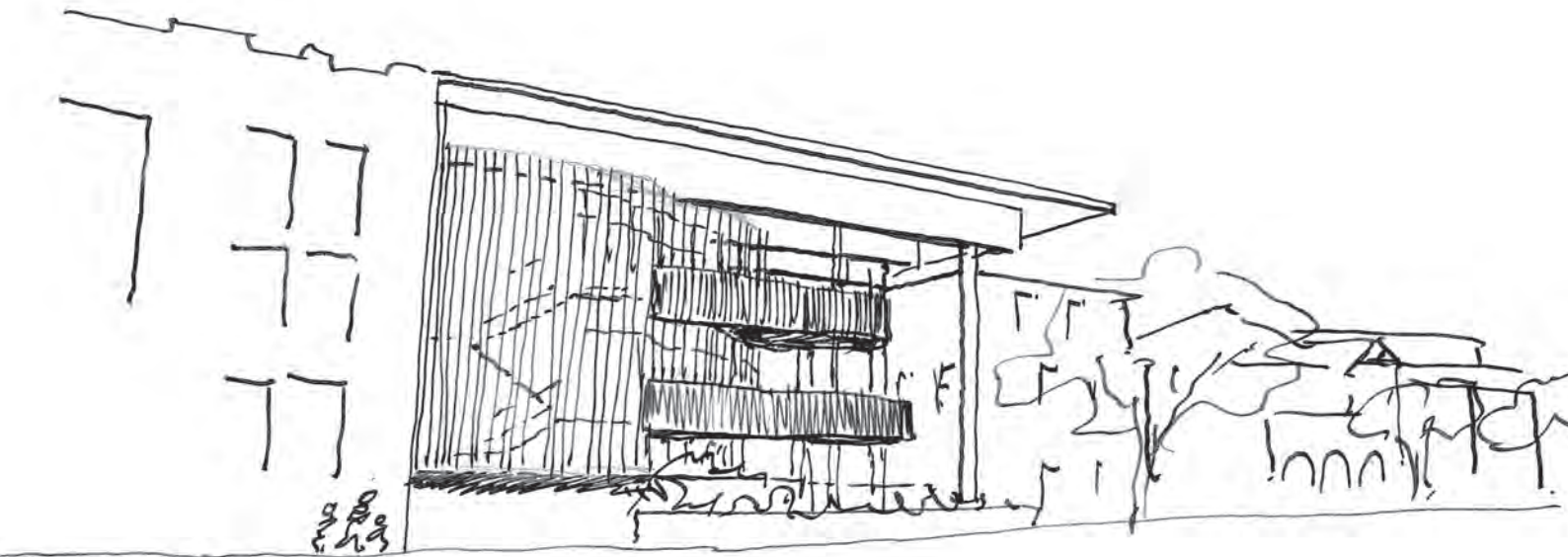


PROJECT ARCHIMEDES

ARCHITECTURAL DESIGN STATEMENT

for WENONA SCHOOL LIMITED

PREPARED BY **tonkinzulaikhagreer** ARCHITECTS



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VISION

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CONNECTIVITY
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VISION

Wenona School Limited has developed a Masterplan, prepared by BVN Architects, which captures the vision of Wenona's future. The Master Plan provides a high level vision that guides the staged redevelopment of the School to meet contemporary pedagogical needs and provide an enhanced environment for students and the School as a whole. With the help of the Master Plan, the first stage of the new School was identified to be located on 261 – 265 Miller Street, North Sydney, and has been called Project Archimedes.

The brief developed by Wenona for Project Archimedes includes a STEM (Science, Engineering, Technology and Mathematics) teaching hub, a Sports hub including a swimming pool, a learn to swim pool with associated teaching and learning spaces, a Senior Ecosystem group learning space plus new staff facilities. After a detailed Design Excellence Competition, TZG were selected as the design architects for the project. The Master Plan vision guided the design team for Project Archimedes throughout the schematic design process, assisted by on-going detailed briefing by the senior school management, the Heads of Department and key operational staff.

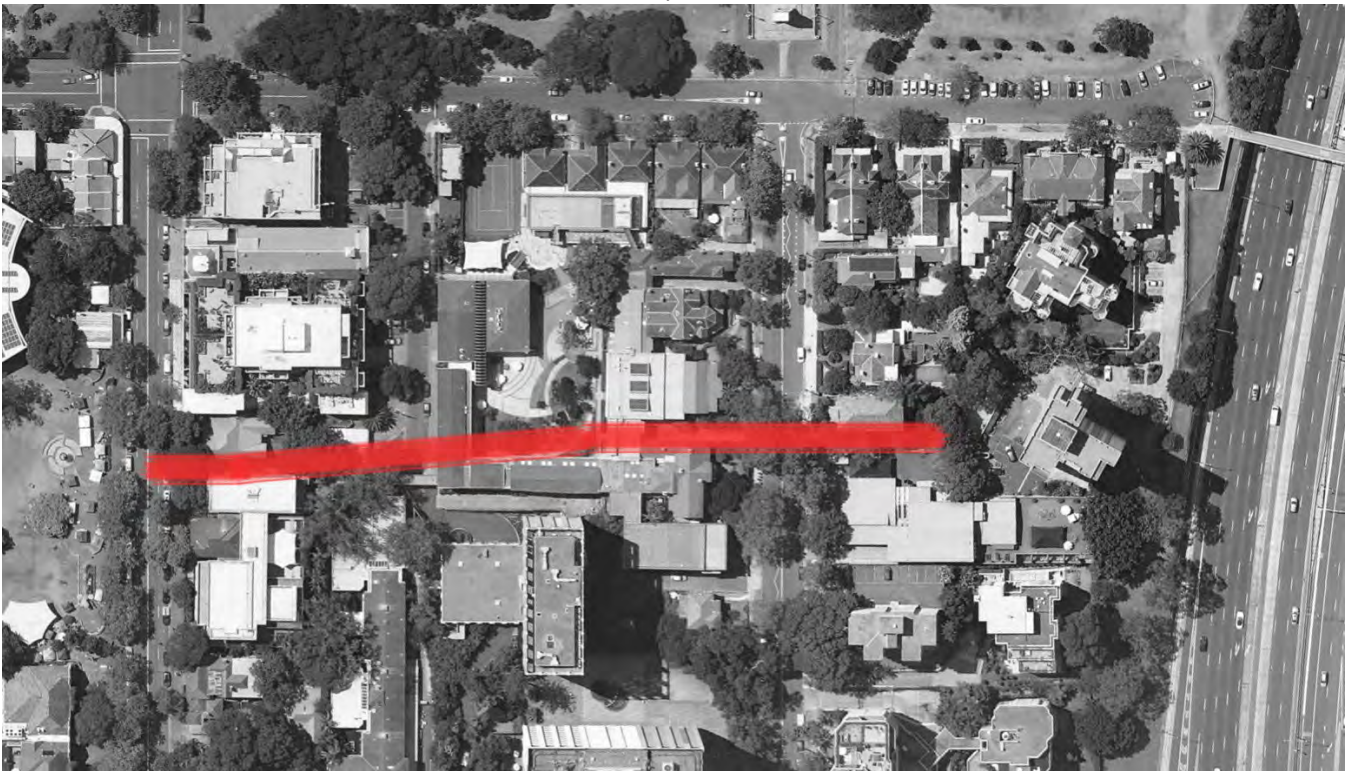


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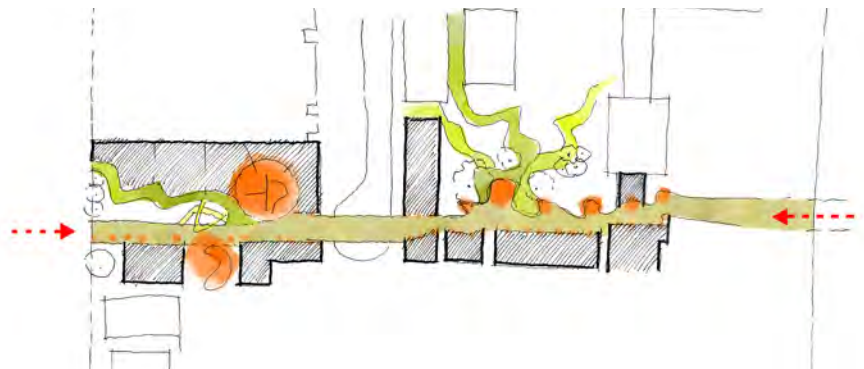
URBAN DESIGN

CONNECTIVITY

A clear connection through the Project Archimedes building to the central campus between Elliott and Walker Streets creates the starting point of the new Wenona School Spine, an essential foundation of the Masterplan. As part of Project Archimedes, the existing bridge is to be replaced by a new, wider and slightly raised covered connection, which better integrates with the Central Campus, providing for the future connection to the Eastern Campus.



AERIAL VIEW



SKETCH OF SPINE CONNECTION THROUGH CAMPUS OF WENONA SCHOOL

URBAN DESIGN

SITE PLANNING

WENONA SPINE

This major site planning strategy was developed by BVN within their Masterplan. The main link of all school sites is of major importance. Project Archimedes connects the school with Miller Street and is the first stage of developing this spine. Of the spine all secondary circulations come of in a less formal and more integrated way.

CONNECTING COMMUNITIES

Main entrance to campus.

BUILDING FORM

To open up to the street and a large void to let light down into the lower ground levels.

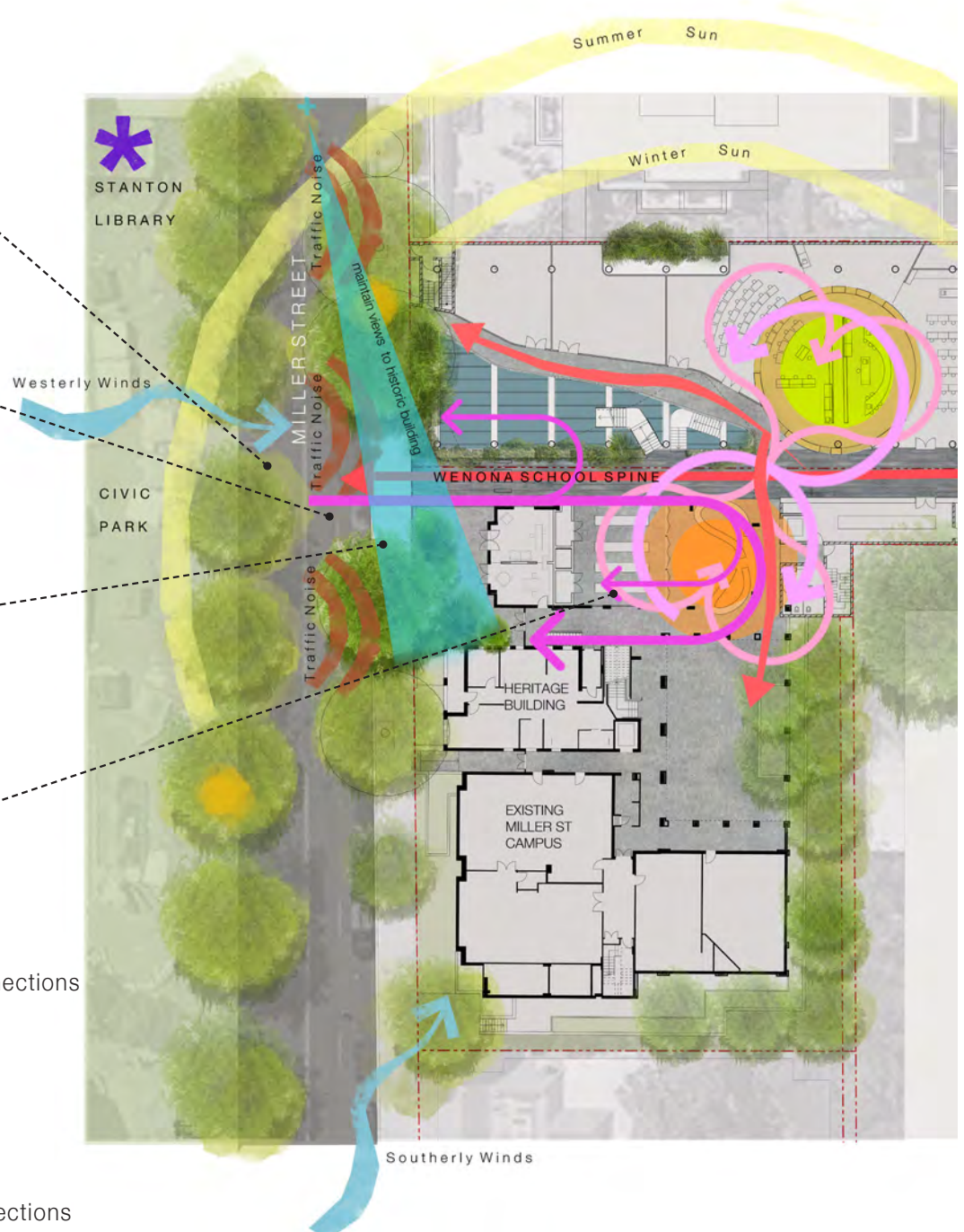
CONNECTION OF HUBS

Main focus for recreational activity.

External community connections

Main circulation

Internal community connections



01

URBAN DESIGN

HEIGHT AND MASSING

During the start up phase of project Archimedes it became apparent that the competition brief exceeded the FSR and height standards provided in the LEP.

The project team considered a range of approaches and studied the surrounding buildings, their uses and relationship to project Archimedes.

The proposed building now continues the existing 'street wall' to the west on Miller Street, with its height matching the parapet of the masonry podium to the apartment building 267 Miller Street to the north. The existing Wenona building 255 Miller Street to the south is of similar height.

This proposed height limitation of 12 metres is then extended over the site as a height plane which is appropriate in terms of bulk. This is appropriate compared to the considerably taller buildings to the north, including the 267 Miller Street apartment building adjoining the site and the former Independent Theatre 269 Miller Street to the north.

Extensive excavation is proposed to minimise the bulk and scale of the building, and great care has been taken to ensure any adverse effects are minimised and the amenity of the neighbourhood is maintained



DIGRAM SHOWING PROPOSED BUILDING WITH A 12M HEIGHT LIMIT

URBAN DESIGN

SET BACKS



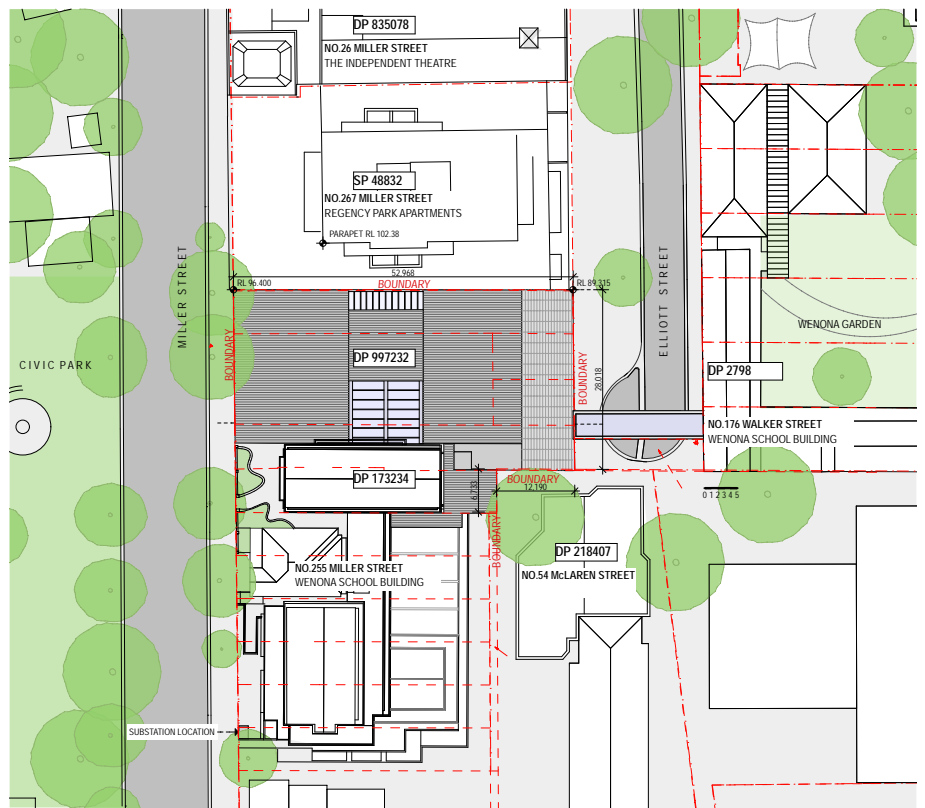
AERIAL VIEW OF 267 MILLER STREET TO THE NORTH AND THE ARCHIMEDES SITE

The building's set backs have been designed to comply with the North Sydney DCP 2013.

To the east (Elliott St) and west (Miller St) the building is set to the street alignment, to define the public realm and strengthen the streetscape, following the precedents set by the adjoining buildings.

To the south the new building adjoins existing Wenona property 255 Miller Street in the western portion, and variable set backs are defined by planning controls, all within the form of the roof which extends to the lot line.

Eastwards, the allotment adjoins the 54 McLaren Street site where an existing development approval allows a multi-storey aged care facility. The building has a no set back to this allotment as allowed by the planning scheme.

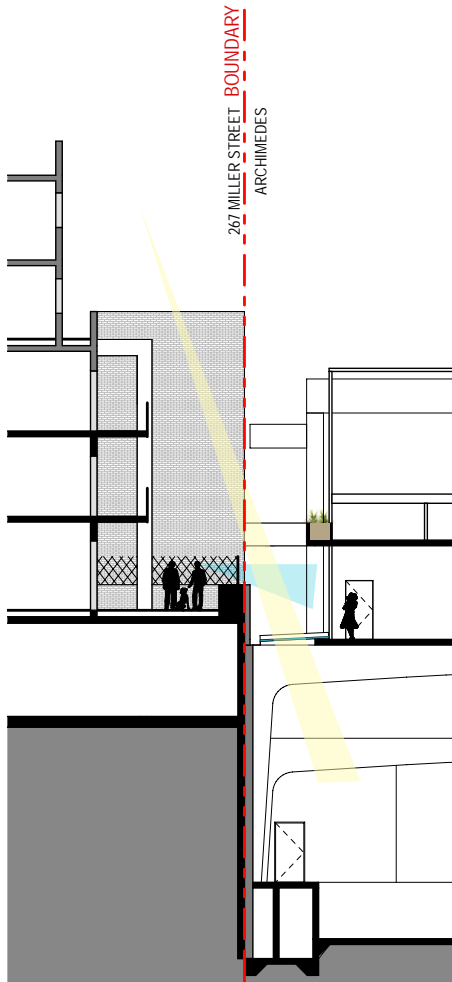


SITEPLAN

01

URBAN DESIGN

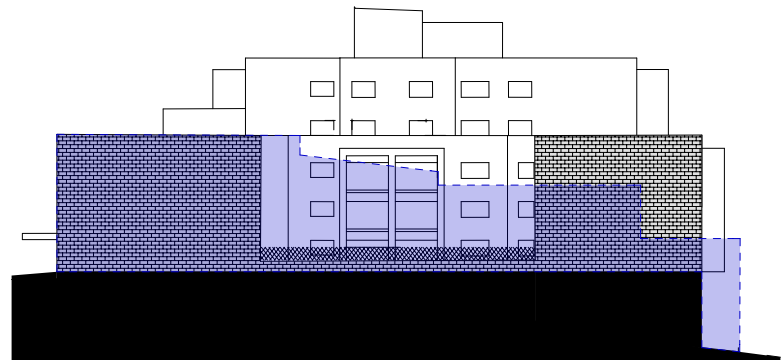
SET BACKS



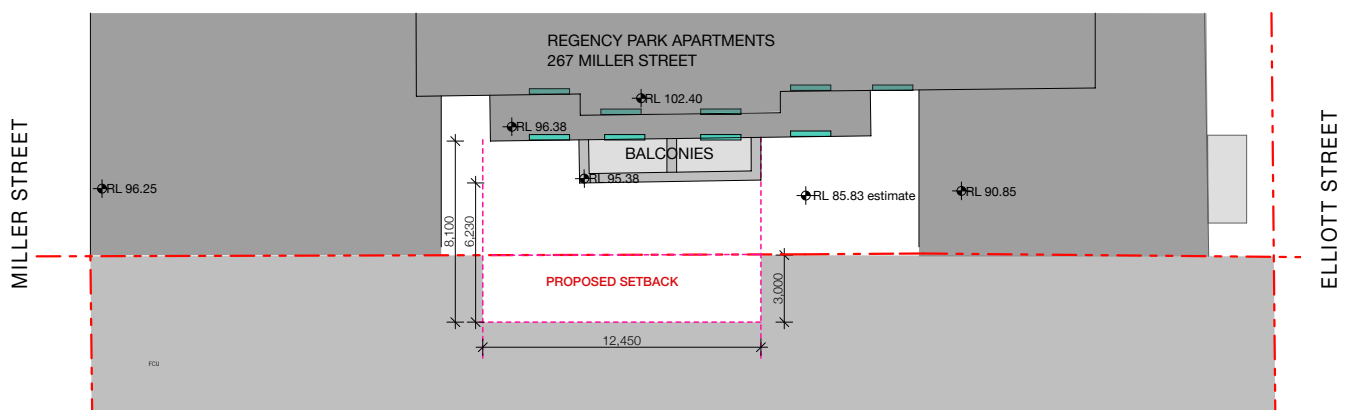
SECTION THROUGH COURTYARD/ PROJECT ARCHIMEDES

To the north, the building matches the setbacks of the adjoining multi-storey residential apartment building 267 Miller Street, which comprises a three level podium with a three level tower above. The tower form is entirely above the proposed Wenona building, whilst the podium is approximately the same height to the west and two storeys higher to the east.

The majority of the adjoining podium of 267 Miller Street is built to the lot line and is blank, where this occurs the proposed Wenona building will also be built to the lot line. Where an approximately 5m deep set back is located on the upper two levels of the podium, the new building will be set back also, to a depth of 3m in accordance with the LEP.



ELEVATION 267 MILLER STREET WITH OUTLINE OF PROJECT ARCHIMEDES



FLOOR PLAN OF EXISTING COURTYARD (267 MILLER STREET) IN RELATION WITH PROPOSED SETBACK OF PROJECT ARCHIMEDES

01

URBAN DESIGN

SET BACKS

This setback volume will be acoustically treated to mitigate noise effects from the school to the residential properties and vice versa, and will be clad in glass with a frit to provide visual privacy in both directions.

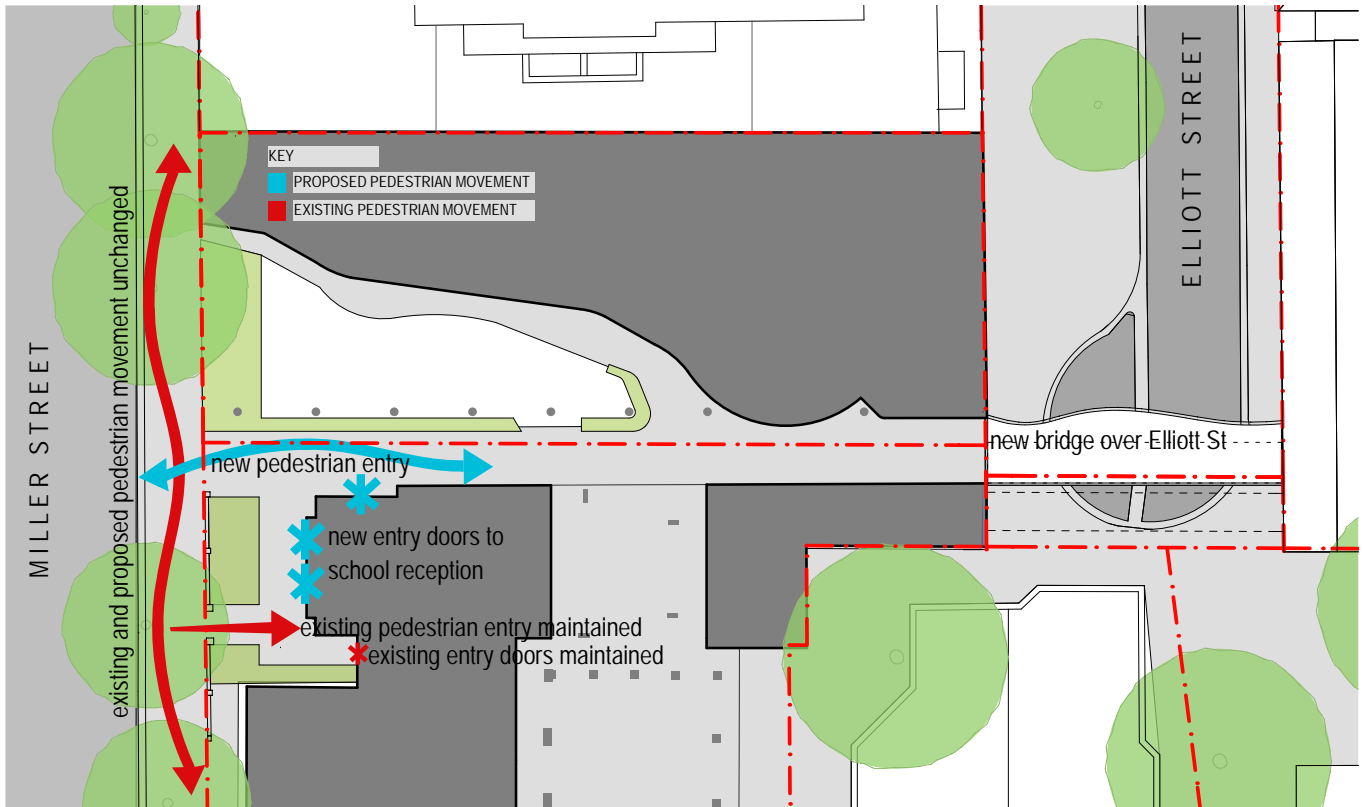
The building's set backs to the north facing the existing courtyard to the residential block has been designed in accordance to the North Sydney DCP 2013, Section 2.4.3. The proposed 3m setback of the facade opposite main living areas of the existing building will result in an overall distance of about 8metres.

The proposed treated glass facade will provide visual privacy and acoustic separation. Planting on one level of the void will provide a pleasant outlook for the residents, A view impact assessment has been prepared and is submitted as part of this application.

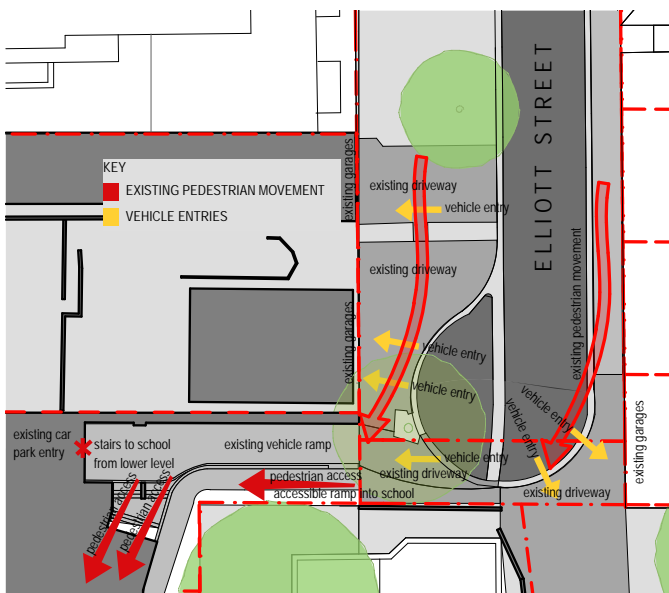
URBAN DESIGN

PEDESTRIAN MOVEMENT

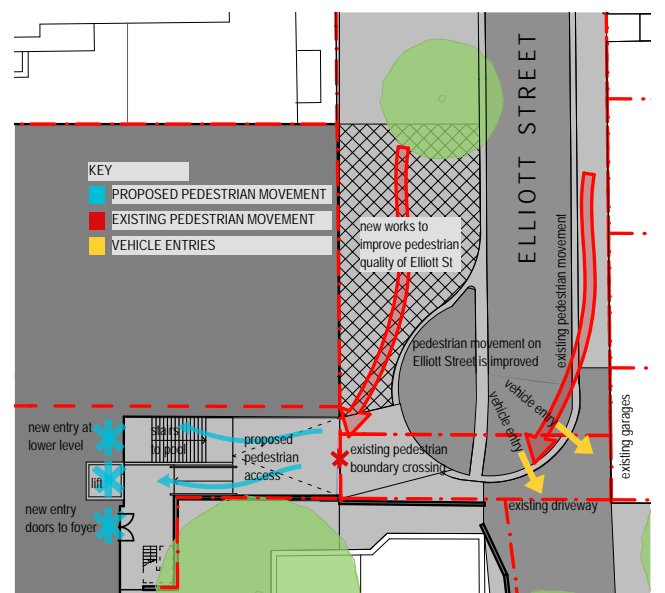
The following diagrams demonstrate the existing and proposed pedestrian conditions of the site at Miller and Elliott Streets.



MILLER STREET ENTRY SHOWING EXISTING (RED) AND PROPOSED (BLUE) PEDESTRIAN FLOW



EXISTING (RED) PEDESTRIAN CONDITIONS AT ELLIOTT STREET



PROPOSED PEDESTRIAN CONDITIONS (BLUE) AT ELLIOTT STREET

02

BUILDING ORGANISATION

COMPETITION PERSPECTIVE
VIEW FROM MILLER STREET

Developing from the competition design, the building is organised around a five-level open space, with a dramatic amphitheatre that becomes not just a place for circulation, but a place where the engaged spirit of education is celebrated, a place where the student body can collect, and where small groups can meet informally. This covered open space is formed and framed by the existing school building and a series of new and overlapping, sculpted circulation and teaching balconies.

A new science-teaching hub is located on the ground floor, celebrating and showcasing science to all students and their parents. The hub is formed by 5 laboratories which can be rearranged to reflect differing class requirements. Sections of moveable wall and open glass partitioning allow visual and physical connection between different spaces. Storage of equipment is showcased in glazed storage walls.



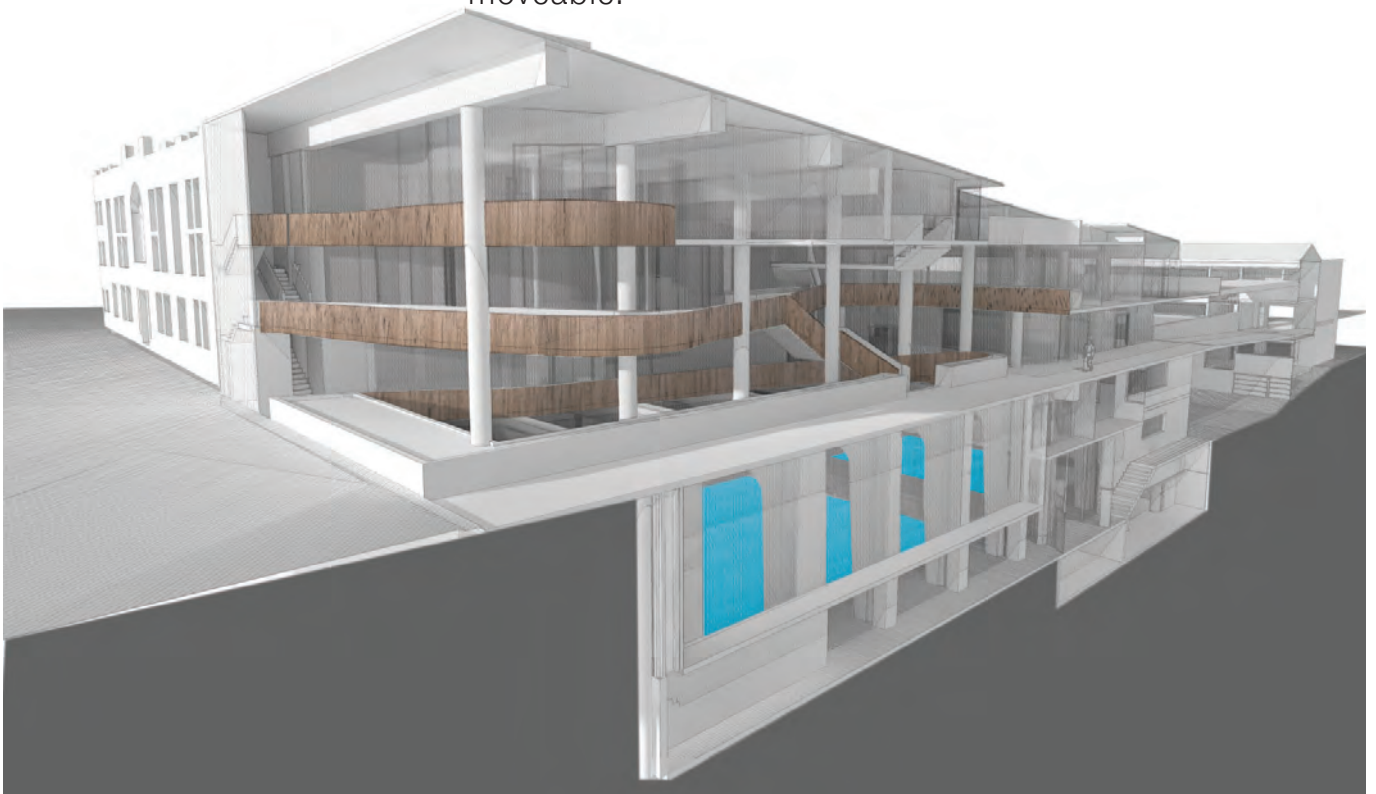
ARTIST IMPRESSION OF THE 'SPINE'

BUILDING ORGANISATION

On the lowest level are a 25m swimming pool, a learn to swim pool and associated change and storage areas. The two pools are divided to create separate pool environments, each accessible from a new foyer off Elliott Street which also connects the new sports facilities with the existing Gymnasiums.

On ground floor a small Student Hub is located in the existing building adjoining the new main School Axis. In conjunction with the new food technology teaching space, this space will form an opportunity for students to meet and interact.

On the upper level, the new 'Nucleus' Senior Ecosystem provides Years 10, 11 and 12 with a multifunctional suite of spaces for group and individual study, parent functions, exhibition space, seminar space and evening study. It is divided in three zones so the three year groups can meet at one time. Furniture is flexible and moveable.



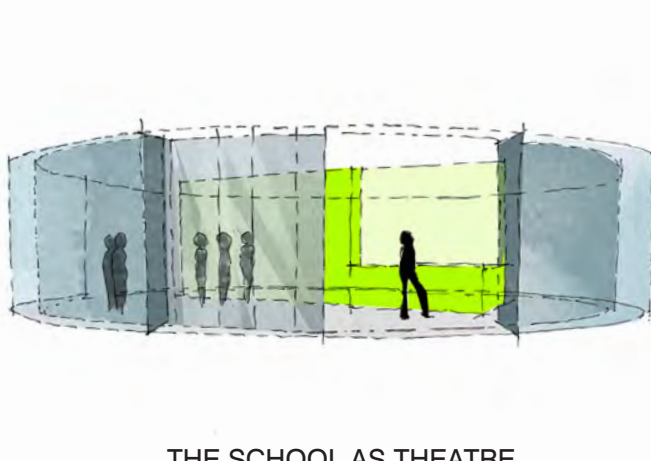
AXONOMETRY OF PROJECT ARCHIMEDES CUTTING THROUGH SPINE.

03

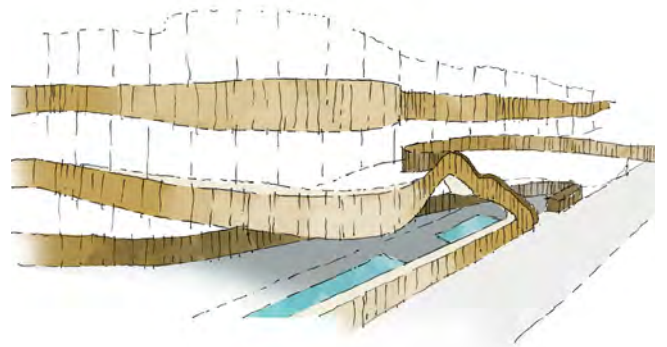
BUILDING DESIGN

KEY DESIGN PRINCIPLES

In addition to the seven masterplanning principles, TZG have developed five themes for Project Archimedes to act as priorities for design development.



THE SCHOOL AS THEATRE



THE ORGANIC AND THE VOID



THE NON-CLASSROOM SPACE



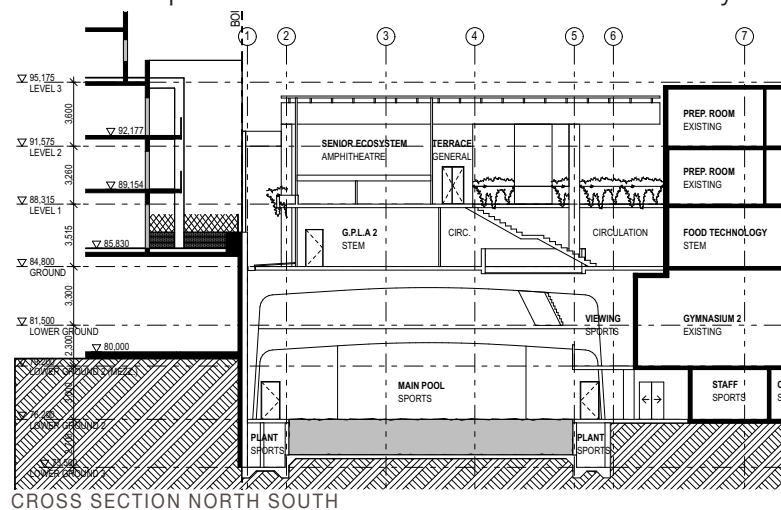
THE EXPERIENCE OF THE STUDENT



A NEW TEACHER

BUILDING DESIGN

The building has been designed with an expressive and innovative structure and layout reflecting the brief; the requirements of which include spanning over the swimming pools at the lower level, and an open and inclusive spirit for the senior school community.



ARTIST IMPRESSION OF POOL LEVEL

03

BUILDING DESIGN

The exterior will be carefully modulated to ensure effective completion of the Miller Street 'boulevard' and to enliven Elliott Street. As set out in the attached Materials Schedule, a range of high-quality durable materials including painted concrete and timber have been selected, in keeping with the existing buildings of the neighbourhood. On both elevations, extensive planting will soften the forms and provide significant environmental benefit.



PERSPECTIVE SHOWING PROJECT ARCHIMEDES ACROSS MILLER STREET.



BUILDING DESIGN

SUSTAINABILITY

Wenona School is committed to a number of long term sustainability outcomes and has set challenging objectives and targets as part of their Master Plan.

The project has actively incorporated the principles of ecologically sustainable design in order to contribute to the broader sustainability goals and help facilitate cultural changes to improve sustainable behaviour and reduce consumption.

Sustainable design opportunities that have been identified and incorporated into Project Archimedes include:

- Low energy use overall.
- Passive energy conservation design.
- Energy efficient mechanical equipment.
- Energy efficient lighting.
- Water harvesting and re-use.
- Enhancement of the indoor environmental quality to promote the health and wellbeing of students
- Materials selection for low toxicity, low embodied energy and good operational / whole of life performance.
- Recommendations for physical and curriculum based learning initiatives and topics.

04

CONCLUSION

The new Project Archimedes will allow the continued provision of the best possible education for the girls and young women of the region, addressing the requirements of the 21st century with its developing pedagogy and focus on sustainability and wellness. In particular it will provide facilities for STEM (Science, Engineering, Technology and Mathematics) and for fitness, both of which are key educational requirements for girls and critical areas for society as a whole.

The height and bulk have been determined to comply with the intent of the planning controls and to be appropriate to the existing adjoining development, as set out in the Planning Report.

Extensive excavation is proposed to minimise the bulk and scale of the building, and great care has been taken to ensure any adverse effects are minimised and the amenity of the neighbourhood is maintained. No increase in student numbers is proposed as a result of the new building, which addresses serious shortcomings in existing facilities elsewhere in the School.



PERSPECTIVE SHOWING PROJECT ARCHIMEDES ACROSS ELLIOTT STREET.