

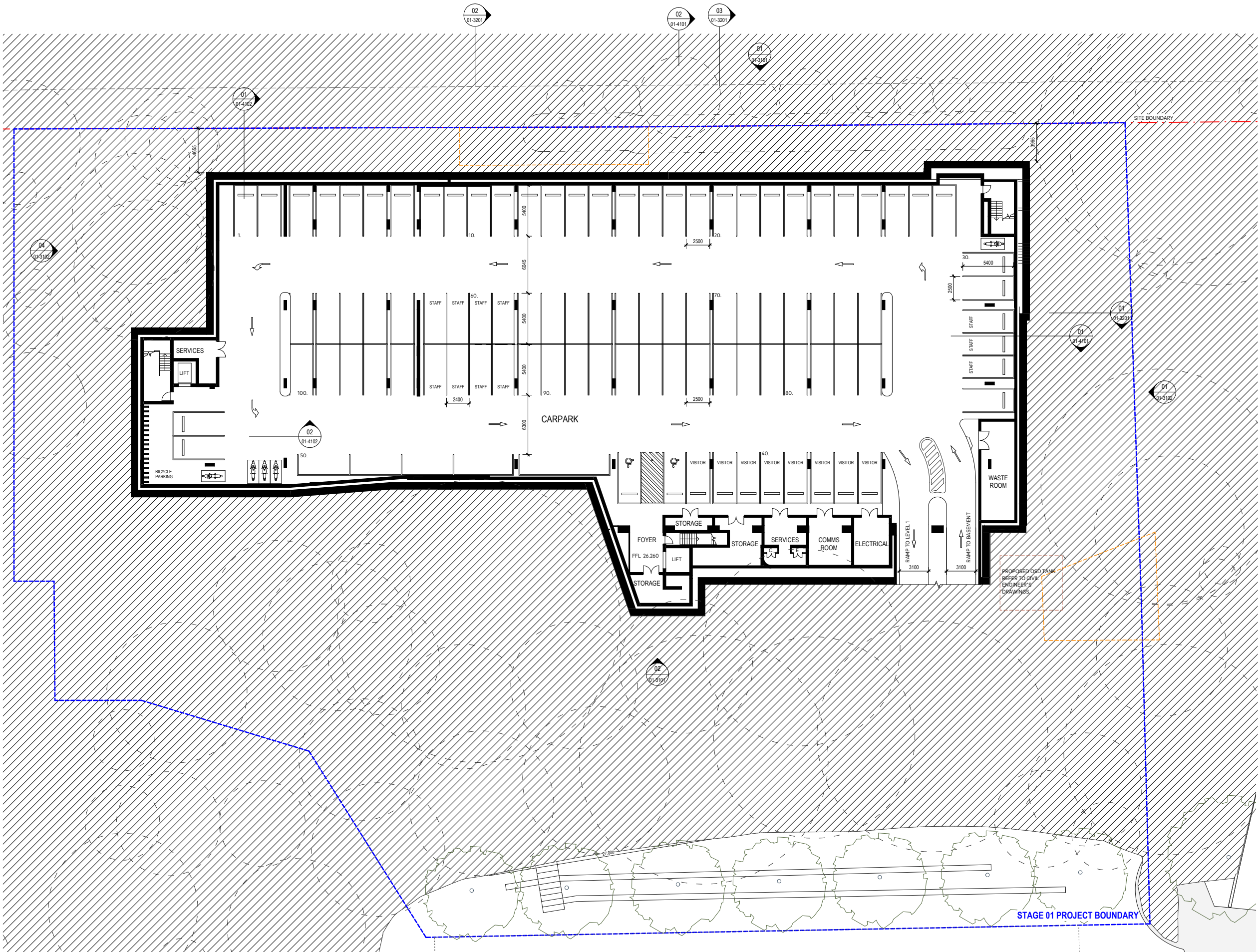
6.12 Floor Plans (Detailed Stage 1)

Basement Level

Providing parking for 100 cars and 4 motorbikes, the basement level is accessed from the south-eastern corner of the building via a ramp from the driveway at grade. To accommodate a pick-up/drop-off mode, the ramp is configured to avoid any cross-over between the cars entering and exiting the carpark to the one-way drive way.

The two separate lifts and stair cores serve the individual building wings above, with electrical and communication services rooms located centrally on the floorplate. Staff bicycle parking is located in the south-western corner, with a waste room located adjacent the ramp allowing bins to be collected near the carpark entry.

A number of storage rooms are also provided adjacent the central lift, allowing for easy access throughout the sports-court wing of the building.



6.12 Floor Plans (Detailed Stage 1)

Level 1

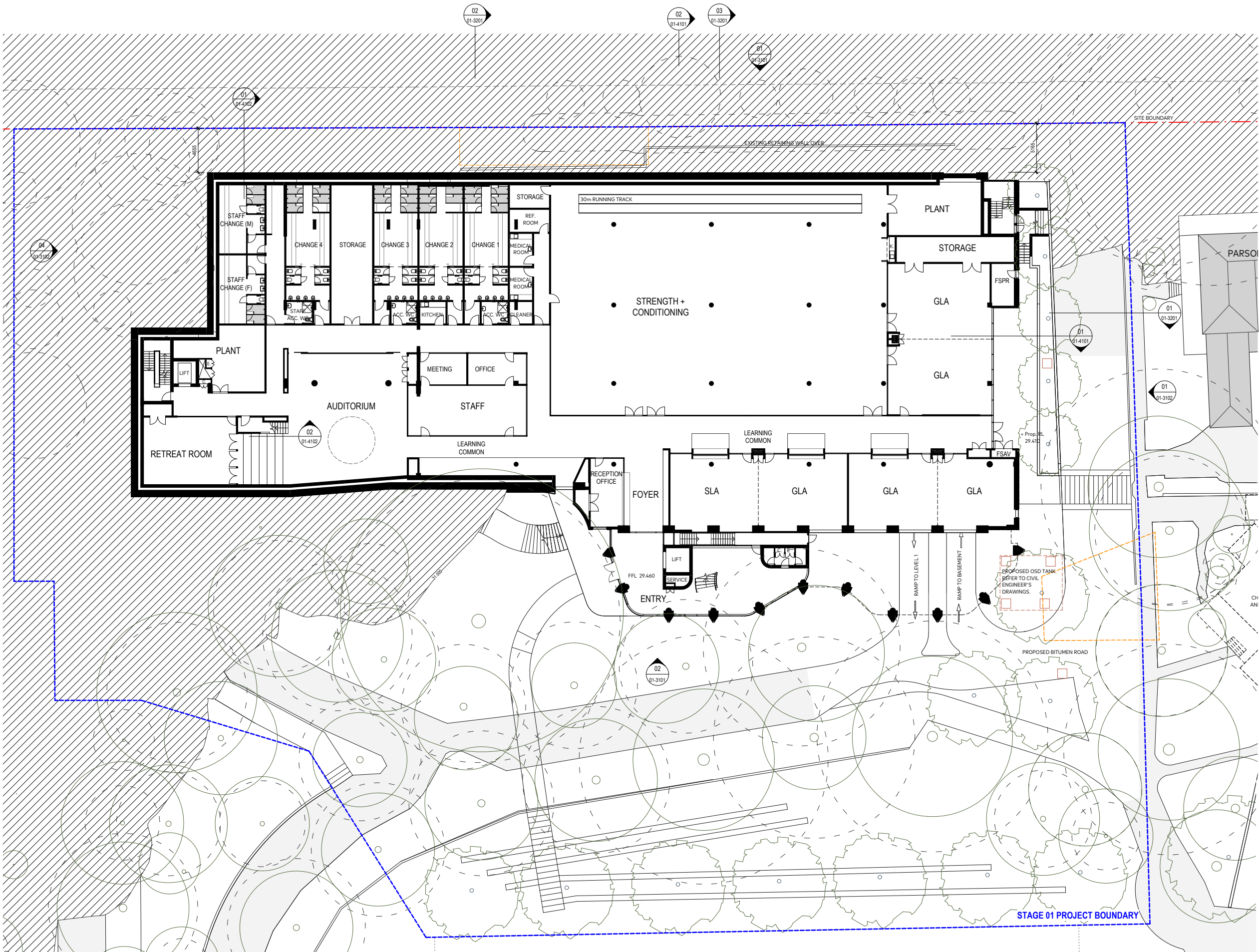
The first floor level serves as the lower entry into the building, predominately serving those that arrive from the Johnson Oval and Parsonage side of the campus. The entry space is generous and contains the primary circulation stair that runs to the roof level, and the central lift. A foyer and reception is located with direct access to the entry space, and provides a secondary secure line to the college's spaces on this level.

Access to daylight predominately occurs on the eastern half of the floorplate, resulting in the general learning areas (GLAs) being located on this side of the building. The large Strength and Conditioning space has access to daylight through high level windows on the north side as well as views through the GLAs to the landscape beyond.

The highly flexible strength and conditioning space is capable of housing a 30m running track and the strength and conditioning equipment required for the college's sporting programs. The space will be highly visible throughout the Level 1 floorplate on account of glazed corridor lines, and there is the ability to visually screen areas where required. Two interconnected GLAs are provided to the east of the strength and conditioning space, functioning as standard GLAs or opened up to provide a larger flexible space that connects strength and conditioning with the outside.

Six change rooms, all with locker space, have been designed, four of which are designated for student use (male and female designated, and home and away on sporting days), the remaining two change rooms are designated for staff use on the western edge of the floorplate. Medical rooms (male and female) and a referee room is provided centrally, with a glazed central staff area area, meeting room and office providing visibility for staff to all areas of the floorplate.

The south-west corner supports the retreat room with a skylight bringing in daylight, while the auditorium space sits below the oculus skylight and connects the floorplate back into the pavilion wing above



6.12 Floor Plans (Detailed Stage 1)

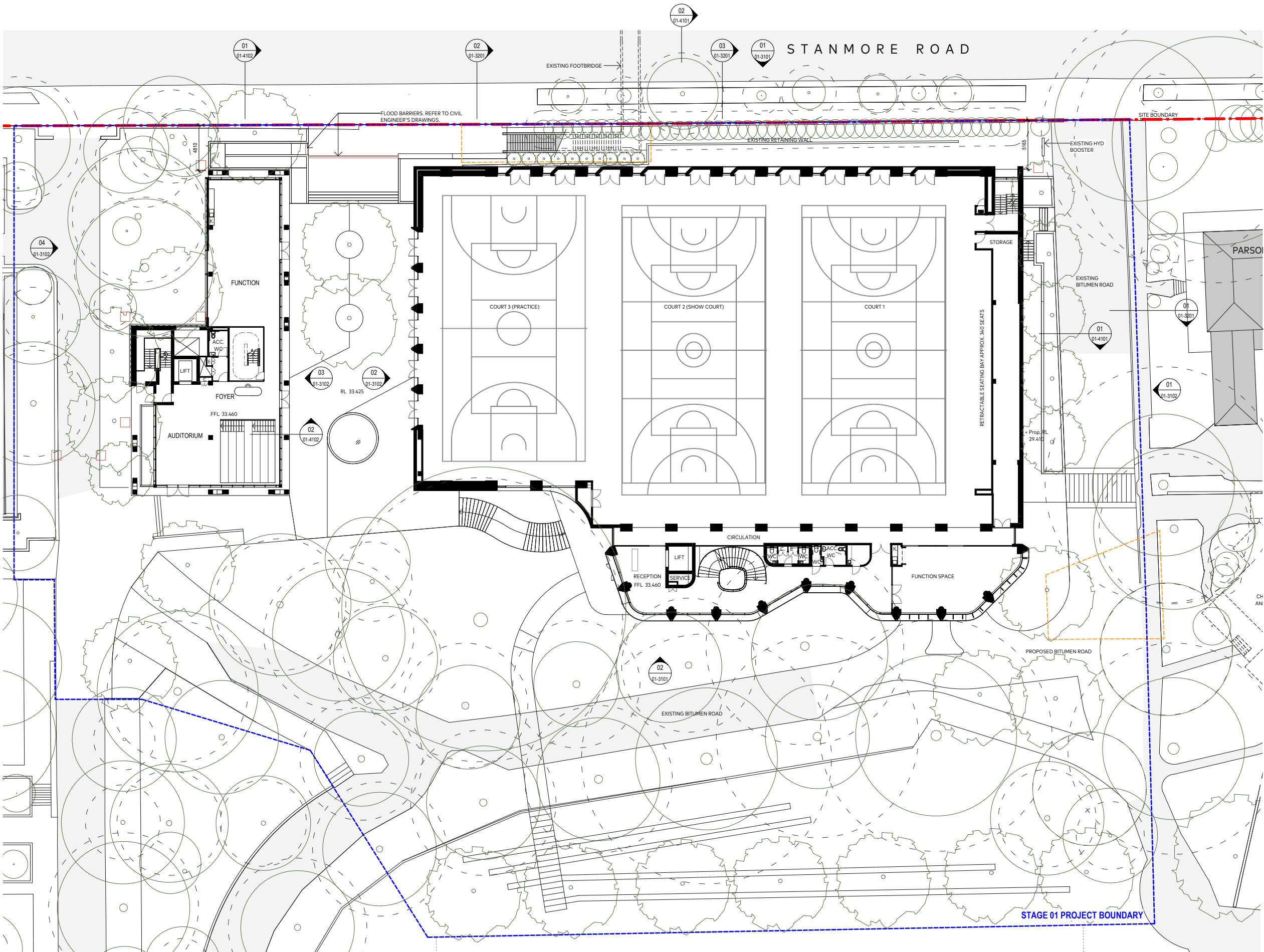
Level 2 (Forecourt Level)

Directly opposite the pedestrian crossing, the forecourt connects the Sevington Building to the Stanmore Road entrance. To the west of the forecourt lies the Pavilion wing, to the east lies the Sevington Hall wing.

With access directly from the forecourt, the Hall wing provides space for three large courts or a variety of smaller courts (refer the section on Sports Court Flexibility within this document), storage along the north wall (within the substantial depth of the columns), storage along the east wall and a function room in the south-eastern corner overlooking the college's ovals. A bank of retractable seating is located on the east of the space. The southern 'verandah' space contains the toilets for the sports hall, services spaces, the lift, foyer space and the sculptural circulation stair. Access to Level 1 is also provided via an external stair located on the south-eastern corner of the forecourt. A glazed fire stair is located on the north-eastern corner of the hall, providing a visual connection with Stanmore Road, and linking the court level with the mezzanine seating above.

The Pavilion wing is predominately glazed at this level, creating a strong visual connection with the forecourt, and allowing this space to be a continuation of the civic facing nature of the forecourt itself. A flexible function space is located in the northern half of this wing, while the southern half contains a communication stair, fire stair, lift and toilets, alongside the auditorium space linking this level to Level 1.

To the south of the building, the forecourt connects to the Memorial Drive landscaping, and the campus beyond.

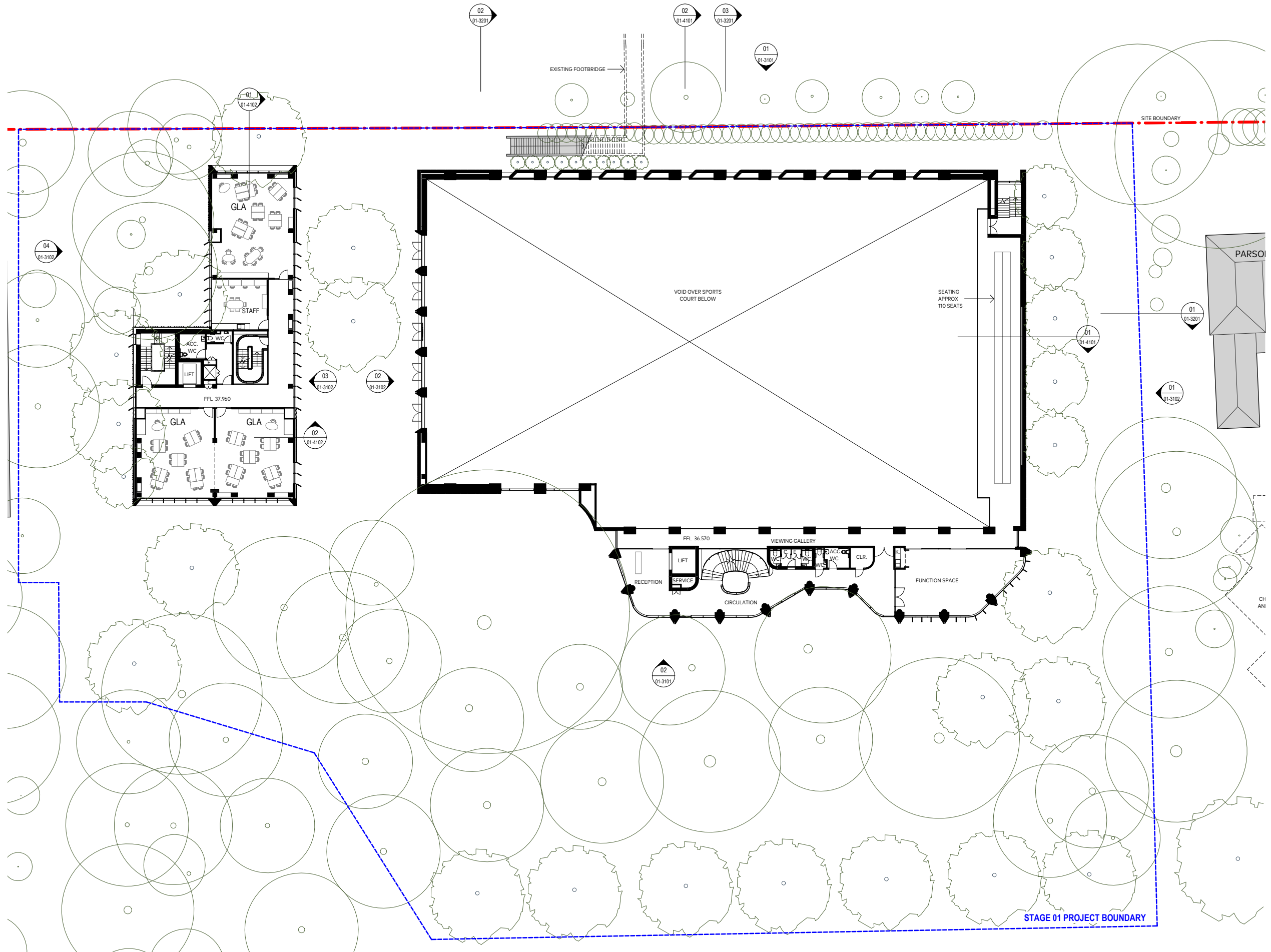


6.12 Floor Plans (Detailed Stage 1)

Level 3 (Mezzanine Level)

In the sports hall wing, the southern Verandah space is replicated from below, with another Function Room to the east looking out across the ovals. The circulation space has been designed to provide standing and/or seating opportunities overlooking the court. To the east of the upper level of the sports hall, the mezzanine is provided with tiered seating providing views across the long side of the courts,

The Pavilion wing is designed to provide future flexibility in its layout, but planned with three GLAs and a staff space at this level. The circulation stair allows for visual interconnectivity between the north and south sides of this wing and, like the sports hall wing, views are provided through to the tree canopies adjacent.

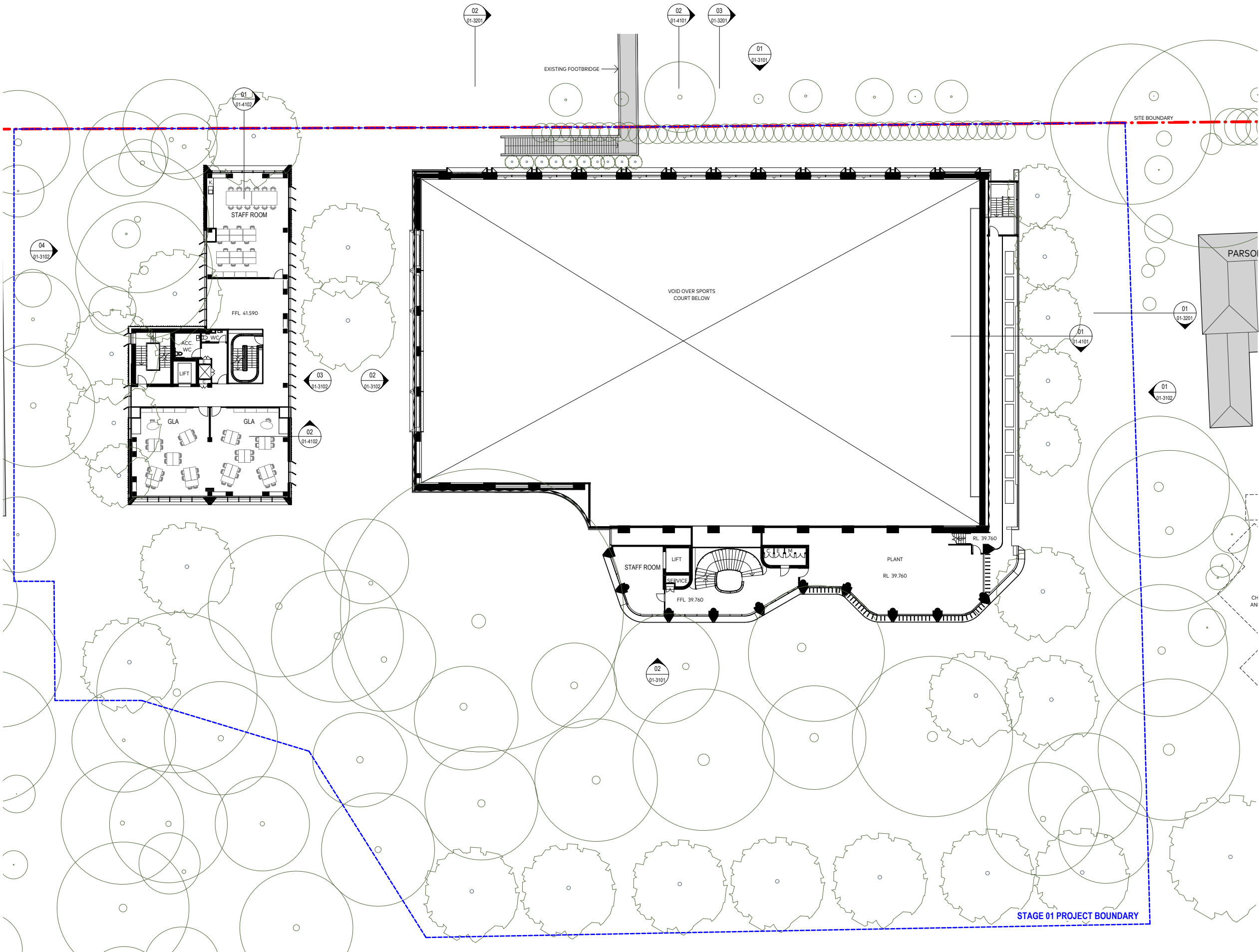


6.12 Floor Plans (Detailed Stage 1)

Level 4

In the sports hall wing, the southern Verandah space is utilised as a plant room to the east and staff room to the west, noting that the building mass steps back from the east at this level to address to residential scale of The Parsonage. The sculptural circulation stair continues up through this level and provides for views through the structural beams of the sports hall.

The Pavilion wing is designed to provide future flexibility in its layout, but planned with three GLAs and a learning common space at this level. The circulation stair allows for visual interconnectivity between the north and south sides of this wing and, like the sports hall wing, views are provided through to the tree canopies adjacent.

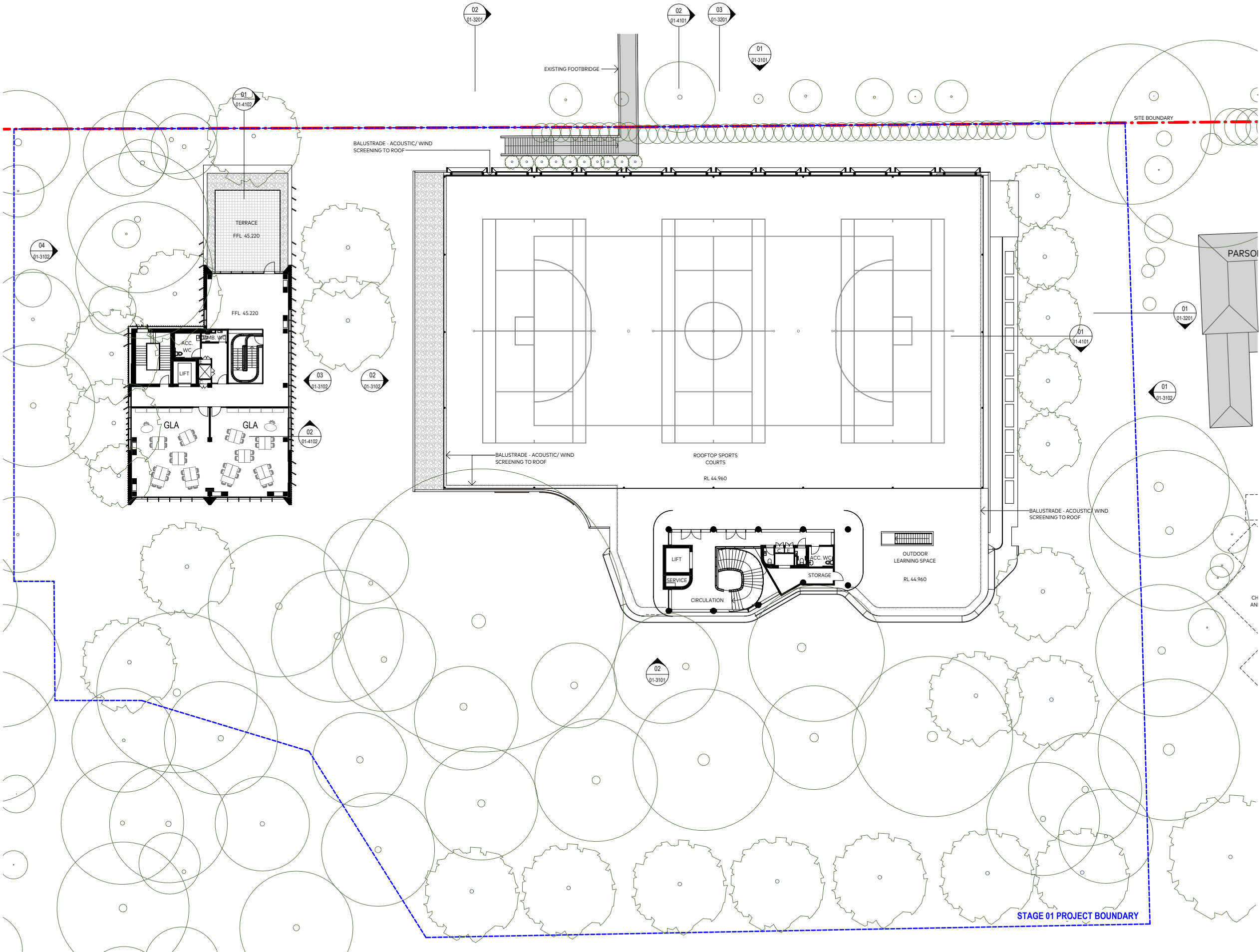


6.12 Floor Plans (Detailed Stage 1)

Level 5

The Pavilion wing is designed to provide future flexibility in its layout, but planned with two GLAs and a staff space at this level. The circulation stair allows for visual interconnectivity between the north and south sides of this wing and, like the sports hall wing, views are provided through to the tree canopies adjacent. A roof terrace is provided (likely for staff use) on the north end of the building.

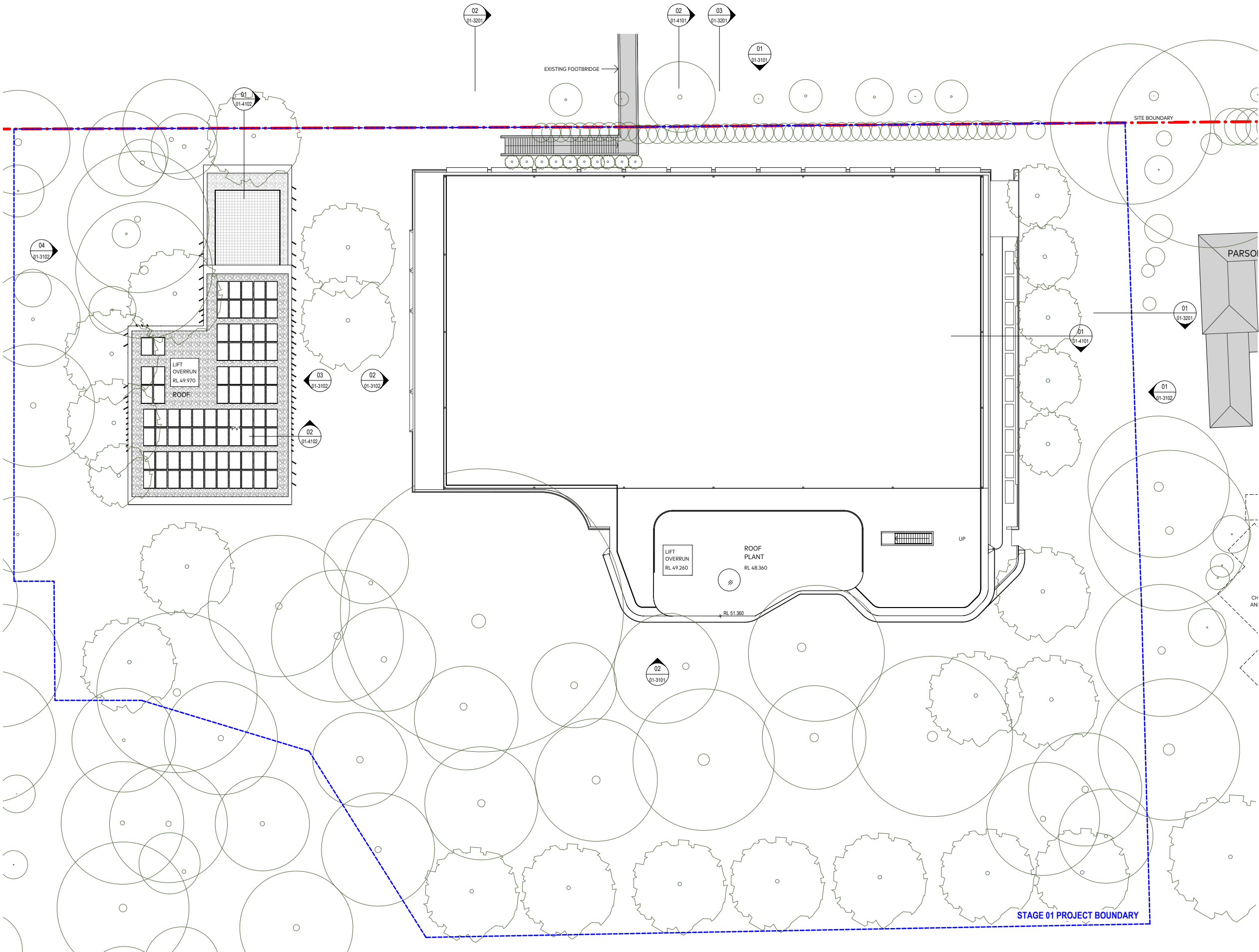
Level 5 is the roof level of the sports-hall wing, and provides for a number of outdoor sports courts over the sports-hall. The sculptural circulation stair terminates at this level, as does the lift. Outdoor learning spaces are provided on the south side of the roof top, alongside amenities and storage.



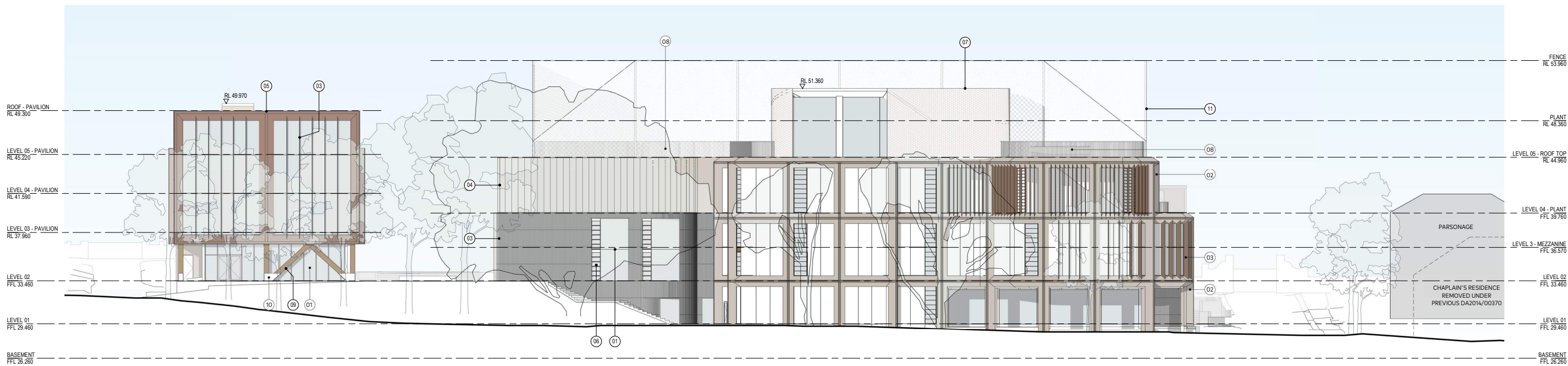
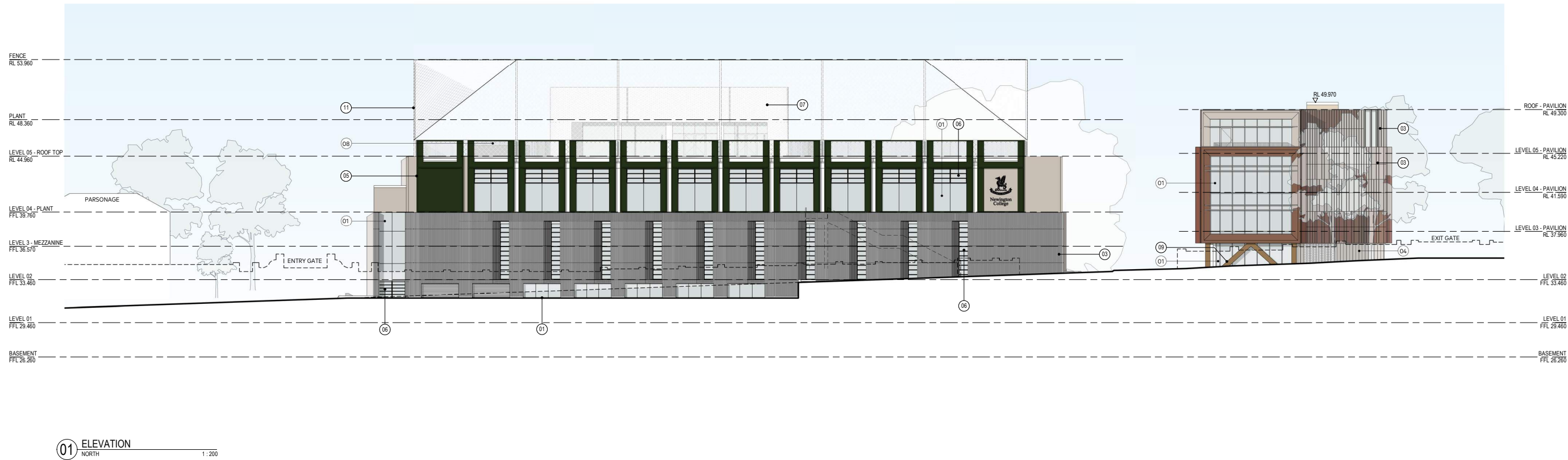
6.12 Floor Plans (Detailed Stage 1)

Level 6 (Rooftop)

A flat roof over the Pavilion wing accommodates a solar array, while the rooftop of the sports-court wing is confined to the space above the core on the southern side of the building. This space is screened and used as roof-top plant space.



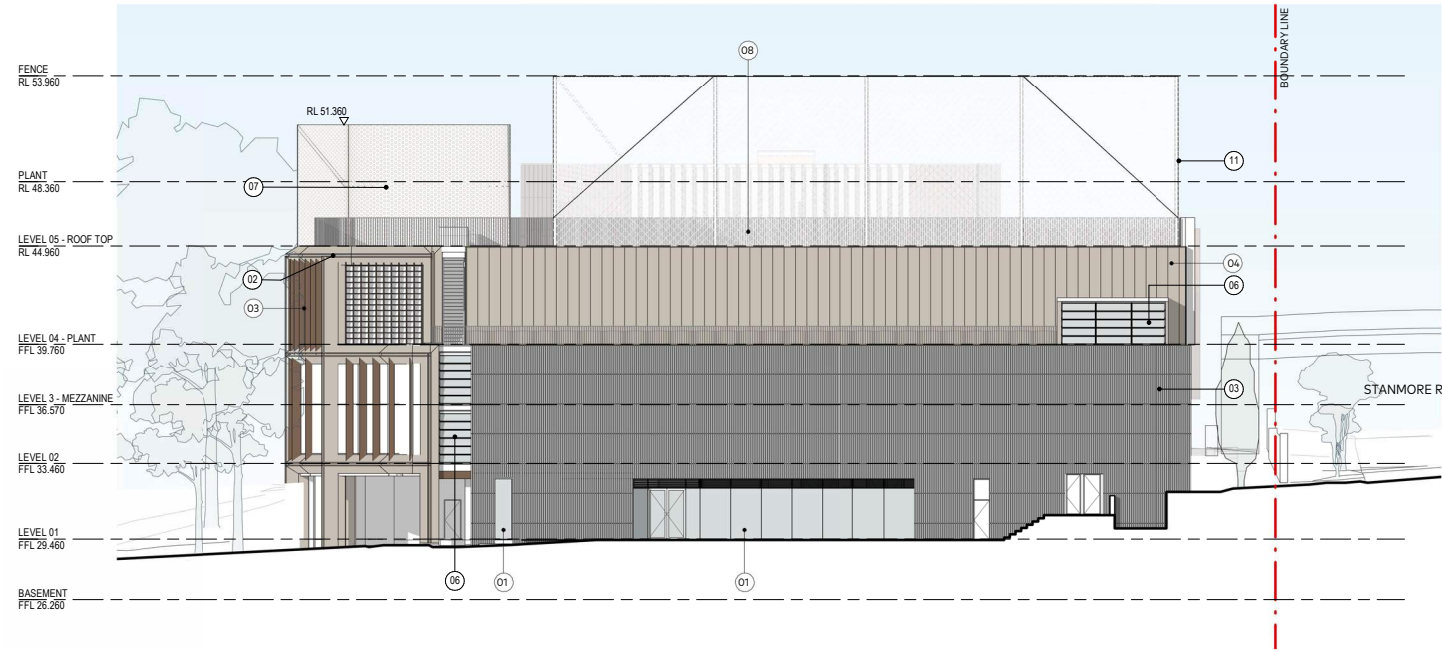
6.13 Elevation and Sections (Detailed Stage 1)



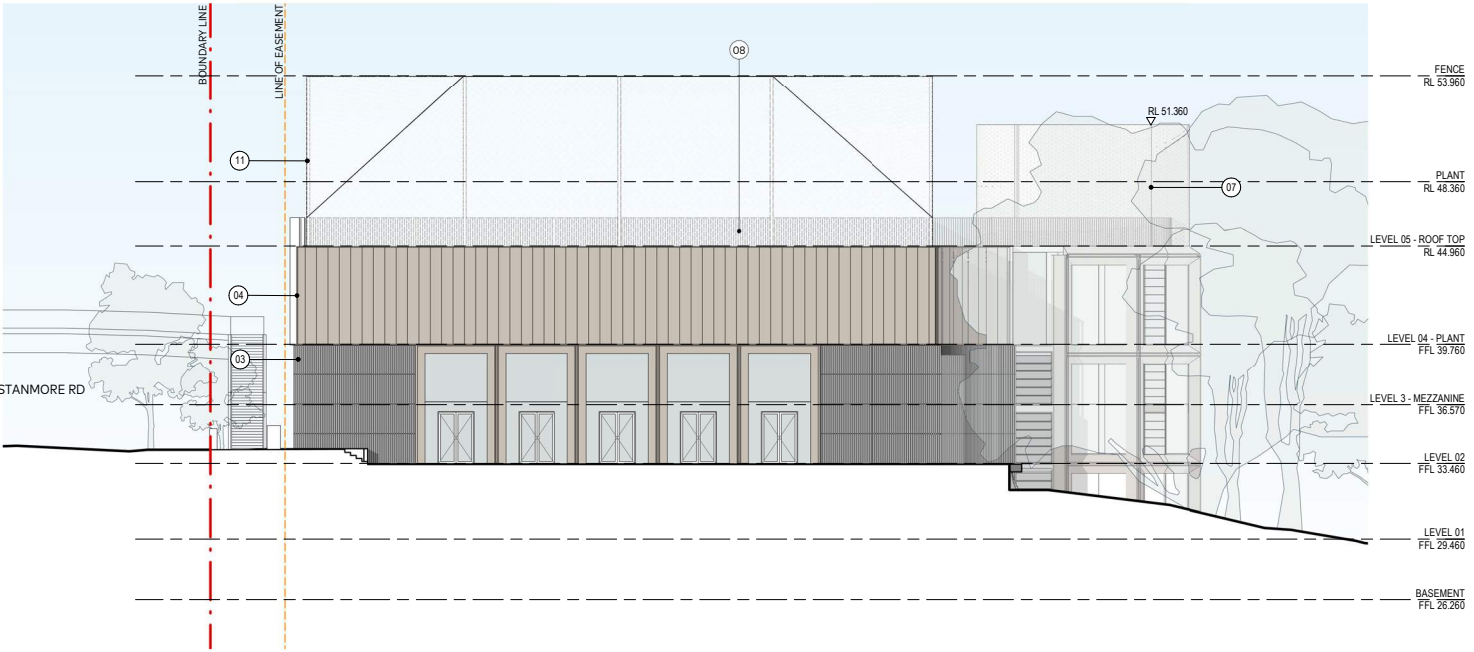
MATERIALS

- | | | | |
|----|---|----|--|
| 01 | FIXED DOUBLE GLAZING | 07 | PERFORATED STEEL MESH SCREENING |
| 02 | GLASS FIBRE REINFORCED CONCRETE (GFRC) CLADDING | 08 | FLAT STEEL BALUSTRADE WITH GLASS INFILL*
* to 1500mm high |
| 03 | TERRACOTTA CLADDING/LOUVRES | 09 | HARDWOOD TIMBER (CLEAR FINISH) OVER STRUCTURAL FRAME |
| 04 | PROFILED ALUMINIUM CLADDING POWDERCOAT FINISH | 10 | MOULDED OFF FORM CONCRETE TO BASE OF EXTERNAL COLUMNS |
| 05 | PROFILED FLAT STEEL CLADDING. POWDERCOAT FINISH | 11 | TENSILE MESH NETTING |
| 06 | GLAZED OPERABLE LOUVRES | | |

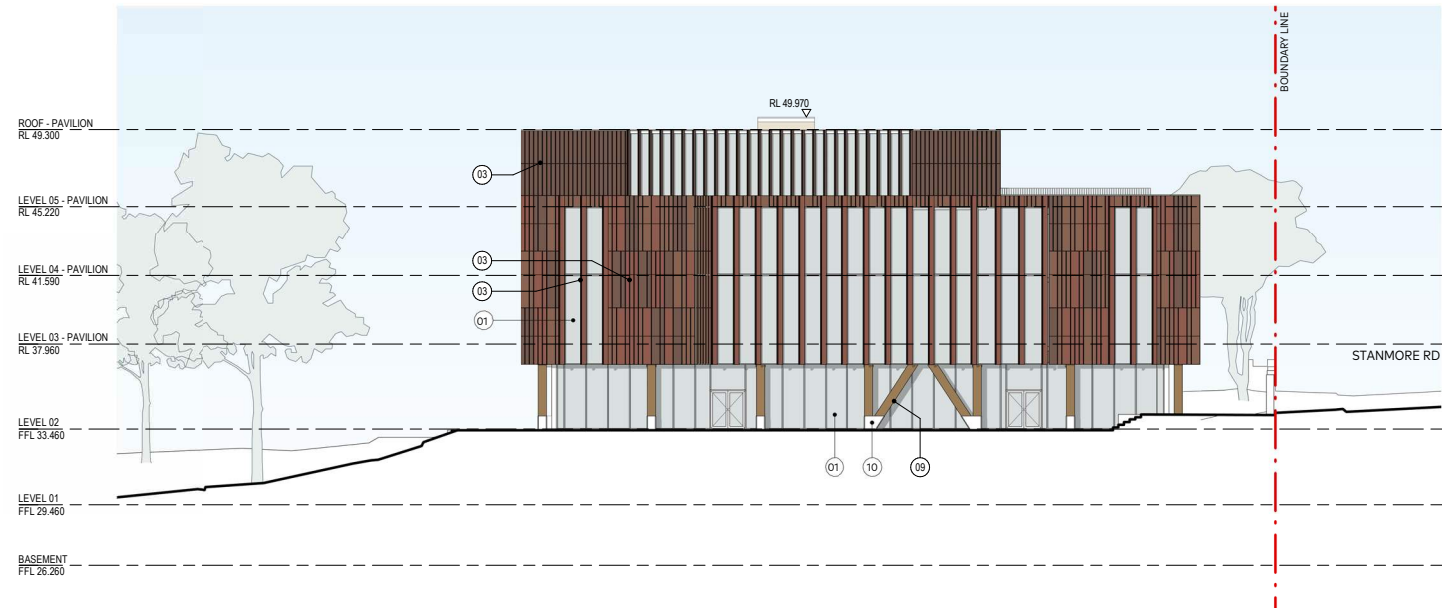
6.13 Elevation and Sections (Detailed Stage 1)



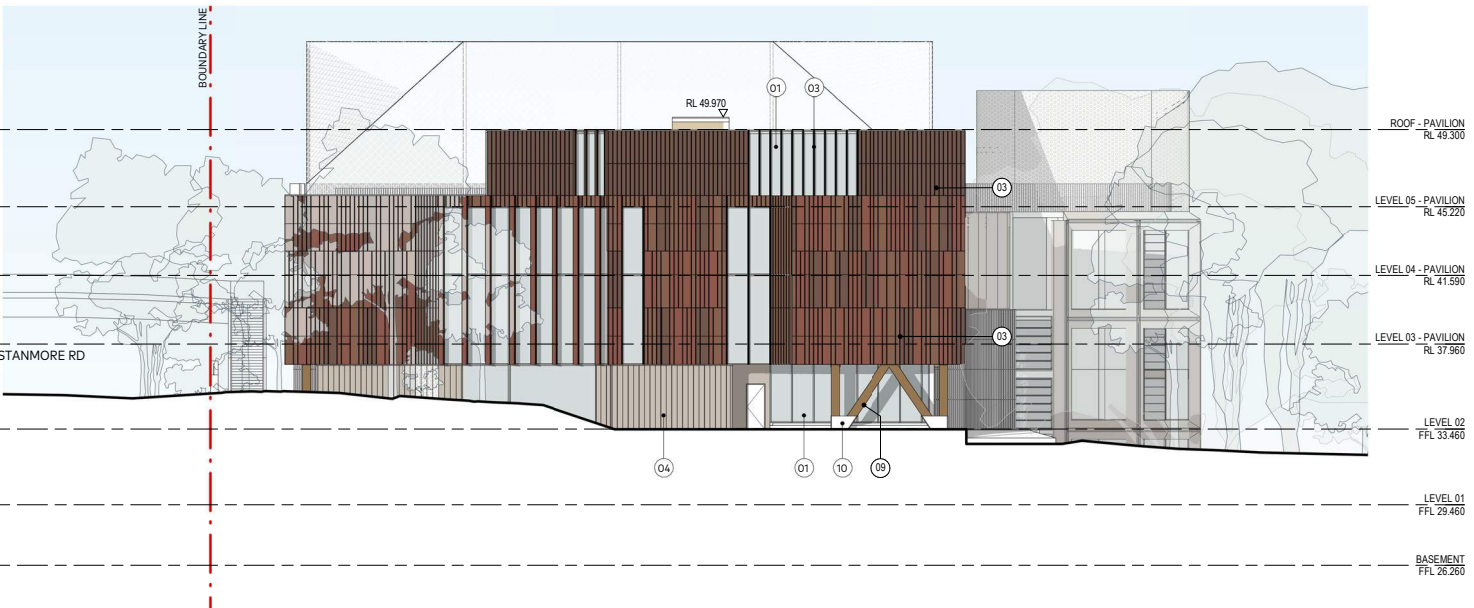
01 ELEVATION
EAST - SPORTS HALL
1:200



02 ELEVATION
WEST - SPORTS HALL
1:200



03 ELEVATION
EAST - PAVILION
1:200

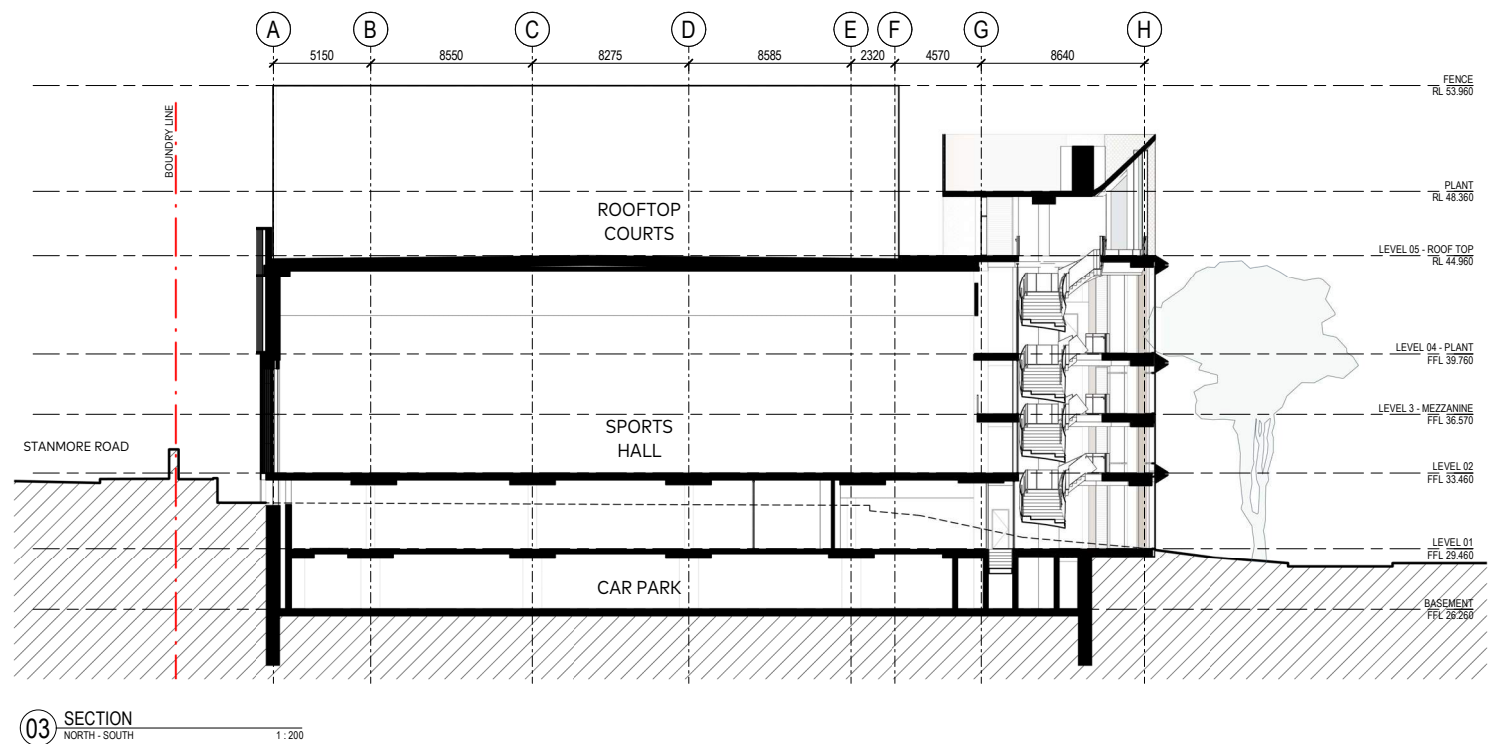
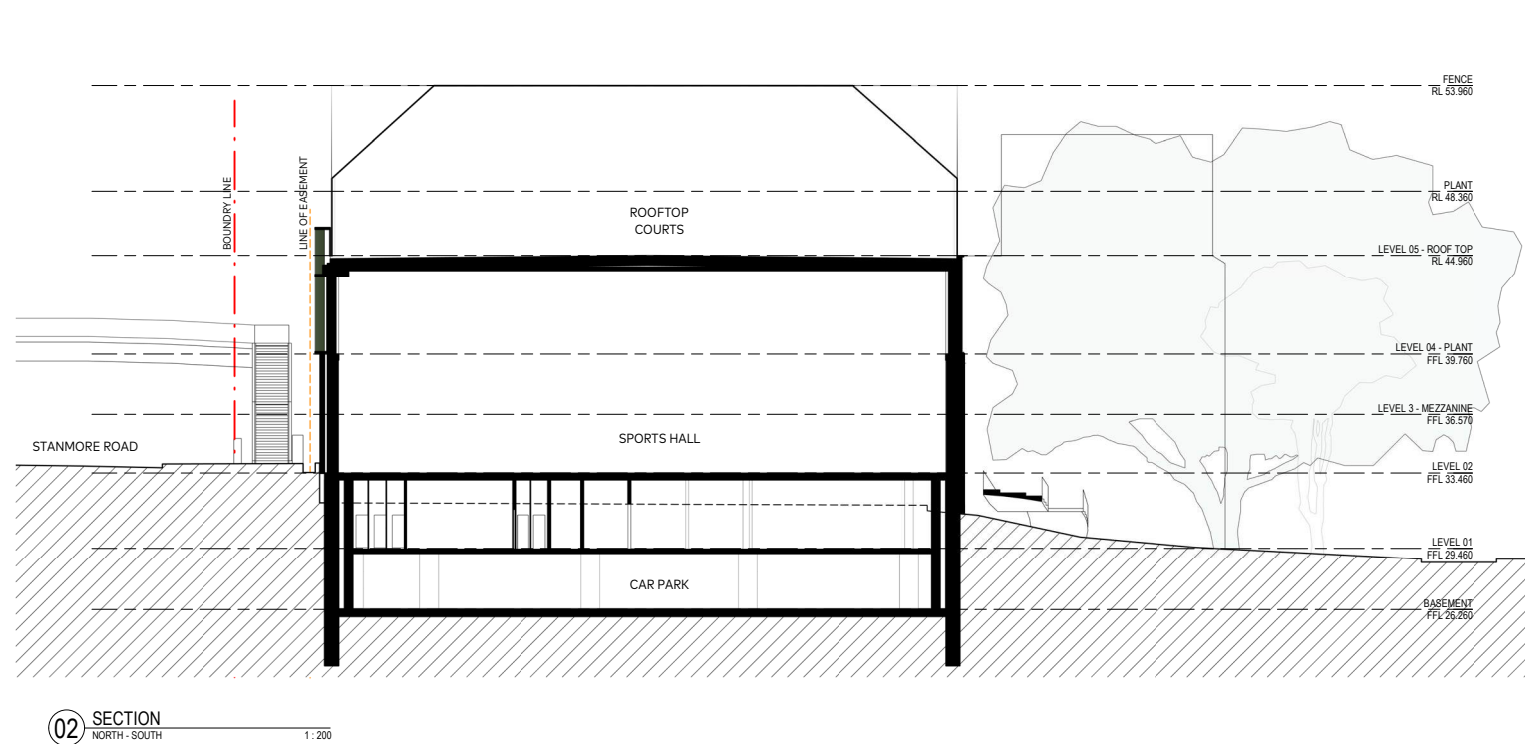
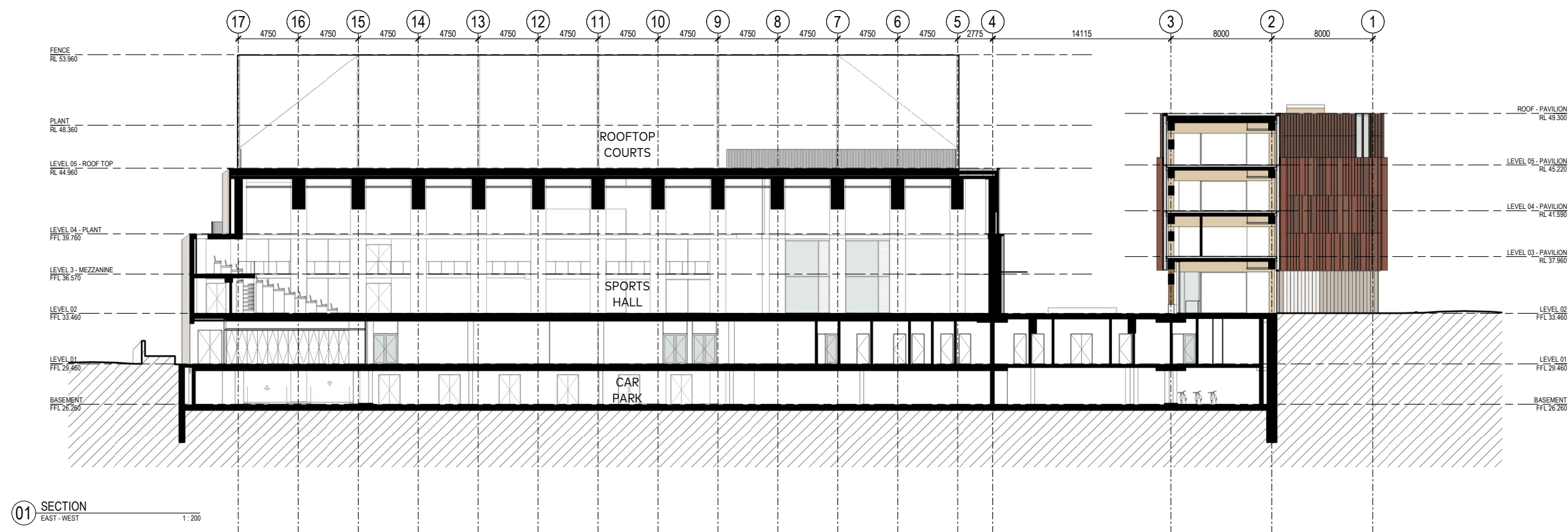


04 ELEVATION
WEST - PAVILION
1:200

MATERIALS

- | | | | |
|----|---|----|--|
| 01 | FIXED DOUBLE GLAZING | 07 | PERFORATED STEEL MESH SCREENING |
| 02 | GLASS FIBRE REINFORCED CONCRETE (GFRG) CLADDING | 08 | FLAT STEEL BALUSTRADE WITH GLASS INFILL*
* to 1500mm high |
| 03 | TERRACOTTA CLADDING/LOUVRES | 09 | HARDWOOD TIMBER (CLEAR FINISH) OVER STRUCTURAL FRAME |
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| 05 | PROFILED FLAT STEEL CLADDING. POWDERCOAT FINISH | 11 | TENSILE MESH NETTING |
| 06 | GLAZED OPERABLE LOUVRES | | |

6.13 Elevation and Sections (Detailed Stage 1)

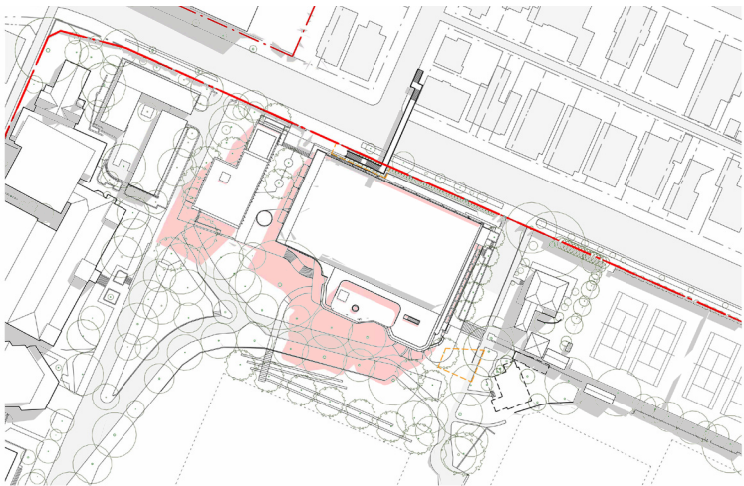


6.14 Sevington: Shadow Studies

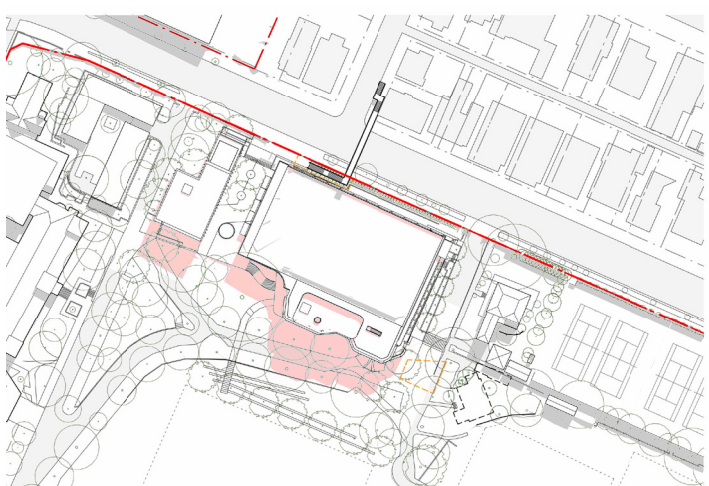
Shadowing from the proposed buildings at Sevington and College Lane happen mostly over the existing Newington College site. Concordia shadows onto Stanmore Road will increase slightly.



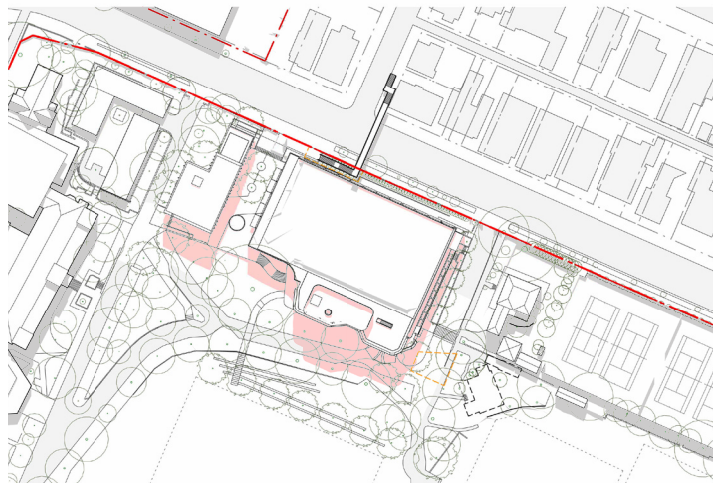
1. Equinox 9am



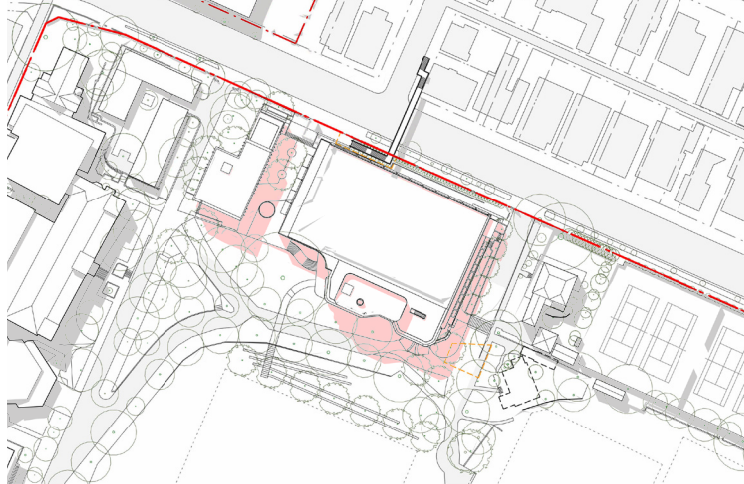
2. Equinox 10am



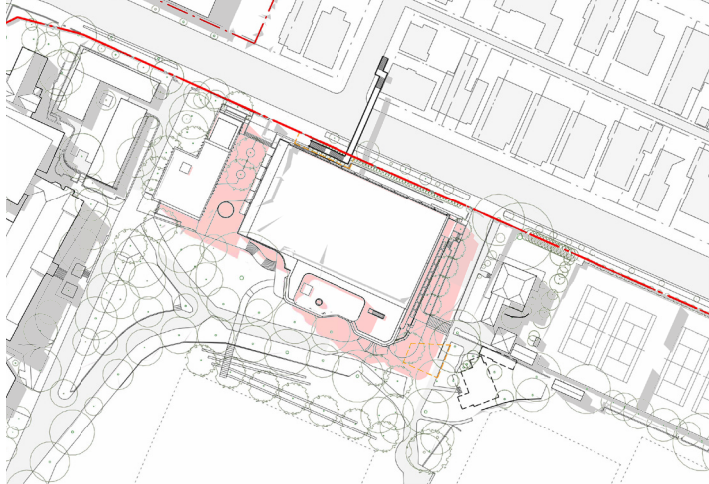
3. Equinox 11am



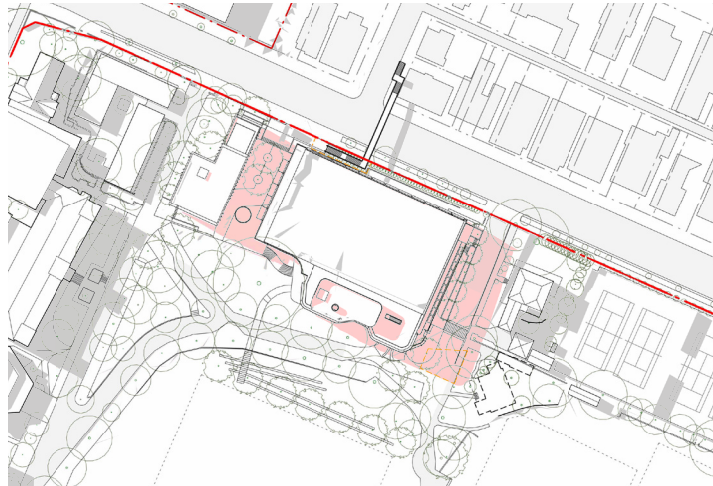
4. Equinox 12pm



5. Equinox 1pm



6. Equinox 2pm



7. Equinox 3pm

Existing Shadows
Proposed Shadows

6.14 Sevington: Shadow Studies

Shadowing from the proposed buildings at Sevington and College Lane happen mostly over the existing Newington College site. Concordia shadows onto Stanmore Road will increase slightly.



1. Winter Solstice 9am



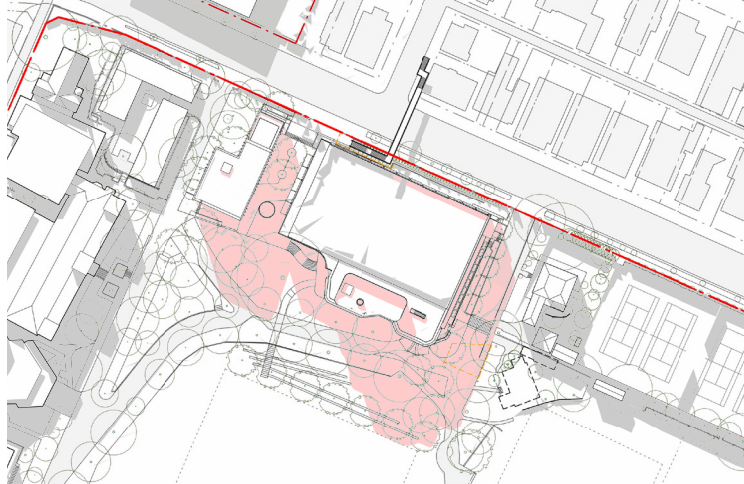
2. Winter Solstice 10am



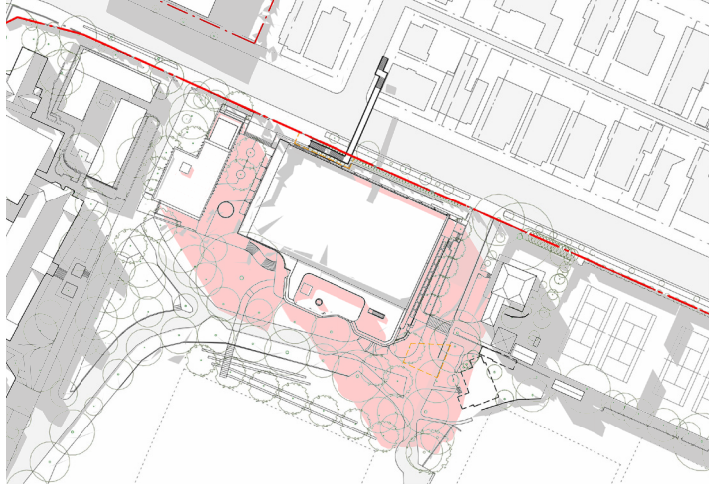
3. Winter Solstice 11am



4. Winter Solstice 12pm



5. Winter Solstice 1pm



6. Winter Solstice 2pm

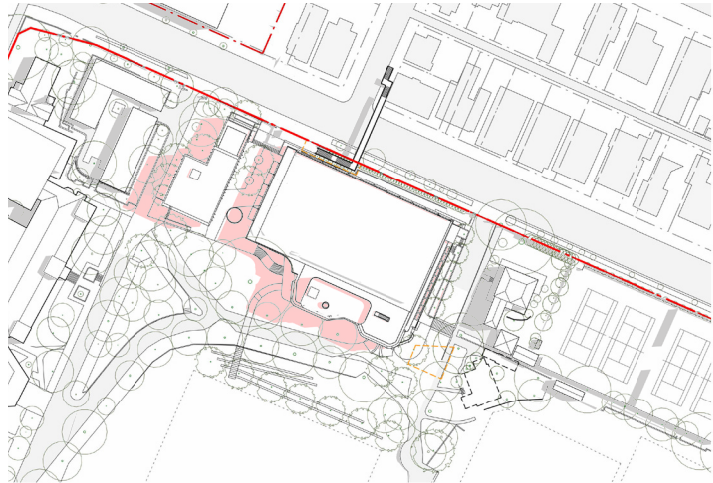


7. Winter Solstice 3pm

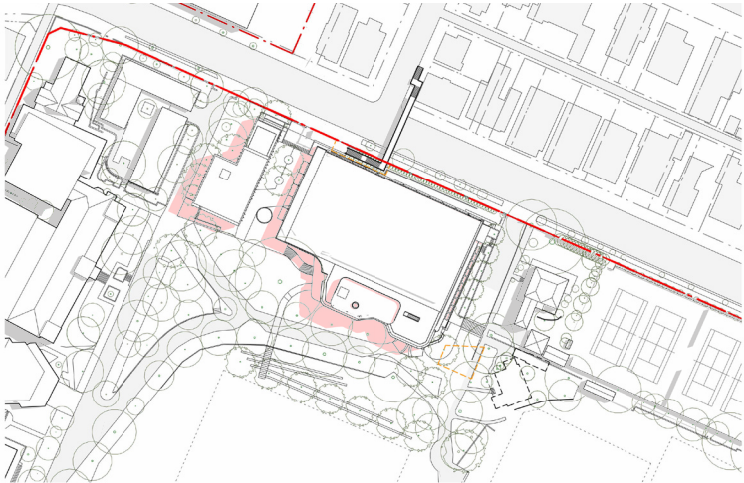
Existing Shadows
Proposed Shadows

6.14 Sevington: Shadow Studies

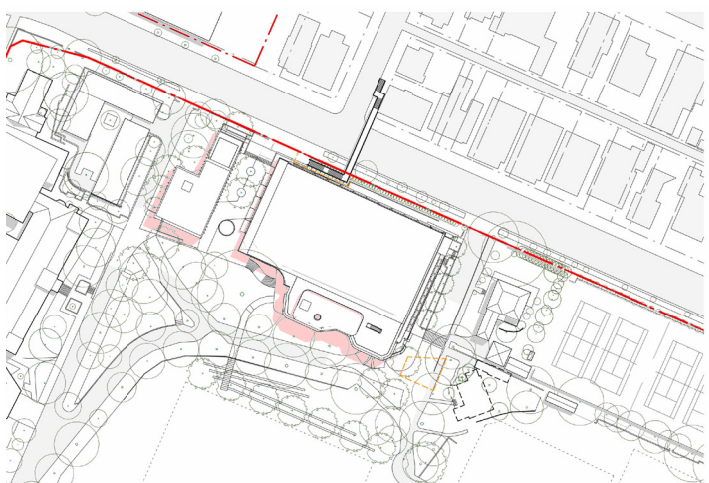
Shadowing from the proposed buildings at Sevington and College Lane happen mostly over the existing Newington College site. Concordia shadows onto Stanmore Road will increase slightly.



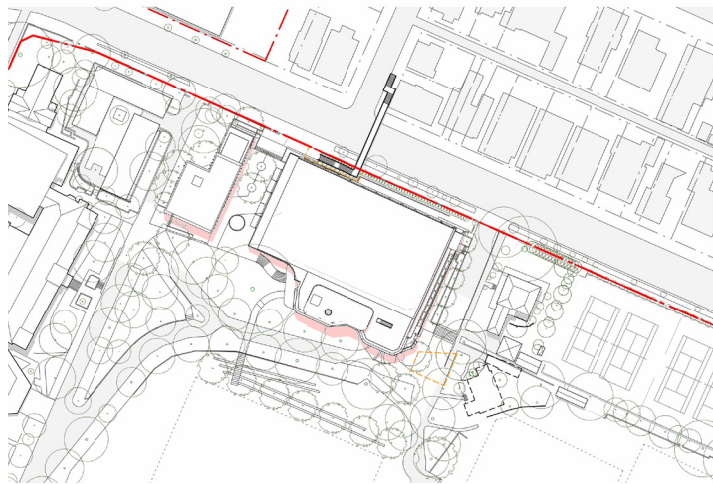
1. Summer Solstice 9am



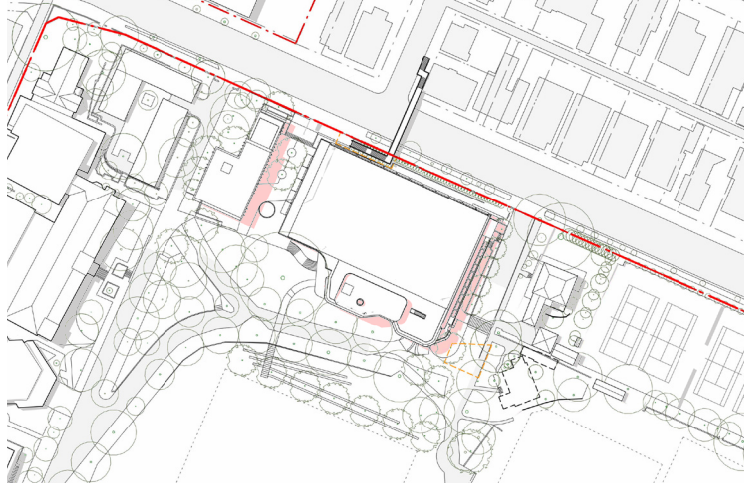
2. Summer Solstice 10am



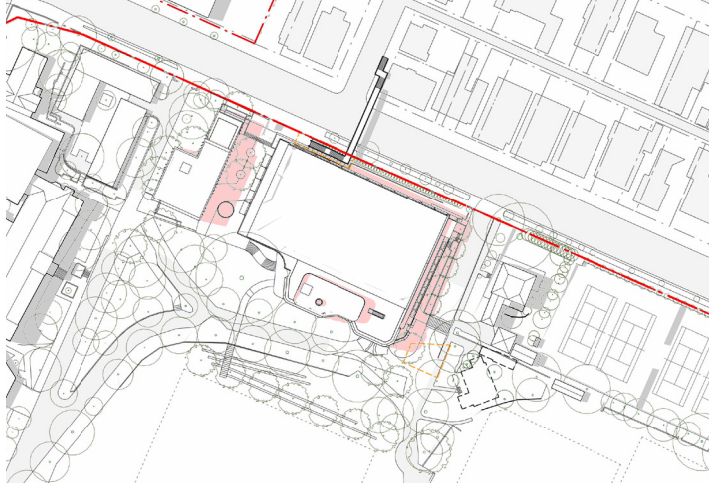
3. Summer Solstice 11am



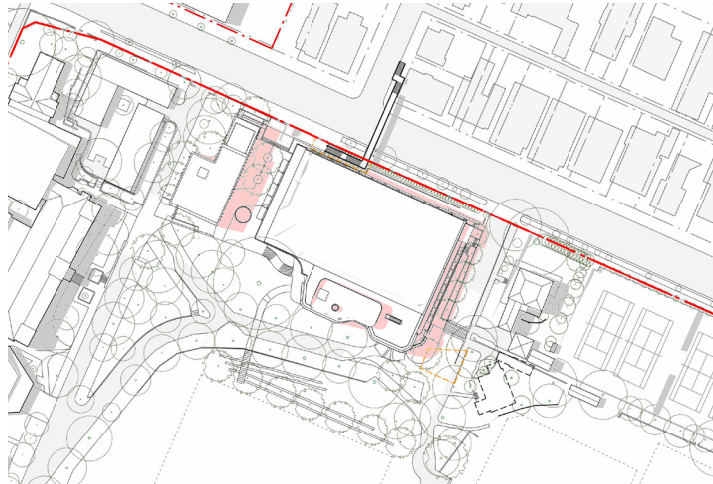
4. Summer Solstice 12pm



5. Summer Solstice 1pm



6. Summer Solstice 2pm



7. Summer Solstice 3pm

Existing Shadows
Proposed Shadows

6.15 Stanmore Road: Stage 1 Street Level Views



Existing Stanmore Road - Western approach



Proposed Stanmore Road - Western approach



Existing Stanmore Road - Eastern approach



Proposed Stanmore Road - Eastern approach

6.16 CPTED Principles

CPTED Principles for Concept Proposal and Stage 1



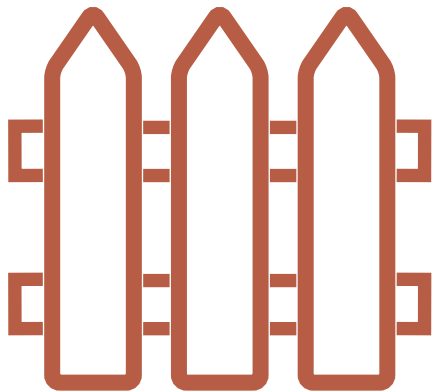
Surveillance

On the Sevington site for Stage 1, extensive glazing on the forecourt level, glazed vertical slots overlooking Stanmore Road, extensive glazing on the south for both the sports-hall wing and pavilion, glazing from the GLAs and corridor on the eastern facade and the glazed facades on the north of the pavilion all help to provide passive surveillance on this area of the site.



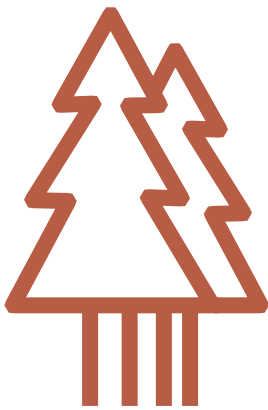
Lighting Technical Supervision

Extensive glazing on ground level and lower levels allows for lighting overspill to public realm adjacent, while lighting will be provided in entrance forecourts. Lighting to the pedestrian bridge and its stair and lift arrangement will be developed during the detailed design phase for this stage.



Territorial Reinforcement

The campus is generally left open during extended school hours. Existing fencing is to remain (generally mid-height sandstone with pilasters), and existing gates are to remain. The forecourt entrance at Sevington is modified to provide a wider opening in the fence, and a retractable gate is employed to close off this entrance after-hours. Fencing and gates will be designed in the detailed stage for the south side of the pedestrian bridge lift and stair access, noting that the lifts and stair that serve the bridge remain open to the public.



Environmental Maintenance

Newington College has an extensive landscaping component on the site. Sight lines are carefully managed, with Memorial Drive kept free of plantings through its centre, allowing for an unobstructed site-line from Stanmore Road to the southern end of the campus. The plantings in the Sevington forecourt are selected for their high-canopies, allowing views through at ground level



Activity & Space Management

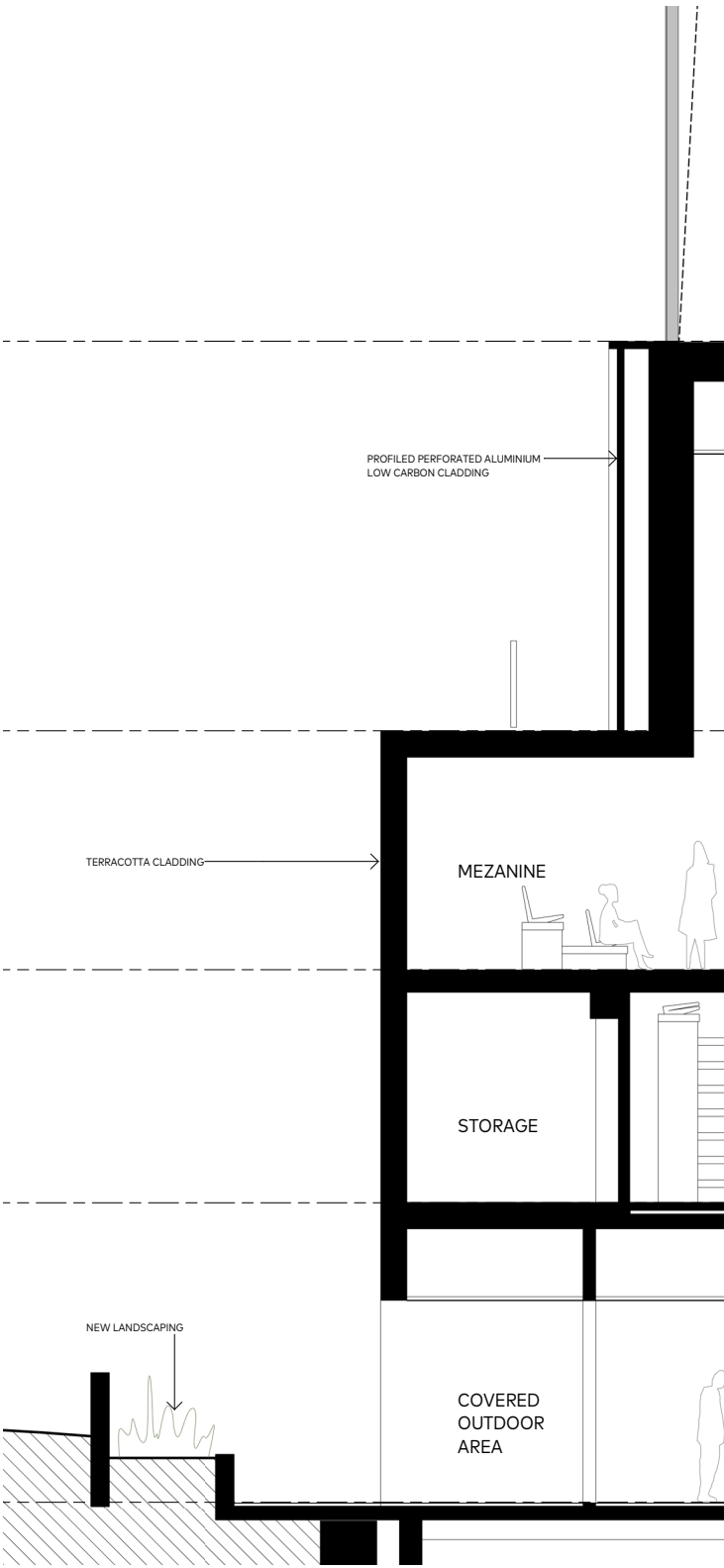
As part of an occupied, functioning educational facility, the grounds will be both well maintained and often activated by student use. Student activity is further enhanced at the Sevington end of the site, bringing more activity and passive surveillance to this area of the campus, including after hours which is expected to improve the perception of safety along this stretch of Stanmore Road.



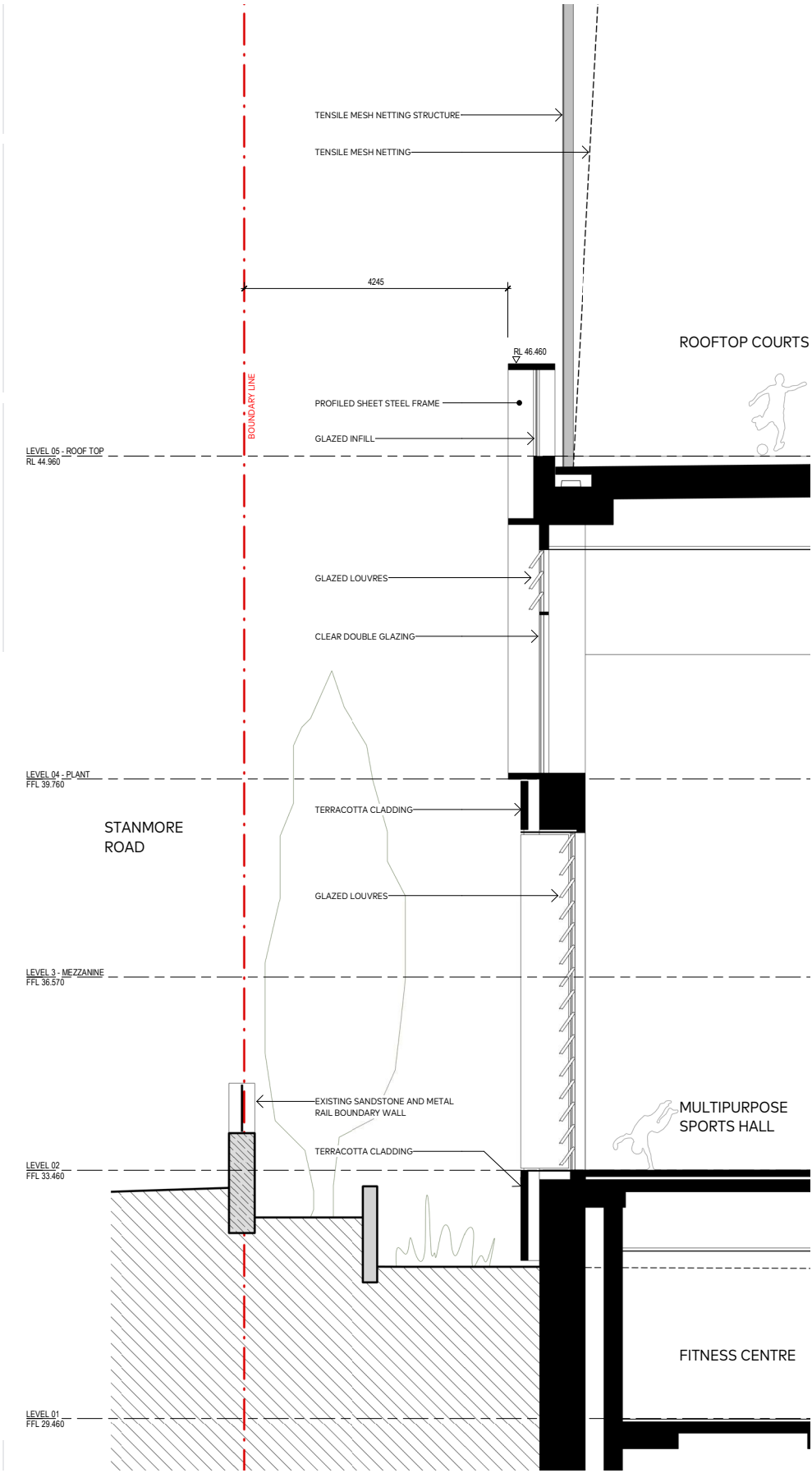
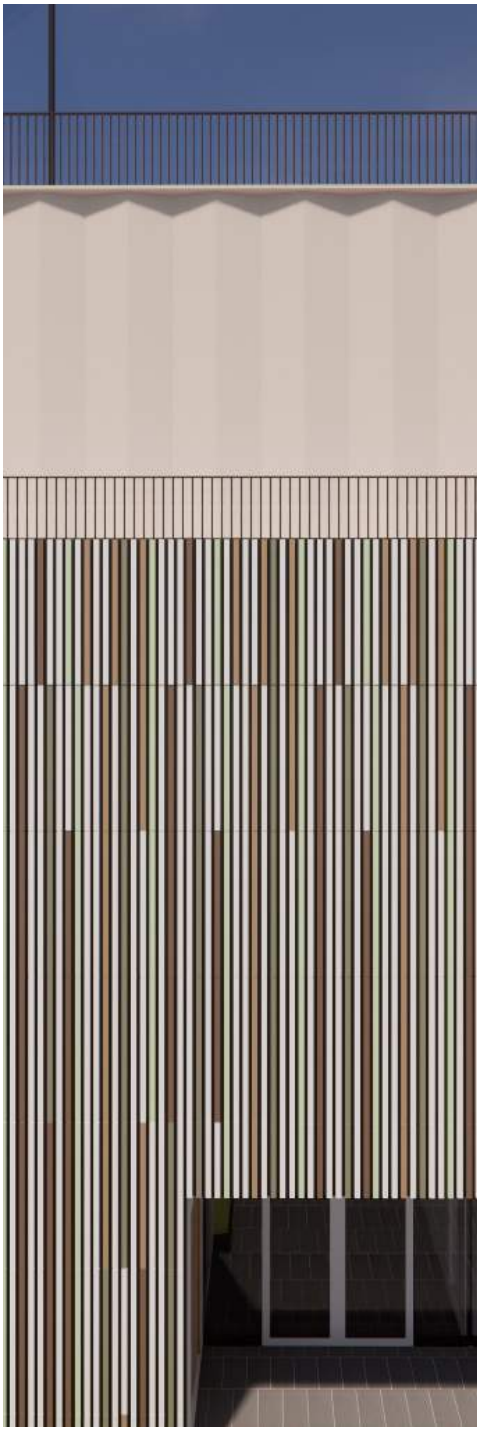
Access Control

Access control is necessary for the entrance forecourt outside of school open and closing times, the fence and new and existing gates will be the primary method of access control along the Stanmore Road edge.

6.17 Detailed Facade Sections



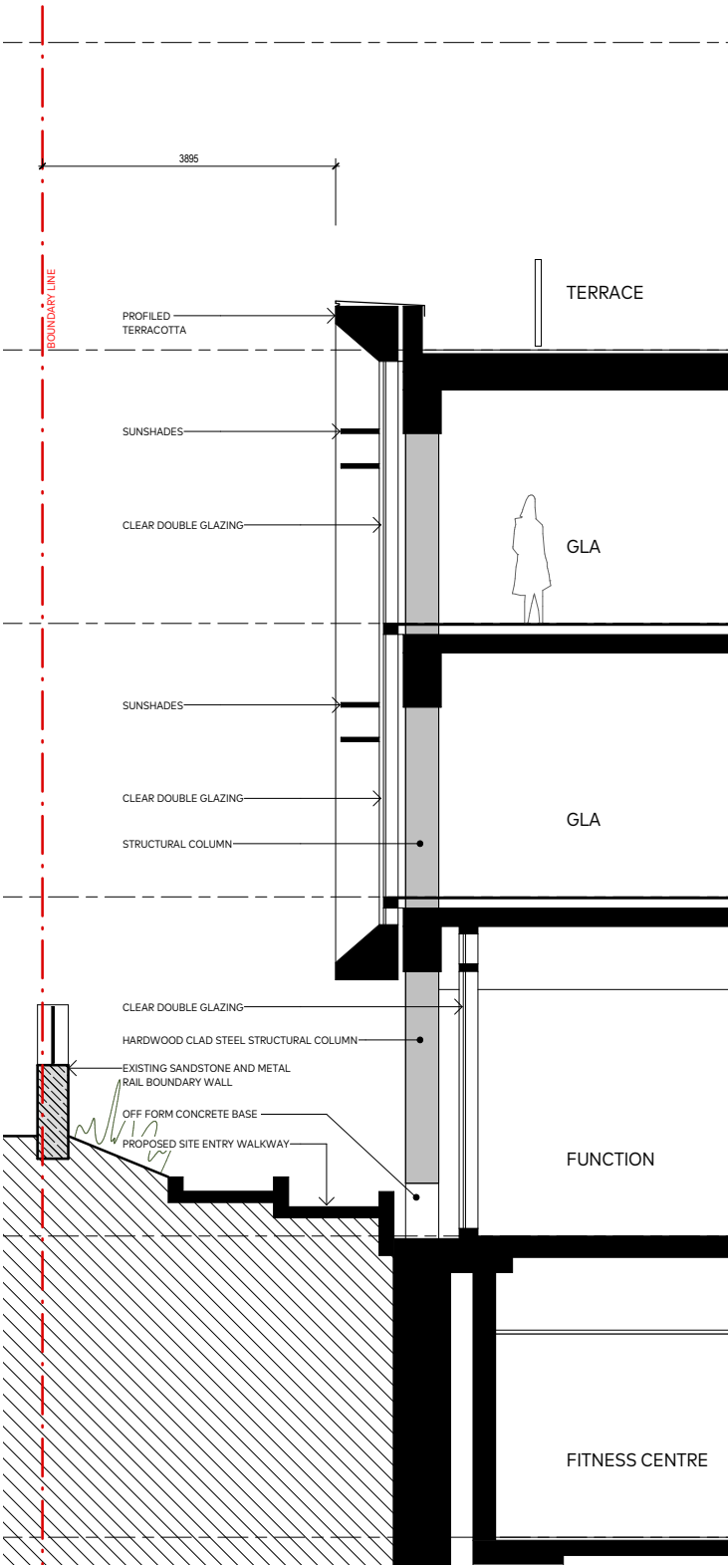
North Facade - Stanmore Road



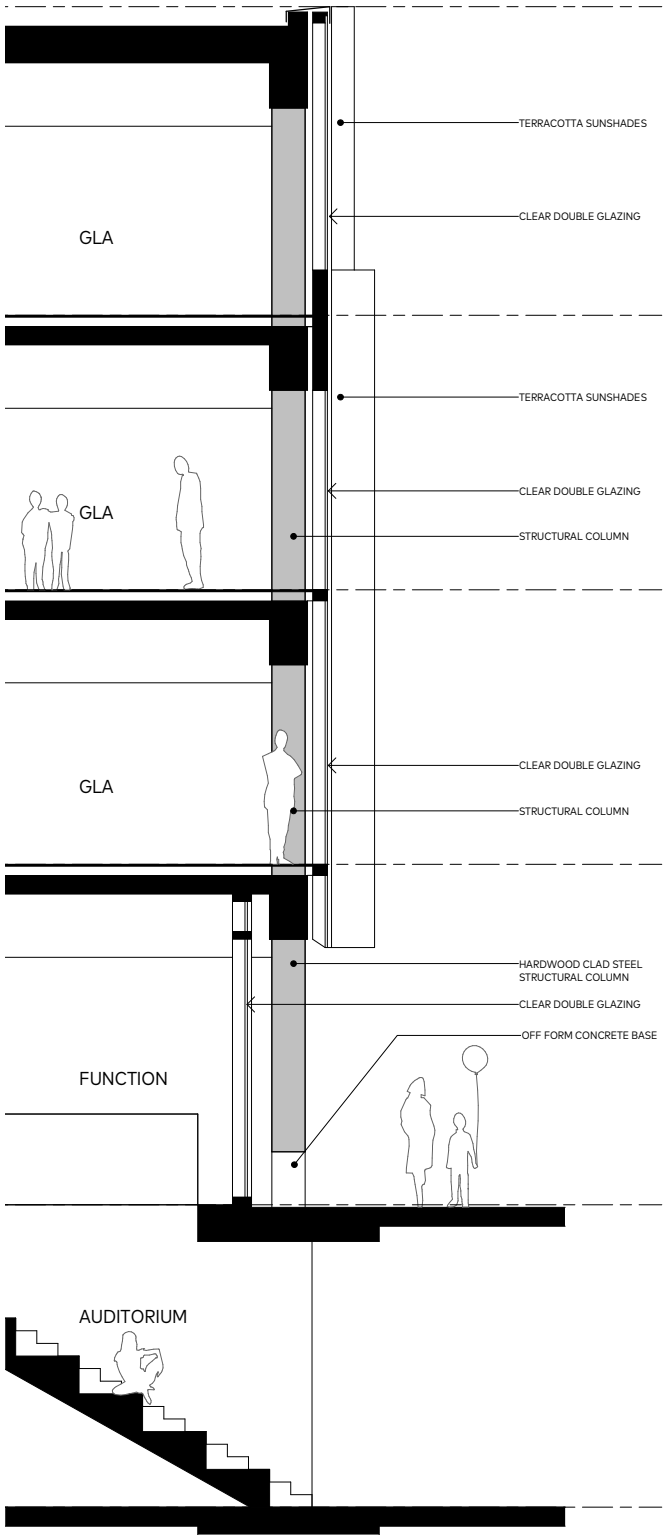
East Facade - Adjacent Parsonage



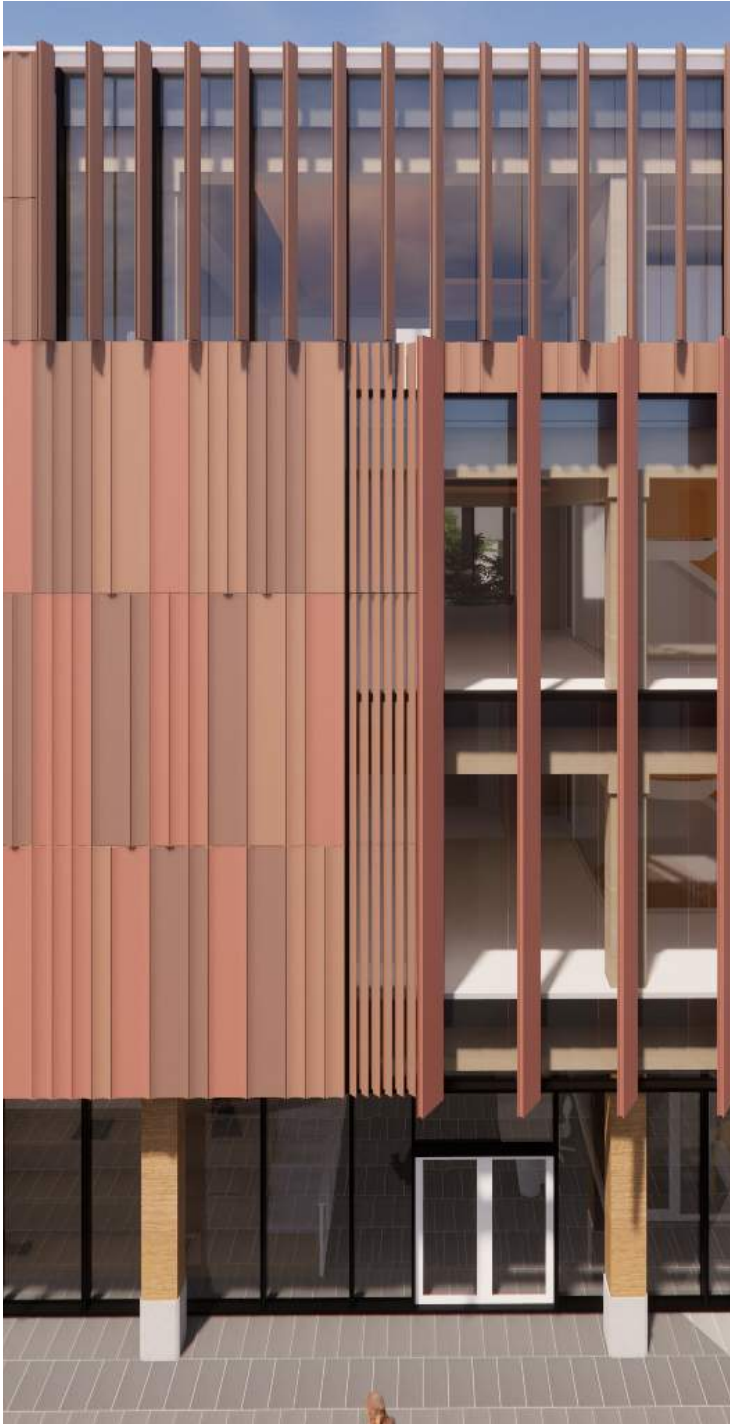
6.17 Detailed Facade Sections



North Facade (Pavilion Building) - Stanmore Raod



East Facade (Pavilion) - Adjacent Sports Hall

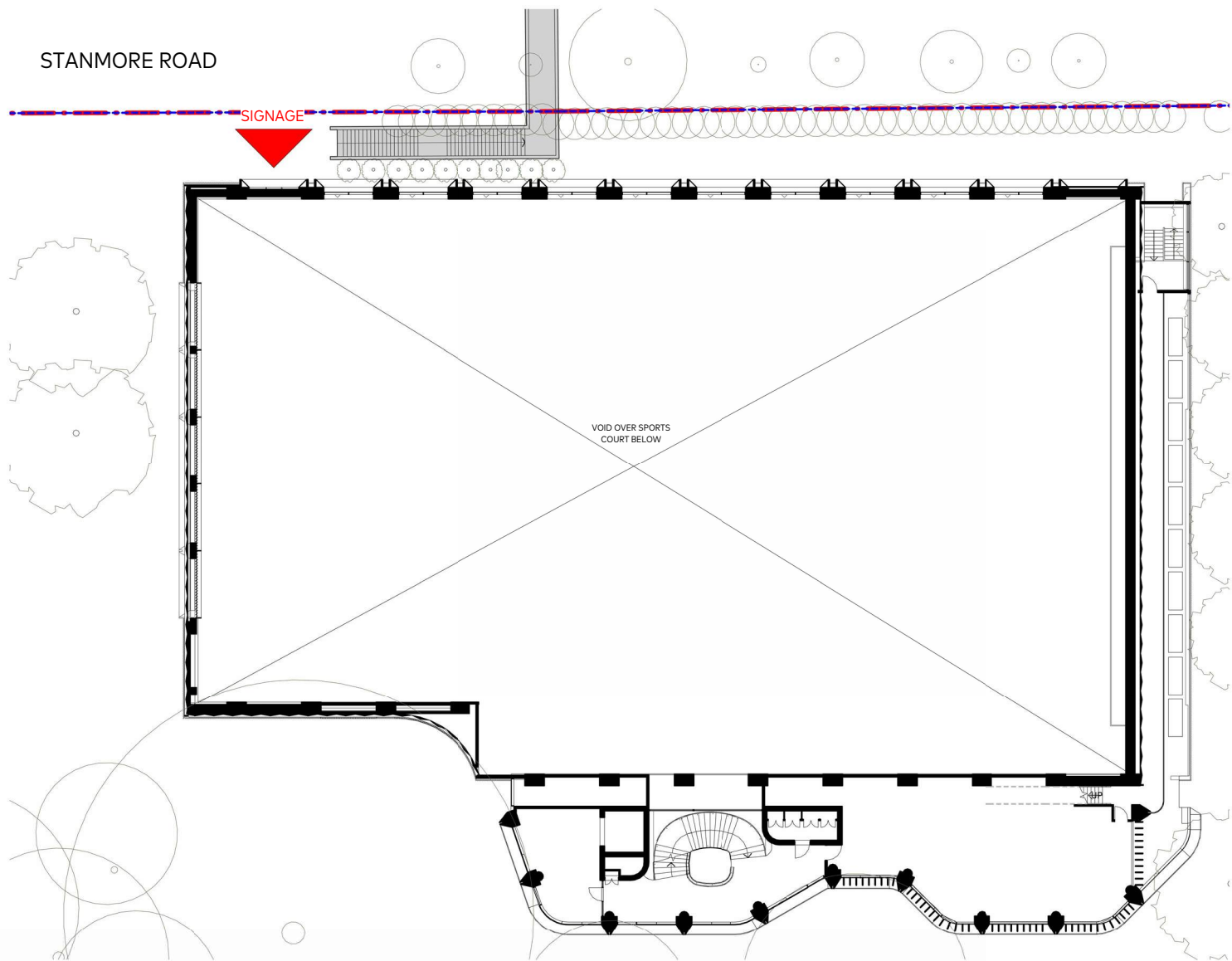


6.18 Building Signage



NEWINGTON COLLEGE SIGNAGE EXAMPLE

01 ELEVATION
NORTH 1:200



02 SIGNAGE KEY PLAN - LEVEL 04
1:200



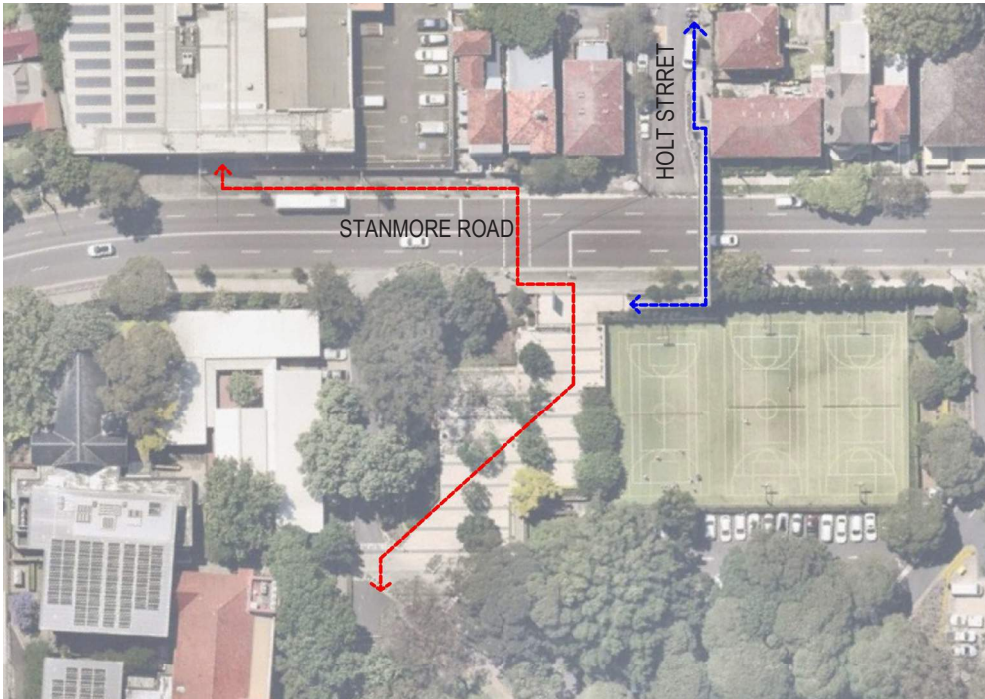
03 SIGNAGE DETAIL
1:20

7.1 Concordia Bridge Link

The pedestrian bridge link is proposed as part of Stage 6 in the concept masterplan, providing the college with a link from the key pedestrian areas of the campus to the new Concordia development across Stanmore Road.

The introduction of the pedestrian bridge removes the existing clash between vehicular and foot traffic near the junction of the Sevington driveway and Memorial Drive, helping to improve safety on the campus.

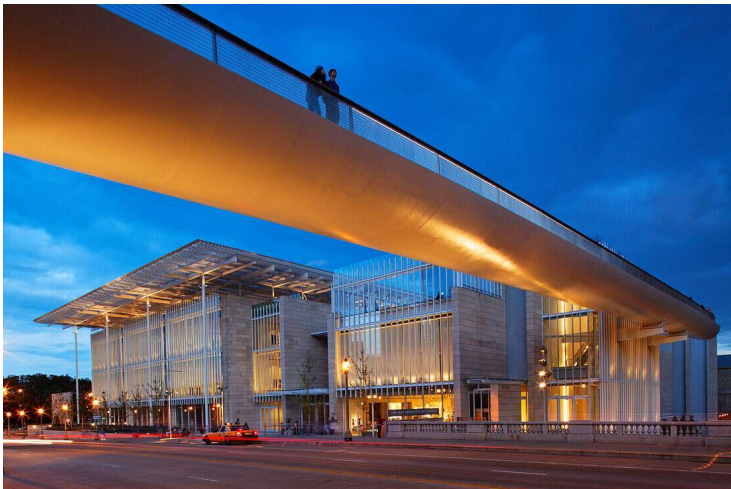
Designed in accordance with TFNSW requirements, the proposed bridge is designed to allow for 24 hour public access, with the lift and stair accessible to the public at all times.



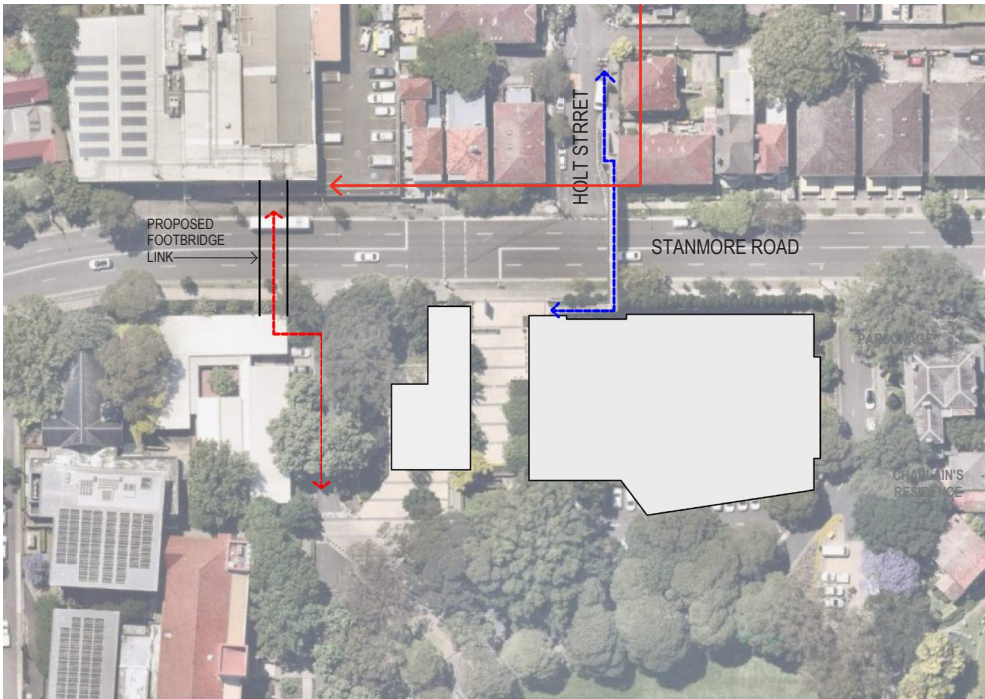
Existing student access - safety concerns crossing Stanmore Road



Existing footbridge over Stanmore Road retained



Pedestrian Bridge Precedent (Nichols Bridgeway Chicago, RP)

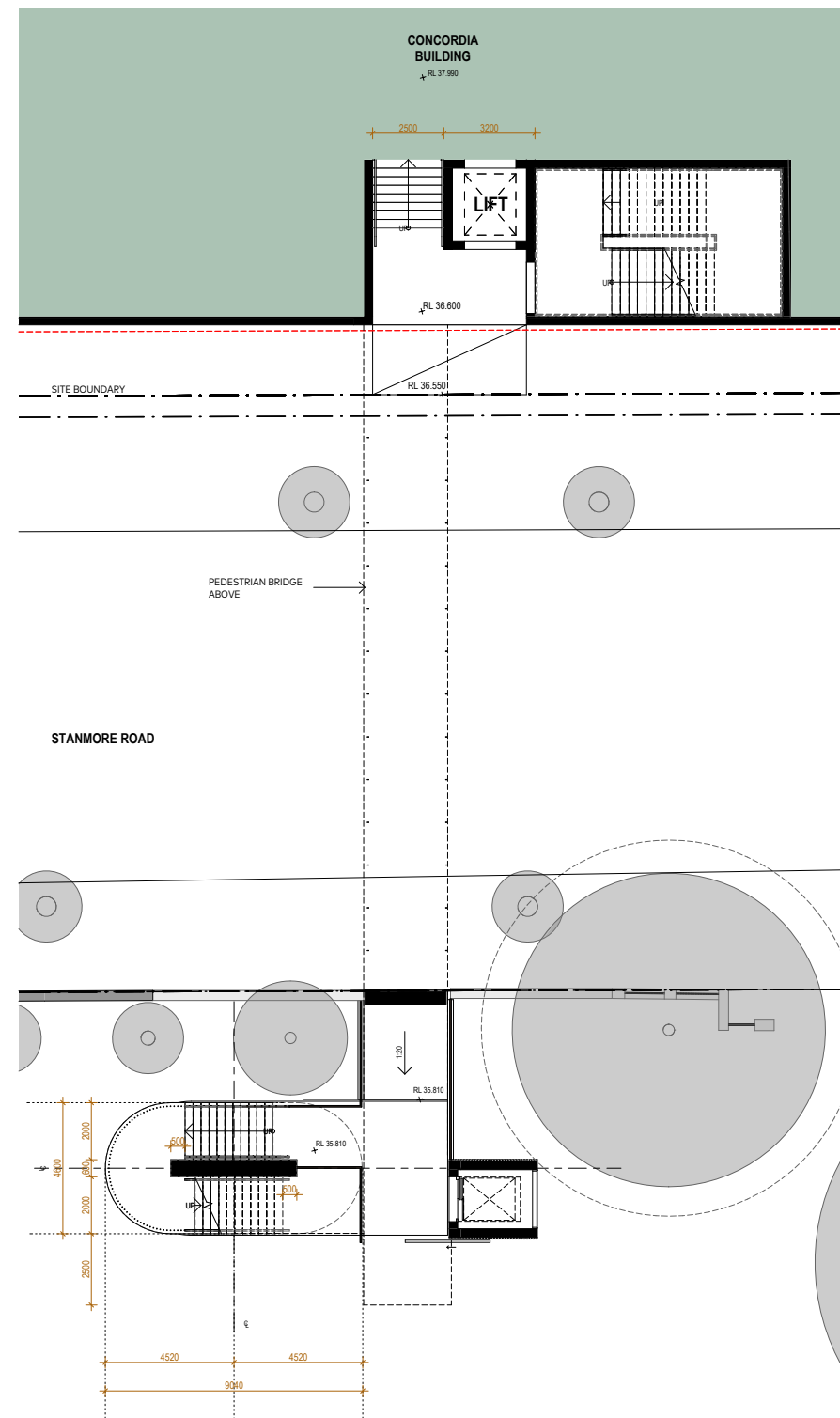


Proposed student access - integrating Concordia into the main campus by making it easier to travel between the two

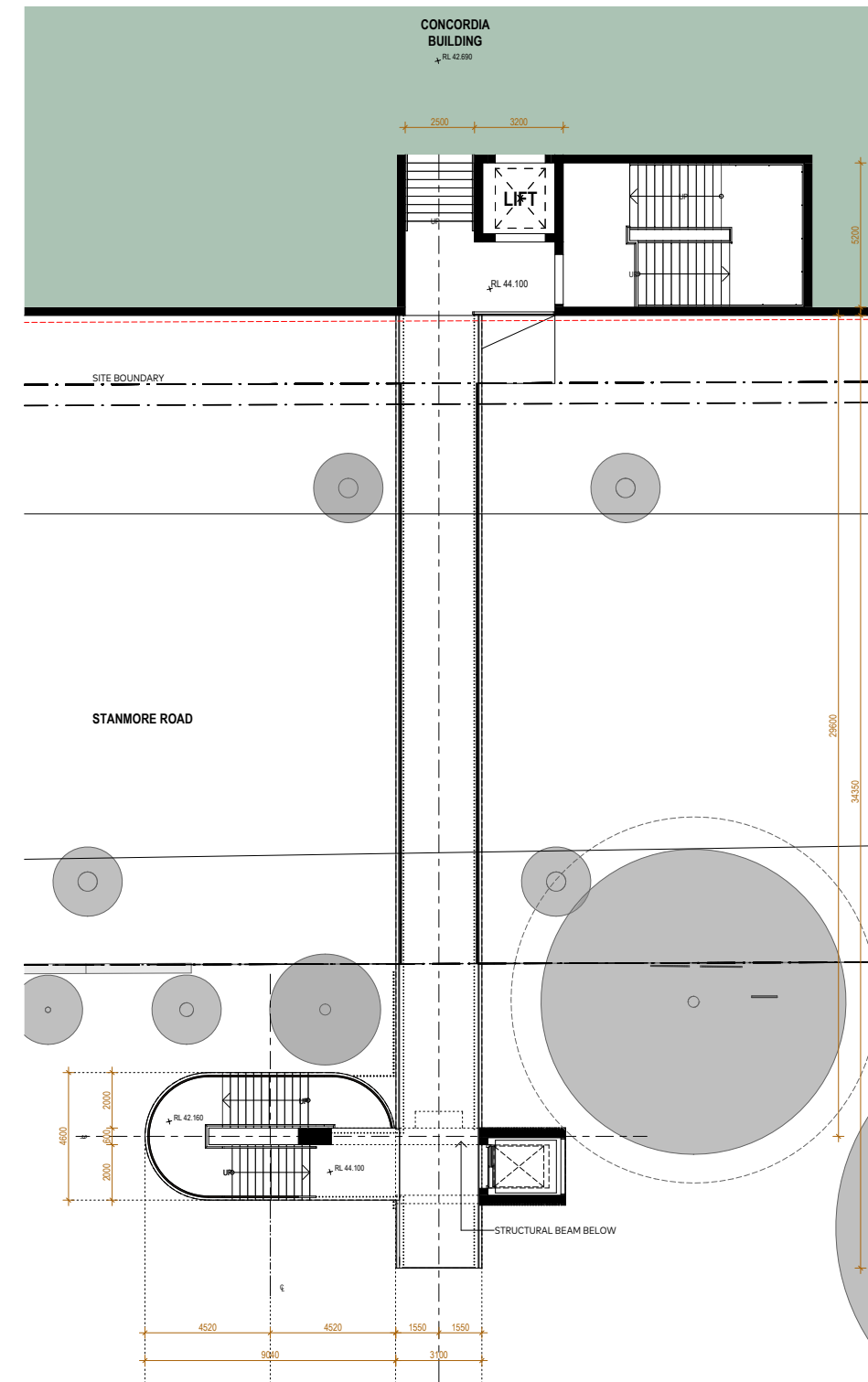


Proposed footbridge over Stanmore Road

7.2 Concordia Bridge Link - Floor Plans

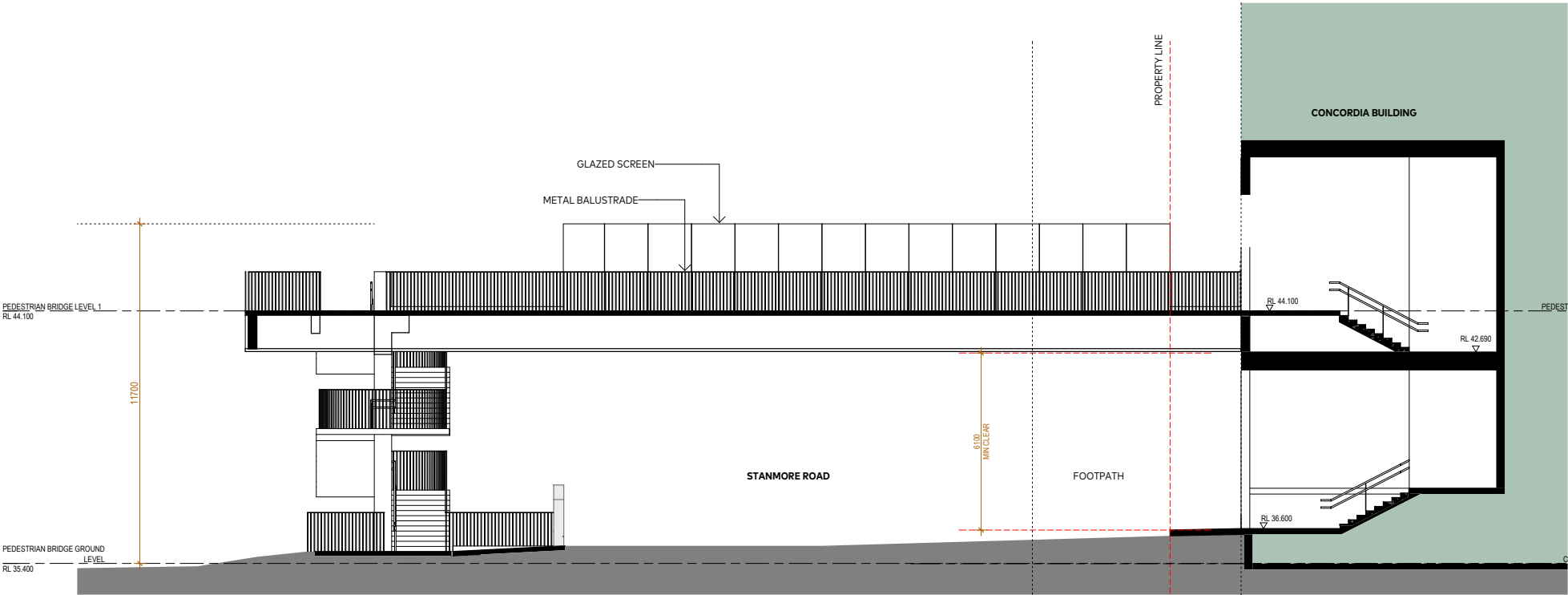


Ground Floor Plan

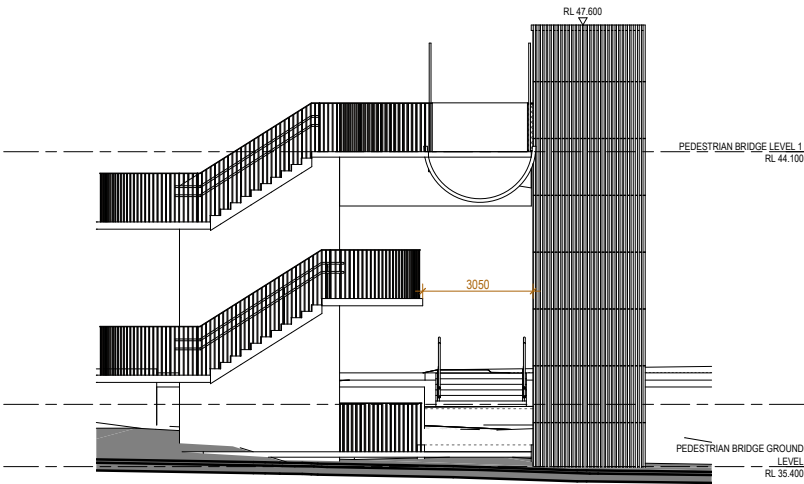


First Floor Plan

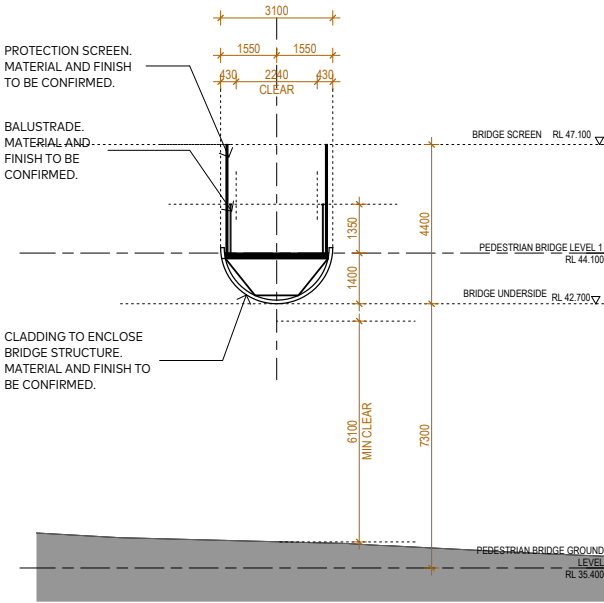
7.3 Concordia Bridge Link - Elevation and Sections



Pedestrian Bridge Section 1



Pedestrian Bridge Elevation



Pedestrian Bridge Section 2



7.4 Concordia Bridge Link 3D Views



Indicative View - Bridge from south



Indicative View - Bridge level looking south



Indicative View - Bridge from west

8.1 Design Consultation

As part of this State Significant Development Application, the design team has been involved in a number of early consultation meetings with key stakeholders, including the Inner West Council (IWC) and the Government Architect NSW.

The primary meetings were as follows:

- State Design Review Panel - Review 1, 27 November 2024
- State Design Review Panel - Review 2, 26 March 2025
- Pre-Development Application Meeting with IWC - 14 May, 2025

The responses and the meetings themselves were generally supportive of the design, the design process and design direction, with a number of additional items raised for the consideration of the design team. The design team has reviewed the feedback provided from all parties and made amendments to the designs to address this feedback appropriately. The measures taken by the design team, where relating specifically to the architectural design of the masterplan and detailed Stage 1 design are outlined on the following pages.

The feedback provided by the State Design Review Panel from Review 1 was previously addressed by the design team and reviewed by the SDRP in Review 2, however the responses and action taken in relation to the feedback is provided here as a record.

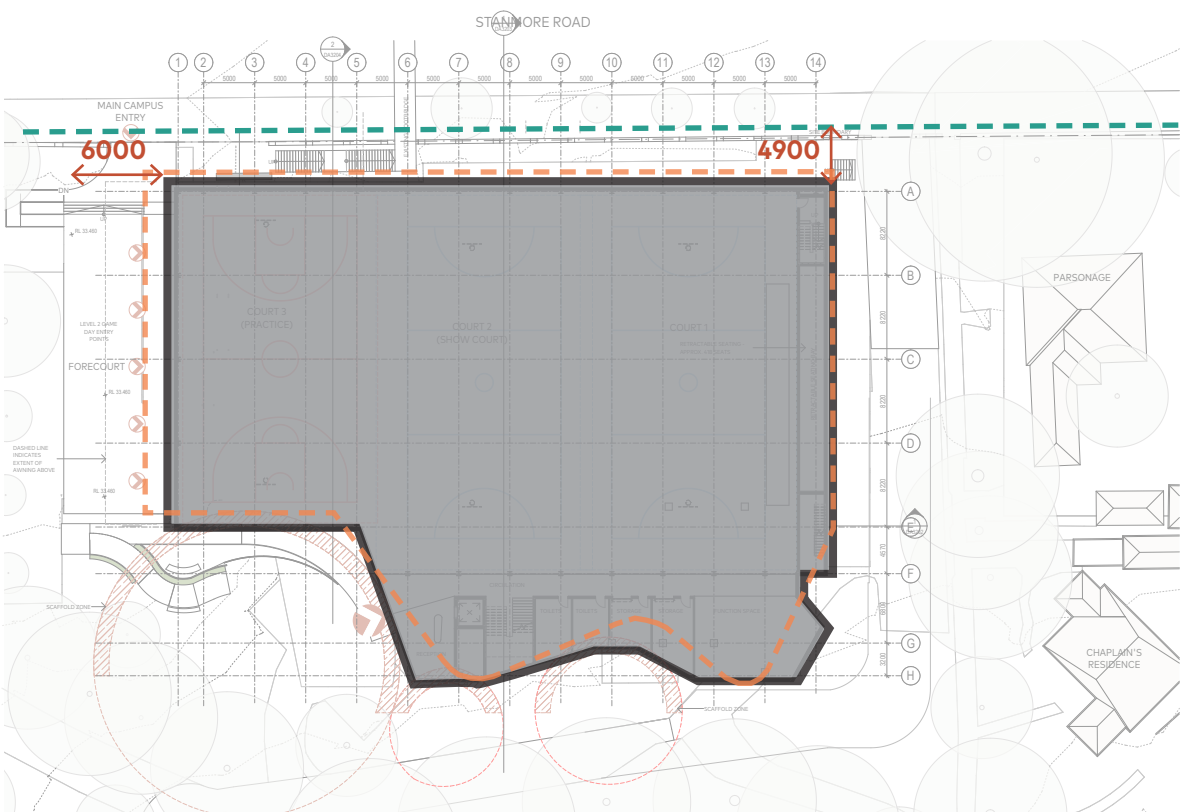
8.2 Architectural Response to SDRP 01 Comments

State Design Review Panel - Review 1 - Comment	Architectural Response
1. Expand the consultation process and its scope to better understand perspectives of female students. Focus on the nuances of how girls use and share different spaces, and their needs and behaviours.	Extensive consultation was undertaken with Newington College, including with Newington's Director of Co-education. At the concept proposal level for the masterplan, it was established that the Centenary Hall conversion to the central cafeteria space represented a positive approach to welcoming the new student cohort, in this legacy building for the college with a prime position on Memorial Drive, the opportunity to deliver a purpose designed gathering space for all is seen as a key requirement for the success of the shift to co-education. At a detailed level, for the Sevington Courts building, care has been applied to the layout of Level 1 in particular to create a sense of openness throughout the floorplate, with good lines of vision and a clear separation between the teaching and learning spaces and the strength and conditioning centre. Both gender specific and uni-sex change rooms and sanitary facilities have been provided equally throughout the new Sevington Building. Additionally, two netball courts have been provided recognising the increased demand for these facilities with the move to co-education.
2. Prioritise engaging a landscape architect to inform and shape the master plan.	Oculus was appointed as the landscape architect for this project following this SDRP review. The landscape architecture design documentation and design report addresses item 3 to item 6 of the SDRP Review 1 letter.
7. Develop a more holistic approach to tree protection. In addition to TPZs include construction impacts - e.g. scaffolding. Seek construction expertise to inform the retention of the conifer trees along Stanmore Road.	Detailed advice from Arterra (in their capacity as the Arboricultural Consultant for this project) was incorporated into the detailed Stage 1 design, including scaffolding zones for the significant trees adjacent the new work and additional requirements regarding the protection of the conifers (namely the retention of the existing retaining wall). For the basement levels, associated excavation beyond pile-cap zones has been considered, and adjustments have been made in the alignment of the piling to support the ongoing health of the trees that are being retained.
8. Review the relationship between the Sevington Courts building and the retained trees along Stanmore Road and the heritage fence/entry gate, to ensure the amenity of the streetscape is maintained and improved. a. increase the setback at Stanmore Road to avoid the building 'crowding out' the streetscape and trees along the fence line b. increase the western setback to the entry gate and sandstone wall.	Following the feedback from SDRP Review 1, measures were taken to rework the design to achieve the requested set-backs from Stanmore Road and the west. A summary of the amendments are illustrated below, the resulting alignment on Stanmore Road in particular provides a buffer to the conifers and the streetscape in general.

Relationship to Stanmore Road



Previous Building Footprint at SDRP #1



Revised Building Footprint at SDRP #2

8.2 Architectural Response to SDRP 01 Comments

State Design Review Panel - Review 1 - Comment	Architectural Response
9. At the Concordia Building: a. reduce the basement footprint to increase deep soil for mature trees b. provide a landscape strategy to optimise the open space at the north; include increased greening for amenity, and address the range of uses and need for access to Cavendish Street.	The basement footprint was reduced following the SDRP Review 1 feedback, resulting in a large zone for deep soil planting to the north of the Concordia site. Refer to the landscape architecture documention and design report for the detail of the landscape treament on the Concordia site.
Sevington Courts Building 10. Revisit the following spaces to address concerns specific to female students: a. review the relationship and interface between GLAs and the central Strength & Conditioning area, specifically access, circulation and viewpoints. Ensure a gender cohort using the GLAs is comfortable with the proximity of the other gender as they work out. b. review the location of bathrooms in the basement. The current configuration raises issues of comfort and amenity, perception of safety, and isolation from the other floors.	Following the feedback from the SDRP REview 1, the Level 1 floorplate was redesigned to provide clear separation between the GLAs and the Strength and Conditioning Space. Only one GLA has access only from this strength and conditioning space, but it is anticipated to be used as a teaching space related to the sporting programme - alternatively, access is provided by a covered outdoor walkway linked to the interal corridor to ensure flexibility when required.. As part of the redesign of the Level 1 floorplate, the bathrooms and changerooms have been arranged to have direct access from a wide corridor, with glazed partitions along its southern length, adjacencies with staff areas and general overlooking from the adjacent sporting and teaching areas on this floor helping to greatly improve the perception of safety. Views through to all corridors on this floor are possible through the teaching spaces and the sporting spaces, and from the exterior. A central, highly visible reception space is also provided with views over much of the floorplate.
11. Provide separate adult bathroom facilities for staff and visitors.	Separate adult bathroom facilities are provided for staff and visitors in the current detailed Stage 1 proposal
12. Demonstrate a clear logic for how the public, parents and visitors will arrive at the school and then access the building. Ensure wayfinding is simple and intuitive.	Wayfinding and the access strategy is described as part of this design report, the current proposal has addressed this feedback (prior to the SDRP REview 2)
13. At locations with full-height glazing, avoid a scenario of blinds typically closed. Balance and optimise the need for light and views with glare.	The issue of glare in the sports hall has been considered, and a number of measures will be proposed as the interior design is progressed at a future stage, including utilising matte court finishes to reduce reflection, considering solid backboards for basketball, incorporating blackout blinds on the high level glazing bays of the show-court (the central bays) and considering the use of internal shutters for the vertical slot glazing on the north for the showcourt. Noting the density of the conifers, the northern vertical slot glazing bays are expected to have minimal glare issues. The proposed pavilion building, which includes teaching and staff areas, and the Level 1 teaching spaces are well shaded and expected to avoid a reliance on retractable blinds to address solar ingress and glare issues generally.
14. Review the storage at the various spaces on Level 1.	Storage has been completely reworked since the design was preseneted at SDRP Review 1, and is now provided to the east of the courts on Level 2 (a large storage area, easy access to the courts), and smaller storage cupboards along the north wall of the courts. Storage is also provided throughout the Level 1 and Basement floors, and at the rooftop to serve the rooftop courts.
15. Revisit the retractable seating to optimise its relationship with the Show Court.	The retractable seating is now designed to be moved into place to be central along the showcourt, or simply extended to provide for tiered seating in assembly mode. Refer to the diagrams contained within this design report for a detailed description of the seating opportunities.

8.2 Architectural Response to SDRP 01 Comments

State Design Review Panel - Review 1 - Comment	Architectural Response
Sevington Courts Building 16. Provide a facade strategy that addresses pattern, colour, materials, depth and the play-of-light.	 The facade strategy (for Sevington) has developed significantly following the SDRP Review 1 meeting and is presented in detail as part of this design report.
 17. Explore overlapping the mesh proposed at the roof level with the facade; to reduce stratification and provide a sculptural form to the building.	 This approach was explored, but the current approach where the mesh is seen as recessive, tucked away from the north facade was adopted as the preferred option (which was not proposed at the SDRP Review 1 meeting where the mesh was aligned with the facade).
Concordia Building 18. Demonstrate a high amenity building interface to the northern outdoor space and how privacy to the neighbours will be provided.	 Significant setbacks are proposed to the northern neighbours on Concordia (those fronting Cavendish Street), with a deep soil planting zone for the majority of this length, allowing substantial tree plantings to be included as part of the concept masterplan proposal. Additional measures are anticipated to be proposed during a future detailed design phase and separate approvals process.
 19. Demonstrate how the built form responds to the curve in Stanmore Road. Consider how the ends of the buildings present in the streetscape.	 The building form has the ability for additional articulation where it is intersected by the pedestrian bridge, approximately at its centre on the south facade. Setbacks are provided at the upper levels and the opportunity to address the existing streetscape and geometry of Stanmore Road is anticipated to be addressed as part of a future detailed design phase and separate approvals process.
 20. Provide further evidence and elaborate on the rationale for another footbridge in such proximity to the existing bridge. Noting the challenges of students crossing Holt St, investigate an option of only one footbridge.	 The key requirements for the new pedestrian bridge are to directly link the Concordia building with the main part of the campus, thereby allowing it to become part of the campus rather than an isolated building, and to resolve a concerning intersection between the pick-up/drop-off vehicular movement and student foot-traffic using the Holt St bridge and pedestrian crossing. Futher analysis is provided within this design report.

8.3 Architectural Response to SDRP 02 Comments (Concept Masterplan)

State Design Review Panel - Review 2 - Comment	Architectural Response
5. Treat the Concordia and Sevington buildings, the arrival forecourt at Stanmore Road, and any existing and new elements in the streetscape as an interrelated and cohesive entity. a. ensure both buildings provide welcoming arrival gestures, visual permeability and activation. Avoid large areas of blank facade onto the street.	The detailed design of the Concordia building will be addressed under a future development application, but within the proposed envelope design the ability to design a building cohesive with the Sevington building is provided. Noting the different functions anticipated in the Concordia building, specifically; large performing arts theatre and stage, exam and multi-purpose hall/gallery space, teaching spaces and the associated foyers and circulation, there will be the ability to articulate each of these functions on the external building form to break-down the building mass presented to the Stanmore Road and the adjacent residential neighbours.
9. Demonstrate that the area between the Stanmore Road entry and Memorial Drive is a safe and comfortable environment for pedestrians. Resolve conflict points with vehicles using the drop-off loop road and the proposed car park.	With the addition of the pedestrian footbridge, the primary conflict between vehicular movement and foot traffic at peak pick-up and drop-off times has been mitigated. Pedestrians can now avoid crossing over the vehicular path by using the bridge. Outside of peak times, vehicular traffic is minimal between the driveway and Memorial Drive and is not expected to have an impact on the usage of the Sevington building. Two formal pedestrian cross overs occur in this location, one serving the Level 01 entrance to Sevington, the other near the junction of the driveway and Memorial Drive. A detailed description of this approach is found earlier in this design report, with additional detail provided as part of the landscape architecture design documentation
10. Rationalise or simplify movement paths to create a better balance between circulation and landscaped areas.	A detailed description of the landscape design proposal is presented in the landscape architecture documentation.
11. Review the southern termination of Memorial Drive to create a sense of destination. Explore: a. how the buildings and their forecourts interface with this space b. future proofing for a new public entry from Newington Road that is on-axis with Memorial Drive.	The concept proposal includes a major intervention along Memorial Drive with the change in function for Centenary Hall, from an undersized hall to the cafeteria space which will provide an appropriate central gathering space for the college, overlooking the main oval. The landscape design response is for this central location addressing Memorial Drive and additional design proposal information is presented in the landscape architecture documentation. Previous studies have included a public entry from Newington Road on axis with Memorial Drive, but given the configuration of the existing buildings in that location and the level change between Newington Road and Memorial Drive, no proposal has been put forward for undertaking this modification as part of this SSDA. The current design proposal allows for the future connection to Newington Road should this work become feasible at a later date.
21. Overlooking analysis of adjacent residences from the proposed classrooms of the College Lane Building.	An overlooking analysis of the residences adjacent the proposed College Lane Building is provided within this design report. Overlooking is possible, but with an effective facade treatment, screening and planting that will be required to be part of the future detailed design, we believe that any potential issue is able to be overcome.
22. 3-D visualisations of the Courts Building and Concordia Building from key vantage points along Stanmore Road, including key elements of the streetscape.	3D visualisations of the sports court and pavilion building are provided as part of the detailed Stage 1 section of this report, while 3D views of the potential building mass of Concordia are described in the concept outline proposal component of this report.

8.4 Architectural Response to SDRP 02 Comments (Stage 1 Sevington)

State Design Review Panel - Review 2 - Comment

5. Treat the Concordia and Sevington buildings, the arrival forecourt at Stanmore Road, and any existing and new elements in the streetscape as an interrelated and cohesive entity.

a. ensure both buildings provide welcoming arrival gestures, visual permeability and activation. Avoid large areas of blank facade onto the street.

b. design the forecourt adjacent to the level-crossing as a civic space. Make it more generous and welcoming.

c. review the design of the northwest corner of the Sevington Building to improve the integration and connection of the (level crossing) forecourt with the existing footbridge.

d. consider reconfiguring the boundary fence at the forecourt to free up space. Explore using the building (all or part) as the secure line.

14. Review the building's address and interface onto Stanmore Road, including its architectural expression, facade treatments and relationship to the arrival forecourt as per item 5 of this letter.

Architectural Response

In relation to the Sevington Building and the arrival forecourt, the addition of the Pavilion wing (appearing as a distinct building at ground level) is intended to provide a more legible and welcoming entry experience from Stanmore Road, partially by framing the forecourt and giving a 'front-door' style address for the College along Stanmore Road, but also by defining the western edge of the forecourt to address the change between the more public function of the forecourt to the semi-private function of the college beyond (noting that public access is maintained during school hours). For visitors arriving from the Stanmore Road entrance and for those using the sports court, there is now the opportunity for a welcome desk to assist in providing directions across the campus and undertaking the sign in process.

The forecourt has been designed as a generous and level space, with the substantial tree planting zones detailed as level with the paving, allowing spill-out from the sports hall, and from the function space located within the Pavilion building. Further opportunities for activation of this space are provided with the inclusion of the auditorium on the southern side of the Pavilion and the oculus skylight at the southern end of the forecourt.

With the forecourt level of the Pavilion and western entrance of the sports-hall substantially glazed, carefully placed glazing slots along the lower level of the sports hall and expansive glazing at the upper level of the sports hall, the buildings have been designed to be welcoming and visually interconnected with the public space beyond, offering an activated street facade, particularly in evening settings. The upper levels of the Pavilion are carefully articulated to provide a balance of solid and glazed elements (both for interior function and energy/thermal performance), glazed elements are thoughtfully located along the eastern facade to give the sense of a predominately visually permeable facade, while substantial glazing is provided on the Pavilion's northern facade to help soften the building's public presence and help provide some passive surveillance to the Stanmore Road public space itself.

The existing sandstone fence is modified and partially relocated to sit directly in front of the north-west wall of the sports hall, helping to open up the forecourt to Stanmore Road as much as practicable. A retractable gate is proposed across the top of the forecourt steps to help secure this entrance after-hours, sliding back to be concealed behind the reconstructed sandstone fence when in the open position. When the gate is open, the forecourt will read as a welcoming and expansive civic entrance from Stanmore Road.

Entry gate to forecourt

View from Stanmore Road

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8.4 Architectural Response to SDRP 02 Comments (Stage 1 Sevington)

State Design Review Panel - Review 2 - Comment

15. Demonstrate how each facade responds to the master plan, streetscape and site conditions to of its orientation, including:

 - a. breaking down the visual bulk and scale
 - b. fenestration that to promotes activation and daylighting, while balancing the need for privacy with the intent for views.
16. At all entrances and forecourts improve the arrival sequence and sense of address. Explore scale transitions and define clear entries with welcoming elements (e.g. awnings).
17. At Level 1 (The Fitness Centre), refine the layout of corridors and vertical transition spaces to create clear circulation paths and sightlines and promote incidental socialising.



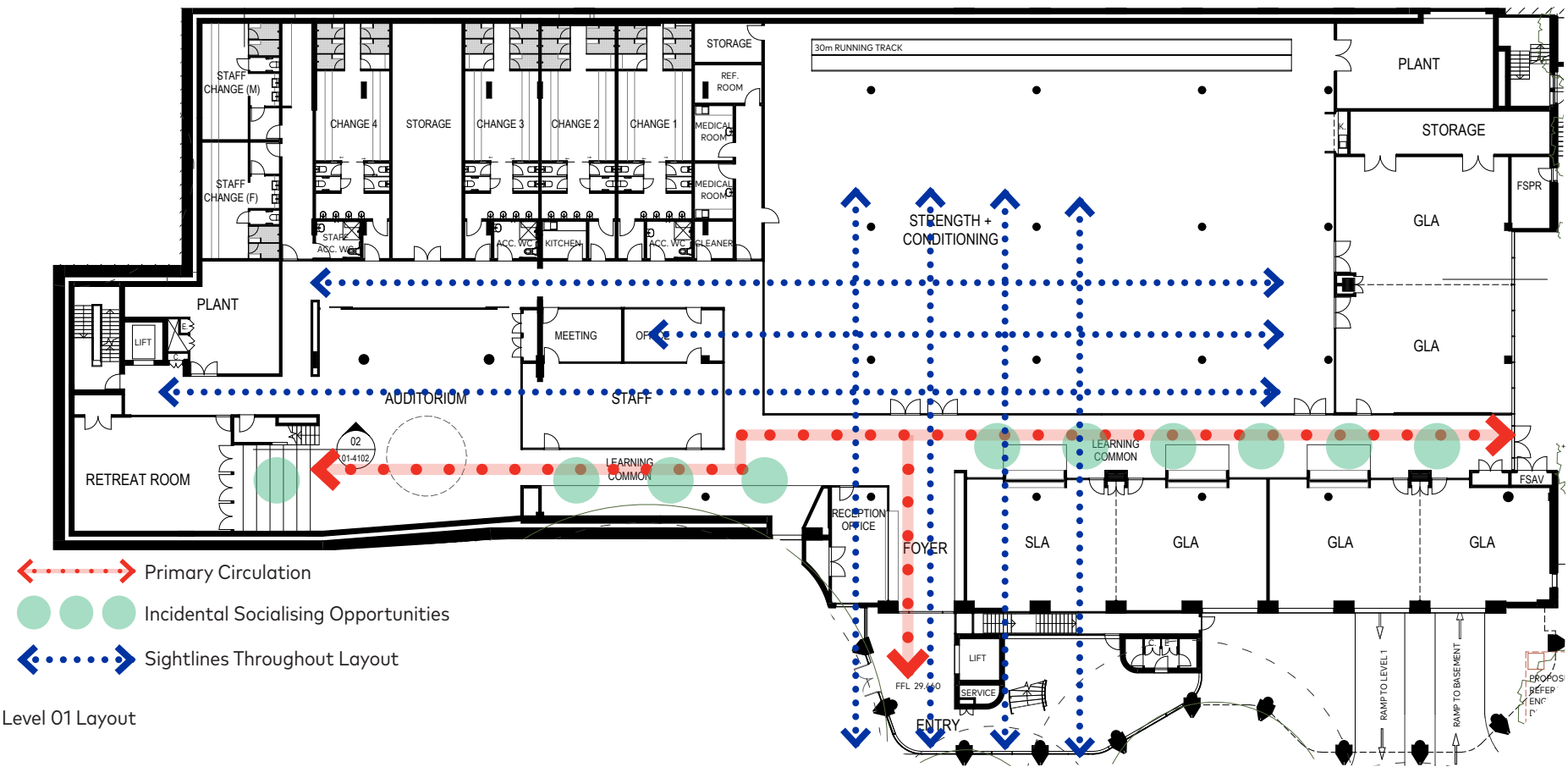
Western entry to sports courts

Architectural Response

A full description of the treatment of each facade and how it relates to its wider site context and function can be found on the preceding pages of this report. The Stamore Road facades are articulated to provide a mix of openness to engage with the community space and more opaque configurations to help deal with glare and noise for the sports hall in particular. East and west facades of both buildings are generally read as more opaque to reduce solar gain where low-sun angles adversely impact the facade, where glazing has been incorporated, these are generally treated with vertical sunshading to reduce the impact of solar ingress. The south facades are treated with large areas of glazing to engage with the campus itself and, in the case of the sports-court wing, to engage with the tree canopies that are located immediately adjacent.

Described at item 5 and 14, the forecourt helps address the sense of arrival from Stanmore Road. Within the forecourt, the Pavilion facade has been recessed and glazed, both providing an awning created by the floors above, and a space that is visually interconnected with the forecourt. To the western facade of the sports-hall, a recessed and glazed entrance has been provided, with awnings sitting above the door line. The southern facade of the sports hall is framed with large GFRC column and slab covers, or cladding, which help to provide definition to this predominately glazed facade, the expression of the circular stair on the facade by extending the glazing up above the top habitable floor, helps indicate the entrance to Sevington from a distance (ie across Johnson Oval and from the Founders building).

The Level 1 layout was substantially reworked following the SDRP 02 feedback, now providing a highly functional and legible layout of GLAs and sports related functions, particularly the large Strength and Conditioning Space. Opportunities for incidental socialising are spread across the length of the building, starting with the learning commons adjacent the GLAs towards the east and centre of the building, and culminating in the flexible and informal auditorium space to the west. Staff areas are located centrally to provide a sense of passive surveillance across the predominately glazed floorplate (glazed partitions are assumed for the staff areas and Strength and Conditioning). Vertical circulation is located adjacent the primary circulation routes and entry spaces, with the centrally located sculptural circular stair acting as a wayfinding marker within the site.



Level 01 Layout

8.4 Architectural Response to SDRP 02 Comments (Stage 1 Sevington)

State Design Review Panel - Review 2 - Comment	Architectural Response
18. Finesse the design of the east and west facades to optimise daylighting to the Level 2 courts while balancing glare and heat gain.	The eastern end of the sports hall has no direct glazing, instead a row of skylights has been introduced above the eastern wall, with the intention of washing the wall with light to provide diffuse light and reduce glare. The Western facade of the sports hall has a deep recess for the glazed component, containing the entry doors to the space. This glazing is generally shaded by the adjacent Pavilion wing, and the intention is to have blinds to further mitigate the impact of glare.
	
19. Rationalise the GLAs to optimise daylighting and how they are clustered to improve layout efficiency.	The GLAs have been reworked to have an efficient layout along the south-eastern areas of Level 01. With the exception of the one space labelled as SLA (Specialist Learning Area, ie for Dance, Music etc), all GLAs have direct access to daylight along the south or eastern facade. The SLA has access to borrowed daylight through the glazed walls of the basement stair and out towards Johnson Oval on the south. The GLAs in the Pavilion wing are also efficiently planned, all with access to daylight and views.
17. At Level 1 (The Fitness Centre), refine the layout of corridors and vertical transition spaces to create clear circulation paths and sightlines and promote incidental socialising.	The Level 1 layout was substantially reworked following the SDRP 02 feedback, now providing a highly functional and legible layout of GLAs and sports related functions, particularly the large Strength and Conditioning Space. Opportunities for incidental socialising are spread across the length of the building, starting with the learning commons adjacent the GLAs towards the east and centre of the building, and culminating in the flexible and informal auditorium space to the west. Staff areas are located centrally to provide a sense of passive surveillance across the predominately glazed floorplate (glazed partitions are assumed for the staff areas and Strength and Conditioning). Vertical circulation is located adjacent the primary circulation routes and entry spaces, with the centrally located sculptural circular stair acting as a wayfinding marker within the site.
23. Demonstrate facade strategies for the Courts Building to address the advice of this letter and the design excellence criteria of the LEP.	The proposed facade strategy is detailed throughout the Stage 1 section (Section 6) of this report.
25. Site plans and landscape plans co-ordinated to show all retained, removed and new trees.	Refer to the site demolition plans and site plans for the Stage 1 detailed design, and to the Landscape Architecture documentation and Arborist Reports for additional information regarding the retention of trees and proposed new trees

8.5 Architectural Response to Pre-DA Meeting Comments

Inner West Council Pre-Development Application - Comment
IWC made the following additional comments to assist in refinement of the design presented: a) Elevations of the entire building/s are required and subject to further review. b) Relocation of the Servington building rooftop north eastern stairwell to a less prominent location. c) Additional montages and 3D modelling to demonstrate the relationship of the proposed new Servington building (as amended) as viewed from Stanmore Road d) The built form and façade detail sections in 1:50 scale. The sections should confirm RLs of the surrounding natural ground levels, and the proposed landscape design intent along these site interfaces. e) Details on building services such as provision of mechanical ventilation and exhausts from the internalised areas or electrical substation requirements. Design treatment such as screening should be employed. f) The 15 at grade carparks reduced to accessible parking only and replaced with landscaping g) Confirmation if any works are to occur at the property 219 Stanmore Road and 154 Cavendish Street as these building outlines are not clearly shown on the architectural plans. h) All pedestrian access points across the site to be clearly identified. i) Further justification is be provided for a second pedestrian bridge for the College given the close proximity of the existing bridge and existing mid-block signalised crossing. Council would only consider supporting the pedestrian bridge if it is publicly accessible.

Architectural Response
a. The full set of elevations, both for the detailed Stage 1 (Sevington) design and the outline concept envelopes have now been produced and are submitted as part of this application b. The rooftop north-eastern stair has been redesigned to reduce its previous bulk on the corner of the building by stepping it back from the Stanmore Road boundary (in plan) and transferring the upper level of the stair to the south side of the roof, concealing the remaining stair flights within the plant space, significantly reducing the previous mass of the stair. In addition, the north facade of the stair is proposed to be glazed to help provide a more active presence of this side of the building on Stanmore Road and to assist in providing a level, and sense, of passive surveillance to the street. c. Additional montages and modelling have now been produced and are provided as part of this report. d. 1:50 facade detail sections have been produced to address this request, and form part of this application. e. design coordination has been undertaken with the services consultants, all of the mechanical ventilation and exhaust requirements are now shown on the documentation (primarily the elevations), and generally consist of discreet and integrated louvre screens within the facades. The rooftop plant room is screened from view and, where required, acoustically treated. f. Some at grade carparking is proposed to the western side of the Sevington development, all other at grade parking within the site (adjacent Founders) is accessible. The landscaping treatment of these at grade carparking is addressed within the Landscape Design Report and documentation. g. There are no works proposed to either properties listed h. Pedestrian access points are noted within the masterplan and detailed Stage 1 documentation i. The proposed pedestrian bridge has been designed to be publicly accessible, with stair and lift access to both sides of Stanmore Road, accessible from the public footpath.



Stair amendments to north eastern corner

9.1 Response to Relevant Policy and Guidance

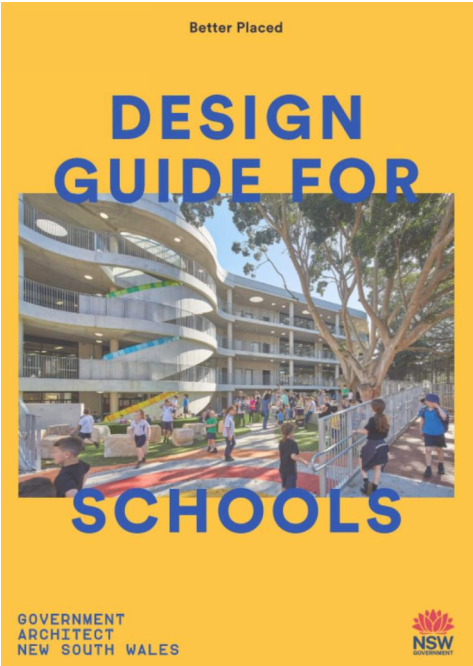
Environmental Design in Schools



The design proposal has been developed to align with key principles of the GANSW Environmental Design in Schools document. The guidelines outline initiatives to achieve good environmental outcomes for schools including passive design, biophilic design and specialist environmental design. This proposal adopts the following:

- Holistic adaptive re-use strategy with retention of existing structure and shell for the Centenary Hall component, converting underutilised building into a key component of the campus.

Design Guide for Schools

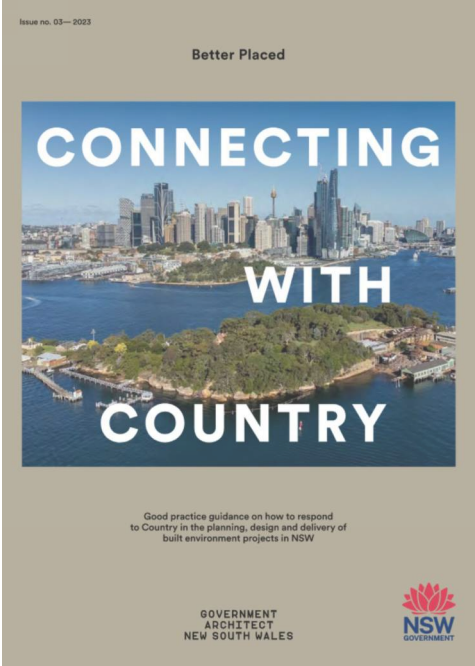


The design proposal has been developed to align with key principles of the GANSW Design Guide for Schools document - inclusive of the Education SEPP Design Quality Guidelines. The aim of using this document as a guideline is to promote better school design, deliver schools that respond to their physical/ social/environmental context and deliver excellent learning spaces.

- Retention of the built form for the majority of the campus and passive solar design principles.
- All areas of the school intended to be accessible with the use of existing lifts and the provision of new lifts within the new buildings.

A detailed review of the SEPP Design Quality Quidelines has been provided in Section 9.4 at the end of this Design Report.

Connecting with Country

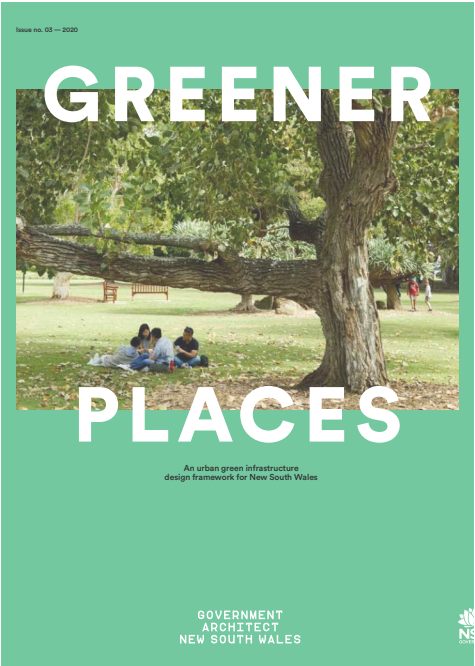


Regarding the GANSW 'Better Placed - Draft Connecting with Country' document and the 'Designing with Country' document, we approached this project with the understanding that the cultural identity of the place should be celebrated through country, community and its individuals. The design team has implemented the following methodology:

- Research & Discover: As part of the initiation process, the design team researched, discovered and reflected on the Aboriginal heritage of the site and precinct.
- Identify Opportunities: Following the initial phase, opportunities were identified primarily within the landscape. Further opportunities exist within the campus of the school to honour indigenous narratives.
- Test and Consult: This phase of the methodology is yet to be completed. The design team will continue to discuss with the school and its stakeholders the appropriate level of consultation to be undertaken in the following phases.

A detailed outline of the approach and measures taken is provided earlier in this document

Greener Places



The design proposal has been developed to align with key principles of the Greener Places document. The framework outlines ways to "create a healthier, more liveable and sustainable urban environment" focusing on improving community connections and access through green infrastructure. This proposal can adopt these strategies through its empathetic relationship to the urban realm.

- Sevington connects with the tree canopies through the southern 'verandah' space, providing for views through the sports hall to the canopies and to the sporting fields beyond.
- Sevington and the Masterplan has minimal impact on reducing the green spaces on the campus, but helps to reinforce the links to these (Sevington with good access to the Johnson Oval and Parsonage sides)
- The proposed Concordia envelope provides for additional, deep-soil landscaping.
- Additional outdoor play space, looking over the tree-tops has been located on the roof of sevington.
- The Sevington and College Lane building envelopes have been designed to retain significant trees

Better Placed



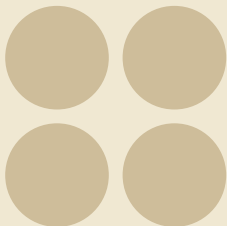
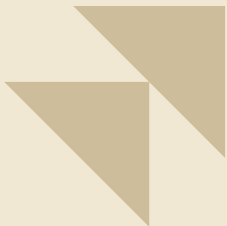
The design proposal has been developed to align with key principles of the Better Placed document.

The Better Placed Design Guide For Schools prepared by the Government Architect New South Wales provides practical guidance on how school projects can be designed to best address the design quality principles in the Education SEPP

This guide has set a benchmark for the project and has been referenced throughout the design process, establishing minimum standards and exemplars for the design response.

A detailed outline of how both the outline concept masterplan and the detailed Stage 1 proposal respond to the principles of the Better Placed document can be found on the following page

9.2 Response to Better Placed - Design Objectives

						
OBJECTIVE 1.	OBJECTIVE 2.	OBJECTIVE 3.	OBJECTIVE 4.	OBJECTIVE 5.	OBJECTIVE 6.	OBJECTIVE 7.
<u>Better fit</u> contextual, local and of its place	<u>Better performance</u> sustainable, adaptable and durable	<u>Better for community</u> inclusive, connected and diverse	<u>Better for people</u> safe, comfortable and liveable	<u>Better working</u> functional, efficient and fit for purpose	<u>Better value</u> creating and adding value	<u>Better look and feel</u> engaging, inviting and attractive
Good design in the built environment is informed by and derived from its location, context and social setting. It is place-based and relevant to and resonant with local character, heritage and communal aspirations. It also contributes to evolving and future character and setting.	Environmental sustainability and responsiveness is essential to meet the highest performance standards for living and working. Sustainability is no longer an optional extra, but a fundamental aspect of functional, whole of life design.	The design of the built environment must seek to address growing economic and social disparity and inequity, by creating inclusive, welcoming and equitable environments. Incorporating diverse uses, housing types and economic frameworks will support engaging places and resilient communities.	The built environment must be designed for people with a focus on safety, comfort and the basic requirement of using public space. The many aspects of human comfort which affect the usability of a place must be addressed to support good places for people.	Having a considered, tailored response to the program or requirements of a building or place, allows for efficiency and usability with the potential to adapt to change. Buildings and spaces which work well for their proposed use will remain valuable and well-utilised.	Good design generates ongoing value for people and communities and minimises costs over time. Creating shared value of place in the built environment raises standards and quality of life for users, as well as adding return on investment for industry.	The built environment should be welcoming and aesthetically pleasing, encouraging communities to use and enjoy local places. The feel of a place, and how we use and relate to our environments is dependent upon the aesthetic quality of our places, spaces and buildings. The visual environment should contribute to its surroundings and promote positive engagement.
• Design is informed by its location and context • Celebrate and integrate heritage buildings to uplift local character • Celebrate and maintain pre-existing sightlines by working with the natural topography of site	• Design prioritises sustainability design principles, in line with AJC's Sustainability Action Plan (SAP). • Flexible layouts to allow for reconfiguration as pedagogical ideals or cohort sizes change • Carefully considered building materials that are circular and reusable • Construction materials that have proven longevity and low maintenance • Development potential of selected sites to be maximised	• Create spaces for the whole school to gather • Sports facilities and performing arts theatre fosters community engagement • Establish a strong Heart at the centre of the campus to encourage relationships across year groups • Provide equally accessible and legible connections though the site at both a macro and micro level	• Better pedestrian pathways throughout site create a connected and integrated campus • Equal consideration given to all faculties to provide exceptional opportunities for all subjects • Support spaces for staff that encourage opportunities for tailored teaching experiences • Focus on Student Wellbeing by providing centralised support facilities for individuals	• Establish celebratory whole school gathering places • Provide a range of appealing spaces for students and staff to meet • New shared amenities and co-educational spaces that support an expanded offering of student curricular and co-curricular activities • Provide a variety of engaging internal and external spaces that foster a lifelong love of learning	• Extend beyond the campus boundaries by creating community facing opportunities for use by the Prep School, and the Stanmore community as a whole	• Reintroduce native vegetation where possible to make the campus a place for humans and non-humans • Preserve existing green spaces on campus

9.3 Response to EPI Provisions

Design Excellence (Inner West LEP 2022)
a. whether a high standard of architectural design, materials and detailing appropriate to the building type and location will be achieved
b. whether the form and external appearance of the development will improve the quality and amenity of the public domain
c. whether the development detrimentally impacts on view corridors and landmarks
d. whether the development detrimentally impacts on land protected by solar access controls established in the relevant development control plan
e. the requirements of the relevant development control plan
f. how the development addresses the following matters (i) the suitability of the land for development, (ii) existing and proposed uses and use mix, (iii) heritage issues and streetscape constraints, (iv) the relationship of the development with other existing or proposed development on the same site or on neighbouring sites in terms of separation, setbacks, amenity and urban form, (v) bulk, massing and modulation of buildings, (vi) street frontage heights, (vii) environmental impacts, including sustainable design, overshadowing, wind and reflectivity and visual and acoustic privacy, (viii) the achievement of the principles of ecologically sustainable development, (ix) pedestrian, cycle, vehicular and service access, circulation and requirements, including the permeability of any pedestrian network, (x) the impact on, and proposed improvements to, the public domain, including landscape design, (xi) the relationship of the development with the street and building frontage.

Architectural Response
a. The design of both the Concept Masterplan and the Stage 1 Detailed Design (Sevington) are the result of an intensive and thorough design process. The designs are described in the preceding sections of this report, including the detailing and materials for the Stage 1 component in particular.
b. The public domain has been carefully considered for both the Concept Masterplan and Stage 1 Detailed Design. Stage 1 creates a public facing entrance for the college on Stanmore Road, where previously there was none. The massing of the proposed buildings respond to the nature of their settings, with the larger buildings concentrated along the busy transport corridor that is Stanmore Road.
c. No detrimental impacts are caused to any existing view corridors or landmarks as part of this design proposal
d. As shown on the shadow studies in Sections 5.17 and 6.14 of this report, the design proposals do not adversely impact on land protected by solar access controls.
e. The relevant development control plan has been reviewed and considered as part of the design proposal, including consulting with the Inner West Council during the Pre-DA meeting (i) The land is zoned SP2 Infrastructure - Educational Establishments and currently in use by Newington College for this purpose (ii) The proposal will not change the existing use of the site as an educational establishment, no new types of use are proposed. (iii) Heritage constraints are generally described in this report and in detail in the Heritage Impact Assessment by Urbis. (iv) The proposed envelopes shown in the Concept Masterplan are set back from the street and adjoining neighbours with appropriate setbacks. The Centenary Hall existing eaves and ridge lines are maintained to reduce any change in appearance of the existing building, while the College Lane Building envelope (Stage 3) is set back from College Lane by 3m, a similar setback to the Newington Building (Tupou) to its north. (v) bulk, massing and modulation of buildings. (v) The outline concept envelopes of the Stage 2, 3 and 6 buildings have been developed to present an appropriate massing for each of their locations. Stage 2 has minimal impact on the existing massing of Centenary Hall, with a discreet lift and stair component located well back from both the street frontage and Memorial Drive frontage, sized with a view to connect into the Stage 3 design. The Stage 3 mass has been developed to respond to the Chapel by creating an offset from the western side of the Chapel and a significant set back from College Lane. Stage 6 responds to its location on a relatively major road, but reduces in building mass at the perimeter to respond to the neighbouring residential buildings. The detailed Stage 1 design is presented in Section 6 of this report, providing a detailed analysis of how the proposed building addresses bulk, massing and modulation. (vi) Heights of the new building in all stages relate to their immediate neighbours, with Stage 1 responding to the ridge lines of the residential buildings on the opposite site of Stanmore Road, and stepping down to the Parsonage building on the east. Stage 2 maintains the existing ridgeline of the Centenary Building, while Stage 3 respects the roof line of the existing chapel building and is a consistent height with the Tupou building to the north. Stage 6 responds to the scale of the adjacent residential properties by stepping down at the upper levels to reduce the potential building height at the perimeter. (vii) Environmental impacts, including sustainable design, overshadowing, wind and reflectivity and visual and acoustic privacy are described throughout this report, but also in the EIS statement by Urbis, the Environmental Wind Impact Study by SLR and the Acoustic Study. (viii) ESD is described in outline concept for the masterplan and in detail for the Stage 1 detailed development in this report, and in the ESD report by Steensen Varming (ix) Pedestrian and vehicular access and circulation is described in detail throughout this report, and in the Traffic Report by Traffix (x) Landscaping has been developed by Oculus and is described in the landscape architecture design report (xi) Detailed facade sections of the detailed Stage 1 design have been included in this design report, describing the relationship with the street.

9.4 Response to Design Quality Principles of the SEPP

Design Quality Principles of the SEPP (Transport and Infrastructure) 2021
Schedule 8 Design quality principles in schools—Chapter 3 sections 3.35(3), 3.36(6)(a), 3.37(5A)(a), 3.37A(3), 3.45(3)(b)(i) and 3.52(3)
1 Responsive to context
Schools should be designed to respond to and enhance the positive qualities of their surroundings. In designing built forms and landscapes, consideration should be given to a Country-centred approach and respond to site conditions such as orientation, topography, natural systems, Aboriginal and European cultural heritage and the impacts of climate change. Landscapes should be integrated into the overall design to improve amenity and to help mitigate negative impacts on the streetscape and neighbouring sites.
2 Sustainable, efficient and resilient
Good school design combines positive environmental, social and economic outcomes and should align with the principles of caring for Country. Schools should be designed to be durable and resilient in an evolving climate. Schools and their grounds should be designed to minimise the consumption of energy, water and other natural resources and reduce waste.
3 Accessible and inclusive
School buildings and grounds should be welcoming, easy to navigate and accessible and inclusive for people with differing needs and abilities. Schools should be designed to respond to the needs of children of different ages and developmental stages, foster a sense of belonging and seek to reflect the cultural diversity of the student body and community. Schools should be designed to enable sharing of facilities with the community and to cater for activities outside of school hours.
4 Healthy and safe
Good school design should support wellbeing by creating healthy internal and external environments. The design should ensure safety and security within the school boundaries, while maintaining a welcoming address and accessible environment. In designing schools, consideration should be given to connections, transport networks and safe routes for travel to and from school.
5 Functional and comfortable
Schools should have comfortable and engaging spaces that are accessible for a wide range of formal and informal educational and community activities. In designing schools, consideration should be given to the amenity of adjacent development, access to sunlight, natural ventilation, proximity to vegetation and landscape, outlook and visual and acoustic privacy. Schools should include appropriate indoor and outdoor learning and play spaces, access to services and adequate storage.
6 Flexible and adaptable
In designing schools, consideration should be given to future needs and take a long-term approach that is informed by site-wide strategic and spatial planning. Good design for schools should deliver high environmental performance and ease of adaptation, and maximise multi-use facilities. Schools should be adaptable to evolving teaching methods, future growth and changes in climate, and should minimise the environmental impact of the school across its life cycle.
7 Visually appealing
School buildings and their landscape settings should be aesthetically pleasing by achieving good proportions and a balanced composition of built and natural elements. Schools should be designed to respond to and have a positive impact on streetscape amenity and the quality and character of the neighbourhood. The identity and street presence of schools should respond to the existing or desired future character of their locations. The design of schools should reflect the school’s civic role and community significance.

Architectural Response
1 Responsive to context - A Country-centred approach has been taken for this project, as described on sections 3.1, 4.4, 5.6 and 6.7. The outline concept envelopes are responding to multiple site conditions including topography and heritage, including Stage 2 and Stage 3 responding to Centenary Hall,the Chapel and Founders. The Sevington Building, to be delivered as Stage 1, has been designed to respond to the natural topography of the site, utilising the significant drop between Stanmore Road and the south side of the project site to accommodate the lower level of the building, allowing the sports hall to directly access the forecourt above. The building is orientated to allow for a controlled amount of direct sunlight from the north, while limiting glazing on the east and west to reduce the impact of the early morning and late afternoon sun in the warmer months.
2 Sustainable, efficient and resilient - The detailed Stage 1 design has been designed to minimise energy consumption through a number of measures described in section 6.9. The site’s significant trees and other important landscaping elements have been retained and the design has been shaped to allow for their incorporation and protection. The outline concept designs for Stages 2, 3 and 6 provide the framework for sustainability: Stage 2 is retaining the existing Centenary Hall building, a highly sustainable approach, Stage 3 is utilising the vertical circulation and lifts provided by the adjacent buildings, thereby allowing for efficiency and making more by building less, while Stage 6 is providing the ability to design a highly flexible and future proofed building.
3 Accessible and inclusive - The outline concept masterplan designs enhance the accessibility of the Newington campus, with the combination of Stages 2 and 3 providing a missing covered link that will afford the College covered and level access from the south-eastern most buildings to the Old Chapel in the north-western corner of the site. The proposed Stage 6 design incorporates the pedestrian bridge that provides not only accessibility for the College, but for the public to cross over Stanmore Road. The detailed Stage 1 design provides for a range of different types of spaces to cater for all student age groups on the campus, with the sports hall itself helping to foster a sense of belonging for the entire college, including the preparatory school, by providing a high-quality, all school gathering space. Additional design has been undertaken in the landscape architecture component of this project.
4 Healthy and safe - The designs build on the work that has already been undertaken at the College to establish the campus as a safe and secure environment. The Stage 1 design allows for additional presence along Stanmore Road with street level windows helping to provide a sense of passive security along this frontage. Refer to Section 6.16 for a detailed overview. The existing transport connections are reinforced, particularly by orientating the revised forecourt to directly correspond to the existing pedestrian crossing on Stanmore Road, and the proposed inclusion of the pedestrian bridge in the final stage of the design. Refer to Section 7 and Section 5.9 for additional information on travel to, from and within the campus, and to the landscape architecture component for landscape related design information.
5 Functional and comfortable -the detailed Stage 1 component provides a wide range of formal and informal spaces, from the more formal GLAs in the pavilion building, to the open and flexible auditorium space linking the forecourt level of the pavilion building with level 1 below. Access to daylight is provided in all spaces that are intended to be used for long periods, alongside views throughout the building to the campus landscape beyond. Refer to Section 6 for a detailed description of the Stage 1 component of the project.
6 Flexible and adaptable - While the masterplan concept development stages have been designed with flexibility in mind, the detailed Stage 1 proposal provides for flexibility at all levels. Level 1 provides a number of flexible teaching and learning spaces around the perimeter (with access to daylight and views), flexible on day one with operable walls, as does the pavilion building layout, both providing the ability to accommodate significant reworking and retrofitting (subject to approval) to ensure long term viability. The sports courts themselves are flexible (as described in Section 6.10 and 6.11), as is the roof top courts space.
7 Visually appealing - described throughout Section 6 of this report, the design of the Stage 1 component of this proposal seeks to provide an aesthetically pleasing composition, responding to its context and the adjacent streetscape. Care has been exercised with the creation of the forecourt and building entrances from Stanmore Road to create a fitting entrance space for the College, reflecting its civic role and giving it a strong presence within its local community. The design for the concept proposal Stages 2, 3 and 6 (and Stage 4 Memorial Drive landscape) is described in Section 5 of this report, massing has been carefully undetaken for these Stages, with the Centenary Hall and College Lane proposal having minimal impact on the neighbouring surroundings and experience of the site along Memorial Drive, while the envelope for Concordia and the pedestrian bridge have been sized and articulated to respond to the more urnba streetstacpe along Stanmore Road.

10.1 External Lighting

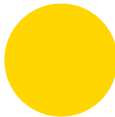
Light is really the source of all being
all materials in nature are made of light
which has been spent, and this crumpled
mass called material casts a shadow,
and the shadow belongs to light.
Louis Kahn

Mechanical Engineering
Lighting Design
Sustainable Design
Electrical Engineering

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LIGHTING DESIGN

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Consultant Advice Note – External Lighting

Project No: 247236

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Page 1 / 15

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Table of Contents

1.0	Introduction	3
1.1	The Site	3
1.2	Project Description	4
1.3	External Lighting Extent	5
1.4	External Lighting SEARs Requirements	7
2.0	External Lighting Strategic Approach	8
2.1	A Safe and Welcoming Campus	8
2.2	Public Domain and Building Perimeters	8
2.3	Multi-Purpose Sports Court Lighting	9
2.4	Codes and Standards Requirements	9
2.5	Selecting a suitable lighting category	10
2.6	Mitigating the Potential Obtrusive Impacts of the Outdoor Lighting	12
3.0	Conclusion	15

1.0 Introduction

This report has been prepared by Steensen Varming for AJC Architects to outline the external lighting impact mitigation requirements for Newington College in accordance with the Secretary’s Environmental Assessment Requirements (SEARs), supporting the State Significant Development Application (SSD-7826465).

A detailed lighting design has not yet been developed for this project. This report acts as technical note outlining the lighting approach and technical parameters required to be addressed in the future lighting design of both the Concept Proposal for the site wide lighting masterplan and the Detailed Stage 1 works to ensure alignment with the SEARS requirements.

1.1 The Site

The Newington College Senior Campus is located at 200-244 Stanmore Road, Stanmore and is bordered by Stanmore Road to the north, Newington Road to the south and College Lane to the west. The College boundary also includes the Concordia building to the north at 221-235 Stanmore Road. The main campus is legally described as Lot 8 in DP710369 and the Concordia site is legally described as Lot A in DP109269, Lot 1 in DP49, Lot B in DP330028, and Lot 1 in DP526319.

The site is illustrated in the Site Aerial at Figure 1.



Figure 1 - Site Aerial

Source: Urbis 2024

1.2 Project Description

The SSDA seeks consent for staged alterations and additions to the Newington College Senior Campus comprising:

Concept Proposal for the provision of new and upgraded facilities, including:

- Building envelope for the redevelopment of Sevington Courts to accommodate recreational facilities and teaching spaces (refer to detailed Stage 1 Works below).
- Building envelope for alterations and additions to Centenary Hall and development of an adjoining, four storey teaching and learning facility (College Lane building). This development will accommodate a cafeteria and dining hall, lecture theatre, multi-purpose teaching spaces and additional pastoral spaces.
- Building envelope for the redevelopment of the Concordia building to accommodate a performance theatre, multi-purpose gallery and exam centre, new teaching spaces and basement car parking. The Concordia redevelopment includes a new pedestrian bridge across Stanmore Road to the main campus.
- Landscaping design strategy across the campus.
- Car parking provision and circulation arrangements.
- Increase of 368 students and 45 full-time equivalent (FTE) staff.

Detailed Stage 1 Works, including:

- Earthworks and the associated demolition of Sevington Courts.
- Construction, fit-out and operation of 3 storey building comprising multi-purpose indoor and rooftop courts, fitness centre, multi-purpose teaching spaces, amenities and basement car parking.
- Construction, fit-out and operation of 4 storey building comprising multi-purpose teaching spaces, administrative functions and amenities.
- Alterations to the existing driveway within the site to facilitate vehicle access to the new basement car park.
- Temporary car park during construction phase of Stage 1 Works.
- Tree removal and new landscaping adjacent to the Stage 1 development site.
- Increase of 368 students and 45 FTE staff.

10.1 Lighting

1.3 External Lighting Extent

New external lighting is to be provided throughout the new public domain and building developments to main pedestrian pathways, the pedestrian footbridge, building entries and perimeter spaces, carpark areas, driveways, and the multi-purpose rooftop sports court and building facades to facilitate navigation of the site at night, a safe and welcoming environment and night-time activity use of the campus. Opportunities to integrate lighting into landscape or urban elements should be considered in key areas to support a welcoming and inviting nightscape.

- The extent of works includes the following buildings and their associated public domain:
- Stage 1 – Sevington Courts (new build) including multi-purpose rooftop sports court
 - Stage 2 – Centenary Hall (refurbishment)
 - Stage 3 – College Lane Building (new build)
 - Stage 4 – Memorial Drive & Surrounds (Landscape Works)
 - Stage 6 – Concordia Building (redevelopment)

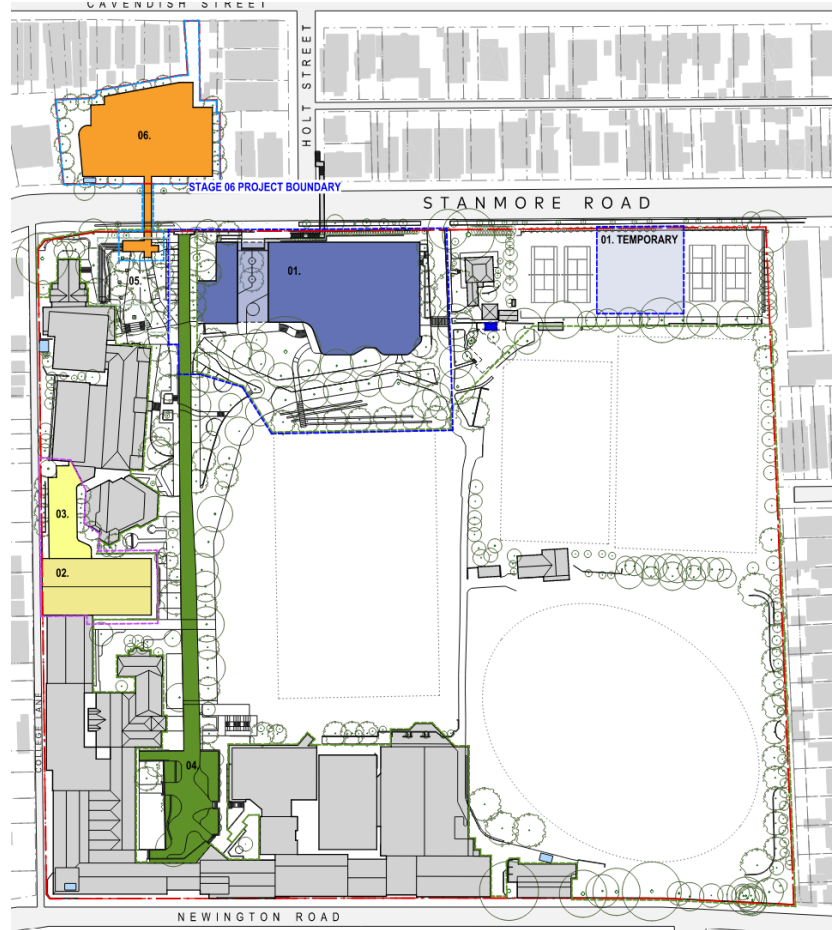


Figure 2 - Masterplan - Staging Plan

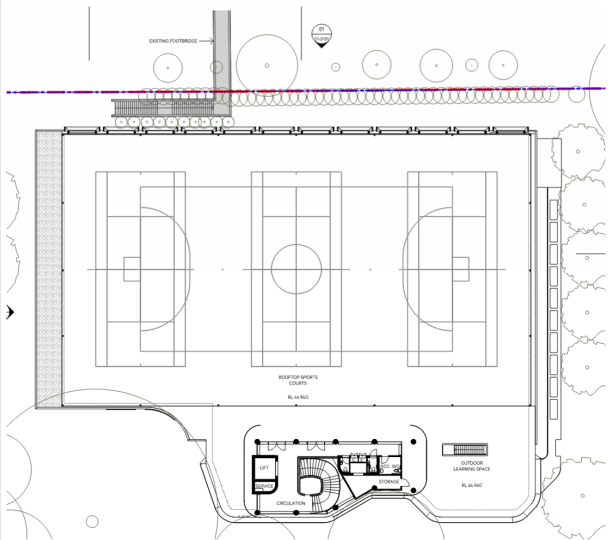
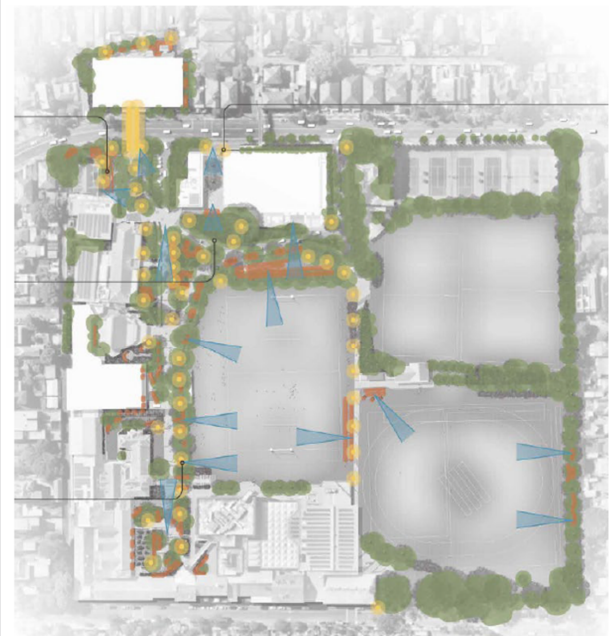


Figure 3 - Rooftop Sports Courts

Source: SSDA-01-2105 – Level 05 Floor Plan

Whilst a detailed lighting concept and design has not yet been developed, a masterplan preliminary concept diagram has been prepared by the landscape architect with the extent of the external public domain lighting indicated below:



Source: Occuls (December 2025)

Figure 4 - Landscape lighting concept

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1.4 External Lighting SEARs Requirements

The external lighting strategy developed for the project must align with the requirements of the Secretary's Environmental Assessment Requirements (SEARs) for the proposed development dated 3rd February 2025 for SSD-78268465. The specific external lighting requirements are as outline in Section 5 Environmental Amenity below:

Concept Proposal

5. Environmental Amenity - Address how good internal and external environmental amenity is achieved by the concept, including access to natural daylight and ventilation, pedestrian movement throughout the site, access to landscape and outdoor spaces. - Assess amenity impacts on the surrounding locality, including lighting impacts, solar access, visual privacy, visual amenity, view loss and view sharing (if applicable), overshadowing and wind impacts (including the preparation of a wind assessment where the concept development has a height above four storeys). A high level of environmental amenity for any surrounding residential or other sensitive land uses must be demonstrated. - Provide a solar access analysis of the overshadowing impacts of the concept building envelopes within the site, on surrounding properties and public spaces (during summer and winter solstice) at hourly intervals between 9am and 3pm, when compared to the existing situation and a compliant development (if relevant).	- Privacy and Overlooking Diagrams - Shadow Diagrams - Accessibility Report - Pedestrian Wind Environment Assessment (if needed) - View Analysis
---	--

Stage 1 Works

5. Environmental Amenity - Address how good internal and external environmental amenity is achieved, including access to natural daylight and ventilation, pedestrian movement throughout the site, access to landscape and outdoor spaces. - Assess amenity impacts on the surrounding locality, including lighting impacts, solar access, visual privacy, visual amenity, view loss and view sharing (if applicable), overshadowing and wind impacts (including the preparation of a wind assessment where the Stage 1 buildings have a height above four storeys). - Provide a solar access analysis of the overshadowing impacts of the Stage 1 works within the site, on surrounding properties and public spaces (during summer and winter solstice) at hourly intervals between 9am and 3pm, when compared to the existing situation and a compliant development (if relevant).	- Privacy and overlooking Diagrams - Shadow diagrams - Pedestrian Wind Assessment (if applicable) - View Analysis
---	---

The key criteria are for the lighting to have a minimal impact on the surrounding locality including adjacent residential properties.

Whilst there is no specific aviation requirements noted for the development, the Aviation Impact Assessment report provides the following recommendation that should be met by the external lighting design:

The applicant needs to ensure that the design and construction of the proposed development limit the upward light (measured at 3° to the horizontal) to no more than 450 candelas during both construction and ultimate operation.

Page 7 / 15

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2.0 External Lighting Strategic Approach

External lighting should be designed to support safe movement, navigation of the site at night with a clear nighttime hierarchy, creation of a welcoming and inviting environment and support the night-time activity use of the campus whilst minimising the impact and obtrusive light to the night sky and neighbouring properties.

An approach should be taken looking beyond statutory compliance to balance the functional requirements and experiential considerations for a holistic nightscape.

External lighting will be applied to main pedestrian pathways, the pedestrian footbridge, building entries and perimeter spaces, carpark areas, driveways, and the multi-purpose rooftop sports court and building facades.

Varying luminaire types will be required to meet the different requirements and should form part of a coherent scheme with a consistent visual language. The luminaires should have a refined and elegant form so as to be unobtrusive for the daytime image and be seamlessly integrated into the architectural and landscape designs.

2.1 A Safe and Welcoming Campus

The general use of light to cultivate a safe night-time environment for all users and visitors of spaces is complex. It is not guaranteed by the achievement of a particular illuminance requirement, and designing lighting to purely meet the codes and standards does not always mean a safe or comfortable environment has been achieved.

People's perception of safety is much more governed by night-time population and activity of an area as well as issues such as facial recognition, contrast ratio, reduced glare, and colour discrimination, as well as the overall atmosphere created. It is crucial to achieve a balance between required illuminance levels and concerns of under-lighting spaces and the concerns of over-lighting and providing overly uniform lighting.

Addressing this balance, the lighting design should take a layered approach by implementing high uniformity and illuminance for key pathways and contributing to improving facial recognition where it is needed, whilst utilising subtle indirect lighting and lighting accents with lower uniformity and illuminance in surrounding areas and building facades to create warm and soft ambient atmosphere. The lighting design should produce suitable conditions for safe use of the facilities and key areas within the surrounding site at night and which are safe to maintain.

2.2 Public Domain and Building Perimeters

Lighting to the public domain will consist of a suite of luminaires, selected to meet the functional and experiential requirements of the campus. Lighting should define the bounds of the nighttime use areas, direct travel and support orientation and navigation. Where indirect lighting may be utilised for built forms, the design, placement and optical control of the fittings is to ensure there is no upward spill light to the night sky. Whilst a detailed lighting concept has not been developed, the below are to be considered in the development of the design approach:

- The main campus pedestrian pathways are to be lit with simple and elegant lighting poles of a suitable human scale. Low level bollards may also be

AJC Architects | Newington College | 10.0 Appendix

architectsajc.com | 133

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provided at main entry points to support wayfinding and orientation. All luminaires should be full cut-off.

- Building entries and building perimeter walkways are to utilise the built form to integrate lighting to provide suitable functional illumination. Where there are building awnings, lighting may be integrated with low glare luminaires to light the area below. Increased illuminance should be provided at the building entries to support wayfinding and orientation. The relationship with the internal building lighting should be considered. The arrangement should limit any upward spill light through direction, optical controls and placement.
- Lighting to the pedestrian footbridge is to be integrated and low level to support safe passage with an aim to conceal the light source to reduce the impact to adjacent properties and road users below. Lighting may be integrated into handrails or architectural built elements to suit the final footbridge design.
- Landscape and urban lighting may be considered in key locations pending the final landscape design. Lighting may be integrated into benches or furniture elements, with accent lighting of landscape features to create a visually interesting and welcoming nightscape.
- Where building façade lighting is suitable to support the nighttime identity of the campus, express the architecture and contribute to the nighttime experience of the campus, the lighting is to be subtle, integrated with the architectural form and used to express and respond to the materiality and form. Light should be directed downwards or be positioned to minimise upward spill light to the night sky.
- External stairs and ramps may utilise a suitable lighting typology to provide the functional lighting requirements. Pole lighting matching the main walkways or integrated handrail lighting may be considered to suit the final architectural design. All lighting to be directed downwards and be full cut-off.

2.3 Multi-Purpose Sports Court Lighting

The lighting design for the Rooftop Sports Court needs to consider the players and spectators experience to provide suitable functional illumination whilst minimising the impact of external lighting on the adjacent locality. Pole lighting will be required to meet the functional requirements for nighttime use of the courts. The positions need to consider the requirements of the various sports that will be played and be clear of any obstruction of play and not be within an exclusion zone.

Low level poles with a single luminaire should be provided with a minimal height. Tall, multi-fitting floodlight poles are not to be provided. Careful fitting selection and placement is needed to direct light to the functional areas of play and circulation whilst limiting spill light outside the bounds of the building and to the night sky above. All luminaires should be parallel to the ground and be full cut off. A lighting control strategy is to be provided to limit the use of the lights to ensure lighting is off when not required.

2.4 Codes and Standards Requirements

External lighting is to be provided in accordance with the following standards:

AS/NZS 1158.0 2005 AMDT 2 2010	Lighting for Roads and Public Spaces – Introduction
AS/NZS 1158.3.1 2020 AMDT 1 2024	Lighting for Roads and Public Spaces – Pedestrian Area (Category P) Lighting – Performance and Design Requirements

Page 9 / 15

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AS4282 2023

Control of the Obtrusive Effects of Outdoor Lighting

AS 2560.2:2021

Sports Lighting – Part 2: Specific applications

2.5 Selecting a suitable lighting category

In the development of the detailed external lighting concept, selection of a relevant lighting category is required to align with the recommendations of the Australian Standards relevant to the purpose and use of the space.

An adaptable solution is recommended for all external lighting to reduce light intensity throughout the evening to minimise the impact on adjacent properties whilst responding to the changing nature and use patterns of how the site is used. It is recommended that during curfew hours, after 11pm (or earlier nominated time as agreed with the client), the light intensity reduces to a low level, when higher levels of light would not be required. Building façade, sports court lighting and landscape lighting elements should turn off at 9pm (or early nominated time as agreed with the client – sports court lighting should be off when not required).

The following provides initial guidance in the selection of a suitable lighting category for finalisation with the development of the detailed lighting concept.

■ Main Pedestrian Pathways	PP3
■ Pedestrian Footbridge	PP4
■ Building perimeter pathways	PP3
■ Building entries and site entries	PP2
■ Connecting elements (ramps, stairs)	PE3
■ Off-Road Carparks	PC3
■ Driveways	PR3
■ Landscape/ Urban Areas	Use of light, shade, and accents with increased contrast to create a visually interesting and welcoming space at night

The final approach should consider a lighting hierarchy, using greater light intensity to main site entries, building entries and key routes, and lower intensity to secondary routes and landscaped spaces. The lit atmosphere, night-time experience and surface brightness will also be used as design parameters rather than solely illuminance levels.

Where suitable, higher illuminance levels could be considered for improved accessibility, namely for ramps, steps and stair areas where sufficient lighting for safe movement and catering for varying levels of mobility is particularly important.

For the multi-purpose sports court, the lighting levels should be provided to meet the level of play for training/ recreational purposes for the following sports:

- Tennis
- Futsal
- Field Hockey
- Netball
- Basketball

10.1 Lighting

The below light levels are required as outlined in AS2560.2:

Table 2.7.1 — LTPs for outdoor hockey							
Level of play	Average horizontal maintained illuminance ($\bar{E}_h$)	Minimum horizontal uniformity ratio		Maximum uniformity gradient per 5 m ^a		Max. glare rating (GR)	Minimum colour rendering index (R_a)
		($E_{hmin}/\bar{E}_h$) (U_1)	(E_{hmin}/E_{hmax}) (U_2)	G	UG		
Ball and physical training	200	0.60	0.40	N/A	N/A	50	65
Regional, state and club level competition	300	0.70	0.50	35 %	1.54	50	65
National and international competition	500	0.70	0.50	30 %	1.43	50	65
^a The limit for G may be increased by 5 % at one point only (or 2 or 4 points if there is scheme symmetry). The point(s) shall only be along the side lines, but not in the corners.							

Figure 5 - Outdoor Hockey LTPs

Source: AS2560.2:2021

Table 2.11.1 — LTPs for outdoor tennis						
Level of play	Grid	Average horizontal maintained illuminance ($\bar{E}_h$)	Minimum horizontal uniformity ^c		Maximum glare rating (GR)	Minimum colour rendering index (R_a)
			($E_{hmin}/\bar{E}_h$) (U_1)	(E_{hmin}/E_{hmax}) (U_2)		
Recreational and residential ^a	PPA	250	0.60	0.30	50	65
	TPA	150	0.20	0.10		
Club competition and commercial	PPA	350	0.60	0.40	50	65
	TPA	250	0.30	0.20		
National and international ^b	PPA	750	0.70	0.50	50	65
	TPA	500	0.50	0.30		
^a For residential tennis courts used for any form of competition, the LTPs for club competition should be used.						
^b These are the minimum levels for International and National level of competition (non-broadcast), higher levels can be recommended, the client should be consulted to ensure the levels are suitable.						
^c Lower illuminance levels should not occur around the net area						

Figure 6 - Outdoor Tennis LTPs

Source: AS2560.2:2021

Table 2.9.1 — LTPs for netball and basketball					
Level of play	Average horizontal maintained illuminance ($\bar{E}_h$)	Minimum horizontal uniformity		Maximum glare rating (GR)	Minimum colour rendering index (R_a)
		($E_{hmin}/\bar{E}_h$) (U_1)	(E_{hmin}/E_{hmax}) (U_2) ^b		
Recreation or training, and low-level local competition	100	0.50	0.30	50	65
Mid-level local and regional competition, high level training	200	0.60	0.40	50	65
International and national competition with large spectator galleries ^a	500	0.70	0.50	45	65
^a International and national competitions are rarely (if at all) played on outdoor courts.					
^b Where two or more courts are adjacent, and with luminaires operating simultaneously U_2 may be reduced by an absolute value of 0.1, e.g. from 0.30 to 0.20 for low level competition.					

Figure 7 - Netball and Basketball LTPs

Source: AS2560.2:2021

Based on the above, it is recommended that the following parameters are followed:

- Average horizontal maintained illuminance – 200-250lux
- Minimum horizontal uniformity – U_1 – 0.6 and U_2 – 0.4
- Maximum glare rating – 50
- Minimum colour rendering index – 90. Whilst the minimum colour rendering requirements of the standards is lower, a higher CRI is required for the outdoor multi-purpose sports hall to ensure suitable rendering of the space, materials and people, supporting facial recognition and in line with the overall site wide approach.

2.6 Mitigating the Potential Obtrusive Impacts of the Outdoor Lighting

Minimising Obtrusive Light

In accordance with AS/NZS 4282:2023, environmental light spill and light spill into neighbouring properties is to be controlled. To minimise the impact, lighting should be applied with purpose and focused on the key pedestrian routes at night. The selection of appropriate lighting categories is to enable safe movement and orientation without over lighting the space. An adaptable lighting control strategy should be implemented to reduce the light intensity when higher levels of light may not be required, ensuring the final installation is purposeful.

The design is to ensure the selection of luminaires with downward distribution and full cut-off optics to all pole and bollard lighting, careful aiming, the concealment of luminaires under awnings or roofs, and the application of glare shields, louvres or back spill shields where required. All boundary located fittings are to be directed away from neighbouring properties.

Consideration is to be given to sight lines and different viewing angles to minimise glare and direct source/ luminous surface visibility. This entails the minimisation of luminance/ glowing surfaces in the luminaire selection and consideration to the use of shielding to further reduce visibility and impact.

This is specifically critical for the rooftop multi-purpose sports court. Individual poles with single luminaires are to be provided with a minimal height and localised coverage. Tall poles with uncontrolled floodlighting should not be provided and are not supported for this project. Luminaires are to be low glare, full cut-off, have well controlled optics focusing light to the court as needed whilst minimising spill light outside the boundary of the building footprint. The wattage should be as low as possible to meet the required illuminance requirements. It is noted this approach may require additional pole positions in order to minimise the overall impact. Careful co-ordination and consideration are required to achieve the required outcome.

10.1 Lighting

Dark Sky Principles

In addition, the external lighting is to align with the International Dark Sky Association's 5 Principles for Responsible Outdoor Lighting, by providing useful, targeted, controlled, warm white lighting. The application of these principles will include the following key measures:

- Use of targeted lighting at low level
- Selection of appropriate categories to keep overall illuminance minimal
- Selection of luminaires with appropriate distribution for the task, to minimise light spill beyond the area that requires illumination
- Where lighting horizontal surfaces, luminaires to have minimal upward light
- Considered mounting orientation of light sources
- Controlled direction of light
- Fitting selection with good optical control
- Minimisation of direct visibility of light sources (limit omni-directional sources)
- The use of any uplighting is to be carefully positioned and aimed (e.g. to the underside of architectural canopies) reducing upward spill light
- Use of shields and louvres where appropriate
- Use of lighting control system to dim/ control lighting and automate the timing of the installation to allow adjustment of intensity at different times
- Consideration of sight lines and viewing angles to minimise glare
- Use of warm lighting where possible (3000K and lower) with reduced blue and UV wavelengths to reduce the risk of disturbance of vision / damage to fauna
- The use of warm light to reduce the attraction of insects and subsequent negative impact on insect populations

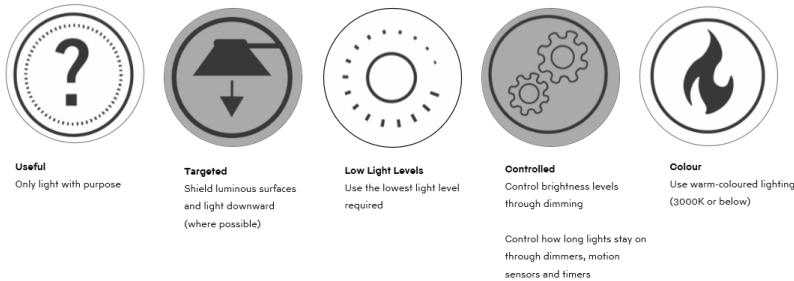


Figure 8 - Principles for Responsible Outdoor Lighting

Source: International Dark Sky Association

Light Quality

- **Correlated Colour Temperature** - In line with the Dark Sky and environmental principles, and to create a warm and welcoming night-time destination, the correlated colour temperature for this project shall be 3000K and below. 2700K - 3000K warm white should be applied to all general lighting, landscape lighting and building façade lighting elements considering the materiality of the landscape and built elements. Sports court lighting should be 3000K.
- **Colour Rendering** - The spectral properties of the light sources have a direct influence on the colour appearance of the surfaces within the spaces. The choice of light sources should be made to create the intended visual atmosphere, being mindful about all the materials and surfaces, their forms, and colours. To create a night-time experience where plants, materials as well as people are read and rendered most naturally, a minimum Colour Rendering Index (CRI) of 90+ is recommended. It is however noted that spectral distribution and gamut index should be looked at when evaluating LED sources rather than solely CRI.

- **Light Intensity and Uniformity** - Lighting should be designed to achieve the adequate illumination levels addressed by the relevant guiding documents for public domain areas (P category) within AS/NZS 1158.3.1. and Sports lighting AS2560.2:2021. Whilst the standards require a certain level of uniformity, non-uniformity in certain areas, contrast and accent lighting has the potential to enhance the architectural quality and draw attention to certain areas; therefore, would be considered to landscape and urban areas. It is anticipated to use light fixtures with the ability to change intensity, which could be reduced late at night, when the pathways and surrounding spaces such as the rooftop sports court are used less. Light intensity can also be used to create hierarchy across the different spaces, for example making the entrances to buildings and the school brighter for easier wayfinding.

Lighting Control

To reduce spill light as well as energy consumption and to create an appropriate nighttime environment that considers surrounding properties, the use of dimmable lighting and a lighting control system is recommended and important for the overall success of the operation of the lighting system.

The application of time clock, sensors, photo electric cell activation and dimming control should be implemented. A timed light-level approach is recommended, whereby through the use of PE Cells and timers, the lighting intensity shall be dimmed throughout the evening to minimise the effects of spill light to not only neighbouring residential properties but also to mitigate the effects of light pollution.

The following modes of operation are recommended, considering alignment with AS/NZS 4282:2023 curfew parameters:

Pathways and General External Lighting – Stage 02, 03 and 06:

- Dawn to dusk - all lighting off
- Dusk to 9 pm - on to pre-set level, to create a safe nighttime atmosphere across the campus
- 9pm – 11pm – on to dimmed pre-set level when use of the site is anticipated to be less
- 11 pm to dawn – dimmed to a low level at key locations or off. Landscape, urban, building façade lighting to be off.

Integrated motion sensors can be considered for additional control of lighting. Motion sensors can increase the light output, triggered by movement, or decrease the output after a period of non-activity after a pre-determined period of time. The light fitting then automatically adjusts the light intensity based on the local and spatial needs to key areas to support safe passage with minimal impact on the environment and neighbouring properties.

Rooftop Sports Court – Stage 01 Sevington Court:

- Dawn to dusk - all lighting to be off
- Dusk to 9pm - on to pre-set levels to achieve level of play requirements. Lighting only to be on when courts are in use with a local control arrangement, otherwise turned off. An automatic off is recommended at 9pm (or at a time when use of the courts is not permitted) to ensure lights are not accidentally left on. The configuration of control to be discussed with client further in the detailed design phase to support the functional requirements.
- 9pm to dawn - all lighting off with the exception of occasional school related events to 10pm (Mon to Sat)

The hours of operation shall be discussed and agreed with the client to ensure the brief requirements are met.

3.0 Conclusion

The external lighting for Newington College is to provide a balance between supporting and guiding safe movement and activity around and within the campus, curating a warm, welcoming atmosphere and providing a high level of integration to avoid adverse visual impact,

A layered lighting design is required to balance minimum illuminance levels with the lit atmosphere, night-time experience and surface brightness for a cohesive nightscape that supports the human experience.

Mitigation measures to minimise the potential obtrusive effects of the lighting are to be applied as part of the design. These include the controlled positioning and integration of luminaires, considered optics, optical control accessories, low illuminance, colour temperatures and the ability to control the intensity; all contributing to a low impact outcome to align with the SEARs requirements and meet the project objectives.



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