The over arching approach to the adaptive reuse of the heritage fabric is to create a new legible layer of meaning so that there is a clarity of the progression of the ongoing development of the site.

Approach

Aligning with the concept of a Village Campus, it is important that the heritage buildings are adequately adapted to meet the brief requirements. Our approach is to carefully modify the internal fabric so that the integrity of the previous spaces can still be read, within a new more open environment. We see this as an opportunity to provide a benchmark for the adaptive reuse of existing heritage Campuses.

In order to maintain heritage fabric, enclosed volumes such as interview rooms are inserted as articulated elements into the larger volumes. To promote collaboration and inclusivity there is the opportunity for display cases to be inserted into new openings in existing walls to provide opportunities for visible learning.

Proposed major interventions

The main north/south circulation spine is reinforced through three carefully placed openings into the existing facades. These large glazed openings provide a clarity of entry into each of the buildings.

In Building 1 the opening provides access from the new landscaped terrace levels and provides connection to a new Outdoor Learning space.

In Building 2 the previous demolition of the existing 1969 building has provided the opportunity for a new opening to the Administration and Staff Hub.

In Building 3, the new opening is provides access to the Media and Performance Learning Community.

Finishes

The existing buildings are in a relatively good condition, therefore it is envisaged that the following works will be undertaken. These will be developed in conjunction with the heritage consultant to ensure that the Conservation Management Plan Policies are considered and responded to.

Reference images: Careful insertions of new vertical movement systems into the heritage fabric

Main Entrance ▪ Safety and security

The main entrance is from Chalmers Street at Ground Level as indicated on Diagram 4. Access will be through automated security gates. Outside of peak school entry and exit times, a further layer of security will be provided between the public reception and the student accessible areas with large pivot security gates. These gates will be opened when required from the public reception area.

Two secondary entrances, which are intended only for supervised use and fire egress are located on Lower Ground at the northern end of the spine and to the southern end of the Movement Complex as indicated in Diagram 3.

Perimeter Security

The building line provides a secure yet inclusive boundary to the perimeter of the site. This is especially important to the western and northern facades where a high level of engagement to the park is required.

Southern boundary: Palisade security fence with gates. Re use of existing heritage gatepost.

Western Boundary: Landscaped terraces form boundary wall, with wall continuing to Cleveland Street. A shared zone is proposed with Prince Alfred Park in front of the Movement Complex.

Northern Boundary: Landscaped terraces form boundary wall with a shared zone with Prince Alfred Park.

Existing palisade fence adjacent to heritage Building 03 to be replaced.

Eastern Boundary: New palisade fence between Building 01 and 02.

Circulation: Main spine

The main horizontal circulation for the Campus is developed as a linear spine which engages with the new entrance Forecourt and the Amphitheater. From this central spine all major access points within the campus are easily visible and accessible.

The spine connects not only the new building but also through a series of ramps and 2 new lifts inserted into Building 1 and 3, provides accessible access across the Campus.

Community access

It is intended that community access will be from the main entrance fro Chalmers Street. A separate lift will provide after hours access to the lower levels - primarily to access the Movement Complex and potentially the Media and Performing Arts Learning Community.

Specific access is also possible to the Gymnasium, directly from the park to the west, however this would be supervised access.

Targeted areas for Community Access include:

Basement:
- Movement Studio
- Movement Complex

Lower Ground:
- Media and Performing Arts Learning Spaces

Refer Appendix for Preliminary CPTED Report

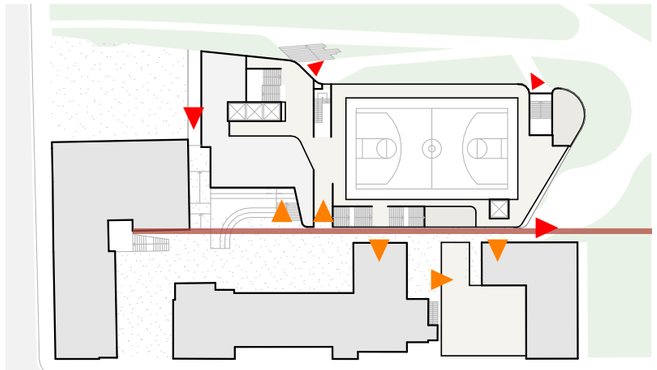


Diagram 1: Park side level - Lower Ground
Access

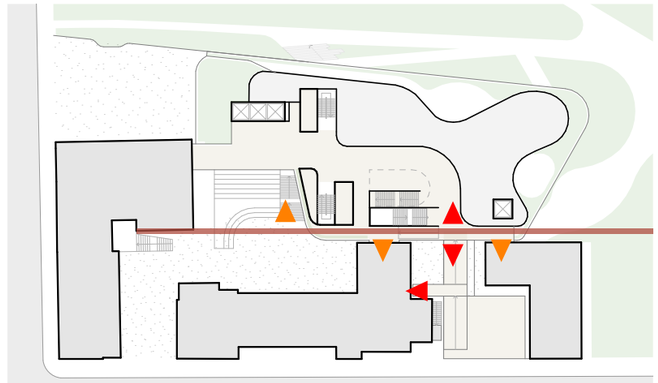


Diagram 2: Cityside level - Ground
Access

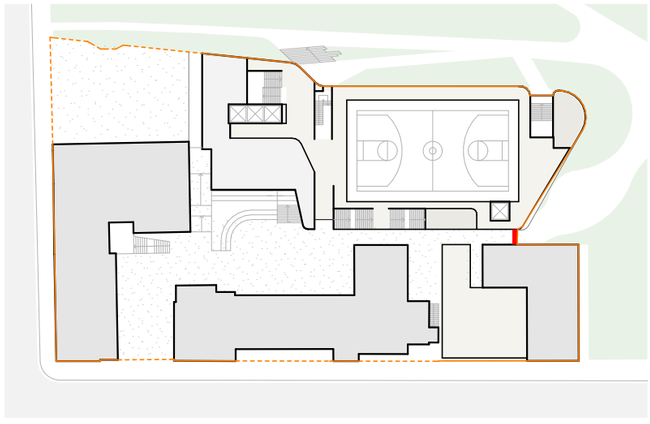


Diagram 3: Park side level - Lower Ground
Security

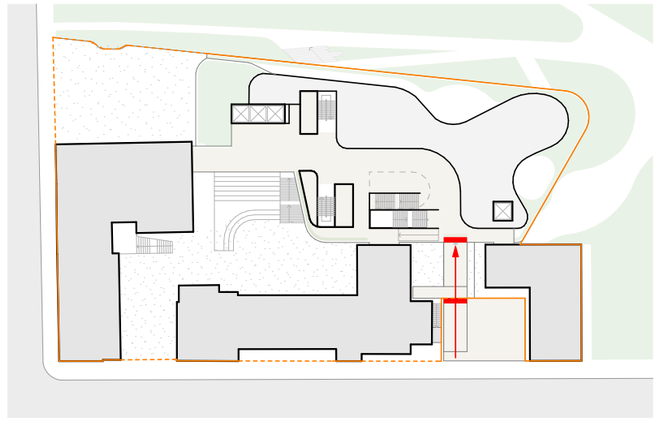


Diagram 4: Cityside level - Ground
Security

LEGEND

- SITE ACCESS/EGRESS
- BUILDING ACCESS
- SECURITY FENCE
- SECURITY LINE AS BUILDING
- SECURITY GATE

Car parking

The existing carpark is maintained with the existing cross over accessed from Cleveland Street.

Consistent with the Project brief, 8 car parking spaces are provided. The final configuration will be subject to the Operational and Management Stratgey to be developed once the Principal is on board. This may include the following carpark types:

- 1 visitor bay
- 1 service bay
- 1 emergency bay
- 1 or 2 accessible bays
- 2 or 3 school designated car parks

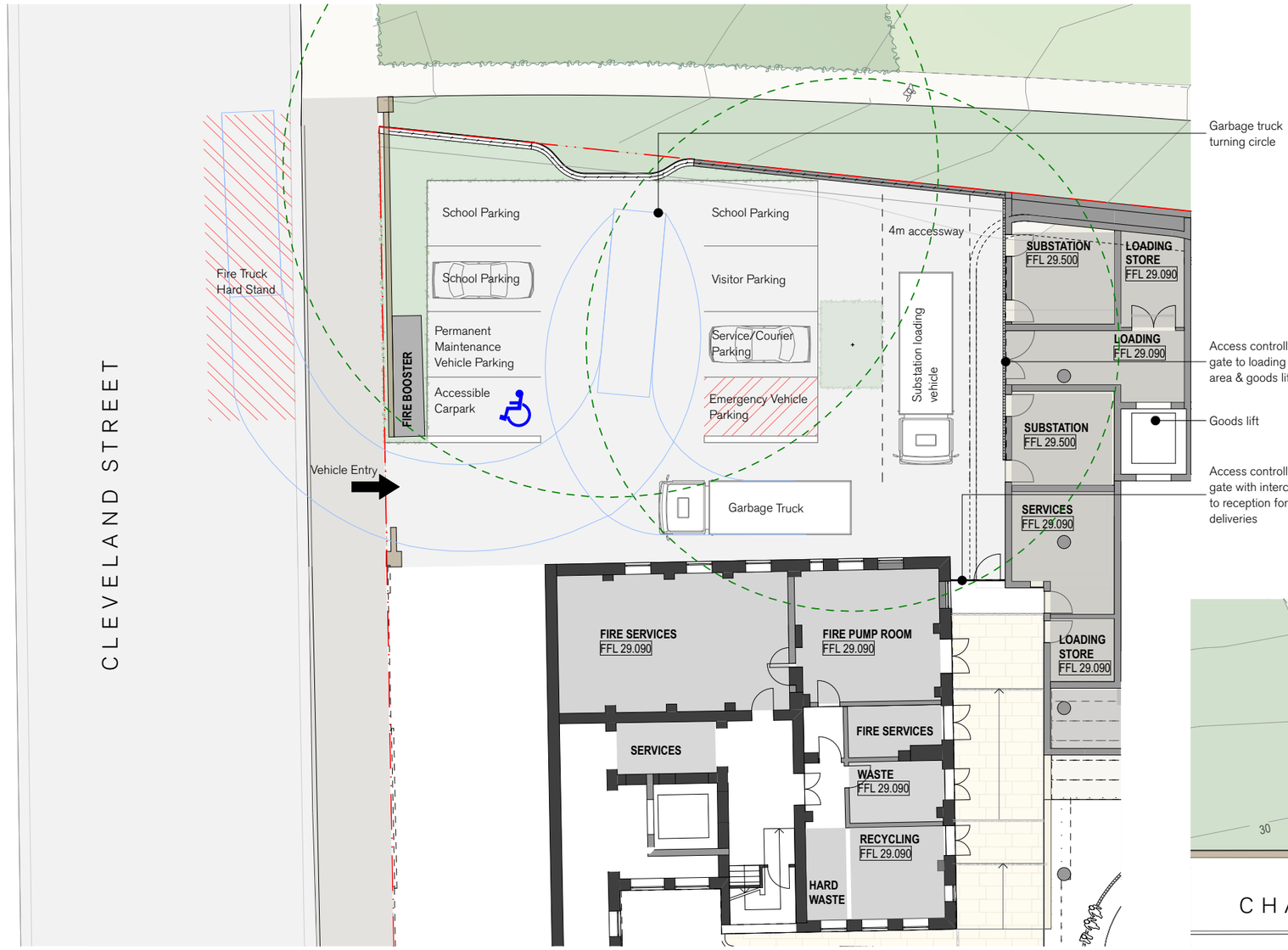
It should also be noted that the proposed layout is indicative only and the exact placement will be subject to further investigation by the Arborist to ascertain the impact on the tree roots of the existing significant fig tree.

Loading

Similarly maintenance access and loading is maintained off Cleveland Street. A direct loading pathway is provided to access the lifts up to the upper levels of the Campus.

A MRV garbage truck can be accommodated with a forward entry and exit.

Refer Traffic Report as prepared by Positive Traffic for further detail.



9.0 Educational Strategies

As the co-author of Department of Education NSW Multi-Level Secondary Schools Concept Spatial Objectives & Implication Report, New Learning Environments (NLE) has built on their evidence-based vision and concept for multi-level schooling in response to the project's strategic objectives and design principles. Working closely with fjmt, NLE has developed a robust model which has been tested through expert stakeholder consultation and timetabling studies.

Introduction

At this stage of submission, the new ISHS, does not have a Principal, therefore the specific development of the educational model has been developed in conjunction with the Project Reference Group and the input of specialised stakeholders and focus groups. A number of educational assumptions have been adopted which have guided the best practice model outcome, whilst still retaining adequate flexibility to enable possible modification both on the engagement of the new principal and also to accommodate curriculum changes over time.

The assemblage of spaces is intended to support a trans-disciplinary design-based approached in accordance with a future-focused learning vision.

It is also possible to accommodate a combination of a trans-disciplinary approach with a more traditional approach. Based on recent precedents, this most often occurs via more flexible arrangements in the middle years before students are locked into more rigid senior pathways and curriculum.

The broad aspects of the model are described as follows.

Learner Agency

In the future-focused learning environment, "learner agency and voice" are prominent – as the learning becomes more personalised, the active role of the learners themselves becomes more powerful". Increased learner agency requires a transfer in agency from teacher to student. It is this major shift, enabled by developments in technology that has had the greatest impact on learning space design in recent years.

Student voice and choice will be encouraged as students learn to learn and begin to make decisions about their learning. Students will have the ability to make choices in how and where they learn through the provision of **diverse learning settings** or the ability to **reconfigure settings**.

The contemporary urban student can be defined by increased independent mobility and confidence in navigating busy streets and public transport. This concept, particularly over the lower community focused levels, are reminiscent of the busy vibrant urban context, creating opportunities for students to grow in their independence. Students will feel comfortable and confident in their space by being able to navigate the school independently and with ease through clear wayfinding, signage and degrees of familiarity/consistency throughout the learning space.

Components of this space will offer a sense of student ownership, presence and voice via highly visible customisable elements, performance, gallery and display spaces. The development will not be 'over designed' so that **post-occupancy student influence** can occur to maximise student input.

Future-focused, Student Centred Learning

Future-focused learning is personalised. Increasingly, constructivist principles are being expanded to address a much more personalised approach to learning where the individual attributes of each learner are acknowledged and nurtured. In order to support a individualised learning experience, the learning environment needs to support rapid shifts between different teaching modes and group size from traditional teacher led instruction, to structured collaborative work in groups, to self-directed informal learning and the variations on these modes. Students are offered convenient access to technologies, resources and display with an emphasis on mobility.

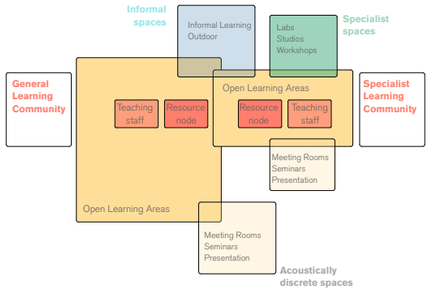
To test the ISHS, we have focused on **future focused learning through the lens of STEAM** – Science, Technology, Engineering, Arts and Maths. STEM approaches are being adopted world wide as a means of integrating learning across core processes of design and manufacturing.

More recently, STEM advocates have come to acknowledge the importance of creativity in these processes and the approach now incorporates Arts disciplines. While it is still possible to deliver each subject in isolation, the spaces also offer opportunities for these disciplines to seamlessly interact, incorporating both highly specialised spaces such as labs with more generic 'maker' space (practical) and general learning areas.

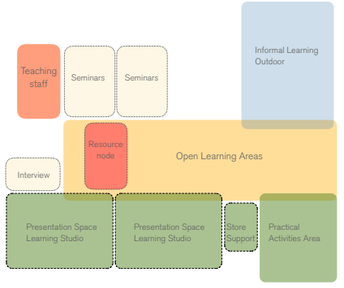
Reference Image ▪ NLE: Practical Activities Area

Reference Image ▪ NLE: Diversity of learning settings

The School as Learning Hub| Learning Communities| Generalist - Specialist *NLE*



ISHS Learning Community Hubs
Generalist - Specialist Learning Community *NLE/FJMT*



Resource Hub, Resource Nodes & Student Services

The school will offer a central resource hub operating as a “one stop shop” for students connecting core student services with library and IT support. This space serves as the first and last port of call in the school and will allow for extended hours of access where required. Resource nodes (mini-libraries) will be available throughout the school to ensure resources can be used ‘where the learning happens’ in relation to each discipline. The resource hub and nodes will be managed by a librarian or ‘media specialist’ who will view the entire campus as a library, working side by side with staff and students in the learning area.

Transition & Rite of Passage

While the spaces themselves have not been designed with specific stages in mind, it is proposed that the building will support stage-related learning via the creation of middle and senior years learning hubs distributed across three levels. This will create a sense of intimacy and community within the two stages, reduce the need for circulation throughout the tower and enable more targeted pedagogical approaches and student management. Shared facilities such as performance spaces, sporting venues, library and outdoor areas enabling middle and senior connectivity, including the ability to come together as a whole school. Students will sense a rite of passage as they move toward the upper level spaces accommodating senior study space and more specialised facilities to support the HSC curriculum.

Connecting with Nature

It is now well established that student well-being is essential to successful learning outcomes. A major contributing factor is a learning environment that is the right temperature, uses natural light and has good air quality and ventilation. Sustainability and the development of environmentally responsible citizens will also be prioritised through increased attention to outdoor learning landscapes and initiatives in reduction of resources.

Outdoor learning environments provide sensory experiences, connecting users with their natural environment and supporting learning experiences that cannot be achieved indoors. Outdoor learning includes informal recreational space (e.g. play space and casual seating), formal learning areas (e.g. can accommodate a structured whole class or group activity), sports facilities (e.g. courts and fields), authentic learning (e.g. sensory and vegetable gardens), reflective spaces (e.g. for quiet reading or personal reflection).

A key priority will also be to value, respect and promote the diversity, ownership and richness of Aboriginal cultures to which outdoor learning is integral. It is expected that a selection of outdoor components will reflect a commitment to this e.g. native and Bush tucker gardens, ‘campfire’ storytelling spaces, outdoor sculpture etc.

All of these elements can also be used to shape the building as a tool for learning to teach students about the importance of the natural environment and their role in preserving it.

This concept provides extensive links to the outdoors. On the lower levels, sports and performance spaces link to outdoor settings and can extend into the park beyond. Should the school need to operate in isolation, entire levels have been dedicated to outdoor sporting and recreational facilities, while smaller terraces support specialist and general learning on the floors above.

Community of Practice

In the discerning, personalised learning environment, the relationship between teacher and student is dramatically altered. The teacher takes on a more facilitative role, while the learner becomes the ‘demonstrator’ of learning. The school will foster a strong professional learning culture. Staff collaboration will be embedded in workplace practice through decreased ownership of space and increased transparency and connectivity of space. The result is a de-privatised approach to teaching where increased communication and team-based teaching approaches offer increased peer support and collegiality.

This concept offers a central hub for staff to come together formally and informal to interact in both a social and professional capacity.

Distributed staff hubs ensure that staff workspace is connected to the learning areas. From these points, staff can not only complete work tasks but passively supervise. The transparency of these spaces will allow teachers to model collaborative behavior and work ethic, while the level of accessibility should reflect a culture of trust and mentorship between student and teacher.

The Dual Campus

The school must operate both as an isolated facility and within the broader context of the community.

The significant link to the adjacent park and its recently upgraded facilities presents extensive opportunities to expand the learning potential of the school and its ability to connect with the local community.

The school has been configured to respond to the park, but in the event that the school will be required to operate in isolation the range and configuration of the facilities, particularly in regard to the provision of extensive outdoor learning space, will not be compromised.

Community Engagement

The design of learning environments should acknowledge that the greatest impact on learners is the well being of the whole family and the social capital of the community. Therefore the learning environment should be designed with the needs of the community in mind and should remove as many barriers to inclusion as possible by incorporating settings and graded degrees of access appropriate to the community’s context.

This concept offers a clear address and entry to the school with immediate access to community-minded spaces. There is an engaging sense of arrival that leads the user into the heart of the campus, placing them in direct contact with the core services and community spaces of the school.

The school site will welcome community interaction both during and out of school hours. There is a need to secure the site while at the same time offering a sense of openness for students and families. The site and its facilities have been configured using a public, privileged and private zoning strategy with the appropriate amount of space allocated to invite community participation while at the same time protecting users and assets.

The configuration of spaces creates a vibrant and active street level accessible to the public and linked to gathering spaces, meeting spaces, performance spaces and sports facilities above and below to the main community hub. This can be used by students for study and might possibly serve as a more convenient study location for local students from other learning institutions. The learning and meeting areas within this space might also attract business and community groups seeking new spaces to collaborate and network.

Remaining spaces within the upper levels of the tower and in more remote locations of existing facilities are limited to staff and student access only, with possible privileged access to roof top spaces to showcase student learning.

View of the Student and Community Hub

Upper level Outdoor Learning areas located on the Verandah

Reference Image ▪ NLE: Outdoor Learning areas

Reference Image ▪ fjmt: Community engagement

Adapting a Schedule of Accommodation

The educational space planning approach maximizes learning area in the form of new space types that are responsive to future-focused modes of learning.

The learning environment will offer the appropriate mix of the following space key types:

- **Open learning** - a range of learning settings responsive to groups of different sizes and independent study to support collaborative and self-directed learning activity.
- **Practical activities areas** – a component of the open learning space that supports 'hands on' learning activity through the provision of sinks and 'maker' settings.
- **Presentation spaces** – a space that can accommodate an entire class group offering degrees of acoustic and visual privacy for activities like formal presentation and explicit instruction. When not in use by a class group, the space can be opened to the open learning area.
- **Seminar spaces** – as above but for medium sized groups
- **Interview rooms** – as above but for small groups
- **Informal learning** – comfortable social spaces for informal meeting, collaboration and independent study of a less focused nature than found in open learning
- **Specialist spaces** – refers to any highly specialised disciplinary space such as laboratory, workshop or performance space.

Purposeful Flexibility

While it is important to provide flexible spaces that are responsive to short and long term change, it is also essential to keep in mind that excessively flexible spaces can often be inflexible by trying to do too much and as a result doing very little. Even though learning cohorts, pedagogies and technologies are susceptible to inevitable change, it is still necessary to plan a space in accordance with how it will be used on day one. Ideally the building shell should be as flexible as possible while interior spaces are more carefully planned using items and furniture that target the proposed pedagogy that will be implemented upon occupancy.

While there will be moveable components that allow for the opening up and closing down of space, the term 'flexibility' has been interpreted in a spatial approach that provides options rather than the ability to change space extensively. For example, while formal presentation spaces are provided which can be used for enclosed teacher centred instruction, such spaces would be selected based on their relevance to the desired learning outcome rather than on the need to 'contain' students in a single space. It will be necessary for teachers to plan their spatial requirements and to consider spatial qualities as part of both time-tabling and room booking systems to ensure the correct pedagogy/space alignment (for example specialist maths or languages might require an acoustically private space while geography might prefer a space with outdoor links etc.)

Learning Hubs

In both new and existing buildings, spaces have been assembled to create a series of learning hubs that can either operate in isolation or, where relevant, in connection with the floor above or below. The Hubs offer a range of configurations which will allow the learning community to maximise the learning potential of its specific location. For example the Learning Communities - Fitness and Movement Complex capitalise on their ground and lower ground floor locations to have direct access to the park and connections to community facilities.

Expanding Amenity

In addition to specialist spaces such as laboratories and workshops, general learning areas have also been equipped with their own practical activities areas on some levels. This will improve the utilisation of specialist spaces, ensuring they are not being time tabled for more generic activity. It also expands potential for authentic learning opportunity to occur outside of specialist spaces, which is necessary to support the inevitable increase in project and problem based learning as well as design-based approaches.

Student Movement

The provision of distributed general learning spaces associated with all specialist spaces enables a range of subjects to be delivered in any level.

A two or three phase starting time is proposed which will lighten the pressure on the lifts for students to access the tower in the mornings and afternoons. This will imply a staggered lunch break necessary in a large school population.

It is envisaged that the timetable will schedule use of specialist facilities in the morning for seniors and in the afternoon for middle years. This way transition can take place during the lunch break, enabling staggered movement.

General circulation will be via stairs and the use of lifts will be restricted to a number of pre selected destination levels

Test case

The three (3) lift design has been tested against a theoretical number of students within the tower portion of the campus. Based on 11 Learning Communities, occupying all areas of the school and a sample timetable of 3 periods, it is proposed that there will be up to 500 students occupying the tower portion (levels 5 - 9 and 11 - 13) at a time.

CIBSE (Chartered Institute for Building Services Engineers) Guide D outlines the general principles for vertical transport design in various types of buildings. The most applicable to this development outlined in the guide is that of university education facilities.

Through utilising the above recommendations and equipment inputs, the system achieves the below performance characteristics (in a five-minute period).

- Maximum Handling Capacity – 169 persons (33.8% assuming 500 total persons)
- Average Time to Destination – 83.8s (at 5HC of 33.8%)
- Average Waiting Time – 27.4s (at 5HC of 33.8%)

Through promotion of the lower floors using solely stairs, restricting access via lift and promoting inter-floor circulation, these are the achievable performances in a five minute period.

If peak timetable change times are staggered by five minute increments, the overall capacity of the lifts to disperse the (assumed 500 person) population is increased, i.e. in a 15-minutes period, the lifts can handle 3x169=507 persons.

Time tabling

The building will respond to two different time tabling approaches (a modified traditional disciplinary and trans-disciplinary) to ensure it can support any changes in the needs of the learning community as the project progresses. Space should not dictate the school's operations, but rather seamlessly support them. While it is relatively easy to adapt traditional teaching methods to contemporary spaces it is almost impossible to do the opposite.

Interview Rooms

Open Learning

Practical Activities Area

Presentation spaces

10.0 Operational Management Plan

Operational Management Plan

As outlined in Section 10: Educational Strategies, at this stage of submission, the new ISHS, does not have a Principal, therefore the specific development of the operation of the campus has been developed in conjunction with the Project Reference Group and the input of specialised stakeholders and focus group. This information will be developed into a Preliminary Operational Management Plan, once the new Principal is engaged.

Notwithstanding this, a number of important strategies have been either implemented or recommended to manage the movement of approximately 95 staff and 1200 students throughout the school day.

Student Movement

As outlined in Section 10: Educational Strategies , "the provision of distributed general learning spaces associated with all specialist spaces enables a range of subjects to be delivered in any level.

It is recommended that a two or three phase starting time is proposed which will lighten the pressure on the lifts for students to access the tower in the mornings and afternoons. This will imply a staggered lunch break necessary in a large school population.

It is envisaged that the timetable will schedule use of specialist facilities in the morning for seniors and in the afternoon for middle years. This way transition can take place during the lunch break, enabling staggered movement.

General circulation will be via stairs and the use of lifts will be restricted to a number of pre selected destination levels."

It is also recommended that the new principal should explore timetable options such as longer periods across the week [e.g. 4-period days, or a mixture of longer and short periods] to accommodate trans disciplinary and project based learning.

Facilities Management

Following detailed Focus Group sessions, it is recommended that the prospective principal explore the use of a facilities manager or similar, to centrally manage general learning spaces, resource nodes and shared specialist equipment (e.g. 3D printers, laser cutters, etc.) to better facilitate shared use by all faculties.

11.0 Materiality and Facades

The intention of the facades is to represent the paedological and conceptual underpinnings of the design.

Each component of the proposal's built form is emphasised by the materiality of its facade, which relates to both its internal function and also corresponds to the part it plays in the narrative of the proposal itself.

The *Landscaped Terraces* relate to the materiality of the park and the wider Sydney character of sandstone construction, anchoring the proposal to the specific site, as well as the wider Sydney context.

The "Studio" has an empathy with the materiality of the heritage buildings of the existing school., reinterpreting the coloration and vertical articulation of the surrounding buildings, establishing its form as a sensitive addition to the existing school campus.

Through its highly open nature, and use of colour, the *Verandah* materiality communicates the concept of the Learning Verandah that has informed its design, as well as its pedological use.

The Learning Hub's translucent and shimmering facade has an ephemeral quality that speaks to its aspiration to provide learning spaces conducive to the ideas of Imagination and Dreaming, central to the Design Principles of the proposal.