NSW GOVERNMENT | Planning & Environment

SSD 7749

Sam McLean
Executive Director
Independent Planning Commission
Level 3, 201 Elizabeth Street
Sydney NSW 2000

Dear Mr McLean

11 Gibbons Street, Redfern – Social and Affordable Housing (SSD 7749)
Response to Request for Additional Information

I refer to the above SSD application and the Independent Planning Commission's (the Commission) letter of 11 June 2019, to the Department of Planning and Environment (the Department), requesting additional information.

Given the technical nature of the information sought by the Commission regarding the proposed ventilation system, flood levels and the capacity of the project to incorporate an additional 500 mm setback to Marian Street, the Department requested the Applicant provide a response to these matters to assist the Department and the Commission. A copy of the Applicant's response, prepared by Keylan Consulting, is attached to this letter.

The matters raised by the Commission are addressed below.

1) Proposed ventilation system

The proposed ventilation system is considered in Section 6.4.3 of the Department's assessment report. It comprises solar powered fans on the roof that will draw fresh air down into each apartment via a ducted system.

Details of the proposed system were provided by Northrop as the project evolved during the Department's assessment of the project. The Department is satisfied that, subject to conditions, the system will provide adequate, safe and effective ventilation to future tenants. The recommended conditions are:

a) Condition A23 relates to the maintenance of all plant and equipment in a proper and efficient condition.
b) Condition B6 requires compliance with the BCA (including fire safety).
c) Condition B34 pertains to the health aspects of the ventilation system.
d) Condition E29 requires that following completion, installation and testing of all mechanical systems, the Applicant shall provide evidence, prior to issue of any Occupation Certificate, that the systems comply with the BCA and Australian Standard AS1668.

The Department further notes alternate means of ventilation are increasingly common, including at Building R4A and Building R4B, Barangaroo (SSD 6965).

The Commission also approved a standard mechanical ventilation system at 80-88 Regent Street (SSD 7080), a nearby mixed-use development that contended with the same issues of noise/ventilation as the proposed development. The Department prefers the proposed solar powered ventilation system as it is a more sustainable system which provides occupants with greater choice as to the mode of ventilation (natural, solar hybrid, full mechanical).

2) Operation of the ventilation system in the event of a power failure/flooding

Power failure

The attached response from the Applicant confirms the proposed system has been revised to include eight wall mounted batteries which will provide sufficient capacity to continue operation of the system overnight and in the event of a power failure. The Department supports this revision and suggests the Commission include an additional condition of consent requiring further design details to be provided to the Certifying Authority prior to issue of the relevant construction certificate.

Flooding

Flooding is considered in Section 6.6 of the Department's assessment report. The Department notes City of Sydney Council (Council) reviewed the flood aspects of the site/proposed development and recommended a condition that included specific flood planning levels for the development, including the elevation of power equipment above the estimated 1% AEP flood level of 25.4m AHD (see condition B27).

The attached response from the Applicant provides further clarification regarding how the design responds to flood levels.

3) Ongoing maintenance and cleaning of the ventilation system

The Department considers the attached response from the Applicant provides satisfactory further information regarding ongoing cleaning and maintenance of the ventilation system.

4) Building setback to Marian Street

The attached response from the Applicant includes a response to the Commission's request to understand the capacity of the project to incorporate a further 500 mm setback to Marian Street.

The Department considers the Applicant's response to be compelling and notes the additional cost, reduction in the area of the communal hub and reduction in the size of the SGCH office implications of the increased setback. The Department further notes that if the entire podium were to be setback, the layout of the first and second floor residential levels would need to be revised which would reduce the size of some affordable housing apartments and potentially the number of affordable housing apartments.

The Department further considers the provision of an additional 500 mm setback unnecessary because:

a) The proposed footpath width of 3 m complies with the Redfern Centre Urban Design Principles (RCUDP) control which requires an average footpath width of 3 m to Marian Street. The Department considers the RCUDP contemplated the population increase generated by the maximum gross floor area set for these sites when stipulating an average 3 m footpath width in Marian Street.
b) As noted by the Commission, a similar width footpath exists on the northern side of the street, adjacent to 7-9 Gibbons Street, providing further pedestrian capacity along Marian Street.
c) The Department is unaware of any data to suggest the proposed 3 m wide footpath would be insufficient to cater for future pedestrian flows, particularly noting Marian Street is a secondary/minor cross-street with the majority of pedestrian desire lines likely to extend north-south along the retail strips of Regent Street and Gibbons Street and between Australian Technology Park and Redfern Railway Station.
d) Analysis for a nearby project (Pemulwuy, SSD 8135) was undertaken as submissions explicitly raised the issue of footpath capacity. The analysis is summarised in the Department's assessment report and demonstrated footpaths with similar widths to Marian Street have capacity for 2,000 to 3,000 people per hour (per footpath). Furthermore, existing and predicted levels of pedestrians on secondary/minor streets around the Pemulwuy site were less than 1,000 people per hour.
e) The issue of the proposed footpath width being unable to satisfy future pedestrian flows was not specifically raised in any submissions to the Department. Therefore, our assessment focused on compliance with the adopted standards and it was not considered necessary or reasonable to request a detailed footpath capacity study.
f) The increased setback, beyond the requirements of the control, would have potential knock-on effects for other projects in the Redfern Town Centre, including 80-88 Regent Street (SSD 9275), 13-23 Gibbons Street (SSD 9194) and 90-102 Regent Street (SSD 9454).

Given the above and the attached response from the Applicant, the Department considers a 500 mm increase in the setback to Marian Street is not necessary or reasonable.

I trust the above will assist the Commission in its consideration of the application. Should you have any further enquiries about this matter, please contact David McNamara, Director, Key Sites Assessments, at the Department on (02) 9274 6379.

Yours sincerely

Sargeant

Anthea Sargeant 25/6/19
Executive Director
Key Sites and Industry Assessments

Enc.: Keylan Consulting letter, dated 17 June 2019

KEYLAN
consulting pty ltd

Suite 2, Level 1
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17 June 2019

Mr David McNamara
Director
Key Sites Assessments
Department of Planning and Environment
GPO Box 39
Sydney, NSW 2001

Dear Mr McNamara

11 Gibbons Street, Redfern (SSD 7449) additional information

This additional information has been prepared on behalf of St George Community Housing (the applicant) to respond to the Independent Planning Commission's request to the Department for additional information on 11 June 2019 in relation to the above project.

We have carefully reviewed the IPC's correspondence in consultation with the Applicant and its consultant team and provide the following response:

1. *How does the ventilation system provide adequate, safe and effective ventilation for future residents?*

The proposed ventilation is similar to those approved in other residential buildings within the City of Sydney local government area including Redfern and Barangaroo.

The base system for achieving compliant ventilation in accordance with BCA 2019 for the proposed apartments is:

- a trickle vent system and
- the use of operable doors and windows which are provided to each habitable room.

The proposed design meets relevant BCA requirements for ventilation and is typically implemented in most residential products of this nature.

Additional to this, the outside air system provides tenants with access to fresh air supply without having to open their windows. This system also provides:

- additional air flow to the apartments to minimise mould
- ensures a healthy internal environment is maintained
- minimises the need for ongoing maintenance to the apartments

The mechanical outside air system has been designed in accordance with the following documents:

- *NCC 2019 Section F, Clauses F4.5 and F4.6 Mechanical and Natural Ventilation of Rooms*
- *• AS 1668.2:2012 The use of ventilation and air conditioning in buildings – Mechanical ventilation in buildings*
- *AS/NZS 1668.1:2015 The use of ventilation and air conditioning in buildings – Fire and smoke control in buildings*

The mechanical system utilises a hybrid system which contains two independent ventilation systems. This comprises:

- System 1 serves all apartment bedrooms only, which includes a central outside air fan located at roof level (two fans for redundancy in design) to supply to all bedrooms. This includes ducting through the building from roof level and branching into every apartment.

- System 2 serves all apartment living spaces and is designed to draw outside air from the façade through trickle vents, by utilising the apartment toilet/laundry and kitchen rangehood. Air will be drawn in through the living area via the kitchen and/or laundry fan depending on operation.

The two mechanical outside air systems will provide fresh air in accordance with BCA 2019 to all apartments in addition to the deemed to satisfy natural ventilation openings. The proposed systems address the concerns raised relating to acoustic and air quality due to the proximity of busy roads.

To provide certainty that the proposed mechanical ventilation system will be designed, constructed and installed in accordance with the requirements of *AS1668*, we have provided the following draft condition (Draft Condition E43):

> *Prior to the issuing of the relevant final occupation certificate, certification is to be provided from the installer of the mechanical ventilation system that the design, construction and installation of the mechanical ventilation system is compliant with the requirements of AS1668, 'The use of mechanical ventilation'.*
>
> *Details demonstrating compliance are to be submitted to the Principal Certifying Authority.*

Northrop's advice which confirms the above, is provided in Attachment 1.

2. *How does the ventilation system operate in the event of a power failure? Provide information on the proposed back up power source and proposed location*

The applicant has progressed the detailed design of the building systems required within the development, including those associated with the operation of the common areas of the building and the proposed Central Outdoor Air System (COAS).

Additional modelling completed by Northrop which included the COAS demonstrated that there will be no excess energy generated by the PV system to warrant the provision of battery storage. Notwithstanding this, to address the IPC's concerns relating to back up power sources and overnight use, the Applicant has liaised with its financier Clean Energy Finance Corporation to explore how a battery system could be accommodated and resolve the

potential size and positioning of batteries with Northrop. The Applicant sees this as having a good long term benefit for the building's tenants and SGCH.

Eight wall mounted batteries are now proposed to be located within the existing back of house area, which will provide sufficient capacity to continue operation of the COAS overnight.

The Applicant would accept a condition requiring further design details being provided to the Private Certifying Authority at the relevant Construction Certificate Stage.

2a. *Substation located below designated flood design levels and the site is identified as being flood affected*

The current location of the proposed substation has been dictated by Ausgrid's design requirements and Council's footpath levels that must be met along William Lane. Further detailed flood levels have been used to confirm the maximum 1% AEP flood level in this part of the site and establish an acceptable location of the substation.

Northrop has prepared a response to this matter confirming the proposed substation's floor level and location is acceptable. Ausgrid have also confirmed the FFL is acceptable and this is included within Northrop's response (Attachment 2).

3. *The process for ongoing maintenance and cleaning of the ventilation system and how this will be managed within private residences*

The mechanical outside system is designed to ensure all maintenance occurs outside of the apartments. The rooftop mechanical plant includes the fans, attenuators, filters, mechanical switchboards and the like to form a complete system.

All fire and smoke dampers are all accessible for maintenance from the common lobby space. Filters from the central outside air system are to be changed at a minimum of every 6 months. Following completion of the building, filters will need to be assessed monthly to accurately determine a filter replacement schedule. All other mechanical equipment (including fans) to be maintained annually, or as per manufacturer recommendations.

The mechanical ventilation system will be installed in accordance with the manufacturers requirements as detailed within our response to Item 1. SGCH will own and operate the proposed residential units in perpetuity within the development. SGCH staff will be responsible for the ongoing maintenance of residential units, common areas, building services and repairs / maintenance in consultation with specialist ventilation contractors where required.

To ensure the proposed ventilation system will be monitored and maintained as detailed by the Applicant, we have provided the following suggested draft Condition (Condition F18):

> *Each year, the Applicant must provide the Department of Planning and Environment with documentary evidence that the Applicant's annual inspection of the mechanical ventilation system has been undertaken.*

4. *The Commission is also seeking further information about the Project's building setback to Marian Street in consideration of pedestrian amenity*

We note that the IPC would like to understand the capacity of the project to incorporate a further 0.5m setback at ground level to be consistent with the 1.3m setback at 7-9 Gibbons Street referred to in Council's letter dated 12 March 2019.

We have reviewed Council's letter and note that it refers to the Redfern Centre Urban Design Principles (RCUDP) and makes the following recommendation:

> *...that a 1.5m setback from the boundary of Marian Street to the face of the building is required for footpath widening akin to what has occurred to the north side of Marian Street...*

The RCUDP states:

> ***...3.2.5 Podium design***
> *Setbacks (see figure 10 setback diagram)*
>
> Podiums are to be provided to all towers (built form over 6 storeys). The following setbacks apply:
> - Provide a nil setback at the street level to reinforce the containment and activation of the street for commercial uses unless otherwise specified below:
>
> ***Front setback***
> - *To Gibbons Street north of Marian Street - 1.2m for footpath widening to approximately 5m*
> - *To Marian Streets - 1.5m for footpath widening* ***to an average width of 3m...***

We submit that the current proposal satisfies the RCUDP setback requirement to Marian Street. We argue that the interpretation to require a 1 .3m setback is incorrect, and that the proposal achieves the intention of the control, being the provision of a high level of pedestrian amenity with a 3m wide footpath. An increased setback by 0.5m to Marian Street in our view is unnecessary and will result in no material benefit. It will also significantly impact on the feasibility of the SCGH office space and community hub. The following is provided to support the current siting of the ground floor level:

- Council's letter incorrectly interprets the relevant RCUDP control and places weight on the 1.5m setback. We contend that this planning control should be read in its entirety, meaning the setback to Marian Street for the ground floor of the podium, should be 1.5m for footpath widening to an average width of 3m. The proposal before the IPC achieves the average width of 3m which is the intent of this provision. The average width of 3m along Marian Street is demonstrated in the ground floor plan provided in Attachment 2.

- The Department's Assessment Report concludes that the *"proposed setback* (to Marian Street) *will provide for an average footpath width of 3m".*

- The proposal is also consistent with the relevant character aims of the RCUDP because it provides:

    - an active frontage along Marian Street through the introduction of commercial uses at ground level with windows overlooking the street
    - an improvement to the existing streetscape along Marian Street. We note which the existing interface of 7-9 Marian Street fronting Marian Street includes the entry to the basement car park and no active uses
    - a sufficient setback to Marian Street to enable pedestrians to pass one another on the footpath noting that this is not a highly trafficable street in terms of pedestrian activity and no further public domain works (such as landscaping or seating) is planned for this part of Marian Street
    - An awning to provide for a high level of pedestrian amenity

In concluding, the Applicant notes that the Department concludes that the current proposal achieves design excellence. The proposal was developed in conjunction with the State Design Review Panel (SDRP) which comprises a City of Sydney Council representative and is the result of 5 SDRP sessions. As a result of these sessions, amendments to the design were made and importantly include:

- an awning along the full length of Marian Street, to provide for a high level of pedestrian amenity. The Applicant notes an awning was not required for the development at 7-9 Gibbons.
- increased building setback along William Lane to continue pedestrian amenity around the building by providing a wider public footpath.

Impact of increased setback to Marian Street

The capacity of the project to incorporate a further 0.5m setback is limited and not without significant feasibility consequences. The design of this building and its relationship to surrounding streets at a pedestrian level has been the result of significant design workshops in the SRDP process. To achieve the additional 0.5m setback, Levels 1 and 2 of the podium would be required to be cantilevered. There is a concern as to the impact this will have on what is a carefully considered streetscape and this late amendment would appear as an afterthought in the refined design. We argue the amendment will result in no material benefit given the average footpath width has been achieved. Further, we argue the amendment will result in the following implications:

- The resultant cantilevering of Levels 1 and 2 would require the slab and columns to be increased to support the structure above. The applicant's quantity surveyor advised this amendment alone would increase construction costs by a minimum of $150,000.

- The proposed Community Hub space will be reduced in area under the ideal minimum size of 50m^2. This space was specifically designed for community events for SGCH, residents and the broader community and to provide an active street frontage to both Gibbons Street and Marian Street. The reduction of the Community Hub will directly impact the useability of the space. This amendment will impact on the ability to provide a good level of community place making and community support and engagement for the future residents and the wider Redfern community.

- SGCH require an office to accommodate 26 staff consisting of primarily tenancy and building managers for residents within this building and nearby properties including those in Redfern. The SGCH detailed fitout plan would be severely impacted by the loss of 12m² of GFA along the full length of Marian Street. This would result in the loss of 7 desk spaces along the wall facing Marian Street due to minimum circulation spaces and will result in a maximum of 19 staff being accommodated in the SGCH office. The amendment will necessitate a complete redesign of the office layout and will impact the provision of staff on-site to support the future residents of this development and other residents within Redfern (refer to Figure 1 below).

- The proposed ground floor plan incorporates all mechanical plant / back of house areas and the bicycle storage area typically provided within a basement. SGCH have investigated the option to recover the lost office space by reducing the size of the bike store. However, this cannot be achieved as both the SDRP and Council have requested this space be increased to accommodate additional bicycles and it is needed for the mechanical plant / back of house areas.

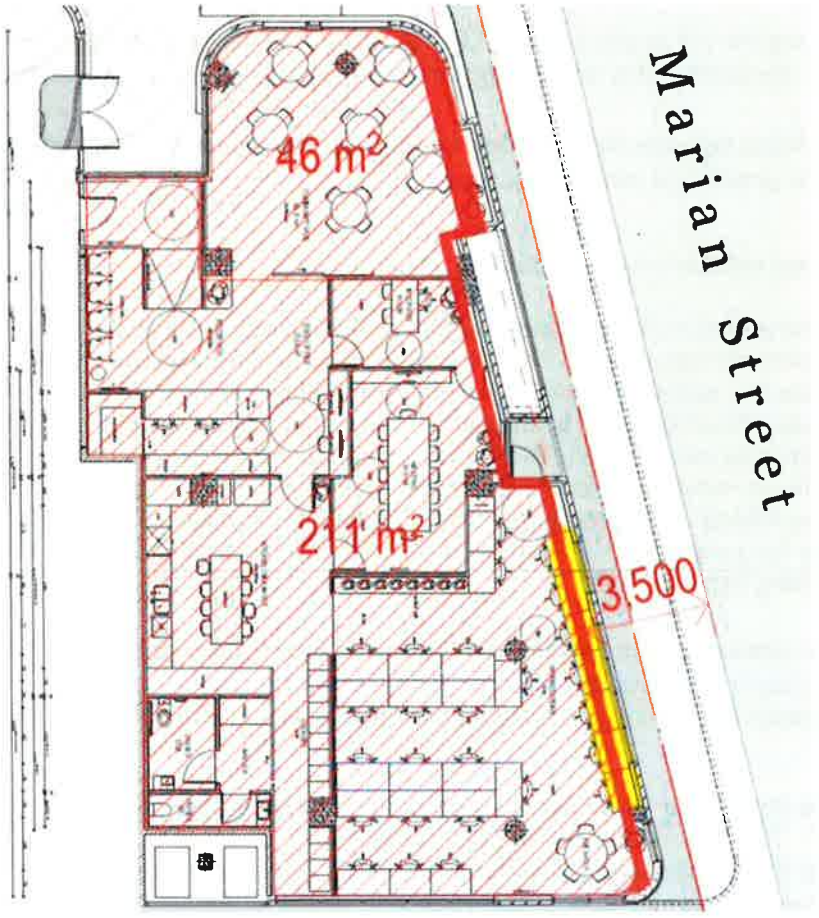

Figure 1: Impact to the indicative office layout plan of SGCH shown in yellow

To support the current proposal, the Applicant has also included plans prepared by DKO to support the above (Attachment 2).

This response should be reviewed in conjunction with the responses prepared by Northrop and the plans prepared by DKO enclosed with this response.

We trust this information will assist the Department in its response to the IPC.

If you have any further enquiries, please do not hesitate to contact Michael Woodland on 02 8459 7506 or Rebecka Groth on 02 8459 7510 or email rebecka@keylan.com.au in the first instance if you wish to discuss any aspect of this response.

Yours sincerely

Michael Woodland BTP
Director

Attachment 1	Responses prepared by Northrop – Mechanical Ventilation and sub-station location
Attachment 2	Plans prepared by DKO