18 December, 2019

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

Architecture
Urban Design
Planning
Interior Architecture

To: Kyou Won Rhee
Strategic Planner

30-46 Auburn Road, Regents Park
Peer review of McGregor Coxall's letter titled '30-46 Auburn Road FSR Addendum to Urban Design Review Report' dated 9 October, 2019

Dear Kyou,

This letter provides a peer review of the addendum letter (dated 9 October, 2019) to the Urban Design Report (dated 9 January 2019), for 30-46 Auburn Road, Regents Park, submitted by McGregor Coxall. The addendum requests Council endorsement for a proposed FSR of 2.4:1 for the redevelopment of the site. This is an increase from the 2.0:1 proposed within the Urban Design Report and greater than the Architectus' recommendation of 1.75:1 with a maximum of 6-8 storeys (March 2019 peer review). The proposed heights and GBA footprints have also been increased (as demonstrated by the 3D model and spreadsheet provided to Architectus on 29 November, 2019), with an increase in the range of building heights of 6 to 12 storeys to 7 to 13 storeys. No updated Urban Design Report has been provided to justify this increase or demonstrate the potential impacts of this increase. In addition, no reference has been made to the recommendations previously provided by Architectus in the Peer Review dated 29 March, 2019.

Architectus Sydney
Level 18 MLC Centre
19 Martin Place
Sydney NSW 2000 Australia
T +61 2 8252 8400
F +61 2 8252 8600
sydney@architectus.com.au
www.architectus.com.au

Adelaide
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Sydney

McGregor Coxall Scheme (proposed 2.4:1, 7-13 storeys)

Architectus Scheme (proposed 1.75:1, 6-8 storeys)

Assumed efficiency rates

The advice related to assumed GFA efficiencies outlined in the letter by McGregor Coxall states the following:

Advice 1:
As a starting point, 75% efficiencies is applied for GBA to GFA.

Architectus Australia Pty Ltd
ABN 90 131 245 684

Nominated Architect
CEO
Ray Brown
NSWARB 6359

The next layer of detail includes;

- *60-65% for ground floor uses, accounting for service areas, ramps, lobbies, etc*
- *80-82% for tower developments, excluding the podiums (some clients push for 85%, but that's only proven when the building envelope is more refined and accurate).*
- *77% for podiums and street wall (block) development where greater confidence of the building form is known (i.e. not singular forms that run the length of a block).*

Advice 2:
General Rule of Thumb for back of the envelope feasibility is 75/85. i.e GFA is 75% x GEA (envelope) and NSA (sellable) is 85% x GFA.

A 75/85 Rule for feasibility and urban design studies is generally used for mid-rise (up to 6 storeys) and 70/85 Rule for high rise (+6 storeys), which usually is quite accurate for dwelling yields. A 65/75 (Discount) Rule for ground floor levels is typically overlaid to allow for carpark entrances, plant and equipment rules and two storey void entries.

Taking into account both calculation methodologies, we can conservatively offer that a basic yield figure between GBA and FSR is 80%. Applying this figure to the area calculated from the model supplied by Pacific Planning delivers the following results:

- *63,293.1 x .80 = 50,634.5m2 GFA*
- *50,634.5 divided by the site area (21,170) results in an FSR figure of 2.39.*

The above efficiencies have been reviewed by Architectus Principal, Farhad Haidari, who leads residential within our Sydney studio, and also by Michael Harrison, Architectus Strategic Advisor for Urban Design and Planning. The below statement has been provided by Farhad Haidari:

"We pursue relatively conservative efficiency rates for Planning proposals where a high level analysis is required due to lack of detailed design. The rates used are derived from analysing efficiencies at every stage of a number of current and past projects.

The stages analysed include;

- *Planning proposals,*
- *Feasibility Studies*
- *Concept Design*
- *DA Applications*
- *Tender and Construction documentation incorporating detailed design and services/structural input, as well as, allowance for latest in wall construction systems.*

The rates derived are flexible enough to allow for complex site geometries and not restrict a good design outcome. However, in extremely irregular site geometries these efficiencies may not be achievable especially when trying to achieve the desired building separation and boundary setback."

In summary, Architectus -

- Applied the below alternative recommended efficiency rates to the proposed GBA areas provided by Pacific Planning, and recommends that a maximum yield figure between GBA and GFA of 76% appears appropriate for this type of development. However, no typical apartment layouts have been provided to assess the suitability and efficiency of the proposed GBA footprints.
- Calculating the resulting GFA by the site area results in an FSR calculation of 2.27:1. However, this is merely a number calculation, and does not necessarily mean that this is a suitable FSR for the site in its context. Other considerations such as ADG compliance and relationship to the surroundings is also required to be assessed (refer to the high level assessment below).

For advice 1, Architectus -

- Agrees with the overall 75% efficiency (as a starting point) applied for GBA to GFA. As a comparative benchmark, the maximum efficiency rate achieved at the Mirvac/Landcom component of the Green Square Town Centre (with an average height of 10 -12 storeys), was 76% efficiency from GBA to GFA.
- Believes 50-65% for ground floor uses to be more appropriate (depending on the size of the floorplate. A smaller floorplate only providing about 4 apartments would result in an even less efficient floorplate).
- Believes 80-82% is slightly conservative for tower developments excluding the podiums (85% is a good target). Note: this is only true for double loaded apartments. Single loaded apartments would have a less efficient floorplate.
- Agrees with 77% for podiums and street (block) development. However, as above, this is only true for double loaded apartments. Single loaded apartments (including single aspect apartments that sleeve above ground car parking), would result in a less efficient floorplate.

For advice 2, Architectus –

- Notes that in most cases, specifically for planning proposals, the term GBA should be used, and in planning proposals GEA and GBA should be assessed to be the same.
- Agrees with the 75% GEA to GFA and 85% GFA to NSA efficiency rates (75/85 rule).
- Believes the 70/85 rule for high rise above 6 storeys to be too low and believes the above 75/85 rule can be applied to residential typical floorplates up to about 25 storeys (above which the floorplates begin to become less efficient due to increased lifting requirements).
- Believes the 65/75 rule for ground floor levels is too high and believes a 50/65 rule to be more appropriate.

Note: the above recommendations by Architectus are based on standard apartment layouts achieving about 8 – 12 apartments per floor. Once smaller or odd shaped floorplates are proposed, or tall towers above 25- 30 storeys are proposed, these rules do not apply.

Proposed building envelope areas

The updated proposed building envelope areas (GBA) provided that relate to the addendum letter are:

- Consistent with the 3D model and drawings provided.
- Larger than the previous proposed areas outlined in the January 2019 Urban Design report. The addendum letter proposes 63,293 sqm GBA, while within the Urban Design report, 56,182 sqm GBA was proposed. No justification for this proposed increase in GBA is provided within the addendum letter.
- The proposed building envelope for building A/B is too deep at the corner to provide appropriate daylight to apartments at the inner corner.

Proposed building heights

The updated proposed building heights that support the addendum letter are:

- Taller than the heights proposed within the January 2019 Urban Design report. The updated model that relates to the addendum letter proposes an increase in building heights to a range of 7 to 13 storeys, while within the Urban Design report, building heights to a range of

6 to 12 storeys was proposed. No justification for this proposed increase in building heights is provided within the addendum letter, nor has there been any comparison to other similar centres within the precinct to determine an appropriate maximum height in the context of its surroundings.

Auburn Road frontage:

- The amended model that relates to the addendum letter proposes a 7 storey street wall height along Auburn Road, with an upper level setback of 10 metre to a height of 9 storeys. This is taller than the proposed 6 storey street wall height within the January 2019 Urban Design report. A maximum 6 storey street wall height (with the 6th storey potentially set back 3 metres) is an appropriate street wall height to transition to the lower density residential dwellings across Auburn Road and is consistent with the recommendations in the local area strategic plans. Architectus recommends that the street wall height along Auburn Road should not increase above 6 storeys.

Average height across site:

- The amended model proposes an increase of building heights from 8 storeys to 9 storeys across most of the site. No overshadowing studies or visual impact assessments have been submitted to assess the impacts of this increase in building heights. Also, the 9 storeys extends beyond the local planning strategic height recommendations. No justification related to this has been provided.

Maximum height proposed within the north-west corner of the site:

- The amended model proposes an increase in maximum building height from 12 to 13 storeys (although the maximum height in metres does not exceed the 47 metres proposed in the January 2019 Urban Design report).
- No overshadowing studies or visual impact assessments have been submitted to assess the impacts of this increase in building heights (particularly to understand the impact to buildings B and C which was heavily overshadowed in the January 2019 Urban Design report scheme).
- Also, no strategic justification has been provided to justify the proposed maximum heights (for example, no comparison to other similar centres within the precinct has been undertaken).

Assessment of proposed building heights by Architectus :

- 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: A 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 to merge 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.
- 9-13 storey buildings on the site is considered to be outside the range of heights for similar areas in the LGA and would have unacceptable impacts on the broader precinct and on the residential amenity within the site.

- Architectus recommends that the maximum height controls for the site be amended to be 23m (6 storeys) along Auburn Road, and 30m (8 storeys) across the remainder of the site.

Proposed building lengths

- Architectus recommends that 6-8 storey buildings should not exceed 65m in length in order to provide good streetscape with built form and architectural variety based on experience of the 280ha Green Square urban renewal area.
- Proposed buildings A/B and E/F exceed this length and are advised to be reduced.

High level ADG assessment

Building separations

Except for the proposed building separation between buildings A/B and C/D, the amended model that relates to the addendum letter does not satisfy the minimum required building separations under the ADG:

- Between buildings C/D and E/F, the minimum required separation for habitable to habitable 9 storeys and above is 24 metres (the current proposal achieves 20 metres).
- Between buildings F and I, the minimum required separation for habitable to non-habitable 9 storeys and above is 18 metres (the current proposal achieves 12.5 metres).
- Between buildings G and H, the minimum required separation for non-habitable to non-habitable rooms 9 storeys and above is not being met. On top of this, Architectus recommends increasing the building separation to allow for habitable to non-habitable rooms to enhance the passive surveillance at ground level (particularly as this is identified as a pedestrian active link into the site from Auburn Road).
- Between buildings H and I, the proposed separation meets the minimum required for non-habitable to non-habitable rooms, however, Architectus recommends increasing the building separation to allow for habitable to non-habitable rooms to enhance the passive surveillance at ground level (particularly as this is the proposed entry driveway into the site).

Building setbacks

- Proposed building separations do not provide sufficient setbacks from the boundary to satisfy ADG requirements and provide for future growth. More generous setbacks are also important to maintain appropriate amenity protection from adjacent land uses (ie, industrial, rail and major road).
- The amended model shows a front setback along Auburn Road of 4.5 metres. 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.
- The amended model shows a minimum rear setback of 2 metres along the rail corridor. This does not provide for an appropriate buffer to the rail corridor (including the opportunity for landscaping buffering). 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 suggested planning control changes in the *North Central Local Area Plan.*
- The amended model shows a minimum side setback of 3 metres (up to 17.5 metres) to the adjoining industrial land to the north. 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. For proposed development 9 storeys and above, the minimum setback to the northern boundary is 12 metres for all habitable rooms facing north (or 6

metres for non-habitable facing north). 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. Architectus agrees with these suggested setback control changes.

Deep soil percentage

- The proposed central communal open space measures 16% of the site area which is greater than the minimum 7% deep soil zone required for a site of this size (note: it is unknown what percentage of site is dedicated to basement carparking, but the minimum size required can be accommodated within the area of open space).

Central communal open space

- The amended scheme proposes 3,363 sqm of useable communal open space. North facing, this area of communal open space receives the minimum required amount of sunlight in mid-winter.
- The quality of the interface of the central communal open space with the northern industrial land is a concern, especially as the industrial uses is unlikely to change in the foreseeable future.

Solar access to apartments

- The proposed configuration of building footprints is largely configured on the east-west axis which results in a large number of south facing apartments with potential solar compliance issues. No solar assessment has been provided as part of the proposed amended scheme.
- A solar assessment undertaken by Architectus in their review dated 29 March 2019 concluded that buildings C/D do not achieve the required minimum 2 hours of solar access between 9am-3pm on 21 June to 70% of apartments. This is expected to be even worse due to the increase in building height to 13 storeys at the north-west corner of the site.
- The amended scheme also proposes an increase in building heights from 6 and 8 storeys to 7 and 9 storeys. This is likely to also have increased solar implications. McGregor Coxall to provide this solar testing to demonstrate compliance.

Cross ventilation

- Generally buildings greater than 60 metres in length 9 storeys are difficult to ventilate unless multiple core locations are located with dual aspect, cross through apartments and corner apartments (with a maximum depth of 18 metres from glass line to glass line for cross-over or cross-through apartments). Buildings A/B and E/F exceed 60 metres in length. McGregor Coxall to provide indicative apartment layouts for typical floors to demonstrate cross ventilation compliance.

Conclusion and key recommendations

The addendum letter prepared by McGregor Coxall seeks Council endorsement for 2.4:1 FSR due to the calculation methodologies used. While this letter provides a review of this calculation methodology, this alone cannot be used to assess the suitability of this FSR for the site.

It can be concluded from the identified (high level) ADG issues listed above that the proposed GBA of 63,293 sqm and resulting FSR for the site is too high for the site. It is recommended that the proponent update the scheme and urban design report to demonstrate ADG compliance and appropriate site setbacks. Greater strategic justification for the proposed heights including view impact assessments is also to be provided. Failing this, Architectus' previous recommendation of 1.75:1 for the site stands with a maximum height of part 30m (8 storeys) and part 23m (6 storeys).

Yours sincerely,

Greg Burgon
Principal, Urban Designer