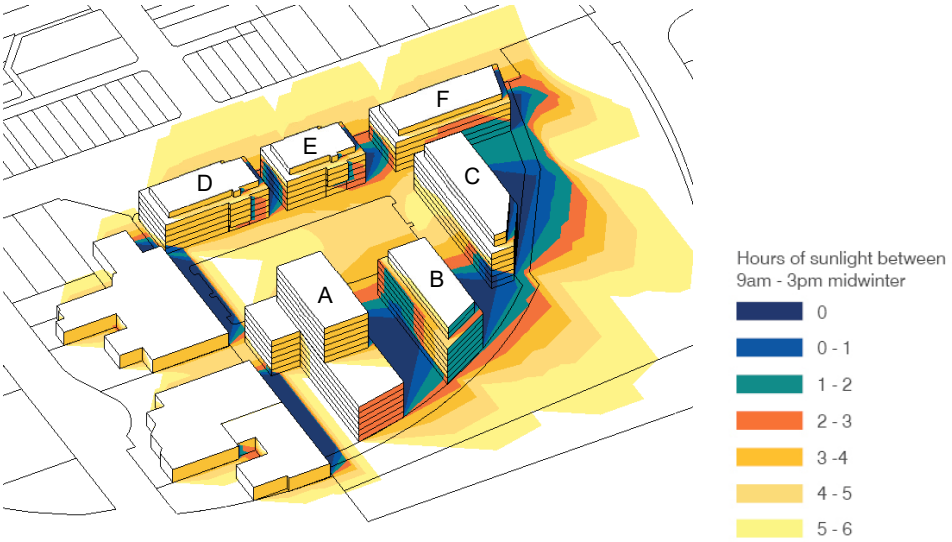


1a-Envelopes testing (Adjusted)

Building	Footprint	Storey	Effiency	GFA
A-1-6	1,863	6	80%	8,944
A-7-12	793	0	80%	-
B-1-6	1,185	6	80%	5,689
B-7-8	763	2	80%	1,220
C-1-6	1,345	6	80%	6,455
C-7-8	878	2	80%	1,405
D-1-5	1,034	5	80%	4,138
D-6	651	1	80%	521
E-1-5	789	5	80%	3,156
E-6	471	1	80%	377
F-1-5	1,210	5	80%	4,838
F-6	786	1	80%	628
Total GFA				37,371
Site Area				21,170
FSR				1.77
FSR (76%)			76%	1.68
Total GFA				35,503

Option 1b - FSR 2:1 (Amended Gateway determination) *(Adapted from McGregor Coxall proposal – 22.4m deep footprints, maximum 12 storeys)*

- Items as per Option 1a.
- Limiting 12 storey portions of envelope to the north-west corner of the site only to minimise solar access impact to buildings. Despite this, solar access is compromised to Building A-B and is unlikely to comply with minimum solar access requirements for this building.
- Results in an FSR of 1.95:1 (using 80% efficiency). *(Or 1.85:1 using 76% efficiency).*



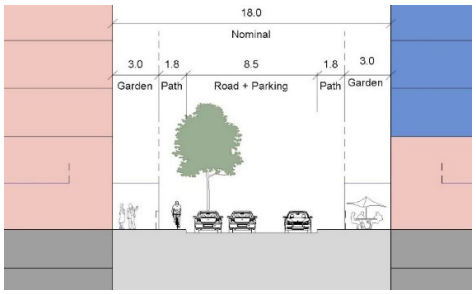
1b-Envelopes testing (Adjusted)

Building	Footprint	Storey	Effiency	GFA
A-1-6	1,863	6	80%	8,944
A-7-12	793	6	80%	3,806
B-1-6	1,185	6	80%	5,689
B-7-8	763	2	80%	1,220
C-1-6	1,345	6	80%	6,455
C-7-8	878	2	80%	1,405
D-1-5	1,034	5	80%	4,138
D-6	651	1	80%	521
E-1-5	789	5	80%	3,156
E-6	471	1	80%	377
F-1-5	1,210	5	80%	4,838
F-6	786	1	80%	628
Total GFA				41,177
Site Area				21,170
FSR				1.95
FSR (75%)			76%	1.85
Total GFA				39,118

- The study completed by Architectus demonstrates that a density of 2:1 still requires built form to be over 8 storeys (28m), which is inconsistent with council's strategy for height in areas away from local centres.

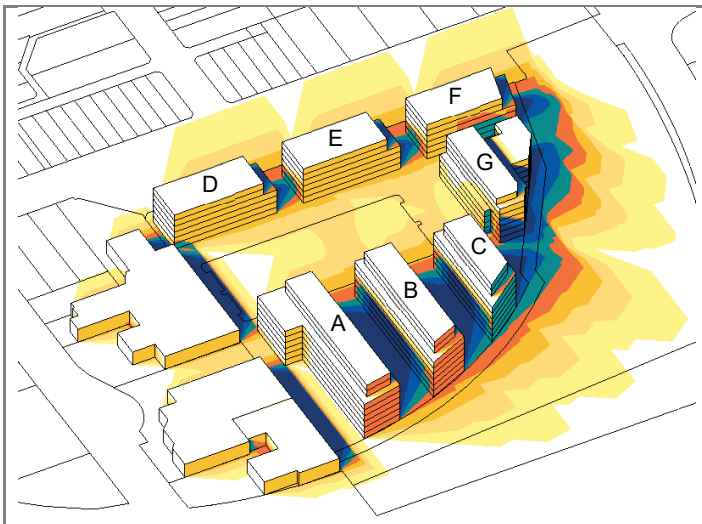
Alternative Proposal

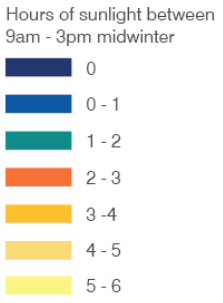
- An alternate built form configuration for the site adapted from the McGregor Coxall proposal to accommodate an FSR of 2.4:1 was proposed in the letter by Smith & Tzannes. Architectus note that under this alternative proposal, the dominant building envelope depth is 18 metres and that the decreased width means that an additional envelope can be accommodated on the site. A detailed ADG analysis of the alternative proposal is provided in *Section 3: ADG Assessment below*, however the strategic issues which will influence appropriate amenity outcomes and maximum FSR area discussed below.
- While the alternative proposal by Smith & Tzannes maintains the 6m setback to Auburn Road as per Council's recommendation, they have reduced the recommended 6m setback along the railway corridor to 3m. This, they claim, will allow the objective of appropriate landscaping and substantial deep soil planting. However as per Part 3E of the ADG, a minimum 6m depth is required for deep soil zones on sites greater than 1,500sqm. In addition, as per our previous advice on building setbacks, providing generous setbacks is also important to maintain appropriate amenity protection from adjacent land uses (i.e. industrial, rail and major road), and allow for potential shared cycle paths.
- The alternative proposal fails to provide upper level setbacks along Auburn Road to create an appropriate scale transition to the area of low density across Auburn Road. It also fails to provide an appropriate level of upper level setbacks to built form within the precinct to mitigate the scale of the development to the public domain and create vertical articulation.
- Within this alternative proposal, building separation was decreased to 18m. Architectus has assessed this 18 metre separation and agrees that it is an appropriate minimum separation to achieve the required building separation distances as per Part 2F of the ADG, and can accommodate a shared access way for vehicular access to enable vehicular drop off points to each future building entry and a turning circle at the end of each road. It also allows for private open space at ground floor and potential deep soil planting as per the indicative section below:



Option 2a – FSR 1.75:1 (Adapted from Smith & Tzannes alternative proposal – 18m deep footprints, maximum 8 storeys)

- Building envelopes perpendicular to the existing rail line setback increased from 3 metres to 6 metres.
- Building envelopes with a maximum of 8 storeys height limit, comprising a street wall of 6 storeys with upper level setbacks of 3 metres to all sides.
- Results in an FSR of 1.71:1 (using 80% efficiency). (Or 1.63:1 using 76% efficiency).
- Note, solar access is compromised to Buildings B and C and is unlikely to comply with minimum solar access requirements for these buildings.



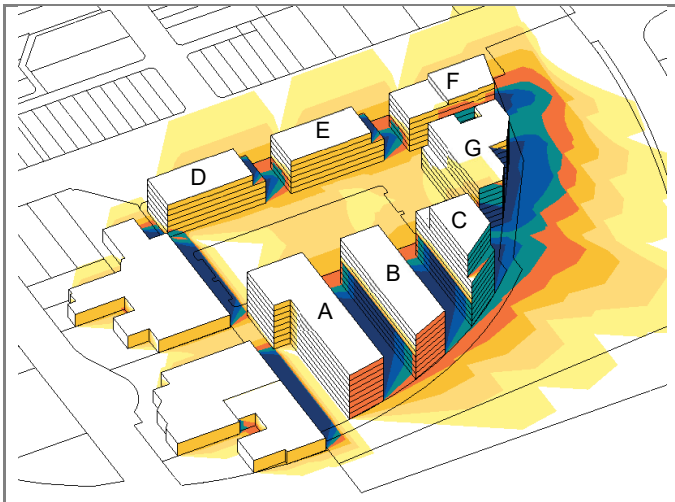


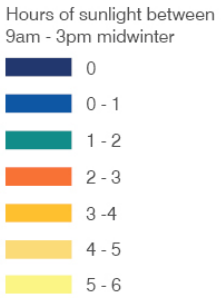
2a-Envelopes testing (Alternative option with 6m setback)

Building	Footprint	Storey	Effiency	GFA
A-1-6	1,536	6	80%	7,371
A-7-8	826	2	80%	1,321
B-1-6	1,147	6	80%	5,508
B-7-8	690	2	80%	1,104
C-1-6	778	6	80%	3,737
C-7-8	438	2	80%	701
D-1-4	837	4	80%	2,677
D-5-6	729	2	80%	1,166
E-1-4	792	4	80%	2,534
E-5-6	684	2	80%	1,094
F-1-4	764	4	80%	2,445
F-5-6	653	2	80%	1,045
G-1-4	1,106	4	80%	3,538
G-5-6	992	2	80%	1,586
G-7	507	1	80%	406
Total GFA				36,234
Site Area				21,170
FSR				1.71
FSR (75%)			76%	1.63
Total GFA				34,422

Option 2b - FSR 2:1 (Adapted from Smith & Tzannes alternative proposal – 18m deep footprints, maximum 12 storeys)

- Building envelopes perpendicular to the existing rail line setback increased from 3 metres to 6 metres.
- Limiting 12 storey portions of envelope to south-west corner of the site only to improve solar access to buildings.
- Results in an FSR of 1.98:1 (using 80% efficiency). (Or 1.88:1 using 76% efficiency).
- Note, solar access is compromised to Building B and is unlikely to comply with minimum solar access requirements for this building.





2b-Envelopes testing (Alternative option with 6m setback)

Building	Footprint	Storey	Effiency	GFA
A-1-8	1,536	8	80%	9,828
B-1-8	1,147	8	80%	7,344
C-1-8	778	8	80%	4,982
C-9-12	495	4	80%	1,584
D-1-4	837	4	80%	2,677
D-5-6	729	2	80%	1,166
E-1-4	792	4	80%	2,534
E-5-6	684	2	80%	1,094
F-1-6	764	6	80%	3,668
F-7	430	1	80%	344
G-1-4	1,106	4	80%	3,538
G-5-8	992	4	80%	3,173
Total GFA				41,933
Site Area				21,170
FSR				1.98
FSR (75%)			76%	1.88
Total GFA				39,836

- Smith & Tzannes propose that a 2.4:1 FSR is plausible for the site however the study of their alternative proposal adapted by Architectus demonstrates that a viable scheme that meets appropriate levels of amenity and urban design considerations does not come close to this density. Option 2b illustrated above achieves 2:1, however to achieve this requires the built form to be over 8 storeys (28m), which is inconsistent with council's strategy for height in areas away from local centres, and does not take into account upper level built form setbacks which are important to reduce the perceived scale in the urban environment.

3. Item / Issue: ADG Assessment

Proponent response – While Smith & Tzannes acknowledge the ADG compliance shortcomings of the design option prepared to DA level by Studio MRA (which Architectus assessed as part of the June 2020 peer review), Smith & Tzannes claim in their review that there is enough capacity and flexibility within the envelopes to achieve ADG compliance. Architectus' analysis summarised below does not support this.

Supplementary to the peer review by Smith & Tzannes, the Proponent has issued amended floor plans and supporting solar access and natural ventilation assessment reports that claim to satisfy the objectives and design criteria for the ADG (Architectus has also completed a review of this more detailed work, refer to Appendix A).

Architectus Recommendations

- The length of floorplates should be reduced on buildings which extend beyond 60 metres in length or demonstrate how the built form will be modulated to avoid a monolithic appearance at street level. In general, buildings 60 metres in length or less are more suitable to achieve the required 60% cross ventilation to apartments.
- As part of any DA submission, the location of winter gardens should be indicated on typical layouts to illustrate the extent to which these measures are required to address the issues of train noise. This will enable a better understanding of how these additions will adversely affect cross/ corner ventilation compliance for each building.
- Assessment of solar and cross ventilation compliance is to be conducted on a building by building basis, and not collectively.
- All envelopes undergo more detailed testing at DA level and be accompanied with a study that includes typical layouts, verified in plan and sun's eye view to demonstrate at least 2 hour mid-winter solar access as well as cross ventilation requirements to ensure each individual building complies with minimum ADG requirements.

Architectus Review & Rationale Behind Recommendations

Solar Access

- Architectus recognise the clarifications made by Smith & Tzannes in relation to the design of the proposed built form envelopes submitted under the previous MRA scheme. The 22.4 metre envelope indicated could potentially form the basis of a workable building which would achieve cross ventilation and solar access, as demonstrated in Figure 4 of their review.
- In their assessment regarding solar access to the proposed envelopes under the MRA proposal, Smith & Tzannes indicated that *"There is more than enough capacity to achieve the required solar access. The solar access analysis at Figure 2 shows that approximately 80% of the north facing building envelope and 95% of the west facing building envelope achieves at least 2 hours of sun between 9:00 and 15:00 mid-winter"*
- While the statement may hold true for most envelopes across the site, this is not the case with envelope C-D which is located to the south of the 12 storey A-B envelope. The overshadowing to C-D means that approximately half of the north facing façade appears to receive less than 2 or more hours mid-winter sun due to the 12-storey height. This is an unacceptable outcome for future residents that can be avoided by re-considering height on the site and a reduction in overall density.
- As indicated previously, under objective 4A-1, the assessment for apartments receiving sunlight to habitable rooms, primary windows and open space stipulates that 70% of apartments "***in a building***** receive a minimum of 2 hours direct sunlight between 9 am and 3 pm," which is contrary to the Smith & Tzannes statement that compliance may be calculated as an aggregation of apartments across multiple buildings within a development site.

Natural cross ventilation

- As indicated above, it is acknowledged that Smith & Tzannes have in their letter responded to the number of single sided apartments and lack of dual aspect and cross through apartments to assist with achieving Objective 4B-3 of the ADG, to comply with the 60% minimum for naturally cross ventilated units.
- What is not clear is how cross ventilation would be addressed with larger envelopes such as A and E-F, whose length is in excess of 60 metres. Given the length of this building, there is no supporting information or diagrams to demonstrate how cross ventilation is achievable with the same design approaches such as split cores and building articulation to achieve the desired compliance.

- Before submitting any DA, further testing of the envelopes by the Proponent to verify cross-ventilation should be undertaken and accompanied by an updated table to demonstrate the impacts of the approach to split cores, through ventilated apartments and building articulation to confirm compliance.

Acoustic Privacy (related to ADG)

- Architectus understands that several approaches have been taken under the current configuration of the master plan to mitigate development from the adverse impacts of rail noise:
  - Use of winter gardens to mitigate the acoustic impacts to affected apartments (at the elevations closest to and near the rail line)
  - Orientation of buildings, (east-west) perpendicular to the rail line to minimise the exposure of building frontages to the primary noise source.
- Both measures are acceptable given the rail line is the most dominant constraint of the site, however the use of winter gardens to mitigate acoustic impacts do need to be considered more carefully given they need to be closed to be effective.
- This need for winter gardens to be closed to be acoustically effective contradicts the need for these spaces to be open in order to satisfy cross ventilation requirements for corner or end apartments facing the train line. This is also applicable to the instances where built form is proposed along Auburn Road, a busy arterial road.
- It is also noted that the perpendicular orientation of built form to the rail line is a strategic move to mitigate the effects of rail noise on the development. Architectus suggests that in addition to these measures, an increase in setbacks of envelopes A-B, C-D and E-F from the rail line be considered in line with council preferred setback of 6 metres or locally lowering the heights of these envelopes to 4 storeys to further reduce the exposure of train noise to future residents.

4. **Item / Issue: Ensuring appropriate built form controls**

   Building envelope length, boundary setbacks, building footprint site coverage, upper level building setbacks, building articulation

Architectus Recommendations

- More generous setbacks are important to maintain appropriate amenity protection from adjacent land uses (i.e. industrial, rail and major road), and allow for deep soil planting and shared cycle paths.
- The identified residential amenity impacts, lack of appropriate landscaped setbacks, and overall building bulk suggests the building footprint coverage is too large for the site area and should be decreased to around the 30% mark.
- Traffic assessment report to be updated to provide comment on the proposed internal street network and basement entry/exit locations.
- Street address to be provided to all buildings to allow convenient, safe and equitable access. The indicative street section provided in Section 2 above illustrates a potential arrangement to allow shared vehicle access.
- Architectus recommends that provisions be provided to enable any future integration of the proposed internal street network with the neighbouring site to the north.
- Architectus recommends an upper level setback of 3m to the 6th storey along Auburn Road or any structures above 6 storeys along all frontages facing streets including the internal

streets and central area of open space to mitigate the scale of the development to the public domain. ▪ The final built form outcome is to include a generous amount of building articulation. The assumed efficiency rates and indicative 3D model does not seem to provide much beyond the building indentations required for natural ventilation.
Architectus Review & Rationale Behind Recommendations
Most of the advice provided previously under the Architectus review dated 15th June 2020 was not considered under the Smith & Tzannes review and is still applicable to the current scheme. ***While the Smith & Tzannes review acknowledges the purpose of a planning proposal is to ensure appropriate controls, their review is largely focused on ADG compliance and fails to respond to any of the key urban design issues raised by Architectus in previous reviews (refer to Architectus June 2020 review).***

Conclusion and key recommendations

In view of the many recommendations still to be addressed from the previous review and urban design issues associated with the proposed envelopes, it is doubtful that the density proposed is achievable. Unless a viable scenario can be demonstrated that addresses all the key issues identified above with a greater degree of certainty, a density of 2.4:1 cannot be supported.

As advised in one of our earliest reviews dated 17 November 2015, “there is a risk that at the DA stage, design quality and amenity of buildings will be compromised to achieve the FSR.” (And this was a comment based on a previously proposed FSR of 2.2:1 that was considered too dense for the site with 6 and 8 storey building maximums). Since reviewing the letter by Smith & Tzannes which clarifies the previous MRA proposal and the alternative proposal based on the McGregor Coxall scheme, the shortcomings of the proposed design outcome are as previously identified.

Architectus’ recommends an FSR of 1.75:1 for the site stands with a maximum height of part 28m (8 storeys) and part 22m (6 storeys).

Yours sincerely,

Greg Burgon

Principal, Urban Designer

APPENDIX

Architectus review of the below documents (with comparison to June 2020 review):

- Amended architectural plans prepared by Studio MRA;
- Solar access opinion prepared by Walsh Analysis;
- Natural ventilation opinion prepared by SLR.

5. Item / Issue: ADG Assessment Proponent response – The Proponent claims that the layout and concept is refined to DA level to ensure compliance with SEPP 65 and the ADG, and includes a signed design verification statement from Michael Raad Architects claiming that the plans provided, while of a preliminary nature, achieve the design principles set out in SEPP 65.	Proponent response – The Proponent claims that the layout and concept have been amended to improve compliance with solar access and cross ventilation, and has included in the submission a solar access analysis report prepared by Walsh^2 Analysis, a natural ventilation analysis report by SLR Consulting Australia, and a supplementary independent review by Smith & Tzannes all confirming that the layouts are capable of satisfying the design criteria for solar access and natural ventilation as per the ADG.
Summary (Architectus review June 2020)	**Summary (Architectus review December 2020)**
▪ Based on our assessment, the proposal does not appear to be achieving the minimum solar access design criteria to any of the apartment blocks. In view of these major discrepancies, Architectus recommends that all units must be verified in plan and sun's eye view to demonstrate 2 hour's mid winter solar access. ▪ The proposal does not apply to the minimum design criteria for cross ventilation. Architectus recommends that the length of floorplates and number of single aspect apartments per floor be reduced, cross through apartments be introduced where multiple cores serve a single floor, and any notches/building indentations used be open to the sky and follow the width to depth ratios specified in the ADG. This will reduce the overall GFA of each building. ▪ The assessment of solar and cross ventilation compliance is to be conducted on a building by building basis, and not collectively.	▪ Solar access – even with extended hours – is still not allowing each building to independently comply with the ADG. Architectus believes that at Master Plan stage, each building should comply with ADG's solar access requirements. ▪ Architectus remains concerned that a very high number of apartments on the western side of the site (with Buildings AB, CD and EF housing 69.3% of the entire site's yield) fail to meet either the ADG's solar compliance requirements or mid winter sun requirements as follows: – 235/416 units (56.5% solar access 9am – 3pm; adjusted) – 283/416 units (68.0% solar access 8am – 4pm) – 96/416 units (23.0% no mid-winter sun) ▪ As noted above, solar compliance issues are a direct result of the built form's layout, orientation, height and density. As noted before, these issues indicate that the density proposed cannot be amenably housed on the site.
Architectus Review and Rationale	
Solar Access – Architectus review June 2020 ▪ The very high number of south facing units (in excess of 125) would suggest that the proposal will fail to meet the design criteria of Objective 4A-1 of the ADG, which specify that a maximum of 15% of apartments are to have no solar access between the hours of 9am and 3pm in mid winter, and that living rooms and	**Solar Access – Architectus' response to updated plans, October 2020** In response to Architectus' previous comments, the Applicants have amended plans to reduce south facing units and maximize mid winter solar access. In addition, an independent solar access analysis has been

private open spaces of at least 70% of apartments in a building receive a minimum of 2 hours direct sunlight between 9am and 3pm at mid winter.

- While the Proponent maintains that minimum solar access compliance is achieved, Architectus took a closer at the DA level floorplates provided by the Proponent. Our conclusions are that no buildings proposed meet the design criteria for solar access compliance:
  - Building A-B, C-D and E-F
    The number of apartments that have no solar access between the hours of 9am and 3pm in midwinter exceed 15% for each building.
  - Building A-B
    116/190 units (61% solar access)
  - Building C-D
    34/104 units (32.7% solar access)
  - Building E-F
    68/126 units (54% solar access)
  - Building G
    41/60 units (66.7% solar access)
  - Building H
    29/45 units (64.4% solar access)
  - Building I
    48/80 units (60% access)
  - **TOTAL**
    336/606 (55.4%)
- Many units included in the Proponent's compliant table do not appear to receive sun, because:
  - the living rooms are located behind protruding built form on the northern side of the unit and/or
  - the living rooms are located too deep behind balconies
- To be conservative, Architectus have counted many units that are borderline – down the eastern façade of G, H and I for example. Our calculations also includes units that receive solar access from skylights; however, all of these need to be verified by the Proponent with detail sections showing how sun reaches the floor for 2 hours – this is quite difficult and cannot be assumed. This is also the case for cross ventilation. A sustainable strategy must also be in place for how these top floor

provided (see Walsh2 Analysis, 15th September 2020) to support ADG solar access compliance.

This analysis indicates that 444 of the 600 units proposed receive 2 hours solar access on June 21st (74%), which exceeds the ADG's 70% requirements. However, it also states that:

- typical of many development sites, its orientation is "biased" to the east of north. This bias constrains compliance with the ADG's 2 hour solar access requirements between the hours of 9am and 11am.
- To address this anomaly, it is recommended that the hours of 8.45am to 10.45am should be used as the basis for some of the testing (noted in the appendix as 11am adjusted).

The report recognizes that as only 96 of the 600 units proposed receive no sun between the hours of 9am and 3pm on June 21st (16%), the proposal does not comply with the no sun requirements of the ADG. This departure from the ADG's requirements is justified on the basis that it is a minor only and is generally caused by "self shading" of Buildings C-D and E-F.

The report also addresses the accuracy of the model used to test solar access and its characterization as sun patches on glazing (1sqm).

The Report's Appendix C provides "adjusted" hours required to achieve mid winter solar compliance to living rooms and private open spaces from 9am – 3pm (ADG Standard). It also shows extended hours from 8am – 4pm, which is a significantly longer period. While the independent analysis states that the current proposal achieves ADG solar compliance (and supports the minor no sun non compliance), **it does not however express its findings on a building by building basis** as required by the ADG. On this basis, solar compliance to living areas and private open space on 21st June is as follows:

- Building A-B
  104/189 units (55.0% solar access 9am-3pm) – ADG standard

  147/189 units (77.8% solar access 8am-4pm)
- Building C-D
  54/101 units (53.5% solar access 9am – 3pm) – ADG standard

  58/101 units (57.4% solar access 8am – 4pm)
- Building E-F
  77/126 units (61.1% solar access 9am – 3pm) – ADG standard

  78/126 units (61.9% solar access 8am – 4pm)

apartments deal with excess heat gains through skylights in summer.	– Building G 60/60 units (100.0% solar access 9am – 3pm) – ADG standard 60/60 units (100.0% solar access 8am – 4pm) – Building H 45/45 units (100.0% solar access 9am – 3pm) – ADG standard 45/45 units (100.0% solar access 8am – 4pm) – Building I 61/79 units (77.2% solar access 9am – 3pm) – ADG standard 61/79 units (77.2% solar access 8am – 4pm) – **TOTAL** 444/600 units (74.0% solar access 9am – 3pm; adjusted) 449/600 units (74.8% solar access 8am – 4pm) Hence, while street facing and north-south aligned buildings (G, H and I) achieve high solar compliance, east west aligned buildings A-B, C-D and E-F (comprising 416 of the 600 units proposed and previously criticized for not providing sufficient cores and more cross through units) do not comply with the solar access requirements of the ADG. The orientation, arrangement and circulation of buildings A-B, C-D and E-F also severely constrains no sun compliance to the western side of the site, with 23% of the 416 units proposed receiving no sun during mid Winter, as follows: – Building A-B 35/189 units (18.5%) – Building C-D 27/101 units (26.7%) – Building E-F 34/126 units (27%) **SUB-TOTAL** 96/416 units (23.0%) – Building G 0/60 units (0.0%) – Building H 0/45 units (0.0%) – Building I 0/79 units (0.0%) **TOTAL** 96/600 units (16.0%) Architectus remains concerned that a very high number of apartments on the western side of the site (with Buildings A-B, C-D and E-F housing 69.3% of the entire site's yield) fail to meet either the ADG's solar

	compliance requirements or mid winter sun requirements as follows: – 235/416 units (56.5% solar access 9am – 3pm; adjusted) – 283/416 units (68.0% solar access 8am – 4pm) – 96/416 units (23.0% no mid-winter sun) As the independent review points out, "self shadowing" contributes to the site's solar non compliance. However, solar non compliance is also due to the respective buildings' east west orientation, height, minimal separation and circulation (limited number of cores and use of long corridors). Notably, all of these built form qualities can be amended, but it would most likely require significant amendments to the current master plan, including but not limited to a reduction in density as previously recommended. While the process of development cannot be known for certain, it is highly likely discrete buildings will be constructed over a staged period of time and perhaps by different developers, given its sheer scale. It would therefore seem appropriate that each building should demonstrate full compliance with the ADG's solar compliance requirements at the Master Plan stage. This would not only distribute compliance and amenity equitably amongst residents, it would guarantee environmental standards are met on a progressive basis.
Natural cross ventilation ▪ Generally buildings greater than 60 metres in length are difficult to ventilate unless multiple core locations are located with dual aspect, cross-through apartments and corner apartments. ▪ Buildings A-B and E-F exceed 60 metres in length and do not consist of any cross through apartments. ▪ The very high number of single sided apartments and lack of dual aspect and cross through apartments means that the proposal cannot comply with the design criteria of Objective 4B-3 of the ADG, which requires that at least 60% of units are naturally cross ventilated. ▪ The cross ventilation table provided by the Proponent includes as cross ventilating, a number of apartments that are: – single sided (including re-entrant corner units such as A215 and above, which are not considered to naturally cross ventilate)	**Natural cross ventilation – Architectus' response** In response to Architectus' previous comments, the Applicants have amended plans to increase compliance with the ADG's cross ventilation requirements. In addition, an independent natural ventilation assessment has been prepared (see SLR Ref. 610.30099-R01, September 2020) to support the proposal's compliance with the natural ventilation requirements of the ADG. The independent assessment refers to section 4B of the ADG and the objectives of 4B-3. It also confirms the building indentation requirements of 4B-2, but states that – due to prevailing wind conditions on the site – the minimum 2:1 proportion is not required in this case. **The analysis confirms that Architectus' initial assessment is correct**. I.e., that a "qualitative assessment" of cross ventilating units reveals that **the proposal does not comply with the cross ventilation requirements of the ADG.** (note: the number of Building A-B apartments shown in the assessment is incorrect. There are 189 units in Building A-B, not 156 as stated in the analysis report): – <u>Building A-B</u> 70/189 units (37.0%)

– Duplex units, (which are not considered to naturally cross ventilate) – reliant on notches not complying with the proportions tabled in ADG 4B-2 (such as units A203, A204, A216, A217, G210, G211, C203, C204, and above) – containing openings that cannot be provided due to visual and/or acoustic privacy issues (as above and H202 and H205 and above) ▪ While 63% cross ventilation compliance is claimed by the Proponent, after taking into account the above listed issues, our review found that the overall compliance is between 39.6% to 40.8% (for below 9 levels, which is a more conventional way of gauging cross ventilation required). ▪ The proposal should demonstrate that each building complies with the ADG's cross ventilation requirements. However, all buildings proposed apart from Building H, do not achieve cross ventilation compliance. This is not acceptable. – Building A-B 44/157 units (28% cross ventilation – in the first 9 storeys. However, this number includes corner apartments that do not seem to cross ventilate due to various issues, such as the side wall being underground or adjacent to an escape stair or a commercial tenancy). 51/157 (32.5% cross ventilation - in the first 9 storeys and including the corner apartments excluded above) 84/190 (44.2% cross ventilation – including all levels below and above 9 storeys) – Building C-D 43/104 (41.3% cross ventilation) – Building E-F 47/126 (37.3% cross ventilation) – Building G 31/61 (50.8% cross ventilation) – Building H 27/45 (60% cross ventilation) – Building I 35/80 (43.8% cross ventilation) – **TOTAL** 227/573 (39.6% - below 9 storeys and	– Building C-D 42/101 units (41.6%) – Building E-F 59/126 units (46.8%) – Building G 27/60 units (45.0%) – Building H 23/45 units (51.1%) – Building I 27/79 units (34.2%) **TOTAL** 248/600 units (41.3%) This is a very poor result and aligns with the criticisms made previously, that many of the proposed buildings are excessively long, are accessed by exceedingly long corridors, have too many single sided units, claim cross ventilation via non compliant slots and rely on openings that cannot be provided due to visual and/or acoustic privacy issues. Although many of them remain, the independent assessment does not refer to these amenity issues and constraints. Nor does it refer to plan diagram 4B-8 ADG, which illustrates how corner and cross through apartments can achieve cross ventilation in an amenable manner, with short circuit corridors and full privacy maintained to all units. Instead, the independent assessment offers an alternative path to compliance, using orientation and local wind factors to demonstrate that air will penetrate single sided apartments via ADG non compliant slots. As Figure 3 does not illustrate each level of the plans, it must be assumed that virtually all slots proposed facing north (Buildings C-D and E-F), south (Building C-D), east (Buildings A-B, G, H and I), and west (Buildings H and I), can facilitate cross ventilation to single sided apartments at all levels. With the “quantitative (CFD) assessment”, natural ventilation increases as follows: – Building A-B 100/189 units (64.1%) – Building C-D 66/101 units (65.3%) – Building E-F 85/126 units (67.5%) – Building G 47/60 units (78.3%) – Building H 37/45 units (82.2%) – Building I 59/79 units (74.7%)

excluding corner apartments mentioned above) 234/573 (40.8% - below 9 storeys and including corner apartments mentioned above) 267/606 (44.1% - all storeys including corner apartments mentioned above) ▪ The proposal also includes slots to single sided units that are covered above. See units AG03, AG20, AG14, AG15, AG16, AG17, AG10, AG11, CG04, CG04, CG01, CG02….and above. These units do not comply as covering these slots traps smells and inhibits movement of air. Some of the slots proposed are excessively long and narrow (see units A111, DG07, DG08, and above) which greatly reduces access to light and air.	**TOTAL** 394/600 units (65.7%) Issues such as the transmission and lingering of odours and impacts on acoustic privacy (referred to in the ADG to support providing indentations with a minimum 2:1 ratio) are not referred to. Nor is any mention made of the very long corridors proposed, which actually create so many single sided units in the first place, or the impacts of closing the slit above and impacts on air movement. Each of these (visual and physical) amenity issues should be comprehensively addressed by the applicant, so as to clearly demonstrate that the proposed method of achieving natural ventilation compliance does not result in reduced amenity generally.
Apartment layout Architectus has found a number of units that do not comply with: ▪ Minimum width living rooms - (ADG 4D-3 : "Living rooms or combined living/dining rooms have a minimum width of 3.6m for studio and 1 bedroom apartments") and, living rooms with reduced widths in front of balconies, thereby not complying with (ADG 4D-1: "A window should be visible from any point in a habitable room"). These units are: G.210 and above; and I.304 and above. ▪ Buildings G has only one lift therefore it fails to comply with the design criteria of Objective 4F-1 of the ADG, which advises that the maximum number of units served by one core is limited to 8. ▪ While Buildings G and H are less than ten storeys (ADG, 4F-1), a single lift serving more than 40 units is not advisable or likely to be supported by Council. ▪ The proposal includes a number of internal habitable rooms with no access to natural light. See units AG03, AG20, A111, AG15, AG16, GG06, GG07, H107 and above). These rooms do not comply with the design criteria of Objective ADG 4D-1. ▪ The proposed building envelope for Building A-B is too deep at the corner to provide appropriate daylight to the third bedroom.	**Apartment layout – Architectus' Response** Architectus has appraised the latest plans and concludes that many amenity issues remain: - While living room widths now appear to comply with the minimum standards of the ADG, these living room widths must be confirmed on dimensioned plans. - Numerous units still contain habitable spaces without access to light and air (units AG03, AG15, AG16, G04, A111, A114, AEG04, EG05, F104, GG04, GG05, GG06, GG07, HG06, I101, I111 and many units on upper levels). This is not acceptable and does not comply with the ADG's natural ventilation requirements. - Habitable spaces without access to light and air also indicates that building plans are too deep and therefore unable to be rationally and amenably designed. - Building G still only has one lift to service 47 units. This is very poor amenity. - Building AB has a very deep corner; this building envelope is very poorly resolved.

Building separation ▪ With non compliant separation between Buildings G and H (8m proposed; the ADG requires 12m up to 4 stories and 18m up to 8 stories), it is not clear how cross ventilation will be achieved on all units facing into the gap, without impacting on acoustic and visual privacy. Therefore, these units would not comply with the ADG's requirements for separation and privacy. ▪ Similarly, the separation between buildings H and I (13m proposed; the ADG requires 18m between 4 and 8 stories) and buildings E-F and I (12m proposed; the ADG requires 18m between 4 and 8 stories) is non compliant and liable to lead to privacy non compliances.	**Building Separation – Architectus' Response** Architectus has appraised the latest plans and concludes that it is unclear if all separation issues raised previously have been addressed: - non compliant building separations identified previously (between Buildings G and H; between Buildings H and I; and between Buildings EF and I) would indicate that strategically located screened openings could facilitate cross ventilation without creating privacy issues within living spaces; however, these strategically designed elements are not shown on plans. - within non compliant building separations, all openings, screens and privacy attenuation strategies need to be shown on plans (with details provided at a larger scale) to clearly demonstrate that these strategies completely resolve all privacy and other issues created by the non compliant building separation.
Building setbacks (related to ADG) ▪ Proposed building separations do not provide sufficient setbacks from the property boundary to satisfy ADG requirements and provide for future growth. Setbacks proposed to the north appear not to comply with the requirements of 2F of the ADG, where mixed use development of a similar scale is likely. ▪ Although future development to the north of the site is liable to generate similarly scaled buildings, the northern setback for buildings A-B and G is about 3m. With bedrooms facing the northern boundary in unit G209 and above, adequate and complying separation will be impossible, thereby leading to acoustic and visual non compliance (part 3F). Nor is it clear how units facing this boundary will achieve cross ventilation if openings will lead to similar privacy issues. ▪ Property boundary setbacks to the south and west as discussed in the section below will need to contain the impacts of rail noise; this has not been demonstrated. ▪ The property boundary setback to Auburn Road proposed is also not sufficient and is discussed in the section below.	**Building setbacks – Architectus' response** Architectus has appraised the latest plans and concludes that it is unclear if all setback issues raised previously have been addressed: - A 3m building setback is proposed to the northern boundary for Buildings AB and G. As noted previously, this minimal dimension will unnecessarily constrain development on the site to the north, does not provide an appropriate separation to neighbouring industrial uses, will impede openings required for solar access and natural ventilation and does not comply with the ADG. - Some setbacks to the western rail corridor are 3m or less which is absolutely minimal. On such a spacious and open site, there is no reason for such a minor setback, particularly as the amenity of the edges are impacted significantly by the freight and passenger rail corridor. - It is unclear how train noise is being ameliorated along the western boundary setback; there appears too little space within the setback for large trees for example. - As noted previously the Auburn Road setback should comply with the DCP.

6. Item / Issue: Other urban design considerations Architectus Review (June 2020)	Other urban design considerations – Architectus' response Architectus Review (December 2020)
Recommendations	**Recommendations**
▪ More generous setbacks are important to maintain appropriate amenity protection from adjacent land uses (ie, industrial, rail and major road), and allow for deep soil planting and shared cycle paths. ▪ The lack of appropriate landscaped setbacks, identified residential amenity impacts and overall building bulk suggests the building footprint coverage is too large for the site area and should be decreased to around the 30% mark. ▪ Architectus recommends that a generous landscape buffer be incorporated to mitigate the interface between the communal area of open space and adjacent industrial land. ▪ Traffic assessment report to be updated to provide comment on the proposed internal street network and basement entry/exit locations. ▪ Street address to Buildings A and C-D to be reconsidered to allow convenient, equitable access. ▪ Architectus recommend that provision be provided to enable any future integration of the proposed internal street network with the neighbouring site to the north.	As per June 2020 recommendations.
Review and Rationale	
Building setbacks ▪ The Proponent's design proposes a 2.8m to 3.7m building setback along Auburn Road. As per previous advice, Architectus recommends a minimum 6 metre setback (which is also consistent with the Bankstown DCP 2015) to provide suitable privacy and acoustic separation from the major road, allow for appropriate landscaping and to relate to the neighbouring streetscape conditions. ▪ A stepped building setback is proposed by the Proponent along the rail corridor, getting as close as 1.5 – 2m in many locations. This does not provide for an appropriate acoustic and visual buffer to the rail corridor (including the opportunity for landscaping buffering/deep soil zones). As per previous advice, Architectus recommends that this rear setback be increased to a minimum of 6 metres for where the short end of the building	**Building setbacks – Architectus' response** ▪ The amended design still proposes a 2.8m to 3.7m building setback along Auburn Road. As per previous advice, Architectus recommends a minimum 6 metre setback (which is also consistent with the Bankstown DCP 2015) to provide suitable privacy and acoustic separation from the major road, allow for appropriate landscaping and to relate to the neighbouring streetscape conditions. ▪ A stepped building setback is still proposed by the Proponent along the rail corridor, getting as close as 1.5 – 2m in many locations. This does not provide for an appropriate acoustic and visual buffer to the rail corridor (including the opportunity for landscaping buffering/deep soil zones). As per previous advice, Architectus recommends that this rear setback be increased to a minimum of 6 metres for where the short end of the building meets the boundary. This minimum of 6 metres is consistent with the

meets the boundary. This minimum of 6 metres is consistent with the suggested planning control changes in the *North Central Local Area Plan.* ▪ The proposal shows a side setback of 2.3 - 3 metres to the adjoining industrial land to the north and 18m setback from the building length to the boundary. This is not an adequate setback to achieve the appropriate amenity separation between residential and industrial. In addition, minimum separations are required under the ADG to allow for any future development that may occur on neighbouring sites (refer to ADG assessment above). ▪ As per the *North Central Local Area Plan,* a minimum 10 metre setback is proposed to industrial land, and where a building length faces the industrial land, this setback is to be extended to a minimum of 24 metres. As per previous advice, Architectus recommends to adopt these suggested setback control changes. **Building length** ▪ The length of proposed Buildings A and E-F are concerning from a visual bulk, permeability, cross ventilation and overshadowing perspective. As per previous advice, Architectus recommends that 6-8 storeys buildings should not exceed 65m in length in order to provide good streetscape with built form and architectural variety, and appropriate cross ventilation of apartments. Buildings A and E-F exceeds this recommendation. In addition, any built form above 8 storeys should be a maximum of 45 metres. Building A exceeds this recommendation. **Building footprint site coverage** ▪ Roughly a third of the site is a good rule of thumb for building footprint coverage for a site of this size that needs to provide internal roads and communal open space. ▪ The building footprint coverage of the McGregor Coxall scheme measured approximately 32% of the site area, while the current Pacific Planning scheme seems to have increased in area measuring approximately 38% of the site area. **Landscape quality**	suggested planning control changes in the *North Central Local Area Plan.* ▪ The proposal still shows a side setback of 2.3 - 3 metres to the adjoining industrial land to the north and 18m setback from the building length to the boundary. This is not an adequate setback to achieve the appropriate amenity separation between residential and industrial. In addition, minimum separations are required under the ADG to allow for any future development that may occur on neighbouring sites (refer to ADG assessment above). ▪ As per the *North Central Local Area Plan,* a minimum 10 metre setback is proposed to industrial land, and where a building length faces the industrial land, this setback is to be extended to a minimum of 24 metres. As per previous advice, Architectus recommends to adopt these suggested setback control changes. **Building length – Architectus' response** ▪ The length of proposed Buildings A and E-F are still of concern from a visual bulk, permeability, cross ventilation and overshadowing perspective. ▪ As per previous advice, Architectus recommends that 6-8 storeys buildings should not exceed 65m in length in order to provide good streetscape with built form and architectural variety, and appropriate cross ventilation of apartments. Buildings A and E-F exceeds this recommendation. In addition, any built form above 8 storeys should be a maximum of 45 metres. Building A exceeds this recommendation. **Building footprint – Architectus' response** ▪ As advised previously, roughly a third of the site is a good rule of thumb for building footprint coverage for a site of this size that needs to provide internal roads and communal open space. ▪ The building footprint coverage of the McGregor Coxall scheme measured approximately 32% of the site area, while the current Pacific Planning scheme seems to have increased in area measuring approximately 38% of the site area. ▪ Excessive footprint site coverage exacerbates solar access issues and visual bulk

▪ Minimal context analysis has been provided. It is not clear if the new street network and open spaces are private, public or publicly accessible and if they are intended to connect with future developments, etc. However, it is assumed that the large area of open space will be publicly accessible. ▪ No updated landscape plan is provided to explain the proposed uses, activation and character of the central space, street types/sections, footpath widths, lighting etc and to ensure that it will provide an acceptable level of urban design quality, safety and open space amenity for future residents. ▪ No basement plan has been provided by the Proponent to illustrate the extent of the proposed basement. However, assuming no basement is provided beneath the central communal open space and is setback 6m from the boundaries, the proposed scheme has the ability to satisfy the minimum requirements for deep soil zones as specified within the ADG. ▪ While the proposed area of central communal open space receives good solar access in midwinter, the quality of the interface of the central communal open space with the northern industrial land (by not having a building along this northern edge) is a concern, especially as the industrial use is unlikely to change in the foreseeable future. It is recommended that a generous landscape edge be provided along this northern boundary to provide an appropriate buffer between the area of open space and existing industrial use.	**Landscape quality – Architectus' response** ▪ Same comments as June 2020 response.
Movement and access ▪ Due to the proposed size of the development, a new street and block pattern are necessary to integrate the precinct into the surrounding neighbourhood and to create greater permeability and connectivity within the precinct to open spaces, schools, centres and transport. The street network also facilitates better address for residential development and increases safety and surveillance. The proposed layout results in zero street address to Buildings A and C-D with no direct vehicle drop-off access. ▪ The McGregor Coxall plan, January 2019, illustrated basement entries/ exits located off the new internal loop road network, while the	**Movement and Access – Architectus' response** ▪ Same comments as June 2020 response.

updated proposal by Pacific Planning, *Attachment I - Architectural Design Report, April 2020*, illustrates one basement entry / exit directly off Auburn Road. No comment has been provided in the Traffic Assessment report on the viability of locating this single basement entry / exit off the major road. ▪ Two access points to the internal street network are proposed (one entry and one exit as per the original McGregor Coxall plan). Neither access point has any relationship to the intersection with Morris Street which limits the opportunity to provide greater integration into the existing road network . Similarly, no comment has been provided in Traffic Assessment report on the viability of these two access points, as opposed to one. ▪ A pedestrian crossing is indicated on the ground floor plan in the Pacific Planning report dated March 2019. No comment has been provided in the Traffic Assessment report on the viability of this pedestrian crossing. Architectus agrees with the necessity of a pedestrian crossing at this location. ▪ The ground floor plan in the Pacific Planning report indicates a cycle path along the perimeter boundary adjacent to the railway corridor, however, a 1.6 -2m setback along this edge does not allow sufficient space for a safe, amenable cycle path with appropriate tree planting and path lighting. Similarly, along Auburn Road a cycle path is indicated on the plan, but there is an inadequate setback to allow this cycleway to happen within the site boundary. The building setback along this edge ranges from 2.8 – 3.7m, and the ground floor private gardens extend into this zone leaving only a 0.6m setback from the boundary.	