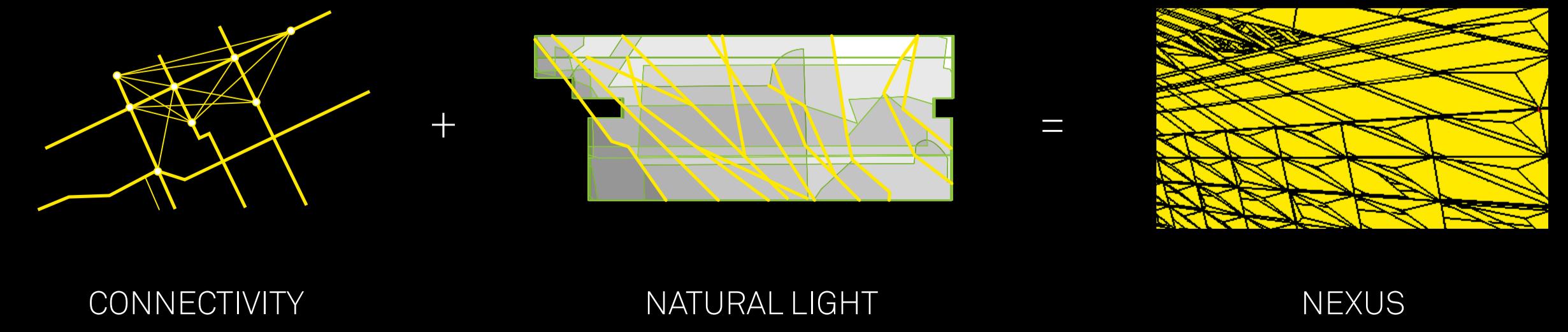




"When you live shoulder-to-shoulder with your neighbours, like it or not, you are connected.  
What you make of that connection, and how you participate in that community – that's what counts."

ROSS MILBOURNE, Vice-Chancellor and President University of Technology, Sydney

The Nexus Laboratory will achieve the University's strategic vision, "to be one of the world's leading Universities of Technology". The state-of-the-art facility will promote connections between new technologies and educational pedagogies that support the university's aspirations to attract and retain world class researchers. Nexus will enhance and support the expansion of the Faculty of Science, further connecting the science precinct with the community, and provoke an environment that will attract and retain internationally leading scientists, academics and researchers.

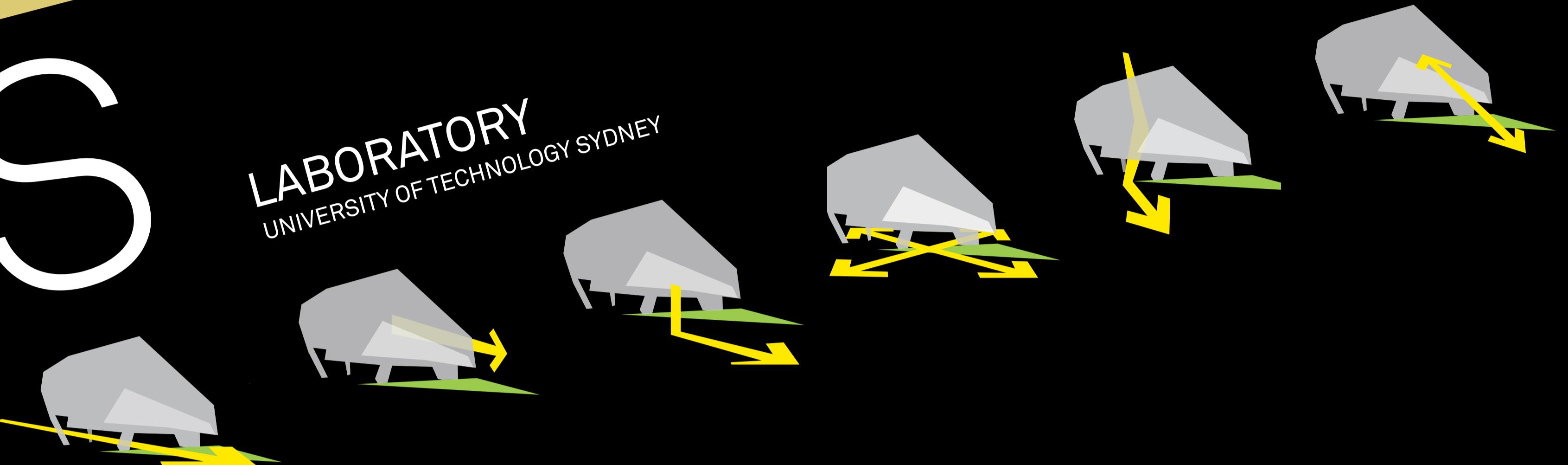


# NEXUS

**nexus** n, pl.

1. a means of connection; link; bond. 2. a connected group or series.

LABORATORY  
UNIVERSITY OF TECHNOLOGY SYDNEY



## DEFINING THE NEXUS

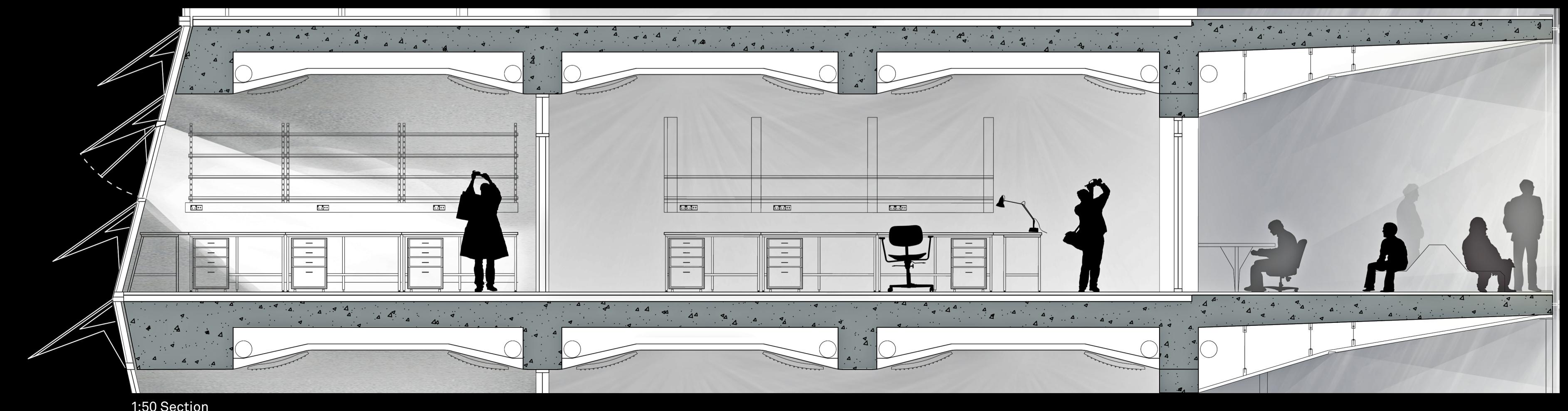
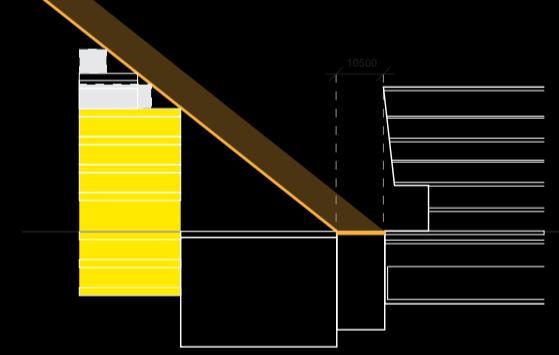
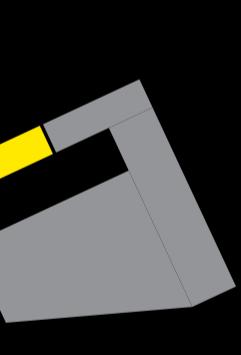
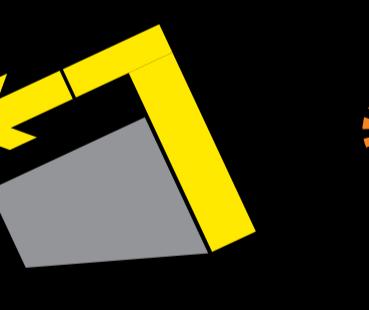
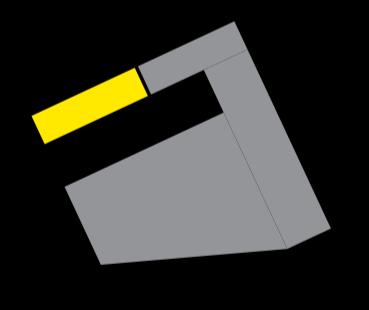
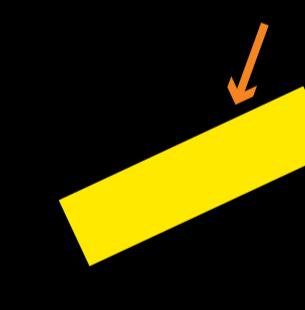
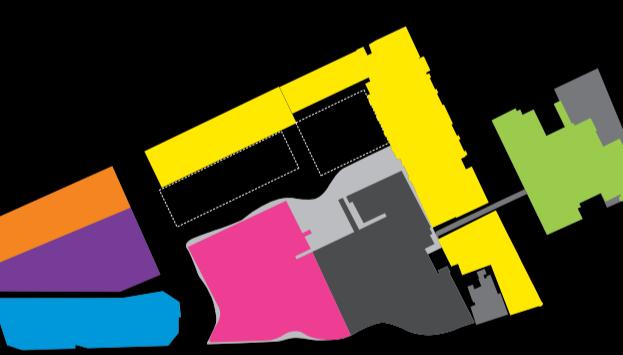
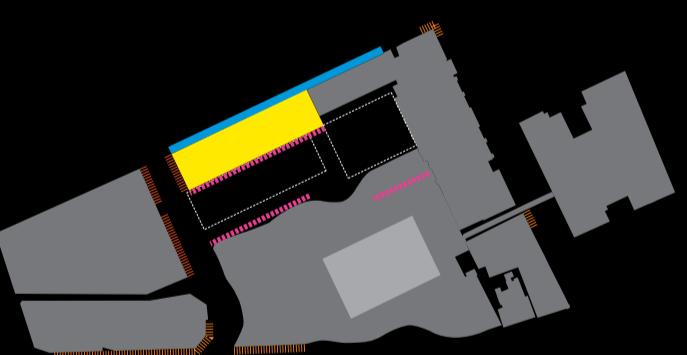
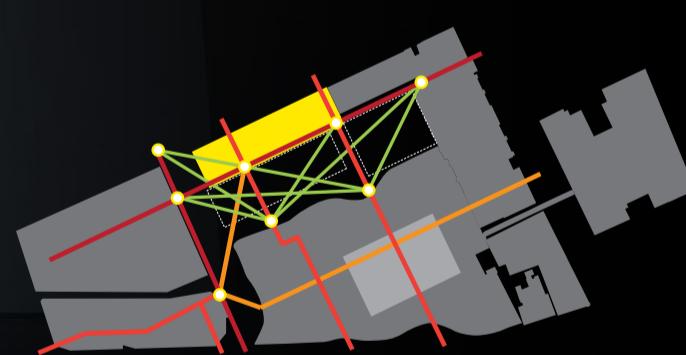
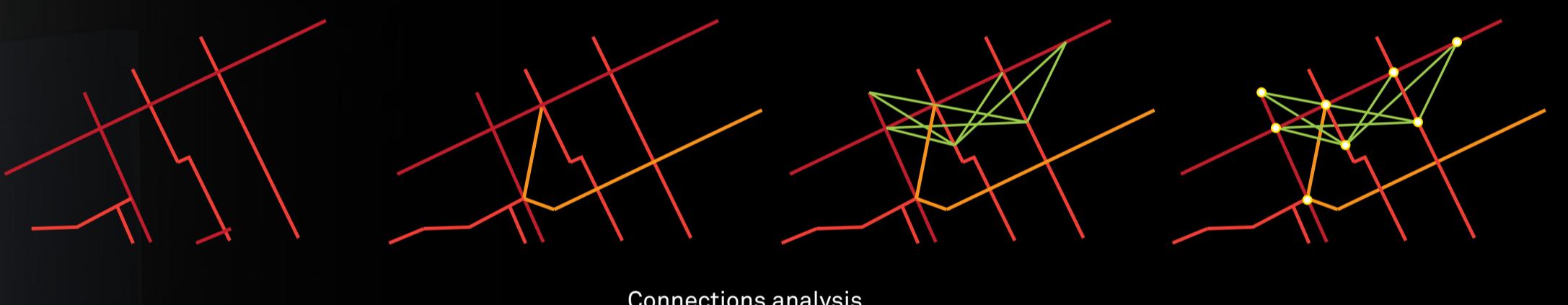
Opportunities for physical and social connections are created by the Nexus.

The building is on the songline between Haymarket and Broadway. As such, the building is not only a part of the Faculty of Science, it is also a key threshold building for the University and the wider central business district.

The Nexus visually links back to Broadway via Jones Street and intersects between Wattle Street and Jones Street. Connections occur back to the existing science building

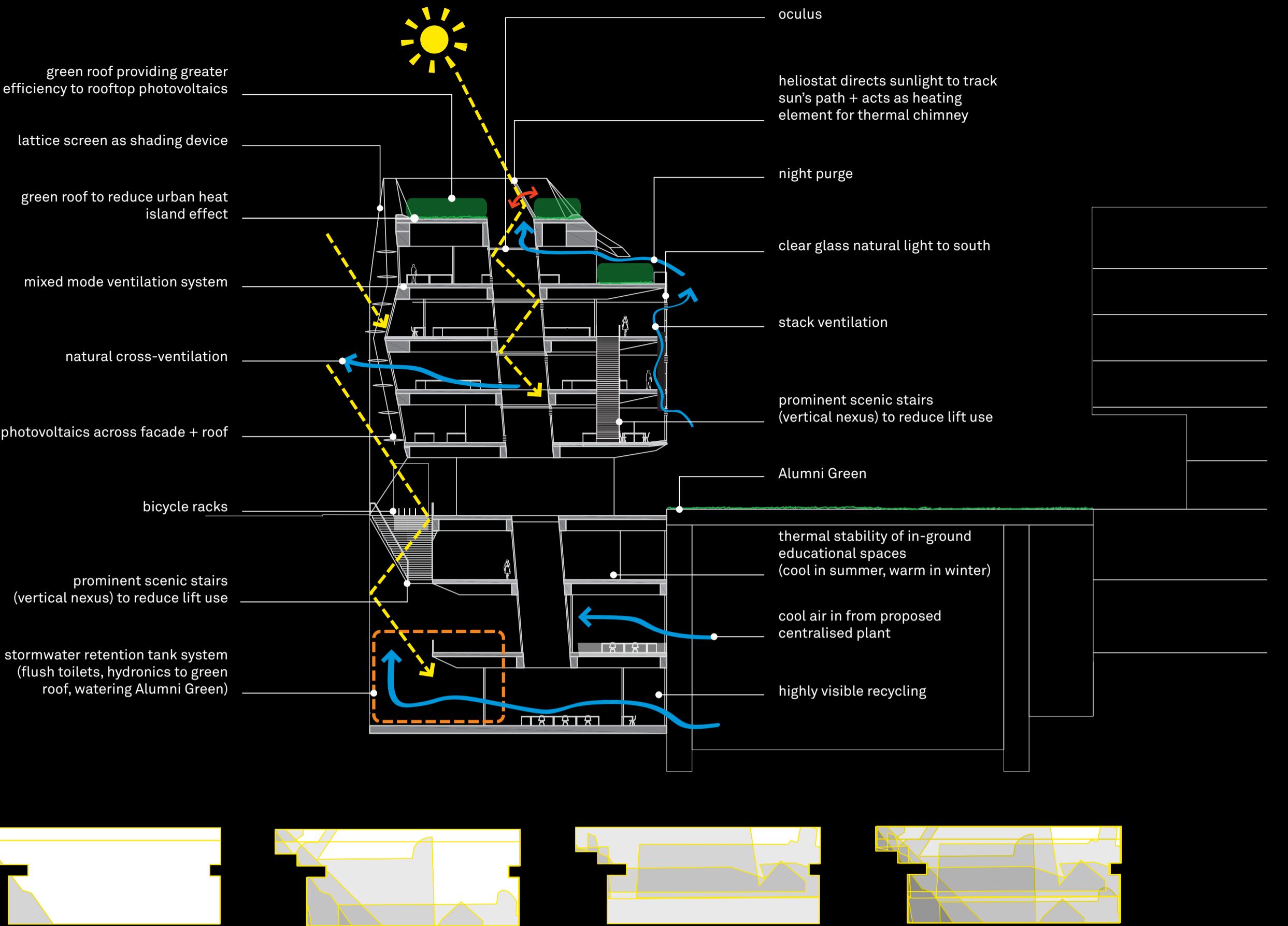
at level seven, as well as underground to the Learning Commons at level one, via a proposed general teaching vein between the Automated Library Retrieval System and the multi-purpose sports hall.

Furthermore, the built environment facilitates interaction between students and staff, and inspires multi-disciplinary collaboration. Active social engagement strategies for the local community and professional industries allow for a permeable and vibrant campus community.





#### ECOLOGICALLY SUSTAINABLE DEVELOPMENT

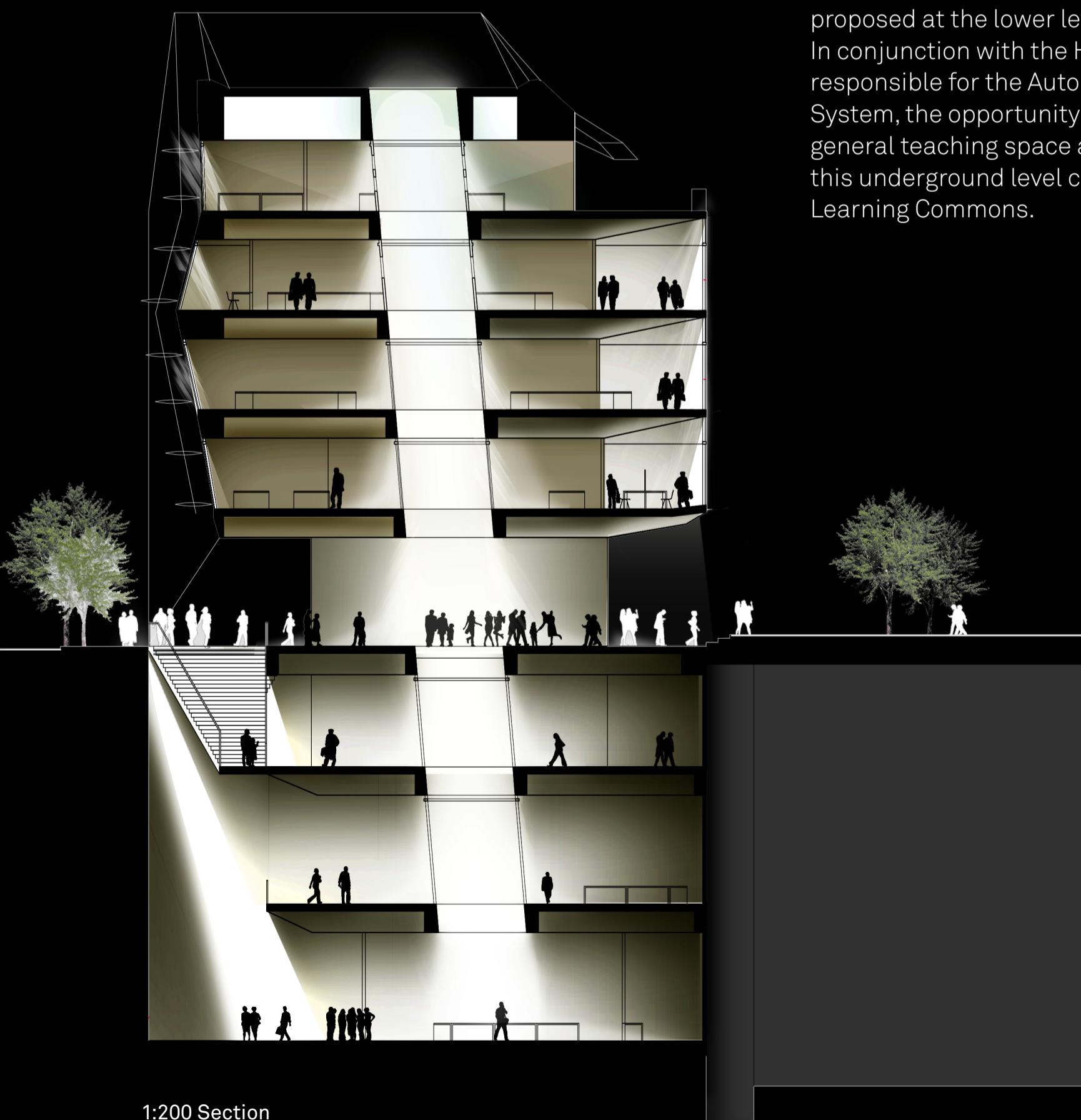


Study of sun impact on Thomas Street facade

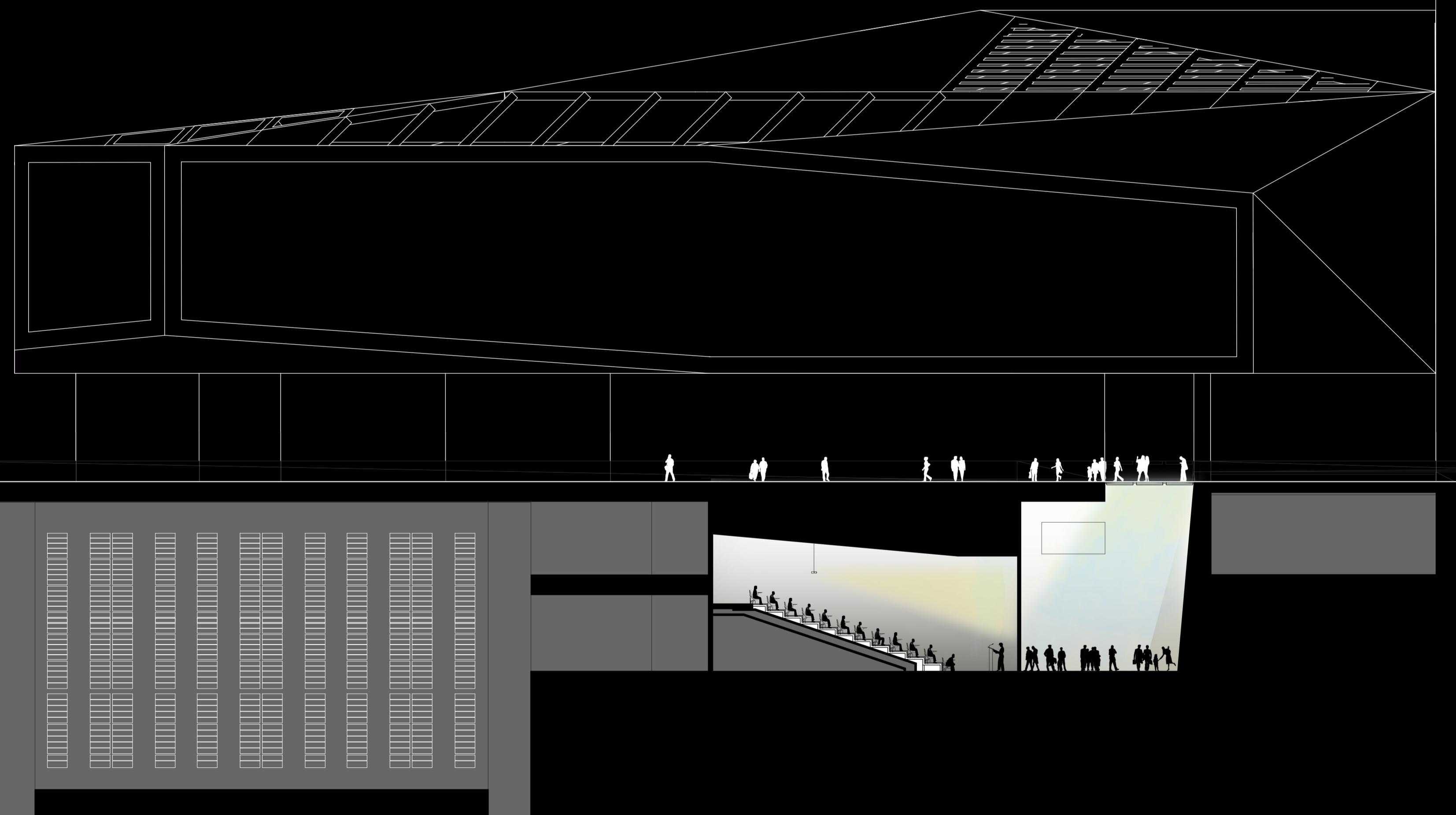
#### LEARNING LANDSCAPE

The learning landscape emphasises the student experience, and integrates the design, space planning and technology with new learning and teaching pedagogies as they emerge and develop.

This includes an additional lecture theatre proposed at the lower levels of the Nexus building. In conjunction with the HASSELL design team responsible for the Automated Library Retrieval System, the opportunity exists to provide innovative general teaching space at low level. In addition, this underground level connects back to the Learning Commons.



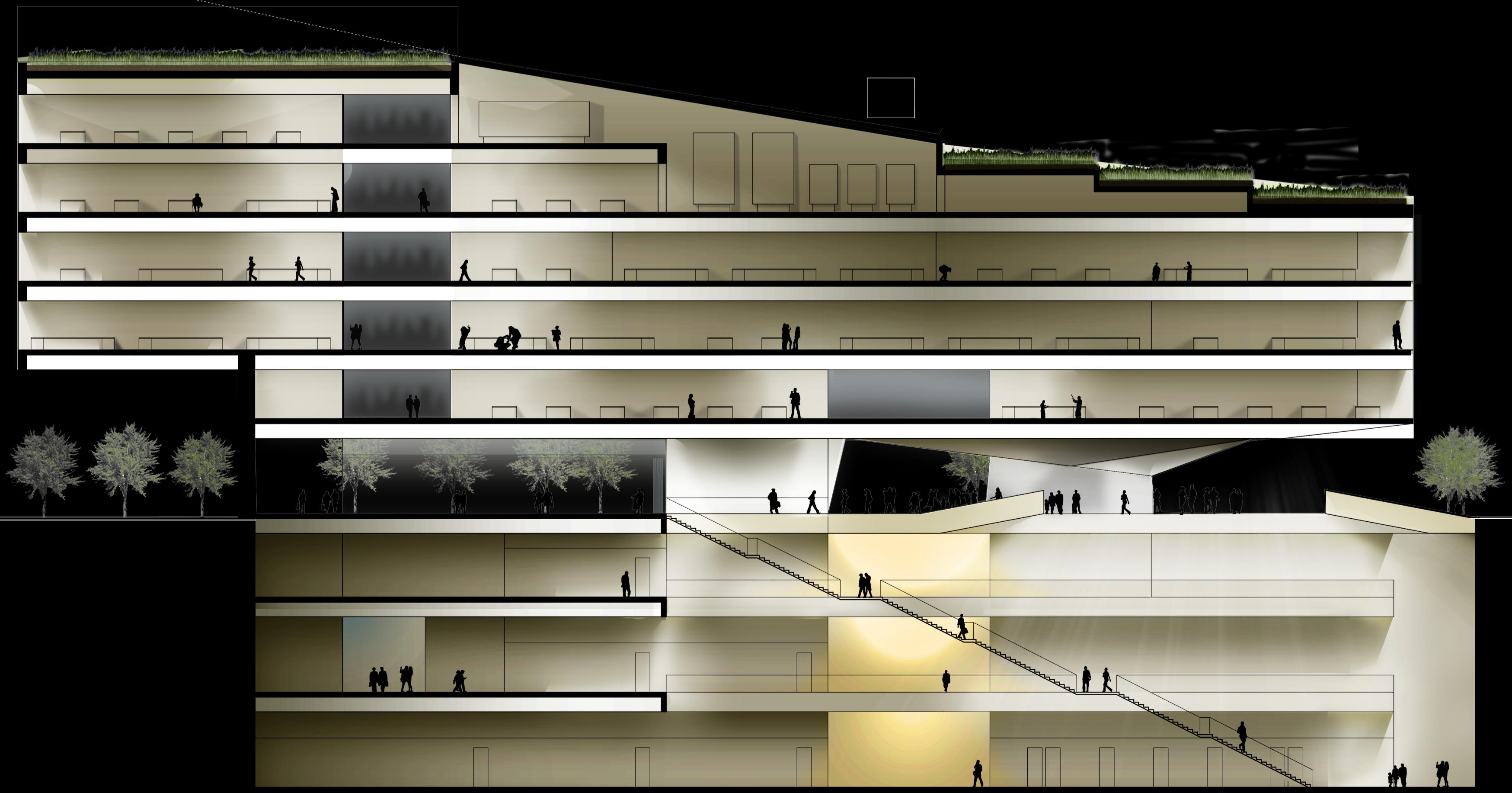
1:200 Section



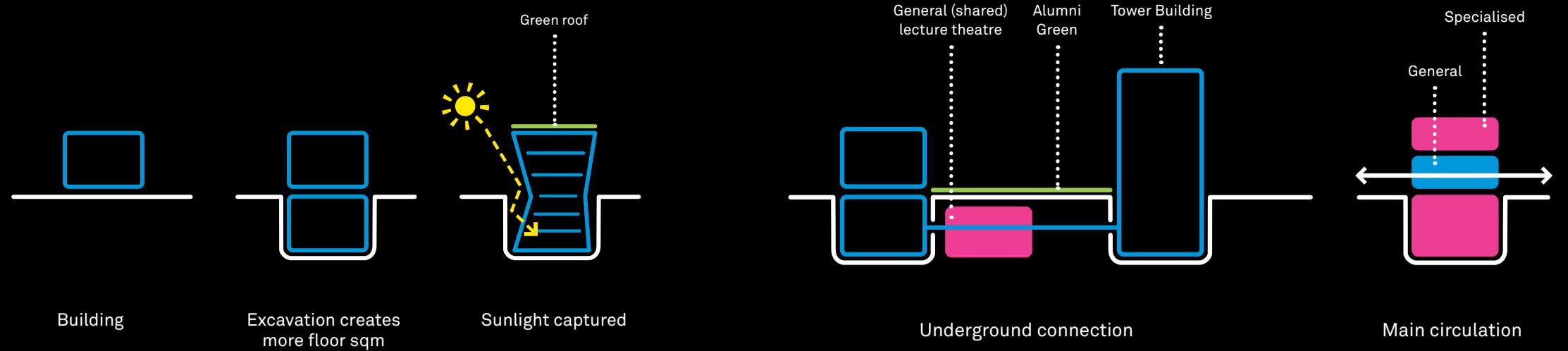
1:200 Section looking north



Atrium looking up to Thomas Street



1:200 Section through Student Commons looking south



#### LANDSCAPE PLAN

Critical to the success of the public domain and landscape language is the building setting and its connectivity to the broader campus and community environs.

To this effect, the proposed design maintains simplicity of idea and clarity of intent:

- Is respectful of Alumni Green.
- Provides space and architectural scale.
- Establishes key circulation and pedestrian movement.
- Includes artful innovation and interest.
- Works within the landscape framework of 'green and forest'.

Key desire lines between, from, to and through buildings intersect Alumni Green as both functional pathways and key opportunities for art expression, illumination and transparent subterranean folly.

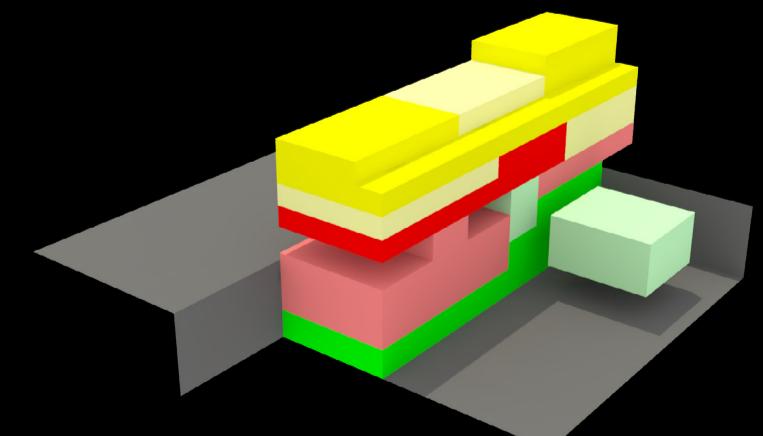
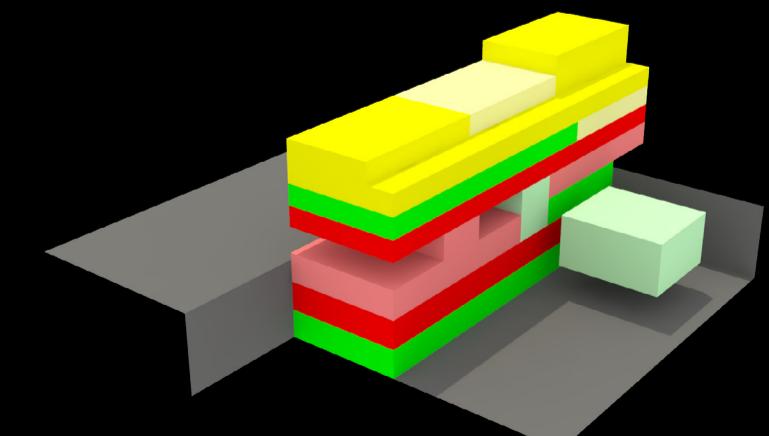
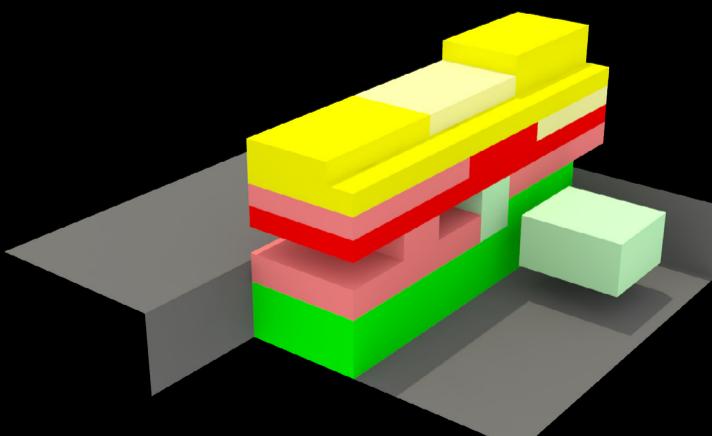
Running the length of Jones Street, connecting Broadway and Thomas Street and framing the western edge of the Alumni Green is a forest of trees set amid a paved pedestrian plaza space.

Irregularly spaced, both tightly and openly grouped, a strong linear grove of Eucalypts is a proposed tree species of scale to compliment both old and new architecture and a form that provides texture, light, shade and a richly Australian context.



#### BLOCKING + STACKING OF PROGRAM

■ specialised ■ public ■ general



Mass dichotomy of different users

Flexible cross disciplinary arrangement

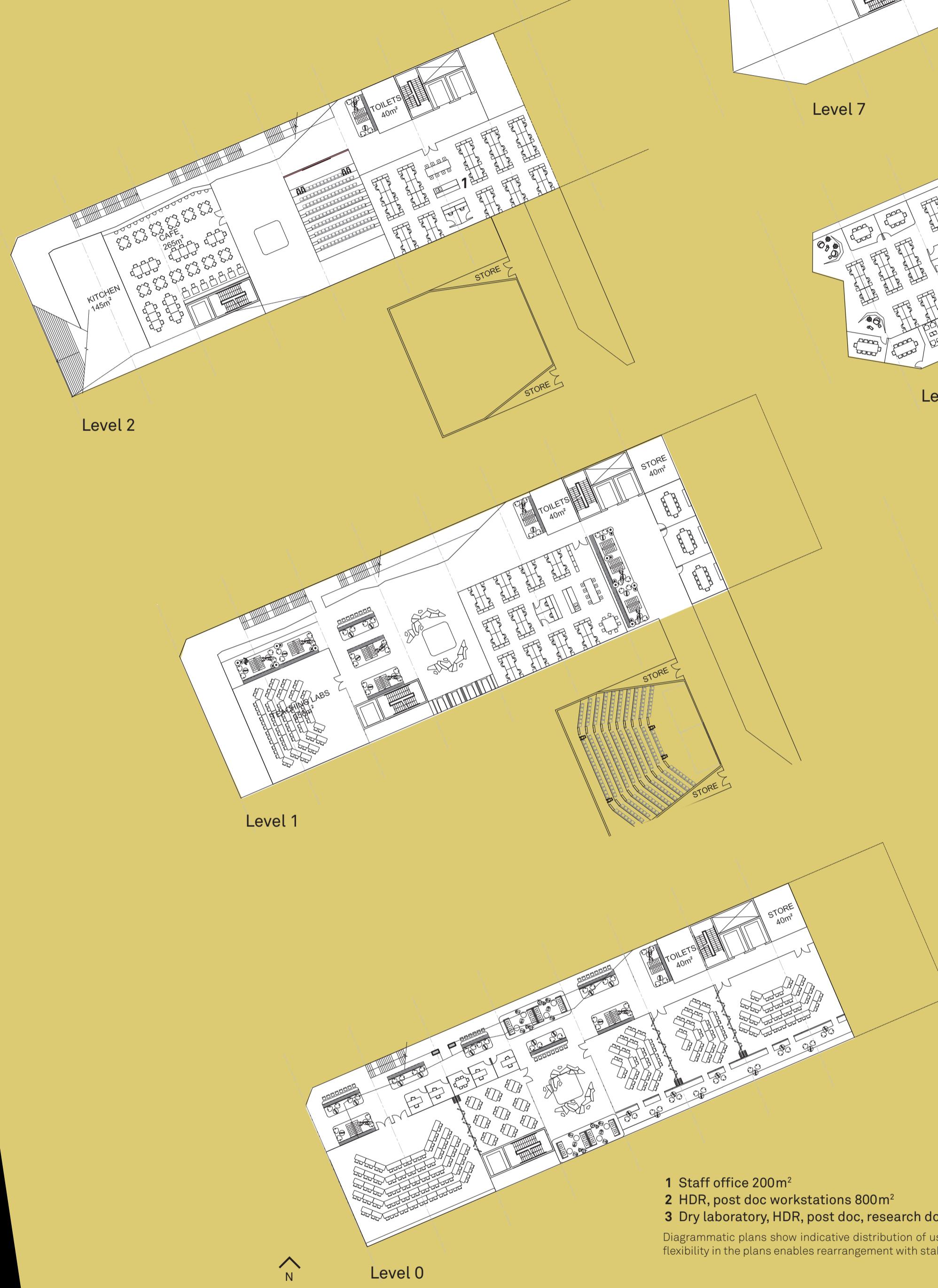
General / specialised shared wet lab

## FLOOR PLANS OF PRINCIPLE LEVELS

The planning of the floors allows for maximum flexibility and changeability as pedagogies and technologies evolve.

Extensive voids and light shafts will ensure that the below ground teaching spaces remain bathed in light.

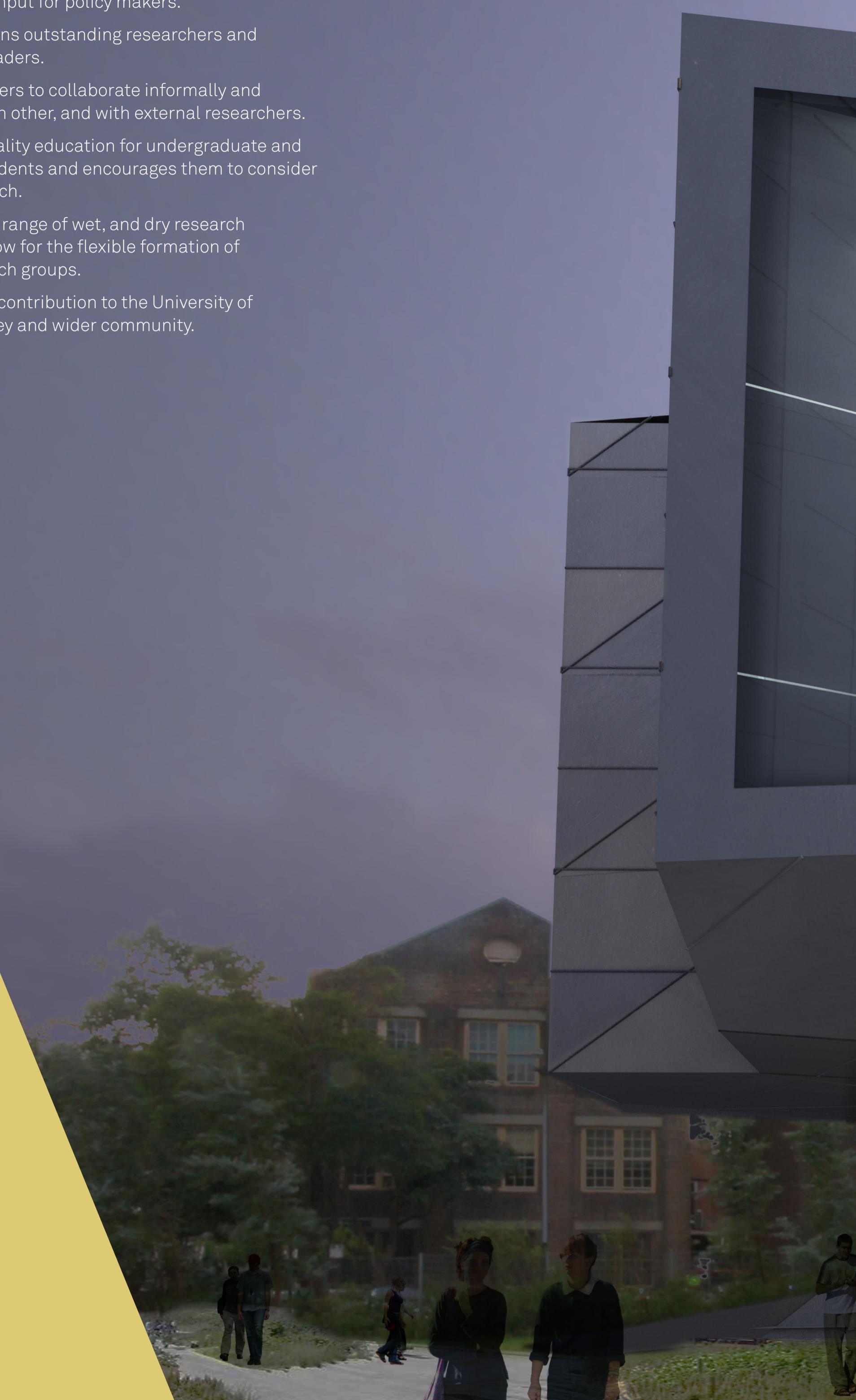
A continuous void along the north edge of the site provides vertical circulation to the lower level, encourages social interaction between students, teachers and researchers and creates a dynamic space for a lively work environment.



## A WORLD CLASS FACILITY

Nexus will generate a world class research facility that:

- Translates scientific knowledge into accessible, evidence-based input for policy makers.
- Attracts and retains outstanding researchers and administrative leaders.
- Enables researchers to collaborate informally and formally with each other, and with external researchers.
- Provides high-quality education for undergraduate and postgraduate students and encourages them to consider a career in research.
- Accommodates a range of wet, and dry research activities that allow for the flexible formation of integrated research groups.
- Makes a positive contribution to the University of Technology, Sydney and wider community.



## FUNCTIONAL PLANNING STRATEGY

The design responds to the diversity of education and research to be undertaken.

It proposes a best practice approach to laboratory design, in the provision of a range of flexible and adaptable spaces that facilitate the certainty of change in research focus, group configuration and technology.

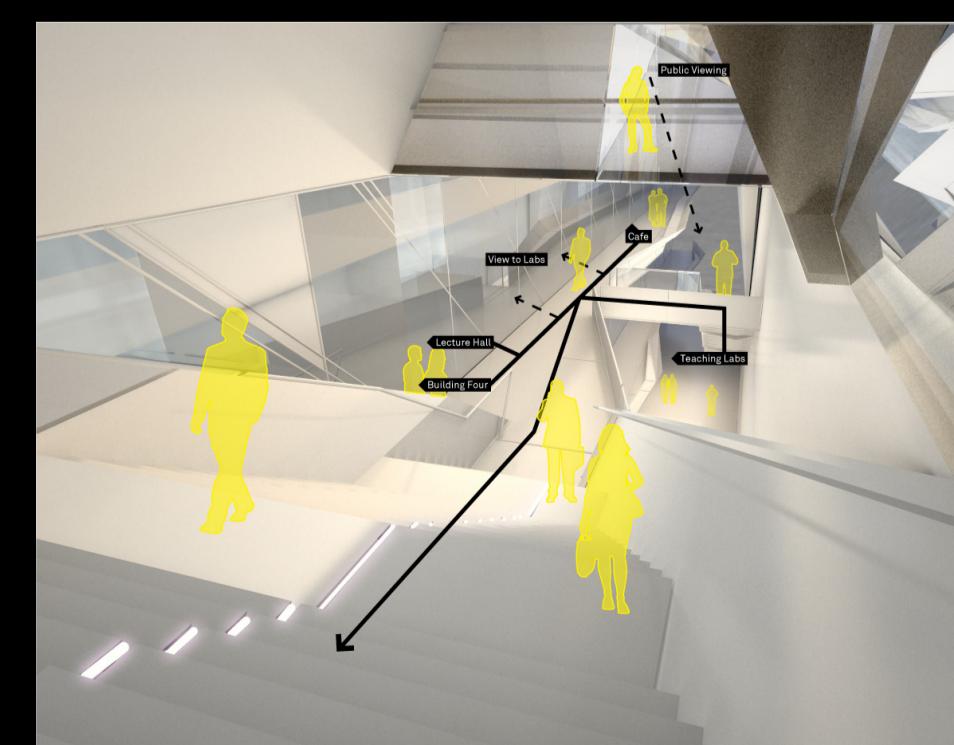
The design recognises the importance of openness and transparency within functional planning in order to facilitate interaction and communication. The strategy undertaken optimises visual connectivity between and within teams, revealing the research activity within to staff, students and the public community.



Space for knowledge transfer



Connections through Grand Stair



Atrium circulation

## NATURAL LIGHT + TRANSPARENCY

The building is designed to allow for the maximum ingress of indirect filtered light both for the comfort and well-being of the students and also as a prerequisite for certain research and controlled experiment that takes place within.

Large expanses of clear, low iron glass maximises the transparency of the building.

