



Your ref: SSD-23512960
File no: MC-21-00005

13 May 2022

NSW Department of Planning, Industry and Environment
GPO Box 39
SYDNEY NSW 2001

Recipient Delivery: patrick.andrade@dpie.nsw.gov.au

Attention: Patrick Andrade

Dear Sir

SSD-23512960 - Request for advice – Upgrades to Glenwood High School at 85 Forman Avenue, Glenwood

Thank you for your correspondence dated 22 April 2022 requesting our advice on the applicant's response to our concerns sent to you on 21 March 2022. The matter relates to the proposed construction of a new 3 storey building to replace the existing demountable structures, a new performing arts building, refurbishment of existing buildings, landscaping and associated works. The proposal is a State Significant Development application under section 4.36 of the *Environmental Planning and Assessment Act 1979*.

The applicant's response has been reviewed by Council officers. Concerns are maintained in relation to the proposed stormwater system and reduced parking provisions on the site. These issues are listed in the attachment to this letter to be addressed.

On this basis, Council's objection to this proposal still stands. The concerns detailed in the attachment need to be comprehensively addressed and referred back to Council for review before a more favourable position can be considered in relation to the proposed development.

If you would like to discuss this matter further, please contact our Manager Development Assessment, Judith Portelli on 9839 6228.

Yours faithfully

Peter Conroy
Director City Planning and Development

Connect - Create - Celebrate

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Blacktown Council's submission to SSD-23512960 – Upgrades to Glenwood High School at 85 Forman Avenue, Glenwood

1. Drainage engineering issues

The applicant has failed to address many of the drainage issues that were raised in the previous request for information dated 21 March, 2022. Please see the comments below in response to the additional information provided.

- The applicant has requested in their response to place conditions on major unresolved drainage issues (refer to Attachment A of response letter by Architectus dated 21 April 2022). We cannot currently place conditions on the major issues as they have not been addressed. For example, MUSIC modelling and calculations have still not been provided to demonstrate how the proposed 50 KL rainwater tank shown on the engineering plans satisfies Council's Part J requirement of minimum 80% of non-potable water demand for the development.
- We have revised the previous request for information dated 21 March, 2022 to include only the major issues (see below) which need to be addressed at this stage. This will in turn also minimise the number of conditions at the final stage.
- The response letter states that there are amended set of engineering plans (Attachment E of the response letter) which have addressed some minor issues outlined in the previous request for information dated 21 March, 2022. We could not locate these amended engineering plans on the NSW Planning Portal Website. We also note that only documents up to Attachment D have been uploaded on the website and there is no Attachment E. Consequently, the comments provided in the attached revised request for information are still against the previous set of engineering plans (dated 9 November 2021).
- The response letter states that the amended flood modelling is currently being reviewed by the applicant's consultant (Enstruct Group Pty Ltd). Consequently, no amended flood information has been provided which addresses issues outlined in the previous request for information dated 21 March, 2022.

Key Drainage Issues

1. Civil Engineering Design Report by Enstruct Group Pty Ltd project no. 6393 revision C dated 9 November 2021 and Stormwater Management Plans in Appendix D of Civil engineering Design Report project no. 6393 revision a dated 9 November 2021:
 - i. Provide OSD catchment plan demonstrating which areas drain to the OSD and areas bypassing.
 - ii. Provide a MUSIC catchment plan that shows both the land use and the areas contributing to each specific device. To make this more understandable it may be easier in many cases to split these into two separate plans. Include all bypassing catchments.

- iii. The 1% AEP flows from the site are to be directed to the OSD. Demonstrate how the surface flows in excess of the pipe capacity are directed to the OSD system.
- iv. The OSD Deemed to Comply Tool Spreadsheet levels do not match the OSD design and also includes incorrect design details for the proposed Filter Cartridges. The spreadsheet is to be amended to include correct Design Filter Cartridge Flows and Filter Cartridges flows with 1% AEP HED. Ensure details and levels are reflected in the design subsequently.
- v. On drawing 0201 (A):
 - a) It seems all the roof water is bypassing the rainwater tank and discharging directly into the stormwater line. Show how the roof water gets to the rainwater tank. Provide a separate system for roof water and surface drainage. Pits between the roof lines (i.e. charged pipes) are to be sealed.
 - b) Provide details of the rainwater tank including pre-treatment, volumes, sections, dimensions etc.
 - c) The 375 mm diameter outlet to the existing stormwater Pit 1 is to be RCP.
 - d) Provide levels of the existing street Pit 1 and confirm the connection level to this pit.
 - e) Clearly show details of all pits including surface levels and invert levels.
 - f) It is unclear whether Pits 18 and 27 are treating surface flows and all or only part of the upstream pipe flows as well. Provide detail for Pit 18 and 27 showing all invert levels for all pipes.
 - g) OceanGuards should treat a maximum of 1000 m² of non-roof areas and 1500m² of roof areas. All OceanGuards are to be clearly notated as "200 micron OceanGuards".
 - h) OceanGuards treating only surface flows require a minimum clear depth of 500 mm below the grate to any inlet or outlet pipe obvert. OceanGuards treating surface flows and upstream pipe flows require a minimum clear depth of 500 mm from the invert of the upstream pipes to be treated, to the obvert of the outlet pipe. Where these pits are treating upstream pipe flows the inverts of all pipes in and out of the pit are to be shown.
 - i) Where OceanGuards (Enviropods) are designed to treat upstream pipe flows, the invert levels on all pipes discharging to and from the pit are to be clearly shown. Provide a minimum clear depth of 500 mm from the invert of the upstream pipes to be treated to the outlet pipe obvert.
 - j) Provide a pit detail with an Oceanguard fitted.
- vi. On drawing 0213 (A):
 - a) The 450 mm diameter inlet pipe into the Stormfilter chamber is smaller than the 375 mm diameter outlet pipe from the OSD tank

discharging to Councils existing drainage system. Provide details to ensure that the overflow from the OSD tank can surcharge safely to the street and away from any class rooms and does not impact adjacent properties.

- b) The design levels in the OSD tank do not match the S3QM Certificate Results or the OSD Deemed to Comply Tool Spreadsheet. Ensure consistency between the design.
- c) Provide more details for the Stormfilter tank such as false floor level and thickness, impermeable baffle distance upstream of Stormfilter weir etc.
- d) Provide details of how the overflow chamber will operate with the sealed lid.
- e) On the tank plan view, provide separate dimensions for the OSD tank and Stormfilter Chamber.
- f) Provide a sealed impermeable baffle, or hood set 250 mm upstream of the Stormfilter weir and extending from the sealed underside of the tank to 400 mm below the top of the weir for the 690 mm Stormfilter cartridge to, to contain floatables including oil. The Stormfilter weir level is to be set 770 mm above the false floor.
- g) The minimum length of the Stormfilter weir (L) is to be increased to provide a maximum velocity of 0.4 m/s under the baffle during peak flow (i.e. $L > Q_{100} / (0.4 \times 0.25)$, or $L > 10 \times Q_{100}$) in m, where Q_{100} is in m^3/s). Provide calculations.

2. Flood modelling and Flood report by Enstruct Group Pty Ltd project no. 6393 revision B dated 13 October 2021:

- i. The flood report is vague and does not provide critical information carried out for the flood modelling. Provide details of blockages, pipes, total catchment area, boundary conditions, flows, velocities etc.
- ii. Allow for a maximum isolated rise in flood level of 0.02 m external to the site in the 1% AEP event as a result of the development.
- iii. All buildings in the floodplain (including both existing and proposed) are to be modelled as complete (i.e. 100%) blockages in the flood model. Simply applying Mannings 'n' value as suggested in Table 1 of the report is not accepted.
- iv. The post-development DEM is to be included to accurately represent any proposed ground level changes (i.e. cut and fill areas) in the post development model. This includes fill for areas such as driveway.
- v. Adopt an impervious area of minimum 80% for the catchment. Amend the DRAINS model and flood report accordingly.
- vi. The maximum travel times for impervious catchment is 12 minutes and pervious catchment is 14 minutes. Amend the DRAINS model and catchment areas breakdown accordingly.

- vii. The flood report is to include flood maps for both the existing and post developed scenarios for the various storm events. This report is to include flood maps for the velocity, depths, hazard etc.
- viii. Provide a flood difference map (developed - existing) for the 1% AEP. Include a 0 to 20 mm category with gradations below or above this figure.
- ix. Ensure the inflow hydrograph in TUFLOW matches the DRAINS hydrology model.
- x. Provide the DRAINS hydrology and amended TUFLOW model electronically to Council.

3. MUSIC Modelling:

- i. The MUSIC model breakdown is incorrect and includes only one node representing the proposed development. The model is to be amended to include appropriate nodes representing the proposed land-use draining to the specific water quality devices. The model is to include the total proposed developable area (including bypass areas). The land-use breakdown is to be in accordance with Chapter 9 of Councils WSUD Developer Handbook 2020.
- ii. The MUSIC model includes total development area of 4000 m² whereas the OSD Deemed to Comply Tool Spreadsheet includes 6500 m². Amend the MUSIC model to include total developable area for the site including bypass areas.
- iii. The proposed water quality system is to meet the required post development pollutant reduction targets indicated under Part J of Councils DCP.
- iv. A Rainwater tank is required to meet the water conservation targets under Part J for the development. A minimum of 80% of non-potable water demand for the development is to be met through the reuse of rainwater. Non-potable water demand is to include landscape watering and toilet/urinal flushing.
- v. MUSIC is generally used to assess the performance of the rainwater tank using the node water balance and an electronic copy of the MUSIC model needs to be provided to Council for assessment.
- vi. Allow for a minimum usage rate of 0.06 kL/day/toilet or urinal and a minimum of 0.4 kL/m²/ year for landscape watering (excluding turfed areas).
- vii. Allow for a 10% loss in rainwater tank size volume in MUSIC to that shown on the design plans. e.g. where a 50kL tank is modelled, construct a 55kL tank.
- viii. Ensure that the areas draining to surface inlet pits with OceanGuards match the engineering plans.
- ix. Ensure that Blacktown Council's specific MUSIC modes are used for the total development area draining to the devices.
- x. The minimum Stormfilter chamber area is to be No. of Cartridges x 0.177 m²/cartridge excluding the area of the weir.

- xi. Ocean Protect has advised that the maximum storage permitted below the Stormfilter weir to ensure effective operation of the filter cartridges is limited to an equivalent volume derived from 2.0 mm of rainfall (20 m³/Ha) without losses, falling over the site area that drains to the Stormfilter chamber (ignoring any bypass area).
4. Submit all models (i.e. MUSIC, DRAINS, TUFLOW) and OSD Deemed to Comply Tool spreadsheet electronically to Council.

2. Traffic issues

- a. We remain concerned that the provision of only 93 car parking spaces for the school with increased capacity for 1,820 students and 133 staff will be relying on on-street parking to meet the parking demand. Our Traffic Engineer has been consistently opposed to the development on this aspect of the proposal during our discussions with School Infrastructure NSW. Our view remains that the reduced car parking provision on the site will put additional pressures on the surrounding on-street parking as the school is isolated and is not frequently serviced by public transport.
- b. The Supplementary Transport Response dated 20 April 2022 has been reviewed by our Traffic Engineer, who notes that the Transport and Accessibility Impact Assessment has expected on-street parking usage to meet the shortfall in the staff parking.

In a worst-case scenario as described in the Transport and Accessibility Impact Assessment, 58 additional vehicles associated with the school will be parking on the nearby residential streets. This will impact the amenity of the residents of these nearby streets as school staff will try to park as close as possible to the school.

- c. We also note Transport for NSW's comments indicating that reduction in private vehicle usage is the aim of the project's transport strategy. However, Transport for NSW has not considered how this aim would be beneficial to the project. Mode - share split targets are by nature an estimate and a theoretical goal only which will need to be revised over time as the School Transport Plan is implemented and reviewed. The real impact of not providing required car park for staff will be felt by the community as we may never achieve reduction in private vehicle usage.

The above parking shortfall situation is further exacerbated as the Department of Education's policy is not to provide parking on site to anyone at any time, and this is particularly the case for students.

- d. For these reasons, the proposal will not be supported in its current form.