Appendix B – EIS Addendum (Building Height Assessment)

15 June 2018
Our Ref: 9787B.8SE

Department of Planning and Environment
GPO Box 39
Sydney NSW 2001

By Email: **Naveep Singh Shergill [navdeep.singhshergill@planning.nsw.gov.au]**

Dear Mr Shergill,

RE: FAIRVALE HIGH SCHOOL STATE SIGNIFICANT DEVELOPMENT (SSD 17_8677)
PROPOSED ALTERATIONS AND ADDITIONS
AMENDMENT TO BUILIDNG HEIGHT DUE TO FLOOD RISK MITIGATION
ADDENDUM TO ENVIRONMENTAL IMPACT STATEMENT

1.0 Introduction

On 9 February 2018 the Department of Planning and Environment (DPE) issued a Response to Submissions letter together with comments from authorities/agencies provided during the exhibition period of the above State Significant Development (SSD) application. Fairfield City Council issued comments (letter dated 29 January 2018) which included feedback from Council's Catchment Management team, summarised in the following recommendation:

> *"It is critical that the proponent considers this information and the impact this flooding may have on the proposed works and existing surrounding development. A flood risk assessment, flood risk management plan and hydraulic engineering report should accompany the application as the adoption of the modelling is imminent. Please ensure that flood sensitive design techniques are addressed as part of this proposal."*

Following receipt of these comments, the project team engaged Site Plus to undertake and prepare a Flood Risk Assessment and Management Plan, which was completed in June 2018. The findings of the Flood Risk Assessment and Management Plan resulted in the floor levels of the proposed buildings being raised to ensure the ground floor finished floor level (FFL) was above the minimum flood design level. The design was also amended to accommodate new ramps and stairs resulting from the amended floor levels, as well as amendments to the grade of existing ramps.

In addition, a review by the School Infrastructure NSW (SINSW) Educational Facilities Standards and Guidelines (EFSG) team required the roof pitch of the academic building to be changed from 3° to 4°, and so this resulted in a minor change to the overall building height.

In summary, the following amendments were made to the levels of the buildings:

- Academic Building:
  - Ground Floor Level – raised from RL16.4 to RL17.25 (**+0.85m**)
  - First Floor Level – raised from RL20.4 to RL21.25 (**+0.85m**)
  - Second Floor Level – raised from RL23.9 to RL24.75 (**+0.85m**)
  - Parapet – raised from RL29.45 to RL30.747 (**+1.297m**)

- Multi-Purpose Hall:
    - Ground Floor Level – raised from RL17.06 to RL17.5 (**+0.44m**)
    - First Floor Level – raised from RL20.4 to RL20.84 (**+0.44m**)
    - Ridge Height (Lower) – raised from RL25.59 to RL26.045 (**+0.455m**)
    - Ridge Height (Upper) – raised from RL28.154 to RL28.6 (**+0.446m**)
- COLA:
    - *No change proposed*.

The increase in levels has resulted in a minor additional encroachment above the building height plane, and therefore this letter has been prepared as an addendum to the assessment provided in the Environmental Impact Statement prepared by DFP Planning dated 8 December 2017.

This letter will consider the existing building height assessment, and then provide commentary on the relevant matters for consideration arising from the proposed increase to the building height of both buildings.

2.0 EIS Assessment of Building Height

The following is an extract of the building height assessment set out in the EIS supporting the proposed development:

> *The Site is subject to a maximum building height of 9m under FLEP. Each of the three new building components will involve works which exceed the 9m building height control, summarised as follows (and shown at Error! Reference source not found.):*
>
> - ***Classroom/ Administration Building** – Approximate maximum height variation of 4.3m (i.e. height of 13.3m above existing ground level) at the south-western corner of the building;*
> - ***Multipurpose Hall** – Approximate maximum building height variation of 1.9m (i.e. height of 10.9m above existing ground level) at the south-eastern corner of the building;*
> - ***COLA** – Approximate maximum building height variation of 1.35m (i.e. height of 10.35m above existing ground level) at the western peak of the structure.*

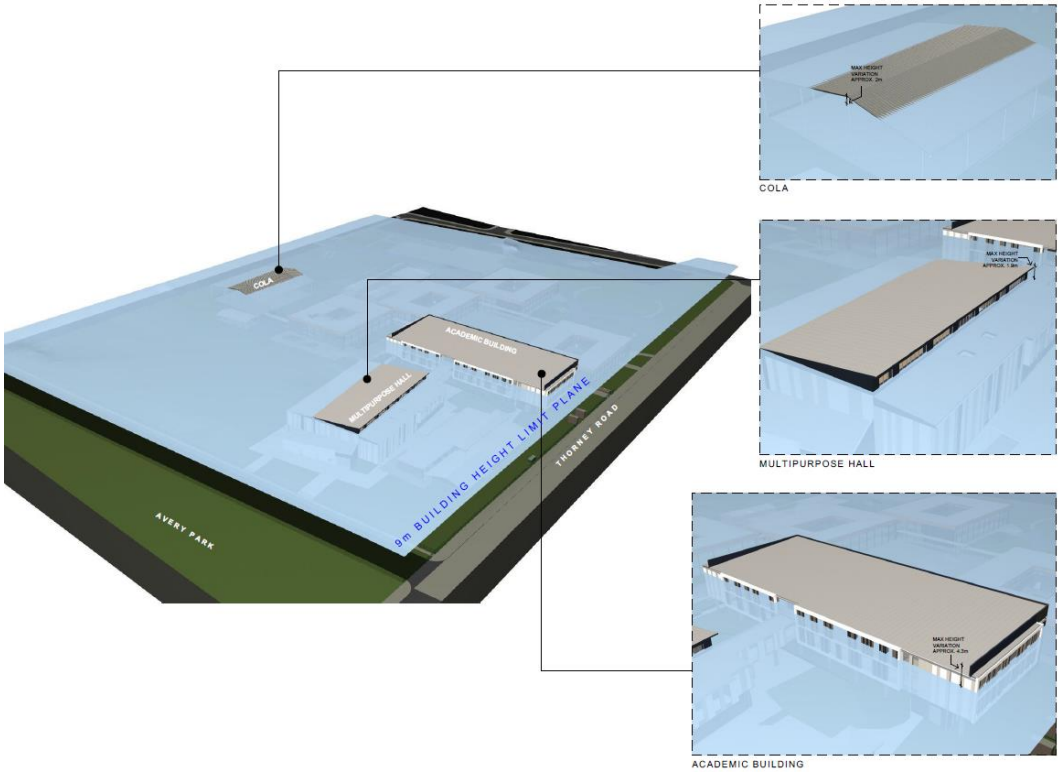

Figure 1: Extract of Building Height Model (Prepared by JDH Architects)

In each of the above cases, the extent of the building height variation is accentuated due to the fall of the site and the need to provide a compatible floor level with surrounding development.

The classroom/ administration building has the highest of the variations (+4.3m) as the floorplate of the building was required to achieve accessible levels at both the northern and southern end of the building. Without undertaking extensive cut, or splitting the building into two sections (which would contribute significant costs and break up the desirable single-floorplate for above-ground learning spaces), the design was unable to reduce the height of the building through conventional means. The only possible alternative would be to relocate the GFA of the top floor elsewhere on the site, and this would impact upon open space areas and further separate out learning spaces and so was not feasible.

The multipurpose hall is similarly constrained by a large floorplate and the need to be accessible to all adjoining facilities, however in design terms a specific ceiling clearance distance is required if the multipurpose hall is going to be capable of being used for competition sports such as netball and basketball. As this is highly beneficial feature for a School hall and community asset, the additional building height is required to satisfy this requirement. The entirety of the built form above the building height control comprises the clerestory roof of the hall, which is of the required clearance and provides natural ventilation for the entire multipurpose space. Amendment in design to either of these design features is not considered supportable.

The COLA covers an area of approximately 1,221m², catering for a new concrete paved area capable of accommodating two (2) line-marked basketball courts. While not designed to achieve the same level of clearance required for competition sports courts, the structural design of the proposed COLA will comprise a free-span structural roof system with framing designed by Jones Nicholson. The ridge line of the roof was de-

centralised to the south to reduce the overall height of the structure, while still maintaining the desirable roof slope to the north and south. The extent of the variation is minor and will not be readily discernible from surrounding properties given the setback of the structure from the northern property boundary and the additional separation provided to neighbouring dwellings across each backyard.

Clause 4.3 of Fairfield LEP 2013 sets out the following objectives for the height of buildings:

> *(a) to establish the maximum height for buildings,*
> *(b) to ensure that the height of buildings complements the streetscape and character of the area in which the buildings are located,*
> *(c) to minimise the visual impact, disruption of views, loss of privacy and loss of solar access to existing development.*

The proposed development (including each of the new building components) has been designed to ensure the streetscape and character of the area are complemented through a high quality design and appropriate consideration of built form, having regard to the opportunities and constraints of the Site. Each building has been designed with a view to minimise the visual impact of the built form and avoid the loss of privacy or solar access to existing residential development.

Having regard to the above, it is concluded that the proposed development is consistent with the objectives of the building height development standard under Clause 4.3 of Fairfield LEP 2013.

The assessment provided above has shown that the proposed building height variation of each new structure is justified in planning terms and that the requirement to comply with the building height development standard would be unreasonable and unnecessary in the case of this proposal. Accordingly, the proposed building height variations are considered supportable.

3.0 Assessment of Proposed Building Height

Each of the three new building components will involve works which exceed the 9m building height control, summarised as follows (and updated Building Height Model extract provided at **Figure 2**):

- **Classroom/Administration Building** – approximate maximum height variation of 5.3m (i.e. height of 14.3m above existing ground level) at the south-western corner of the building. This represents an increase to the building height of approximately 1m;

- **Multipurpose Hall** – Approximate maximum building height variation of 2.5m (i.e. height of 11.5m above existing ground level) at the south-eastern corner of the building. This represents an increase to the building height of approximately 0.6m; and

- **COLA** – Approximate maximum building height variation of 1.35m (no change proposed);

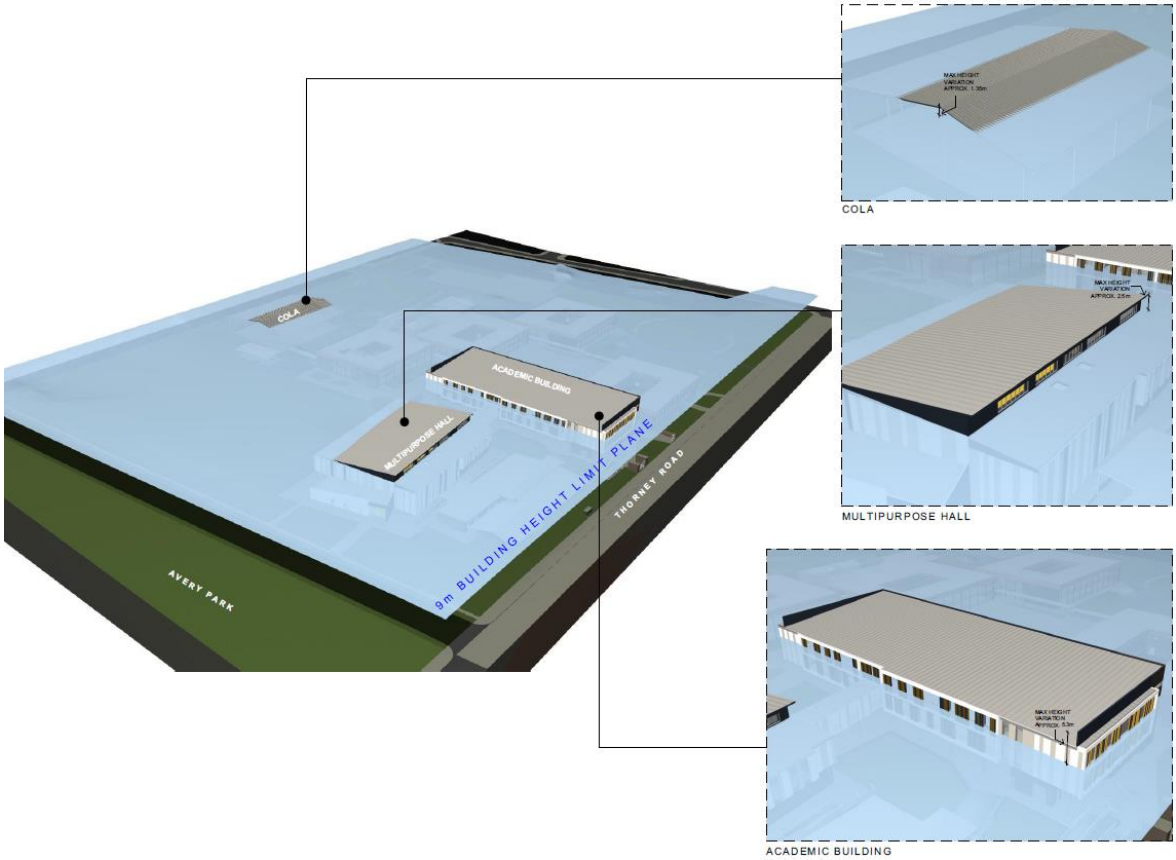

Figure 3: Extract of Updated Building Height Model (Prepared by JDH Architects)

The proposed amendments to the building height of the academic building (approximately +1m) and multipurpose hall (approximately +0.6m) will not result in any noticeable change to the outcome assessed in the EIS, having regard to the following:

- The extent of each building height variation is still accentuated by the fall of the site, and now the need to provide appropriate floor levels to address the risk of overland flow flooding present at the Site;

- The academic building retains the greatest building height variation, warranted by the need for a flood-compatible ground floor level and the difficulties in breaking up the building (which is not feasible at this stage of the project). The building does not adopt a pitched roof or an excessive parapet design which would otherwise further contribute to the height of the building, therefore the only way to reduce the collective height of the building without compromising the function of the lower floors would be to remove and relocate the GFA of the second floor. This outcome would impact upon open space areas and further separate learning spaces, and so is not feasible;

- The multipurpose hall is subject to minor increases in building height due to the location of the building as it relates to the overland flow paths, the nature of the use of the building and the design considerations for a large floorplate designed to be used for competition sports. The entirety of the built form above the building height control still comprises a portion of the clerestory roof of the hall, being a roof form which is required to provide clearance and natural ventilation;

- The proposed development (including the additional building height of the academic building and multipurpose hall now proposed) seeks to ensure the streetscape and character of the area are complemented through high quality design, and that visual, privacy and solar impacts of the built form are minimised to existing residential development. Accordingly the proposed development is still consistent with the objectives of the building height development standard under Clause 4.3 of Fairfield EP 2013.

The assessment provided above has shown that the proposed building height variations (inclusive of the additional height resulting from flood risk assessment) are justified in planning terms, and that the requirement to comply with the building height development standard would be unreasonable and unnecessary in the case of this proposal. Accordingly, the proposed building height variations (as amended) are considered supportable.

If you would like to discuss the above further, please contact the undersigned on 9980 6933.

Yours faithfully
DFP PLANNING PTY LTD

STEPHEN EARP
PRINCIPAL PLANNER

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