



Metro Inner Development Assessment Panel Agenda

Meeting Date and Time: Wednesday, 14 August 2024; 1:00pm
Meeting Number: MIDAP/29
Meeting Venue: 140 William Street, Perth

A live stream will be available at the time of the meeting, via the following link:
[MIDAP/29 - 14 August 2024 - City of Stirling](#)

PART A – INTRODUCTION

1. Opening of Meeting, Welcome and Acknowledgement
2. Apologies
3. Members on Leave of Absence
4. Noting of Minutes

PART B – CITY OF STIRLING

1. Declarations of Due Consideration
2. Disclosure of Interests
3. Form 1 DAP Applications
 - 3.1 Lot No. 50 and Lot No. 123 (House Number 160) Hale Road, Wembley Downs - Additions to existing educational establishment – DAP/24/02709
4. Form 2 DAP Applications
5. Section 31 SAT Reconsiderations

PART D – OTHER BUSINESS

1. State Administrative Tribunal Applications and Supreme Court Appeals
2. General Business
3. Meeting Closure

Please note, presentations for each item will be invited prior to the items noted on the agenda and the presentation details will be contained within the related information documentation



ATTENDANCE

DAP Members

Eugene Koltasz (Presiding Member)
Lindsay Baxter (Deputy Presiding Member)
Neema Premji (Specialist Member)

Part B – City of Stirling

Cr Michael Dudek (Local Government Member, City of Stirling)
Cr Teresa Olow (Local Government Member, City of Stirling)

Minute Secretary

Laura Simmons (DAP Secretariat)

Officers in Attendance

Ashlee Kelly (DAP Secretariat)



PART A – INTRODUCTION

1. Opening of Meeting, Welcome and Acknowledgement

The Presiding Member declares the meeting open and acknowledges the traditional owners and pay respects to Elders past and present of the land on which the meeting is being held.

This meeting is being recorded and livestreamed on the DAP website in accordance with regulation 40(2A) of the *Planning and Development (Development Assessment Panels) Regulations 2011*. Members are reminded to announce their name and title prior to speaking.

2. Apologies

Cr Suzanne Migdale (Local Government Member, City of Stirling)

3. Members on Leave of Absence

Nil.

4. Noting of Minutes

Signed minutes of previous meetings are available on the [DAP website](#).



PART B – CITY OF STIRLING

1. Declarations of Due Consideration

Any member who is not familiar with the substance of any report or other information provided for consideration at the DAP meeting must declare that fact before the meeting considers the matter.

2. Disclosure of Interests

Nil.

3. Form 1 DAP Applications

- 3.1 Lot No. 50 and Lot No. 123 (House Number 160) Hale Road, Wembley Downs - Additions to existing educational establishment – DAP/24/02709

4. Form 2 DAP Applications

Nil

5. Section 31 SAT Reconsiderations

Nil

PART B – Item 3.1 - HALE SCHOOL, LOT NO. 50 AND LOT NO. 123 (HOUSE NUMBER 160) HALE ROAD, WEMBLEY DOWNS – ADDITIONS TO EXISTING EDUCATIONAL ESTABLISHMENT

Form 1 – Responsible Authority Report
(Regulation 12)

DAP Name:	Metro Inner DAP
Local Government Area:	City of Stirling
Applicant:	Planning Solutions (Aust) Pty Ltd
Owner:	The Governors of Hale School
Value of Development:	\$29.45 million ☐ Mandatory (Regulation 5) ☒ Opt In (Regulation 6)
Responsible Authority:	City of Stirling
Authorising Officer:	Amanda Sheers, Director Planning and Development
LG Reference:	DA24/0610
DAP File No:	DAP/24/02709
Application Received Date:	6 May 2024
Report Due Date:	1 August 2024
Application Statutory Process Timeframe:	90 Days
Attachment(s):	1. Development Application Plans (received 5 June 2024) 2. Aerial Location Plan 3. Metropolitan Region Scheme Zoning Map 4. City of Stirling Local Planning Scheme No.3 Zoning Map 5. City of Stirling Planning Assessment 6. Applicant's Final Submission: a. Applicants Submission prepared by Planning Solutions received on 6 May 2024 b. Architectural Design Package prepared by Kerry Hill Architects (KHA) received on 6 May 2024 c. Feature Survey prepared by MNG received on 6 May 2024 d. Landscaping Plan Package prepared by Aspect Studio received on 6 May 2024 e. Concept Drainage Plans prepared by WGA received on 6 May 2024 f. Environmental Sustainable Design Strategy prepared by Full Circle

	Design Services received on 6 May 2024 g. Acoustic Assessment prepared by Gabriels Hearne Darrel received on 6 May 2024 h. Heritage Impact Assessment prepared by Griffiths Architects received on 6 May 2024 i. Bushfire Technical Advice prepared by Bushfire Prone Planning received on 6 May 2024 7. City of Stirling Design Review Panel (DRP) Report dated 14 March 2024 8. Schedule of referral responses from Statutory / Public Authorities a. Comments received from Department of Planning, Lands and Heritage, Heritage and Property Services dated 8 July 2024 b. Comments received from Department of Planning, Lands and Heritage, Strategy and Engagement dated 18 June 2024 9. Applicants Response to Public Consultation	
Is the Responsible Authority Recommendation the same as the Officer Recommendation?	☐ Yes	Complete Responsible Authority Recommendation section
	☒ N/A	
	☐ No	Complete Responsible Authority and Officer Recommendation sections

Responsible Authority Recommendation

That the Metro Inner Development Assessment Panel resolves to:

Approve DAP Application reference DAP/24/02709 and accompanying plans (as listed in Condition 3) in accordance with Cstlause 68 of Schedule 2 (Deemed Provisions) of the *Planning and Development (Local Planning Schemes) Regulations 2015*, and the provisions of the City of Stirling Local Planning Scheme No. 3, for the proposed Additions to Educational Establishment at Lot 50 and Lot 123, House Number 160 Hale Road, Wembley Downs subject to the following conditions:

Conditions

1. Pursuant to Clause 26 of the Metropolitan Region Scheme, this approval is deemed to be an approval under Clause 24(1) of the Metropolitan Region Scheme.

2. This decision constitutes planning approval only and is valid for a period of four (4) years from the date of approval. If the subject development is not substantially commenced within the specified period, the approval shall lapse and be of no further effect.
3. The development is to comply in all respects with the attached approved plans, as dated, marked and stamped, together with any requirements and annotations detailed thereon. The plans approved as part of this application form part of the development approval issued are listed below unless otherwise approved:

DRAWING TITLE	Revision	Sheet Number	Date	Drawn By
Contents Page	A	A0001	April 2024	KHA
Proposed Roof Site Plan	A	A0050	April 2024	KHA
Proposed Ground Floor Site Plan	A	A0051	April 2024	KHA
Demolition Plan	A	A0052	April 2024	KHA
Lower Ground Floor Plan	A	A1001	April 2004	KHA
Ground Floor Plan	A	A1010	April 2004	KHA
First Floor Plan	A	A1011	April 2004	KHA
Roof Plan	A	A1013	April 2004	KHA
GA Sections	A	A2000	April 2004	KHA
Elevations	A	A3001	April 2004	KHA
Elevations	A	A3002	April 2004	KHA
3.2 The Building in Context	NA	NA	NA	KHA
Coversheet	B	LA-000	April 2024	Aspect Studios
Tree Retention	B	LA-050	April 2024	Aspect Studios
General Arrangement	B	LA-101	April 2024	Aspect Studios
Gardening, Drainage & Levels	B	LA-401	April 2024	Aspect Studios
Sections	B	LA-701	April 2024	Aspect Studios
Concept Drainage	A	CV_001	March 2024	WGA
Concept Drainage	A	CV_003	March 2024	WGA

Landscaping

4. Prior to the commencement of development, a detailed Landscaping Plan is to be provided for the City of Stirling's approval that is generally in accordance

with the Landscaping Investigation and Opportunities Plan prepared by Aspect Studio dated April 2024 and any recommendations therein.

5. Prior to the occupation of the development, all landscaped areas are to be planted and reticulated in accordance with the approved Landscaping Plan and maintained thereafter for the duration of the development, to the satisfaction of the City of Stirling.

Parking and Access

6. No goods or materials being stored, either temporarily or permanently in the parking or landscape areas or within access driveways. All goods and materials are to be stored within the buildings or storage yards, where provided.

General

7. A Site Management Plan shall be submitted to and approved by the City of Stirling prior to the commencement of any works. The Site Management Plan shall include specific details on the management of aspects including, but is not limited to, dust, noise, vibration, waste management, storage of materials, traffic, parking, on-site and street tree protection areas and site safety/security. The Site Management Plan is to be complied with for the duration of the construction of the development, to the satisfaction of the City of Stirling.
8. Air conditioning units, ducts and other services shall be screened from view, to the satisfaction of the City of Stirling.
9. External lighting shall be positioned in accordance with Australian Standard AS/NZS 4282:2023, to the satisfaction of the City of Stirling.

Colours and Materials

10. The colours, materials and finishes of the development shall be in accordance with the details and annotations as indicated on the approved plans which forms part of this approval, to the satisfaction of the City of Stirling, unless otherwise approved.

Waste Management and Services

11. All servicing and deliveries to the site, including the loading and unloading of vehicles, is to occur entirely within the lot, and is not to occur within the road reserve.
12. The development is required to be connected to sewer.
13. Stormwater from all roofed and paved areas shall be collected and contained on site. Stormwater must not affect or be allowed to flow onto or into any other property or road reserve.

Advice Notes

General

1. If an applicant is aggrieved by this determination, there is a right of appeal under Part 14 of the Planning and Development Act 2005. An appeal must be lodged within 28 days of the determination with the State Administrative Tribunal.
2. This is a Development Approval under the City of Stirling Local Planning Scheme No.3 and related policies. It is not a Building Permit or an approval to commence or carry out development under any other law. It is the responsibility of the Applicant to obtain any other necessary approvals, consents and licences required under any other law, and to commence and carry out development in accordance with all relevant laws.
3. This approval is not an authority to ignore any constraint to development of the land, which may exist through statute, regulation, contract or on title, such as an easement or restrictive covenant. It is the responsibility of the Applicant to investigate any such constraints before commencing development. This approval will not necessarily have regard to any such constraint to development, regardless of whether or not it has been drawn to the decision makers attention.
4. The Applicant is responsible for ensuring that all lot boundaries as shown on the approved plans are correct.
5. A Master Plan be provided including future capital works to the satisfaction of the City of Stirling including the provision for but not limited to;
 - a. Public Art;
 - b. Parking and access; and
 - c. Landscaping.
6. Noisy Construction Work outside the period 7.00am to 7.00pm Monday to Saturday and at any time on Sundays and Public Holidays is not permitted unless a Noise Management Plan for the construction site has been approved in writing by the City of Stirling.
7. The development shall comply with the *Health (Public Buildings) Regulations 1992*. The premises must be registered as a Public Building with the City of Stirling and an inspection of the property shall be completed and Maximum Accommodation Certificate issued prior to use of the premises.

Landscaping

8. In reference to the Advanced Trees, an Advanced Tree is defined in Local Planning Policy 6.11 - Trees and Development as: a tree which requires planting in at least a 90 litre container or greater size and which is at least two (2) metres in height and at least two (2) years of age.
9. Prior to the occupation of the development, all reticulated garden beds shall be fitted with low flow triple dropper or coarse spray and timer connection reticulation measures, to the satisfaction of the City of Stirling.

10. All Advanced Trees are to be centrally located within the deep soil area free of buildings, impervious surfaces and other fixed structures, and be open to the air.

11. Prior to the occupation of the development, all mulched landscaping areas shall be mulched to a depth of 75mm, to the satisfaction of the City of Stirling.

Details: outline of development application

Region Scheme	Metropolitan Region Scheme (MRS)
Region Scheme - Zone/Reserve	Urban
Local Planning Scheme	City of Stirling Local Planning Scheme No.3 (LPS3)
Local Planning Scheme - Zone/Reserve	Private Institution
Use Class and permissibility:	Educational Establishment – ‘D’ use. ‘D’ means that the use is not permitted unless the Council has exercised its discretion by granting planning approval.
Lot Size:	503,836m ²
Existing Land Use:	Educational Establishment
State Heritage Register	State Registered building located on site
Local Heritage	☒ N/A ☐ Heritage List ☐ Heritage Area
Design Review	☐ N/A ☒ Local Design Review Panel ☐ State Design Review Panel ☐ Other
Bushfire Prone Area	No
Swan River Trust Area	No

Proposal:

On 6 May 2024, the City formally accepted a Form 1 Development Assessment Panel application for a new Science and Technology Building to an existing Educational Establishment (Hale School) located at Lot 50 and Lot 123, House Number 160 Hale Road, Wembley Downs.

The proposed Science and Technology Building will replace the existing Science and Technology Building and is located at the same location on the development site. A brief summary of the proposed development is provided below

- A three-storey building with:
 - o A total of 18 learning rooms, with associated staff rooms, preparation rooms and storage areas;
- Vehicle access and parking arrangements to remain as existing; and
- Alterations to current vegetation and landscaping on-site to facilitate the proposed development.

Proposed Land Use	Educational Establishment
Proposed Gross Floor Area	4,901m ² of Gross Floor Area Gross Floor Area means the total floor area within a building measured over the enclosing walls (including the portion of any common or party wall forming part of the building) exclusive of parking facilities sited within the building
Proposed No. Storeys	Three storeys

Background

The proposed development is located within the centre of the Hale School site, approximately 190m from the nearest lot boundary. The site is zoned 'Urban' under the Metropolitan Region Scheme (MRS) (Attachment 3) and is zoned 'Private Institution' under the City's Local Planning Scheme No.3 (LPS3) (Attachment 4).

The site has frontages to Hale Road, Williamston Road, Queenscliffe Road, Cobb Street, Glenelg Avenue, Stockdale Crescent, Unwin Avenue and Lefroy Street. Single and double storey Grouped Dwellings and Single Houses characterise the adjoining area.

On 29 April 2024, Hale School Memorial Hall was recognised by the Department of Planning Lands and Heritage (DPLH) as a place of cultural heritage and significance and therefore entered in the State Register of Heritage Places. The proposed development is setback approximately 140m with no impact to Hale School Memorial Hall. The application was referred to DPLH for comment which is discussed in this report.

The proposed development was reviewed by the City's Design Review Panel (DRP), prior to the lodgement of the development application, on Thursday 14 March 2024. The DRP report can be found in Attachment 7.

Legislation and Policy:

The following legislation is applicable to the proposed development:

Legislation

- *Planning and Development Act 2005*
- *Planning and Development (Development Assessment Panels) Regulations 2011*
- *Planning and Development (Local Planning Schemes) Regulations 2015*
- Metropolitan Region Scheme (MRS)
- City of Stirling Local Planning Scheme No. 3 (LPS3)

State Planning Policies

- State Planning Policy 3.5 – Historic Heritage Conservation (SPP3.5)
- State Planning Policy 7.0 – Design of the Built Environment (SPP7.0)

Local Planning Policies

The following Local Planning Policies are applicable to the proposed development.

- Local Planning Policy 4.5 – Private Institution Design Guidelines (LPP4.5)
- Local Planning Policy 6.3 – Bin Storage Areas (LPP6.3)
- Local Planning Policy 6.6 – Landscaping (LPP6.6)
- Local Planning Policy 6.7 – Parking and Access (LPP6.7)
- Local Planning Policy 6.11 – Trees and Development (LPP6.11)
- Local Planning Policy 6.12 – Public Art on Private Land (LPP6.12)
- Local Planning Policy 6.18 – Public Consultation (LPP6.18)

Consultation:

Public Consultation

The proposed development was advertised for a period of 28 days in accordance with the 'Complex Application' requirements of Clause 64(3) and (6)(a) of *the Planning and Development (Local Planning Schemes) Regulations 2015*. Owners and occupiers within a 200m radius of the subject site were notified of the proposal. A notice was placed on the City of Stirling's website, advertising signs placed on-site and relevant Ward Councillors were notified.

The consultation period commenced on 22 June 2024 and concluded on 20 July 2024. During the consultation period a total of three submissions were received, comprising two 'Other' submissions and one letter of support. The submissions received during the consultation period and their relative locations are tabled below.

Submissions Received	Within Radius 200m	Greater than 200m Radius	Number of Submissions
SUPPORT	1 (33.3%)	(0%)	1 (33.3%)
OBJECT	0 (0%)	(0%)	0 (0%)
OTHER (Comment)	1 (33.3%)	1 (33.3%)	2 (66.6%)

All matters raised in submissions received during the advertising period are summarised in the table below, and the City's response to the matters raised by the submissions is also provided.

Public Consultation Submissions		
Submission Number	Submission Details	Officer Comment
1	No objection.	Noted.
2	No objection to the proposal, however parking and traffic concerns associated with the school pick up and drop off and potential additional students numbers associated with the Hale School site.	The proposal does not result in an increase in student numbers, with the application for the replacement of the existing Science and Technology building. The City has recommended an Advice Note requesting a Master Plan be provided to the City detailing the parking and access of the overall site.

Public Consultation Submissions		
Submission Number	Submission Details	Officer Comment
3.	I support the development of new facilities, on the provision that no vehicle or pedestrian access is proposed via Lefroy street.	The application does not propose to alter existing access and car parking arrangements and is for a new Science and Technology building only. As stated above, an appropriate advice note has been recommended requiring a Master Plan.

Consultation with Government/Service Agencies

The proposed development was referred to the following external agencies:

- Department Planning Lands and Heritage – Strategy and Engagement; and
- Department Planning Lands and Heritage – Heritage and Property.

The DPLH have no objections to the proposed development. These referral responses are contained in Attachment 8.

Internal Referrals

The application has been referred internally and recommendations of relevance have been incorporated into the condition setting.

Planning Assessment:

The proposal has been assessed against the applicable planning framework and is supported by the City. The following matters have been identified as relevant key considerations:

1. Land Use
2. Primary Planning Controls
3. Local Planning Policy 4.5 – Private Institution Design Guidelines
4. Landscaping and Trees
5. Public Art

1. Land Use

The development site is located on land zoned 'Private Institution' under LPS3. The below table summarises the zoning permissibility of the proposed land use, as outlined in Table 1 – Zoning Table of LPS3.

Zone	Land Use	LPS3 Zoning Permissibility	
Private Institution	Educational Establishment	D	'D' means that the use is not permitted unless the Council, or in this circumstance the Metro Inner DAP, has exercised its discretion by granting planning approval.

The proposed works are discretionary and must be considered against the objectives of the Private Institution Zone of LPS3 (Clause 4.2.10) which are as follows:

- *To provide for a range of privately owned community facilities, and uses that are incidental and ancillary to the provision of such facilities, which are compatible with surrounding development.*
- *To ensure that the standard of development is in keeping with surrounding development and protects the amenity of the area.*

The development site contains an existing Educational Establishment, being Hale School. The proposed building further contributes to the existing range of private educational facilities offered on the development site through the provision of a renewed science facility.

The built form of the proposed additions do not exceed the permissible three storey height limit as per LPP4.5. The proposed development is consistent with the heights of existing buildings on the site. Additionally, the proposed development satisfies the provisions of the local planning framework and provides significant separation between the proposed works and the surrounding residential development, with a minimum setback of 230m to the closest residential property.

The proposed additions to the existing Educational Establishment are consistent with the Private Institution Zone. The proposed high-quality designed building sits centrally within the Hale School site, surrounded by high-quality landscaped spaces. The proposal will positively contribute to the amenity and functionality of the site and will not have any adverse impacts on neighbouring amenity, as it is concealed by existing buildings and is located a significant distance from adjoining properties.

2. Primary Planning Controls

The following table identifies the key elements of the planning framework applicable to the development:

Element	Provision	Proposed
Building Height	• Development located over 10m from the lot boundary is permitted a maximum height of 4 storeys (12.0 metres wall height) above natural ground level.	• The maximum height of the proposal is 11.8 metres above Natural Ground Level.
Street Setbacks	LPP4.5 permitted setbacks: • Front setbacks shall be 6.0 metres.	• A minimum setback of 192 metres is provided to the nearest lot boundary.
Car Parking	• A minimum of 337 car bays required.	• 532 existing car bays provided onsite. • Existing vehicle access and parking arrangements remain unchanged.

Landscaping	A minimum of 10% of the site is required to be landscaped.	Landscaping significantly exceeds 10% of the site area.
-------------	--	---

The City's assessment of the development against the planning framework is included in Attachment 5 which concludes that the development satisfies all relevant objectives.

3. Local Planning Policy 4.5 - Private Institution Design Guidelines

The proposed development does not comply with the following provision of LPP4.5:

Provision	Proposed	Comply Yes/No
All applications for development shall be accompanied by a Local Development Plan for the site, as per Clause 5.12 of Local Planning Scheme No.3, with the exception of: - Single storey proposals; - Additions to existing buildings less than 10% of the subject lot area; and - Family Day Care and Rural Pursuit.	The proposed development has not been lodged concurrently or subsequent to a Local Development Plan and proposes buildings greater than one storey in height.	No – Discretion is sought.

The use of discretion is required to consider height of the proposed development in the absence of an approved Local Development Plan (LDP).

Local Planning Policy 4.5 – Private Institution Guidelines	
Objectives	Officer Comment
To ensure that development does not adversely affect the amenity of surrounding properties;	The proposed height at a maximum of three storeys is suitably located in the centre of the site and is adequately screened by existing buildings and established vegetation. Furthermore, the proposed additions are setback significantly from the adjoining properties which ensures there are no adverse impacts to surrounding properties.
To encourage development that is sympathetic to the scale and bulk of surrounding properties;	The proposed development is sympathetic to the scale and bulk of surrounding properties as: - The proposal complies with the maximum building height of four storeys and lot setbacks of 6 metres. - The scale of the development is consistent with the bulk and scale of the existing buildings on the site. - The proposed additions are located centrally within the site and are screened from residential properties

Local Planning Policy 4.5 – Private Institution Guidelines	
Objectives	Officer Comment
	through landscaping and significant separation distances.
To ensure that the efficiency of the local transport network is not encumbered by development;	The proposed development is for the replacement of an existing Science and Technology building at the Hale School. The development does not propose to increase student or staff numbers or modifications to existing access and parking arrangements with a 195 car parking bay surplus.
To support the provision of viable and high quality retirement and aged care developments; and	N/A.
To ensure that development is well integrated with the surrounding community.	The proposed additions are considered to be well integrated with the surrounding community as the development is consistent with the existing land use on the site and is reflective of the existing built form in the locality.

As the proposed building is a replacement of the existing Science and Technology building at the existing Hale School campus along with the proposed building height, development location and significant setback to lot boundaries, a LDP is not considered required in this instance.

4. Landscaping and Trees

The proposed development has been assessed against the relevant landscaping and tree provisions of the City's planning framework and is supported. The applicant submitted a Landscaping Plan prepared by Aspect Studios which identifies the removal of five Significant Trees in order to facilitate the proposed classroom building. The removal of five Significant Trees is to be offset by the planting of six small and 15 large trees with the retention of a number of Significant Trees on site.

As such, the City supports the proposed landscaping.

It should be noted the City has had preliminary discussions with the landowner regarding future works onsite. As such, the City has requested a Master Plan as an advice note, to ensure matters including landscaping and trees, access and parking and public art are considered as part of future applications.

5. Public Art

The City's LPP 6.12 applies to development proposals with a value in excess of \$2 million. With a value of development estimated at \$29,453,375 the proposed development satisfies the provisions to impose a minimum 1% (\$294,533.75) contribution cost of development to be provided as public art.

This application does not propose the provision of public art with consideration against the relevant objectives of LPP6.12 provided below:

Local Planning Policy 6.12 Public Art on Private Land	
Objectives	Officer Comment
To complement the impacts of urban intensification through providing functional private and public realm infrastructure that contributes to the overall amenity of an area;	The proposed development is located in the centre of the site and is screened by existing buildings and established vegetation. With a setback of 192m to the nearest boundary, the provision of public art associated with the development would not be visible from the public realm to have any impact on the amenity of the area.
To develop a positive sense of place through the provision of public art where urban intensification is occurring;	The proposal is for the replacement of the existing Science and Technology building, and therefore is not considered to represent urban intensification to justify the provision of public art.
To improve the appearance, vibrancy, character, and amenity of the City's built environment; and	The development is of high-quality and reflects the architecture of the existing buildings on-site. As the proposed redevelopment is located centrally within a large site, the proposal will not be visible from the public realm.
To improve the attractiveness and functionality of the private and public domain for those living, using or passing by development sites through the use of public art.	The built form of the proposed development is reflective of the architecture of the Hale School and includes architectural features which provide an attractive setting for the development and users. Given the nature of the proposed use as an Educational Establishment, location of the proposed additions and the significant setbacks to adjoining properties, the provision of public art in this instance would not be visible from the public realm and is therefore not required.

The City recognises that the following DAP application for the proposed Science and Technology Building is one project in the overall master plan for Hale School, it is for this reason that the City recommends an Advice Note be included to require a Master Plan be provided to the City including future capital works including the provision for but not limited to;

- a) Public Art
- b) Landscaping and trees
- c) Parking and access

The City has engaged in discussions with the Applicant regarding the provision of a Master Plan.

Conclusion:

The application seeks approval for additions to the existing Educational Establishment at Hale School.

The proposed development is located central to the site, and will not be visible from any of the surrounding streetscapes. The built form is of high quality and is consistent with the existing buildings onsite.

The development replaces an existing building and upgrades the existing facilities without increasing student or staff numbers. The proposal does not include any modifications to existing access and carparking arrangements and maintains a car park bay surplus of 195 bays.

The development proposes the removal of five existing established trees, however the application proposes the planting of 21 new trees and the retention of a significant number of established trees onsite.

Accordingly, the application is recommended for approval subject to conditions.



ARCHITECTURAL DESIGN REPORT

HALE SCIENCE
BUILDING,
HALE SCHOOL

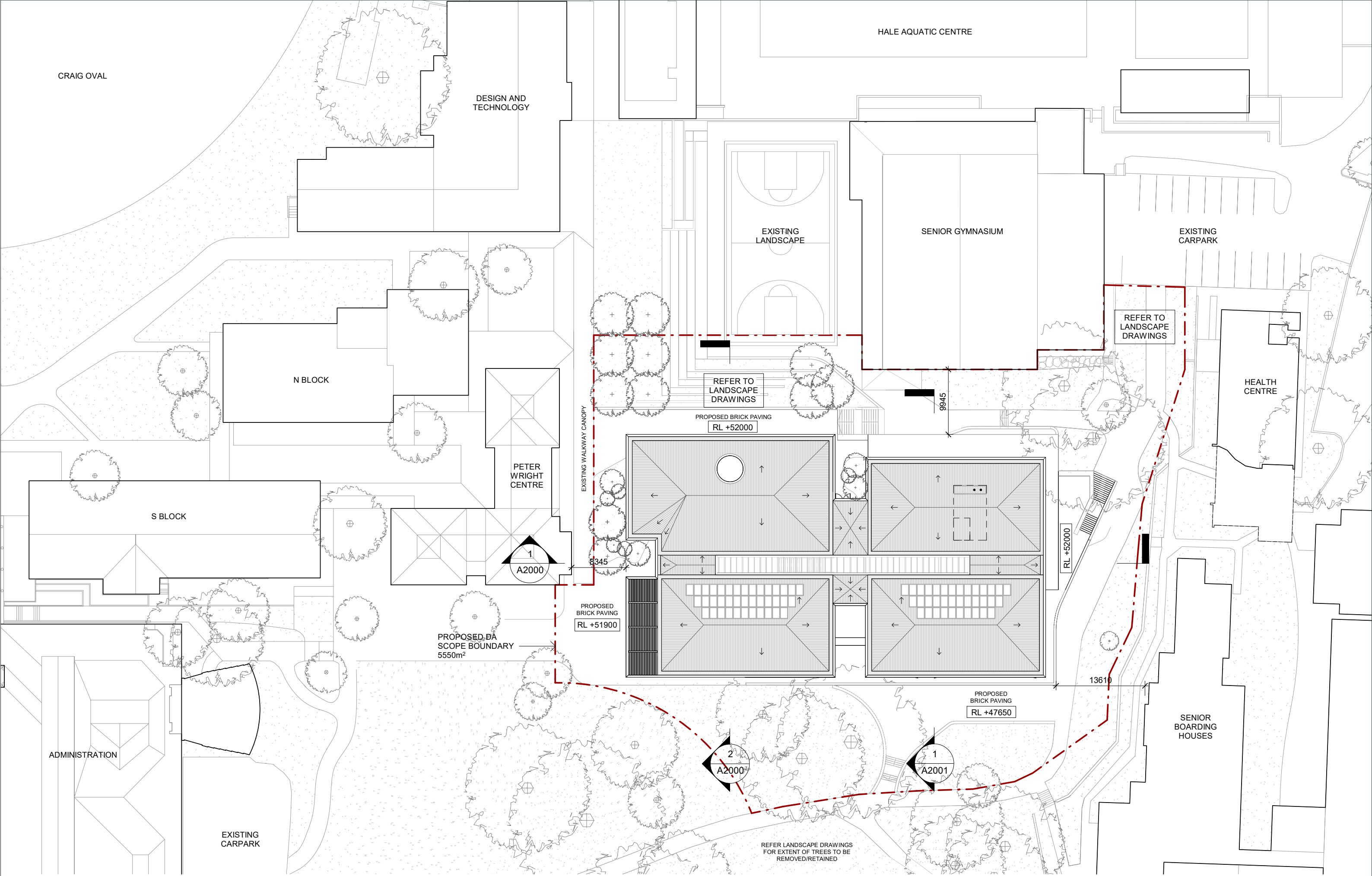
DATE	AMENDMENT	REV
23 APRIL 2024	DA SUBMISSION	A

HALE SCIENCE BUILDING

ARCHITECTURAL DRAWINGS FOR DA SUBMISSION

DRAWING TITLE	DRAWING NO.	REV
Contents Page	A0001	A
Proposed Roof Site Plan	A0050	A
Proposed Ground Site Plan	A0051	A
Demolition Plan	A0052	A
Lower Ground Floor Plan	A1001	A
Ground Floor Plan	A1010	A
First Floor Plan	A1011	A
Roof Plan	A1013	A
GA Sections	A2000	A
Elevations	A3001	A
Elevations	A3002	A





KHA

PRINT IN COLOUR

Rev. Date
A 23.04.24

Amendment
DA Submission

Kerry Hill Architects Pty Ltd.
30 Mount Street, Fremantle
Western Australia
T +61 (8) 9336 4545
© Kerry Hill Architects Pty Ltd.

Disclaimer
1. Do not scale drawings. Written dimensions govern.
2. All Dimensions are in millimeters unless otherwise noted.
3. All Dimensions are to be verified on site prior to proceeding with the work.
4. Kerry Hill Architects are to be notified in writing of any discrepancies.
5. This drawing must be read in conjunction with all relevant contracts, reports specification and drawings.
6. This document has been prepared by Kerry Hill Architects Pty Ltd (KHA) for the purpose of conveying design intent. This document does not represent a complete design and is for the purpose of ongoing coordination between the relevant specialist consultants. KHA has made every effort to maintain the accuracy of the documents. It does not accept liability for loss or damage incurred as a result of the use, or reliance on the accuracy, of this information. All recipients of this document should make their own enquiries to verify the content themselves and with all other relevant disciplines. This document does not form part of any construction contract and should not be relied upon for the purpose of construction.

Project
HALE SCIENCE BUILDING

Client
 HALE SCHOOL

Project No.
634

Drawing Status
DA Submission

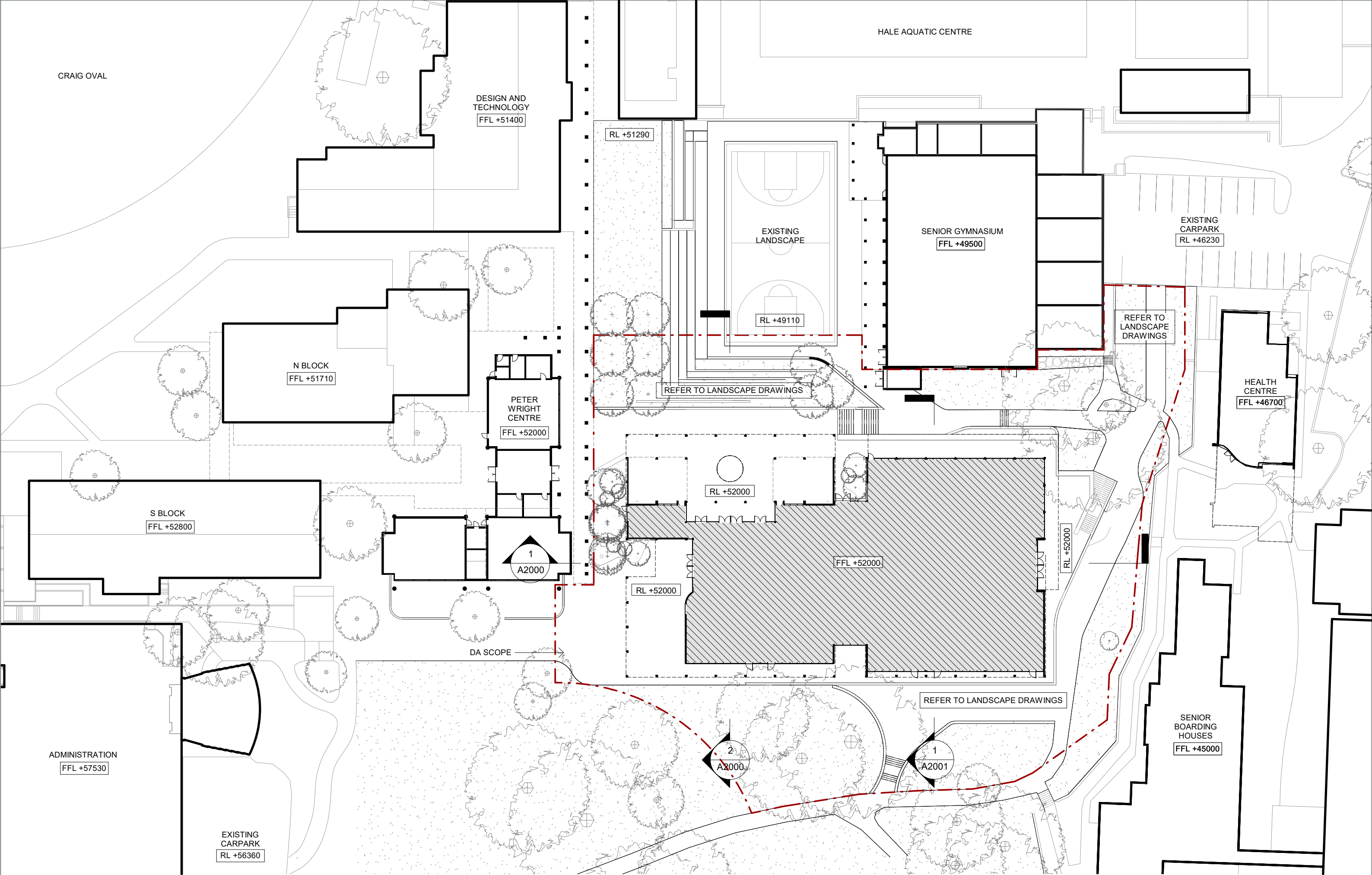
Drawing
Proposed Roof Site Plan

1

Scale at A1/A3
1 : 500

Drawing No.
A0050

Date
23.04.24
Revision
A



KHA

PRINT IN COLOUR

	Rev. Date	Amendment
A	23.04.24	DA Submission

Kerry Hill Architects Pty Ltd.
30 Mount Street, Fremantle
Western Australia
T +61 (8) 9336 4545
© Kerry Hill Architects Pty Ltd.

Disclaimer
1. Do not scale drawings. Written dimensions govern.
2. All Dimensions are in millimeters unless otherwise noted.
3. All Dimensions are to be verified on site prior to proceeding with the work.
4. Kerry Hill Architects are to be notified in writing of any discrepancies.
5. This drawing must be read in conjunction with all relevant contracts, reports specification and drawings.
6. This document has been prepared by Kerry Hill Architects Pty Ltd (KHA) for the purpose of conveying design intent. This document does not represent a complete design and is for the purpose of ongoing coordination between the relevant specialist consultants. KHA has made every effort to maintain the accuracy of the documents. It does not accept liability for loss or damage incurred as a result of the use, or reliance on the accuracy, of this information. All recipients of this document should make their own enquiries to verify the content themselves and with all other relevant disciplines. This document does not form part of any construction contract and should not be relied upon for the purpose of construction.

Project
HALE SCIENCE BUILDING

Client
 HALE SCHOOL

Project No.
634

Drawing Status
DA Submission

Drawing
Proposed Ground Site Plan

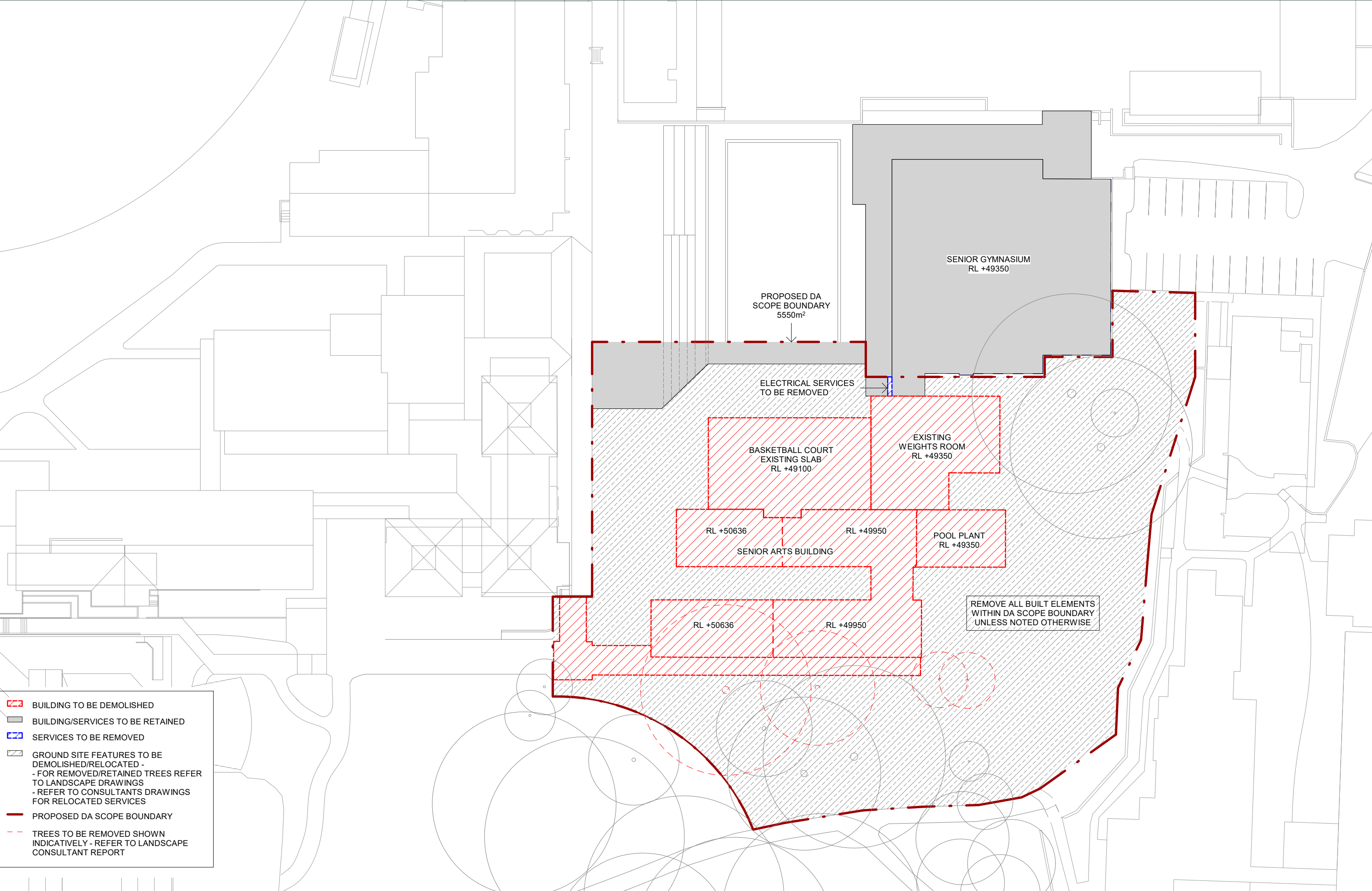


Scale at A1/A3
1 : 500

Drawing No.
A0051

Date
23.04.24

Revision
A



- BUILDING TO BE DEMOLISHED
- BUILDING/SERVICES TO BE RETAINED
- SERVICES TO BE REMOVED
- GROUND SITE FEATURES TO BE DEMOLISHED/RELOCATED -
- FOR REMOVED/RETAINED TREES REFER TO LANDSCAPE DRAWINGS
- REFER TO CONSULTANTS DRAWINGS FOR RELOCATED SERVICES
- PROPOSED DA SCOPE BOUNDARY
- TREES TO BE REMOVED SHOWN INDICATIVELY - REFER TO LANDSCAPE CONSULTANT REPORT

KHA

PRINT IN COLOUR

Rev. Date
A 23.04.24
Amendment
DA Submission

Kerry Hill Architects Pty Ltd.
30 Mouat Street, Fremantle
Western Australia
T +61 (8) 9336 4545
© Kerry Hill Architects Pty Ltd.

Disclaimer
1. Do not scale drawings. Written dimensions govern.
2. All Dimensions are in millimeters unless otherwise noted.
3. All Dimensions are to be verified on site prior to proceeding with the work.
4. Kerry Hill Architects are to be notified in writing of any discrepancies.
5. This drawing must be read in conjunction with all relevant contracts, reports specification and drawings.
6. This document has been prepared by Kerry Hill Architects Pty Ltd (KHA) for the purpose of conveying design intent. This document does not represent a complete design and is for the purpose of ongoing coordination between the relevant specialist consultants. KHA has made every effort to maintain the accuracy of the documents. It does not accept liability for loss or damage incurred as a result of the use, or reliance on the accuracy, of this information. All recipients of this document should make their own enquiries to verify the content themselves and with all other relevant disciplines. This document does not form part of any construction contract and should not be relied upon for the purpose of construction.

Project
HALE SCIENCE BUILDING

Client
 HALE SCHOOL

Project No.
634

Drawing Status
DA Submission

Drawing
Demolition Plan

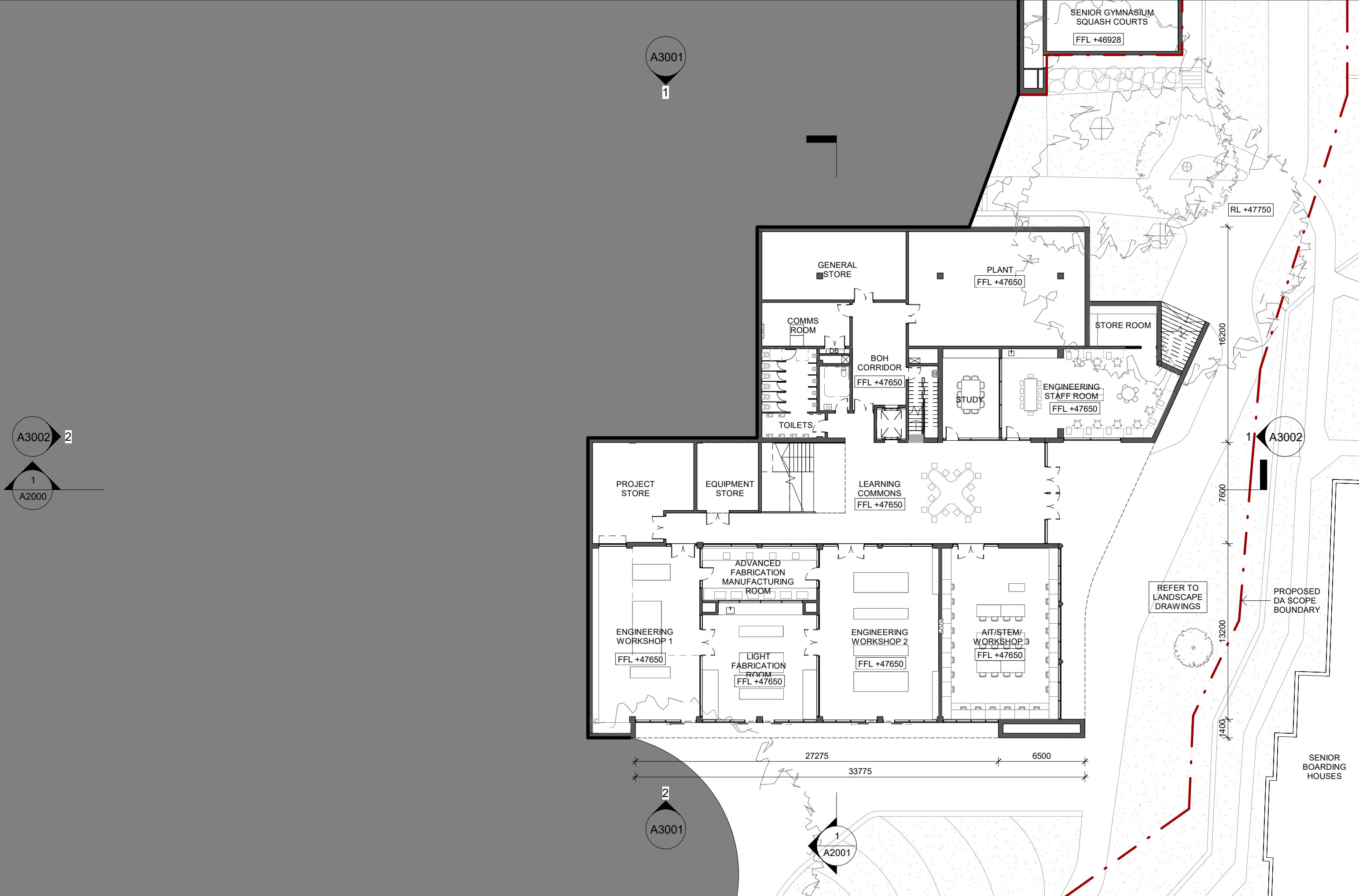


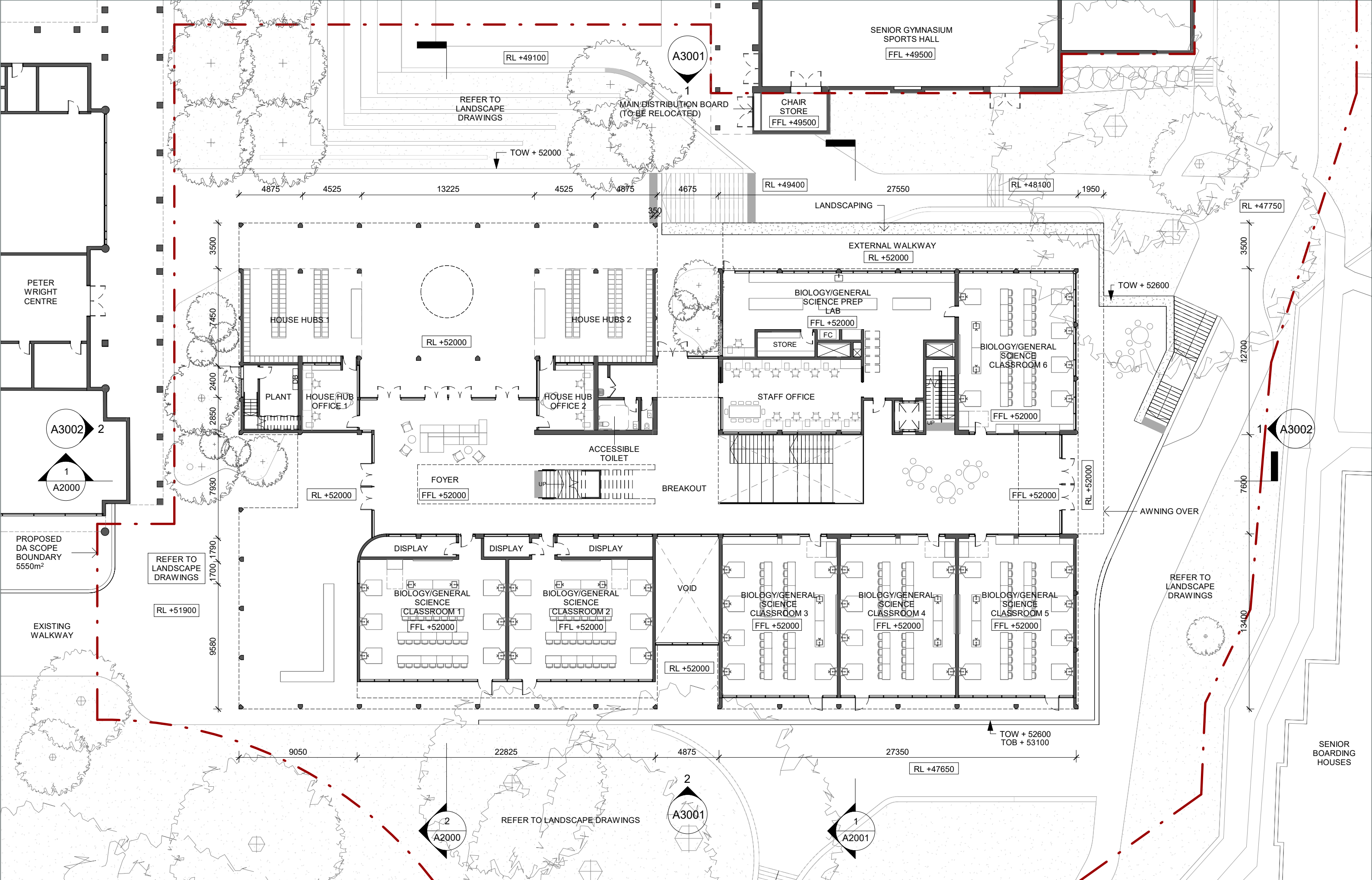
Scale at A1/A3
1 : 500

Drawing No.
A0052

Date
23.04.24

Revision
A





KHA

PRINT IN COLOUR

Rev. Date	Amendment
A 23.04.24	DA Submission

Kerry Hill Architects Pty Ltd.
30 Mount Street, Fremantle
Western Australia
T +61 (8) 9336 4545
© Kerry Hill Architects Pty Ltd.

Disclaimer
1. Do not scale drawings. Written dimensions govern.
2. All dimensions are in millimeters unless otherwise noted.
3. All dimensions are to be verified on site prior to proceeding with the work.
4. Kerry Hill Architects are to be notified in writing of any discrepancies.
5. This drawing must be read in conjunction with all relevant contracts, reports specification and drawings.
6. This document has been prepared by Kerry Hill Architects Pty Ltd (KHA) for the purpose of conveying design intent. This document does not represent a complete design and is for the purpose of ongoing coordination between the relevant specialist consultants. KHA has made every effort to maintain the accuracy of the documents. It does not accept liability for loss or damage incurred as a result of the use, or reliance on the accuracy, of this information. All recipients of this document should make their own enquiries to verify the content themselves and with all other relevant disciplines. This document does not form part of any construction contract and should not be relied upon for the purpose of construction.

Project
HALE SCIENCE BUILDING



Project No.
634

Drawing Status
DA Submission

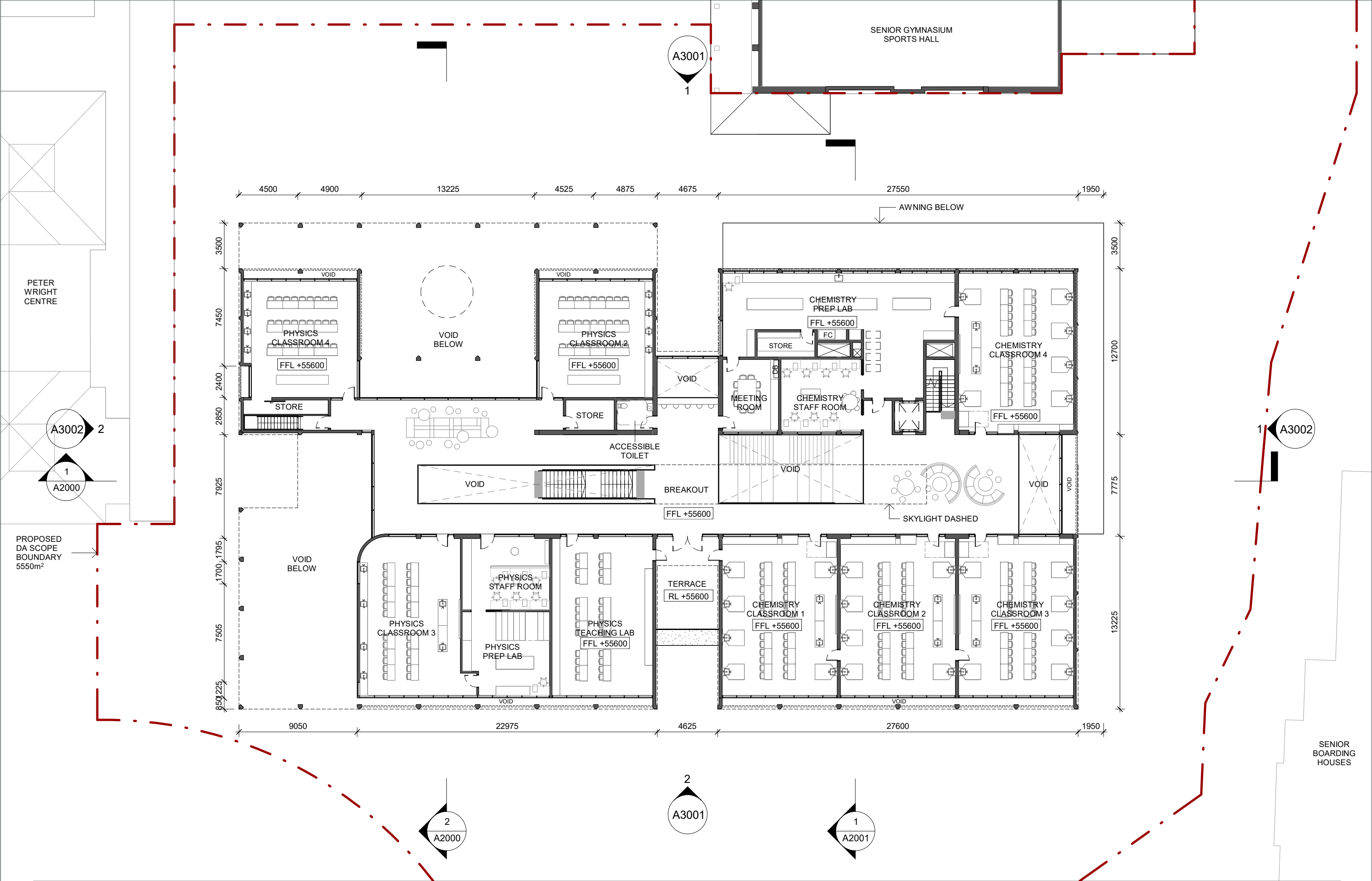
Drawing
Ground Floor Plan



Scale at A1/A3
1 : 250

Drawing No.
A1010

Date
23.04.24
Revision
A



KHA

PRINT IN COLOUR

Rev. Date	Amendment
A 23.04.24	DA Submission

Kerry Hill Architects Pty Ltd.
30 Mount Street, Fremantle
Western Australia
T +61 (8) 9336 4545
© Kerry Hill Architects Pty Ltd.

Disclaimer
1. Do not scale drawings. Written dimensions govern.
2. All Dimensions are in millimeters unless otherwise noted.
3. All Dimensions are to be verified on site prior to proceeding with the work.
4. Kerry Hill Architects are to be notified in writing of any discrepancies.
5. This drawing must be read in conjunction with all relevant contracts, reports specification and drawings.
6. This document has been prepared by Kerry Hill Architects Pty Ltd (KHA) for the purpose of conveying design intent. This document does not represent a complete design and is for the purpose of ongoing coordination between the relevant specialist consultants. KHA has made every effort to maintain the accuracy of the documents. It does not accept liability for loss or damage incurred as a result of the use, or reliance on the accuracy, of this information. All recipients of this document should make their own enquiries to verify the content themselves and with all other relevant disciplines. This document does not form part of any construction contract and should not be relied upon for the purpose of construction.

Project
HALE SCIENCE BUILDING

Client
 HALE SCHOOL

Project No.
634

Drawing Status
DA Submission

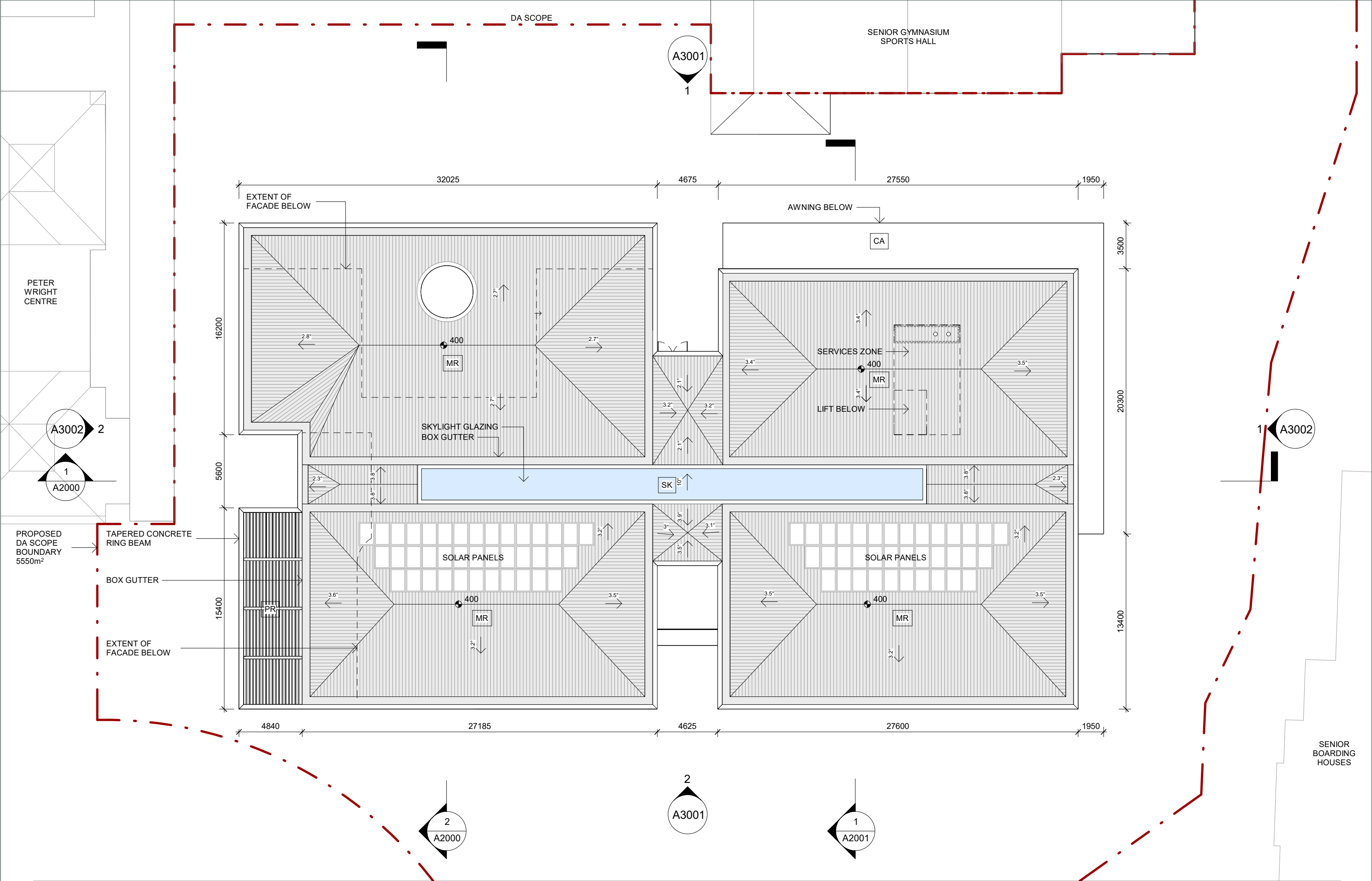
Drawing
First Floor Plan



Scale at A1/A3
1 : 250

Drawing No.
A1011

Date
23.04.24
Revision
A



KHA

PRINT IN COLOUR

Rev. Date	Amendment
A 23.04.24	DA Submission

Kerry Hill Architects Pty Ltd.
30 Mount Street, Fremantle
Western Australia
T +61 (8) 9336 4545
© Kerry Hill Architects Pty Ltd.

Disclaimer
1. Do not scale drawings. Written dimensions govern.
2. All Dimensions are in millimeters unless otherwise noted.
3. All Dimensions are to be verified on site prior to proceeding with the work.
4. Kerry Hill Architects are to be notified in writing of any discrepancies.
5. This drawing must be read in conjunction with all relevant contracts, reports specification and drawings.
6. This document has been prepared by Kerry Hill Architects Pty Ltd (KHA) for the purpose of conveying design intent. This document does not represent a complete design and is for the purpose of ongoing coordination between the relevant specialist consultants. KHA has made every effort to maintain the accuracy of the documents. It does not accept liability for loss or damage incurred as a result of the use, or reliance on the accuracy, of this information. All recipients of this document should make their own enquiries to verify the content themselves and with all other relevant disciplines. This document does not form part of any construction contract and should not be relied upon for the purpose of construction.

Project
HALE SCIENCE BUILDING

Client
 HALE SCHOOL

Project No.
634

Drawing Status
DA Submission

Drawing
Roof Plan

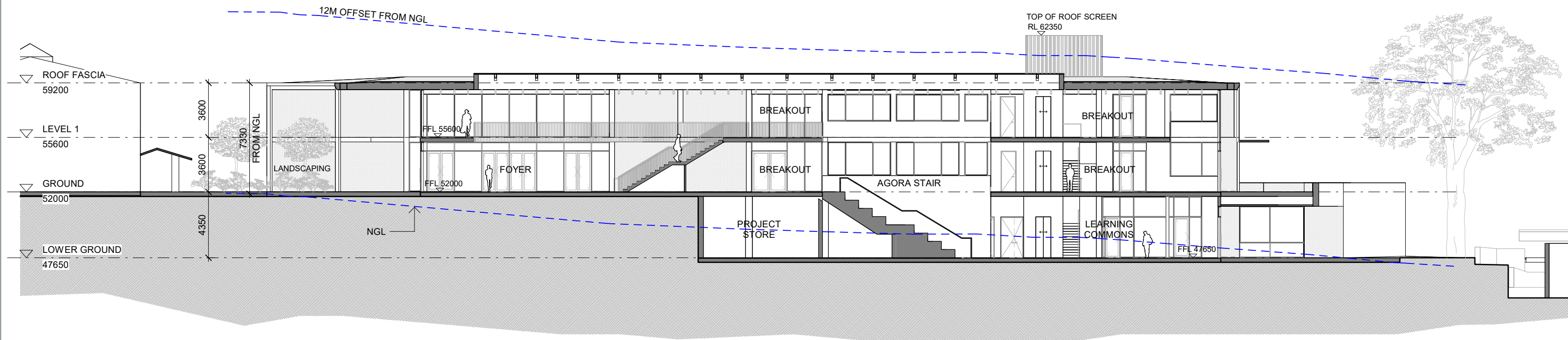


Scale at A1/A3
1 : 250

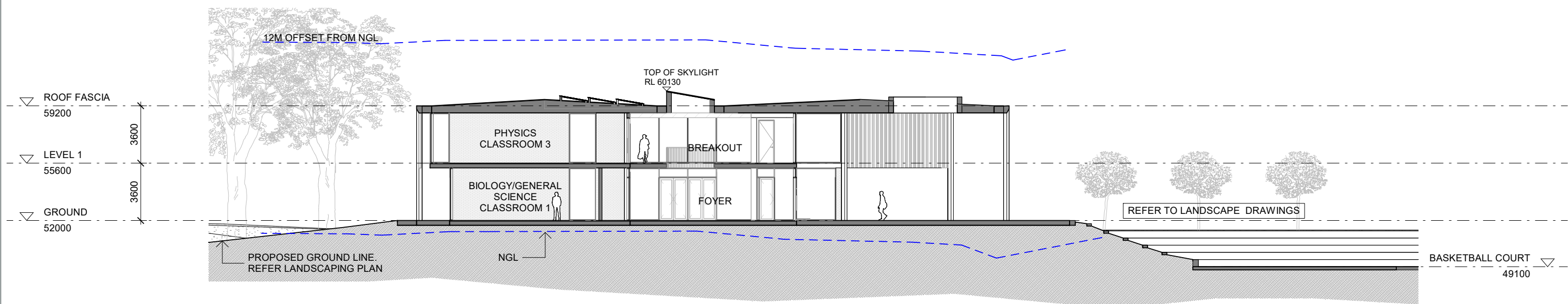
Drawing No.
A1013

Date
23.04.24

Revision
A



1 SECTION A
A2000 1 : 250



2 SECTION B
A2000 1 : 250

-- NATURAL GROUND LINE

KHA

PRINT IN COLOUR

Rev. Date
A 23.04.24

Amendment
DA Submission

Kerry Hill Architects Pty Ltd.
30 Mouat Street, Fremantle
Western Australia
T +61 (8) 9336 4545
© Kerry Hill Architects Pty Ltd.

Disclaimer
1. Do not scale drawings. Written dimensions govern.
2. All Dimensions are in millimeters unless otherwise noted.
3. All Dimensions are to be verified on site prior to proceeding with the work.
4. Kerry Hill Architects are to be notified in writing of any discrepancies.
5. This drawing must be read in conjunction with all relevant contracts, reports specification and drawings.
6. This document has been prepared by Kerry Hill Architects Pty Ltd (KHA) for the purpose of conveying design intent. This document does not represent a complete design and is for the purpose of ongoing coordination between the relevant specialist consultants. KHA has made every effort to maintain the accuracy of the documents. It does not accept liability for loss or damage incurred as a result of the use, or reliance on the accuracy, of this information. All recipients of this document should make their own enquiries to verify the content themselves and with all other relevant disciplines. This document does not form part of any construction contract and should not be relied upon for the purpose of construction.

Project
HALE SCIENCE BUILDING

Client
 HALE SCHOOL

Project No.
634

Drawing Status
DA Submission

Drawing
GA Sections

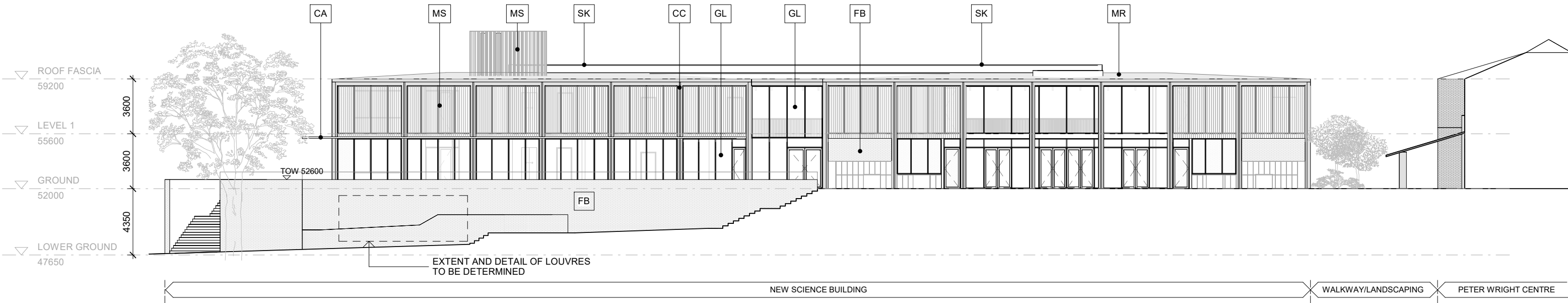


Scale at A1/A3
1 : 250

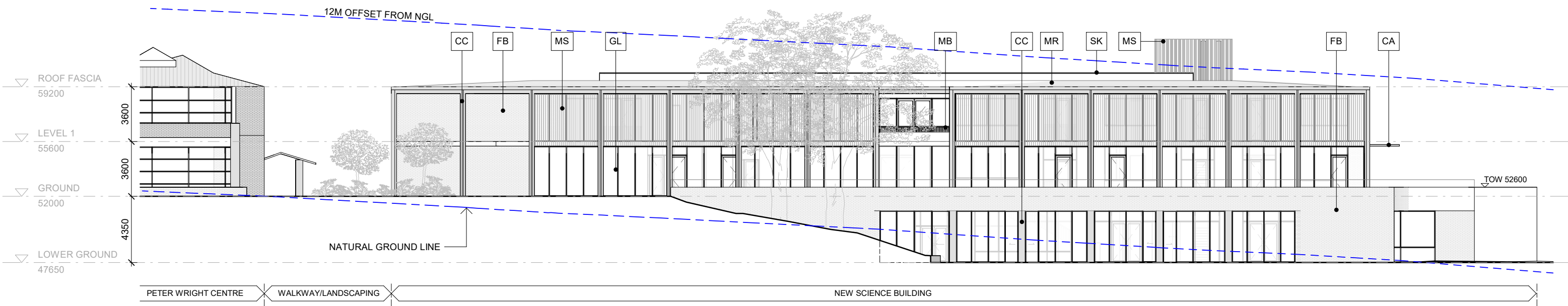
Drawing No.
A2000

Date
23.04.24

Revision
A

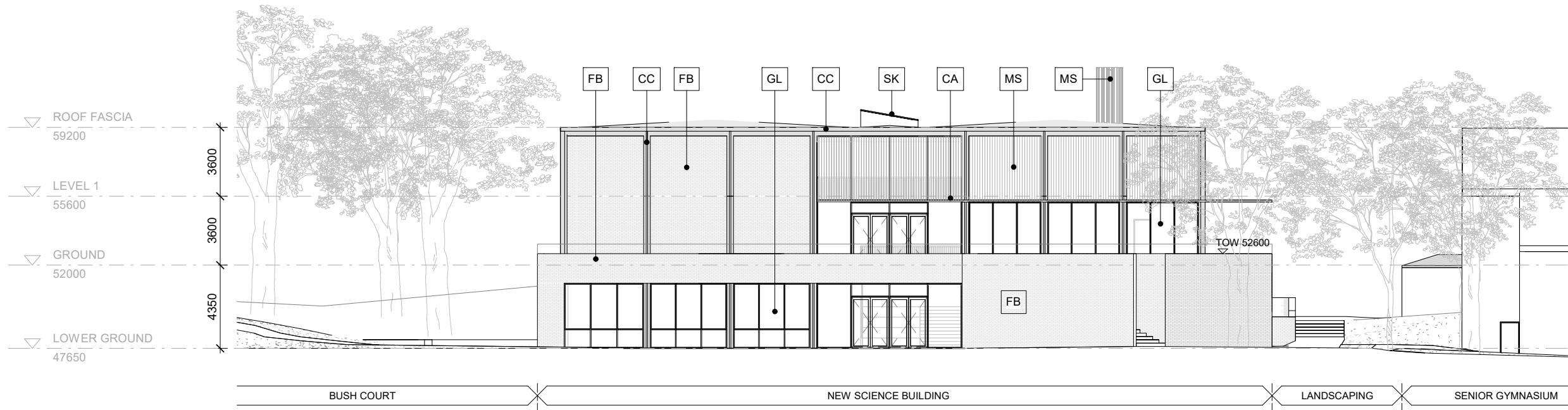


1 NORTHERN ELEVATION
A3001 1 : 250

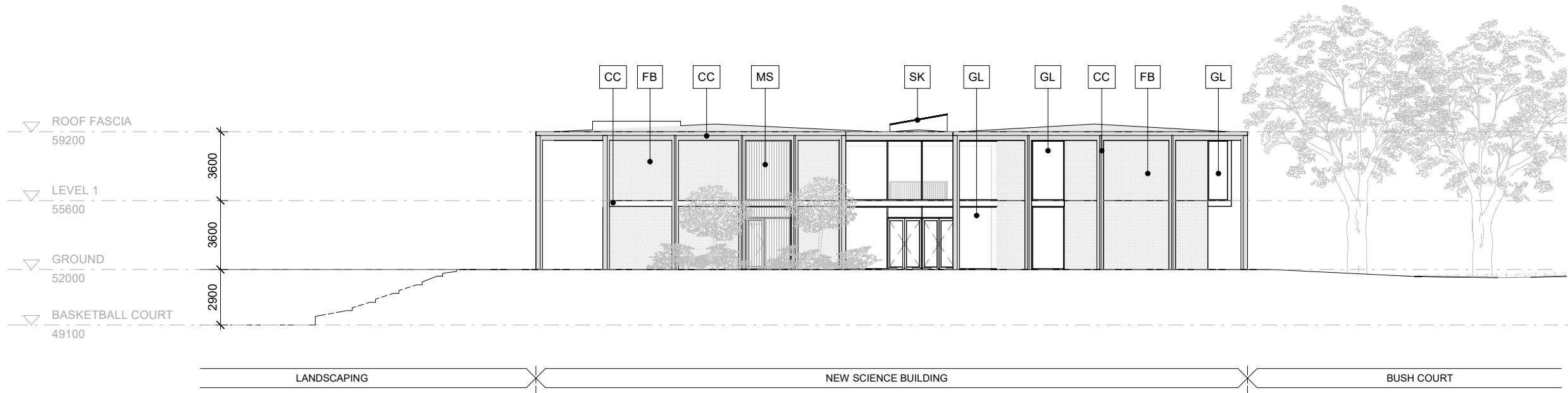


2 SOUTHERN ELEVATION
A3001 1 : 250

- CA CANOPY
- CC COLOURED CONCRETE
- FB FACE BRICKWORK
- GL ALUMINIUM FRAMED GLAZING
- MB METAL BALUSTRADE
- MR METAL SHEET ROOFING
- MS METAL SCREEN
- PR PERGOLA
- SK GLAZED SKYLIGHT



1 EASTERN ELEVATION
A3002 1 : 250



2 WESTERN ELEVATION
A3002 1 : 250

- CA CANOPY
- CC COLOURED CONCRETE
- FB FACE BRICKWORK
- GL ALUMINIUM FRAMED GLAZING
- MB METAL BALUSTRADE
- MR METAL SHEET ROOFING
- MS METAL SCREEN
- PR PERGOLA
- SK GLAZED SKYLIGHT

KHA

PRINT IN COLOUR

Rev. Date	Amendment
A 23.04.24	DA Submission

Kerry Hill Architects Pty Ltd.
30 Mouat Street, Fremantle
Western Australia
T +61 (8) 9336 4545
© Kerry Hill Architects Pty Ltd.

Disclaimer
1. Do not scale drawings. Written dimensions govern.
2. All Dimensions are in millimeters unless otherwise noted.
3. All Dimensions are to be verified on site prior to proceeding with the work.
4. Kerry Hill Architects are to be notified in writing of any discrepancies.
5. This drawing must be read in conjunction with all relevant contracts, reports specification and drawings.
6. This document has been prepared by Kerry Hill Architects Pty Ltd (KHA) for the purpose of conveying design intent. This document does not represent a complete design and is for the purpose of ongoing coordination between the relevant specialist consultants. KHA has made every effort to maintain the accuracy of the documents. It does not accept liability for loss or damage incurred as a result of the use, or reliance on the accuracy, of this information. All recipients of this document should make their own enquiries to verify the content themselves and with all other relevant disciplines. This document does not form part of any construction contract and should not be relied upon for the purpose of construction.

Project
HALE SCIENCE BUILDING

Client
 HALE SCHOOL

Project No.
634

Drawing Status
DA Submission

Drawing
Elevations

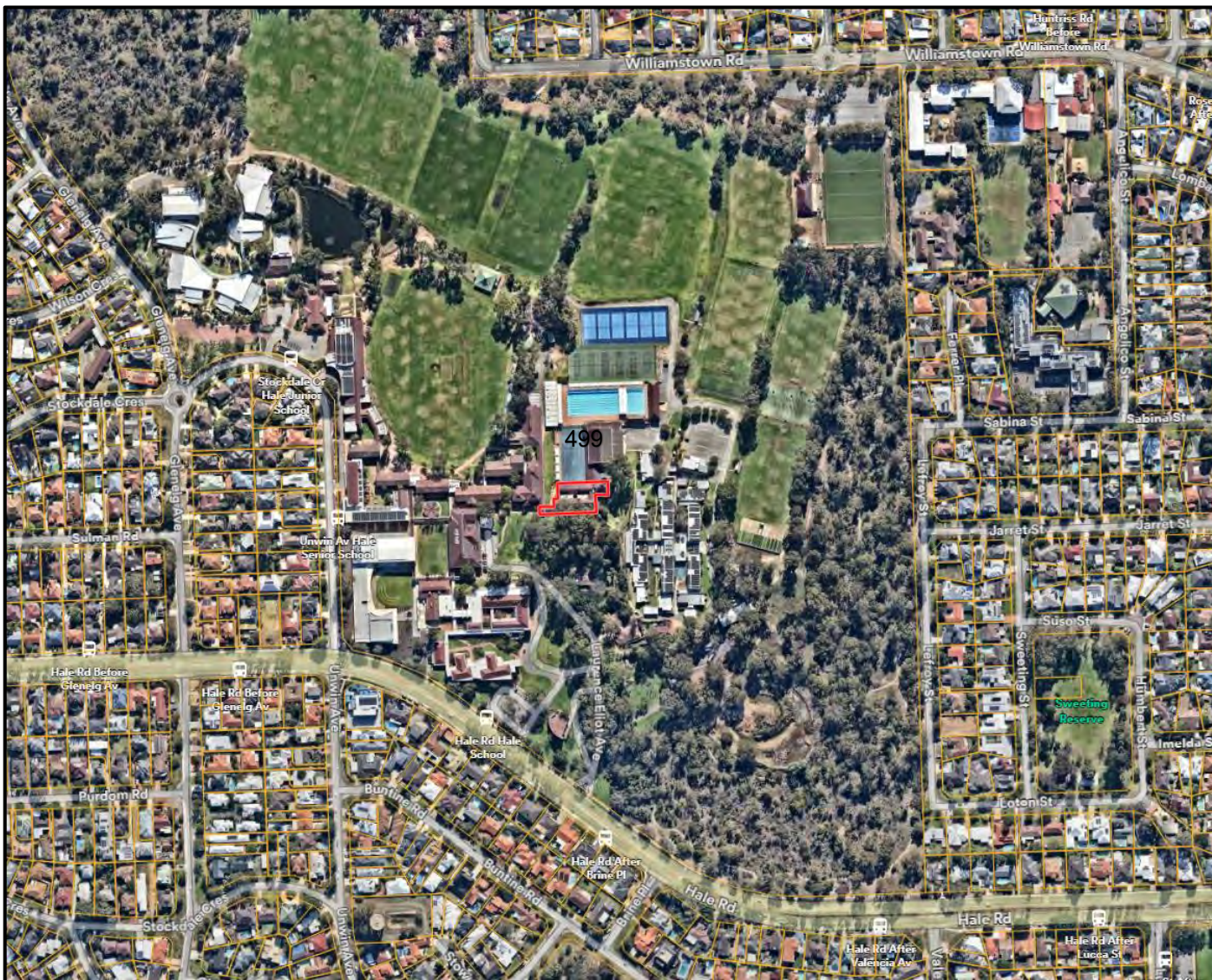
Scale at A1/A3
1 : 250

Drawing No.
A3002

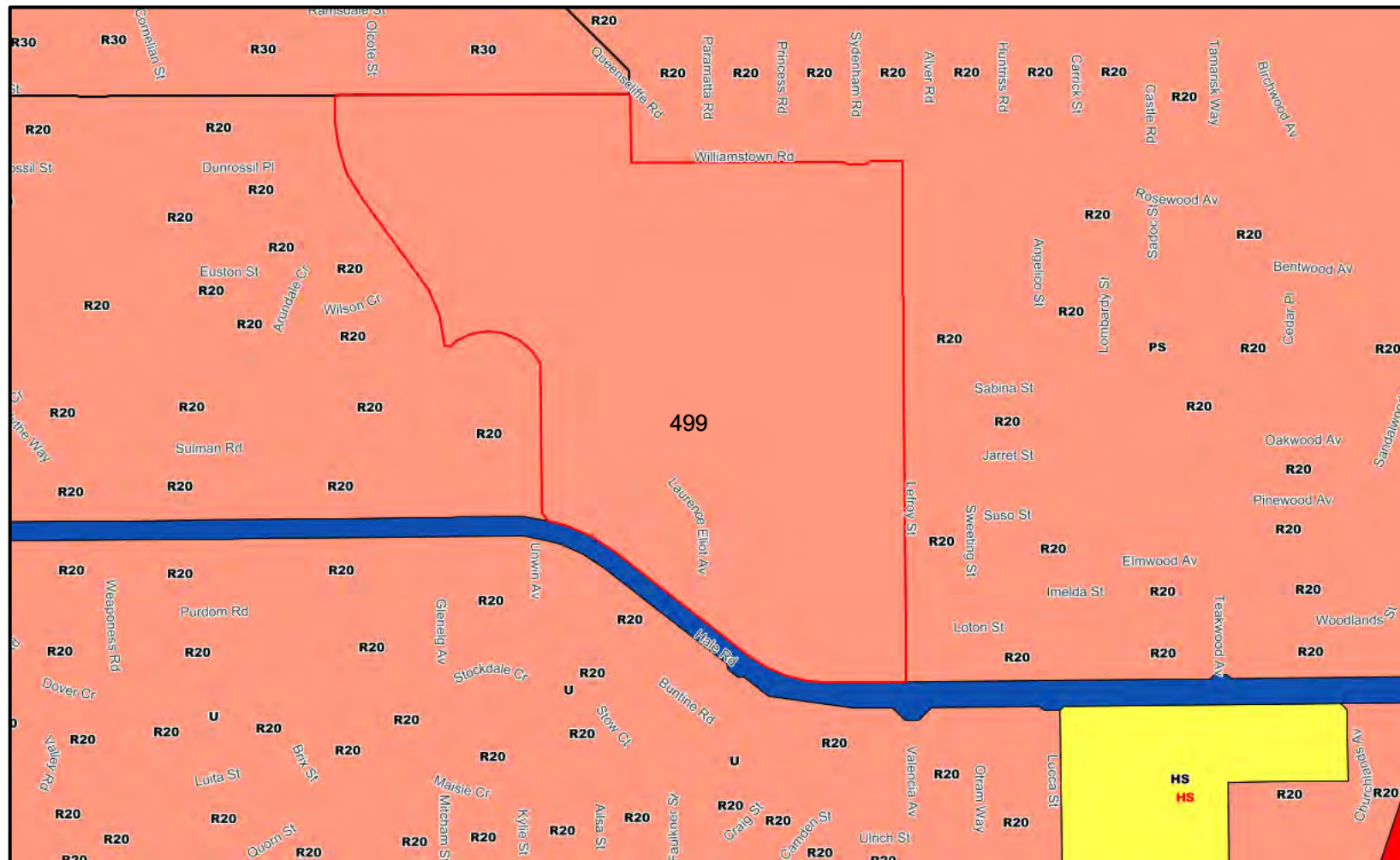
Date
23.04.24

Revision
A

Attachment 2 – Aerial Location Plan



Attachment 3 – Metropolitan Region Scheme Zoning Map



Attachment 4 – City of Stirling Local Planning Scheme No.3 Zoning Map



Attachment 5 - City of Stirling Planning Assessment

State Planning Policy 7.0 – Design of the Built Environment

State Planning Policy 7.0 – Design of the Built Environment (SPP7.0) applies to all development applications. An assessment of the proposed development against SPP7.0 is provided below.

State Planning Policy 7.0 – Design of the Built Environment	
Design Principle	Officer Comment
<u>Context and character</u> Good design responds to and enhances the distinctive characteristics of a local area, contributing to a sense of place.	The proposed additions respond appropriately to the context and characteristics of the locality. The proposed built form is consistent with the existing Educational Establishment buildings on site. The proposal references the existing colour and material palette of the existing Educational Establishment buildings on the site. The development maintains the characteristic tree lined streetscapes and further contributes to this through the provision of an additional 21 Advanced Trees. The proposed additions do not impact the existing sense of place for the surrounding residential development by virtue of the separation distances between the development and the adjacent street.
<u>Landscape quality</u> Good design recognises that together landscape and buildings operate as an integrated and sustainable system, within a broader ecological context.	The proposed development provides high quality landscaping. The proposed development integrates landscaping into the design of the overall development, with the retention of significant vegetation where possible, the planting of suitable planting species and an irrigation strategy. A detailed landscaping Plan has been required as a condition of approval. The use of water sensitive reticulation and irrigation systems improve the sustainability of the system and can be adequately implemented by way of condition.
<u>Built form and scale</u> Good design ensures that the massing and height of development is appropriate to its setting and successfully negotiates between existing built form and the intended future character of the local area.	The built form and scale of the proposed development is appropriate. The building heights are consistent with the existing buildings on the development site and relevant local planning framework.

Attachment 5 - City of Stirling Planning Assessment

State Planning Policy 7.0 – Design of the Built Environment Design Principle	Officer Comment
	significant separation distances are provided between the proposed buildings and the surrounding residential development, assisting in negotiating the differences in building typology within the locality.
<u>Functionality and build quality</u> Good design meets the needs of users efficiently and effectively, balancing functional requirements to perform well and deliver optimum benefit over the full life cycle.	The proposed development is of quality and is high functional for the intended use of the building. The proposed building incorporates a range of durable materials. The rooms sizes are adequate for the intended uses, with the grouping of specialist facilities which are easily accessible within the development. The development includes a range of uses and functions necessary for, and beneficial, to an Educational Establishment.
<u>Sustainability</u> Good design optimises the sustainability of the built environment, delivering positive environmental, social and economic outcomes.	The proposed development optimises sustainability within the proposed built form. The development is proposed to be fitted with energy efficient lighting, electrical and mechanical systems as well as water efficient fixtures. The development has been designed to include passive design principles to provide shading and lighting to desired areas through the use of appropriately located eaves and skylights/light scoops. The location of windows and common spaces have been positioned to utilise cross-flow areas to allow spaces to be passively cooled.
<u>Amenity</u> Good design provides successful places that offer a variety of uses and activities while optimising internal and external amenity for occupants, visitors and neighbours, providing environments that are comfortable, productive and healthy.	The proposed development provides a high level of amenity for the uses of the Educational Establishment. The development is provided with high quality landscaping which is integrated into the overall design of the proposal and assists in providing a comfortable environment for occupants and visitors. The proposed additions include a series of specialist learning hubs and technology areas, that provides a variety of uses and activities for the Educational Establishment.

Attachment 5 - City of Stirling Planning Assessment

State Planning Policy 7.0 – Design of the Built Environment	
Design Principle	Officer Comment
<u>Legibility</u> Good design results in buildings and places that are legible, with clear connections and easily identifiable elements to help people find their way around.	The proposed development provides a highly legible environment with easily navigable wayfinding throughout the site. • A pedestrian footpath is provided from surrounding Science and Technology building to the pedestrian network at the campus, which provides a clear and easily identifiable path of movement for pedestrians. • There is no change to the existing vehicle arrangement and car parking spaces as part of this application; and
<u>Safety</u> Good design optimises safety and security, minimising the risk of personal harm and supporting safe behaviour and use	The proposed development optimises safety aspects within the development through; • Independent pedestrian and vehicle movement spaces within the car parking areas, which is not proposed to be altered as part of this proposal. • The building is located centrally to the site and clear of the existing car parking locations, and incorporates a number of pedestrian links to allow for safe movement through the overall site.
<u>Community</u> Good design responds to local community needs as well as the wider social context, providing environments that support a diverse range of people and facilitate social interaction.	The proposed additions is for the upgrade of the Educational Establishment which is significant to the overall community.
<u>Aesthetics</u> Good design is the product of a skilled, judicious design process that results in attractive and inviting buildings and places that engage the senses.	The proposed design is attractive and provides a sense of engagement for the occupants of the building as: • The colour palette ties the existing Educational Establishment and proposed additions together by referencing the existing vernacular and reference to themes significant to the history of the Educational Establishment; • The colour and materials palette are consistent with the existing building typology; and • The use of the selected colours references the historical significance of Hale School

Planning and Development (Local Planning Schemes) Regulations 2015

The proposed development has been assessed against Clause 67- Consideration of Application of the *Planning and Development (Local Planning Schemes) Regulations 2015*. The matters have been addressed in the table below.

Attachment 5 - City of Stirling Planning Assessment

Clause 67 – Consideration of application by local government Provision	Officer Comment
(a) the aims and provisions of this Scheme and any other local planning scheme operating within the Scheme area	The proposed development satisfies the aims of LPS3 as the proposed development continues to provide a community benefit through the expansion of the Educational Establishment and assists in the facilitation of economic growth and employment options associated with the proposed development.
(b) the requirements of orderly and proper planning including any proposed local planning scheme or amendment to this Scheme that has been advertised under the Planning and Development (Local Planning Schemes) Regulations 2015 or any other proposed planning instrument that the local government is seriously considering adopting or approving;	The development is consistent with the principles of orderly and proper planning, subject to conditions. The built form of the proposed development is consistent with the requirements of the local planning framework. The development proposes to retain a number of significant trees on-site, and where trees are proposed to be removed are proposed to be replaced with an additional 20 Advanced Trees.
(c) any approved State planning policy;	The proposed development satisfies the requirements of relevant state planning policies including SPP3.7 and SPP7.0.
(g) any local planning policy for the Scheme area;	The proposed development is consistent with the relevant local planning policies applicable to the development. The proposal satisfies the relevant objectives of the relevant policies.
(m) the compatibility of the development with its setting, including — (i) the compatibility of the development with the desired future character of its setting; and (ii) the relationship of the development to development on adjoining land or on other land in the locality including, but not limited to, the likely effect of the height, bulk, scale, orientation and appearance of the development;	The proposed development is considered to be compatible within its setting. The proposed buildings are provided with significant separation distances to the surrounding residential development. The buildings are consistent with the heights of existing buildings on the overall development site and within the height requirements of the applicable local planning framework. The proposed buildings do not exceed three storeys in height, and while are different building typologies to the surrounding residential development, are not considered to be of a size or scale that is incompatible with the nearby development.

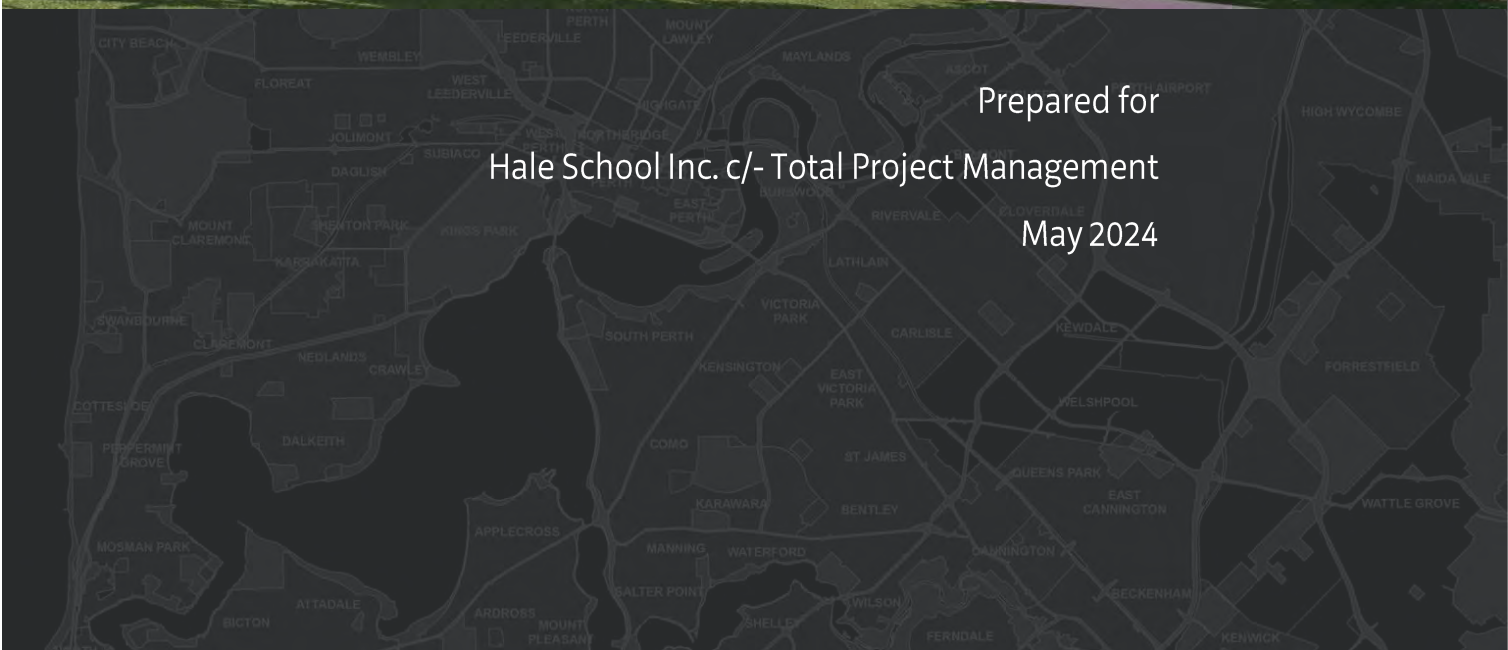
Attachment 5 - City of Stirling Planning Assessment

Clause 67 – Consideration of application by local government	
Provision	Officer Comment
(n) the amenity of the locality including the following — (i) environmental impacts of the development; (ii) the character of the locality; (iii) social impacts of the development;	The existing Educational Establishment and surrounding residential development forms the basis of the existing characteristics of the locality. The proposed development is not considered to have an adverse impact on the amenity of the locality with respect to the character, social and environmental implications.
(p) whether adequate provision has been made for the landscaping of the land to which the application relates and whether any trees or other vegetation on the land should be preserved;	The proposed development will positively contribute to the landscaping of the development site. The proposed development includes an additional planting of 21 Advanced Trees associated with the development.
(s) the adequacy of — (i) the proposed means of access to and egress from the site; and (ii) arrangements for the loading, unloading, manoeuvring and parking of vehicles;	The proposal does not include additional staff or students and is an upgrade of the existing facilities only. There is a substantial surplus of car parking on-site.
(t) the amount of traffic likely to be generated by the development, particularly in relation to the capacity of the road system in the locality and the probable effect on traffic flow and safety;	The proposal does not include additional staff or students and is an upgrade of the existing facility. The car parking assessment details a substantial surplus on site.
(y) any submissions received on the application;	The City received three submissions. Further details are provided in the Public Consultation section of the RAR.
(za) the comments or submissions received from any authority consulted under clause 66;	DPLH have provided comments relating to the abutting Other Regional Road Reserve. DPLH have provided comments relating to the abutting state heritage site (Hale School Memorial Hall). Further details are provided earlier in the RAR.

Development Application Report

Proposed Science Building

Lot 50 (160) Hale Road
Wembley Downs, WA 6019



Prepared for
Hale School Inc. c/- Total Project Management
May 2024

Copyright Statement 2024

© Planning Solutions (Aust) Pty Ltd

All rights reserved. Other than for the purposes of and subject to the conditions prescribed under the *Copyright Act 1968* (Cth), no part of this report may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic or otherwise, without the prior written permission of Planning Solutions (Aust) Pty Ltd.

No express or implied warranties are made by Planning Solutions (Aust) Pty Ltd regarding the information and analysis contained in this report. In particular, but without limiting the preceding exclusion, Planning Solutions (Aust) Pty Ltd will not verify, and will not assume responsibility for, the accuracy and completeness of information provided to us.

This report has been prepared with particular attention to our Client's instructions and the relevant features of the subject site. Planning Solutions (Aust) Pty Ltd accepts no liability whatsoever for:

- a third party's use of, or reliance upon, this report;
- use of, or reliance upon, this report in relation to any land other than the subject site; or
- the Client's implementation, or application, of the strategies recommended in this report.

Direct all enquiries to:

Planning Solutions

Level 1, 251 St Georges Terrace
Perth WA 6000

All correspondence to:

Planning Solutions
GPO Box 2709
CLOISTERS SQUARE PO WA 6850

Phone: 08 9227 7970

Fax: 08 9227 7971

Email: admin@planningsolutions.com.au

Web: planningsolutions.com.au

Project Details

Job number	8740	
Client	Hale School Inc. c/- Total Project Management	
Prepared by	Planning Solutions	
Consultant Team	Town Planner Architect Civil Engineer Landscape Architect ESD Consultant Acoustic Consultant Arborist Heritage Architect Bushfire Consultant	Planning Solutions Kerry Hill Architect (KHA) Wallbridge Gilbert Aztec (WGA) Aspect Studios (Aspect) Full Circle Design Services (FCDS) Gabriels Hearne Farrell (GHF) Civica ArborSafe (Civica) Griffiths Architects Bushfire Prone Planning

Document Control

Revision number	File name	Document date	Prepared by	Checked by
Rev 0	240506 8740 Hale Science Building DA Report	6 May 2024	LJ/AG	TE

Contents

1	PRELIMINARY	3
1.1	Background.....	3
1.2	Pre-lodgement Consultation.....	3
1.3	Previous Approvals.....	3
1.3.1	2022 approval: refurbishments to maintenance building and demountable office and car parking upgrade.....	3
1.3.2	Memorial Hall Precinct.....	4
1.4	Architectural Design Competition.....	4
1.5	Design Review Panel Presentation.....	5
2	SITE DETAILS	11
2.1	Land description	11
2.2	Location.....	11
2.2.1	Regional context.....	11
2.2.2	Local context, land use and topography.....	11
2.2.3	Site photos	13
2.2.4	Land use and topography.....	14
3	PROPOSED DEVELOPMENT.....	14
3.1	Development Summary	14
3.2	Built Form	15
3.3	Transport.....	17
3.4	Landscaping.....	17
3.5	Sustainability.....	18
3.6	Civil Design and Stormwater Management.....	18
4	STATUTORY PLANNING FRAMEWORK.....	19
4.1	Metropolitan Region Scheme	19
4.2	Local Planning Scheme.....	19
4.2.1	Zoning.....	19
4.2.2	Land use permissibility.....	19
4.2.3	Development standards and requirements.....	19
4.2.4	Heritage.....	20
4.2.5	Draft Local Planning Scheme No.4.....	21
4.3	Local Planning Policies.....	21
4.3.1	Local Planning Policy 4.5 – Private Institution Design Guidelines.....	21
4.3.2	Local Planning Policy No. 6.2 – Bicycle Parking.....	25
4.3.3	Local Planning Policy No. 6.6 – Landscaping.....	25
4.3.4	Local Planning Policy No. 6.11 – Trees and Development.....	26
4.3.5	Local Planning Policy No. 6.7 – Parking and Access.....	27
4.3.6	Local Planning Policy 6.12 – Public Art on Private Land.....	28
4.4	State Planning Policies.....	30
4.4.1	State Planning Policy 3.7 – Planning in Bushfire Prone Areas.....	30
4.4.2	State Planning Policy 7.0 – Design of the Built Environment.....	30
5	CONCLUSION	33

Figures

- Figure 1: Aerial photograph of the site
- Figure 2: Northern view of proposed development
- Figure 3: Southern view of proposed development (screened by vegetation overlayed)
- Figure 4: View from bush court and school arrival
- Figure 5: View of proposed development from Hale School's Administration Building
- Figure 6: Proposed science inspired public art examples to be incorporated into the building design

Tables

- Table 1: Design Review Panel comments and proponent response
- Table 2: Lot details
- Table 3: Assessment against scheme development objectives
- Table 4: Objectives of Local Planning Policy 4.5
- Table 5: Development standards of Local Planning Policy 4.5
- Table 6: Landscaping requirements of Local Planning Policy 6.6
- Table 7: Assessment against requirements of Local Planning Policy 6.11
- Table 8: SPP7.0 Design Principles Statement

Appendices

- Appendix 1: Certificates of Title, Diagram and Deposited Plan
- Appendix 2: Architectural Design Package and Feature Survey
- Appendix 3: Landscaping Plan Package and Arboricultural Impact Assessment
- Appendix 4: Concept Drainage Plans
- Appendix 5: ESD Strategy
- Appendix 6: Acoustic Assessment
- Appendix 7: Heritage Technical Advice Note, DPLH Advice and Visual Impact Study
- Appendix 8: Bushfire Technical Advice Note

1 PRELIMINARY

1.1 Background

Hale School is a world-renowned Anglican day and boarding school in Perth Western Australia, offering comprehensive and tailored education experiences to boys from Pre-Primary to Year 12. Hale's students come from a wide and varied background across the State, country and globe, bringing their unique personalities, perspectives and experiences into a culturally enriched community.

Hale School was founded by Bishop Mathew Blagden Hale in 1858 and is the oldest private boys' school in Western Australia. The school was originally situated at the Cloisters on St Georges Terrace in Perth, relocated to the Pensioner Guard Barracks at the top of St George's Terrace around 1880, and then to new Havelock Street premises in West Perth in 1914. In 1961 the school moved to its current premises in Wembley Downs.

The campus now consists of a junior school for Pre-Primary to Year 6, a Middle School for Years 7 & 8 and a Senior School for Year 9 to 12. The school also consists of sporting grounds and boarding facilities for regional and international students. In 2008, Hale School celebrated its 150th anniversary.

1.2 Pre-lodgement Consultation

The project team including Kerry Hill Architects, Planning Solutions and TPM met with senior officers from the City of Stirling (City) on 12 September 2023 to discuss Hale School's Campus Plan and introduce the Science Building proposal. The project team later met with the City's officers at the Hale School site on 5 February 2024. The meeting included a walking tour of the recently completed Memorial Hall and Art Precinct project followed by a pre-lodgement discussion of the Science Building development proposal. The development application requirements including technical reporting, approval pathway, design review process, and advertising were discussed.

1.3 Previous Approvals

1.3.1 2022 approval: refurbishments to maintenance building and demountable office and car parking upgrade

Another application for minor works to Hale School was approved by City. The approval comprised the refurbishment of the existing maintenance building and demountable office on the subject site, enhancing the amenity and functionality of its built form. This development approval has resulted in the provision of a new bus parking area with six new 45-degree bus parking bays.

1.3.2 Memorial Hall Precinct

This development approval resulted in the redevelopment of the existing Memorial Hall. Works included the removal of the existing staff car park and associated structures near the south-west corner of the site (Hale Rd corner Unwin Ave), additions to the existing Memorial Hall, and the construction of a new Performing Arts Precinct.

This development has been carefully integrated with the existing school layout. The buildings have been designed and constructed to a contemporary architectural standard, comprising the following design features:

- A distinct flat roof form and heights for visual interest.
- Mixture of textures and materials, including brick in Chillingham White, coloured concrete, anodized aluminium, autumn blend brick paving and shale grey metal sheet roofing.
- High-quality landscaping along the Unwin Avenue and Hale Road frontages as well as within the site.
- Openings and entrances designed to encourage passive surveillance of the adjoining streets and provide ample solar access.
- A landmark feature statement on the corner of Hale Road and Unwin Avenue, created by the Stow theatre building to provide a missing sense of arrival to the campus.

Similarly to the current proposal, the City determined that a Detailed Area Plan (hereafter referred to as a Local Development Plan (LDP)) would not be required to be prepared prior to lodging a development application for the proposed development.

1.4 Architectural Design Competition

Hale, with the assistance of TPM and KHA, developed a Project Definition Plan (PDP) for the proposed Science Building in the first half of 2023. Following the completion of the PDP, Hale elected to progress a Design Competition exercise to engage the Architect to the project.

As part of the initial concept design phase of the proposed development, and with a view to seeking meaningful input from reputable architectural practices, Hale elected to undertake an architectural design competition for the new Science Building. The purpose of the design competition was to select an appropriate design concept for the proposed development and furthermore to appoint a Lead Design Consultant/Architect to the project. The evaluation process included notable input from Craig Smith, the City of Perth Architect, ensuring a comprehensive assessment. Participants included:

- Kerry Hill Architects
- Cox Architecture
- Architectus
- Parry & Rosenthal Architects

Following the evaluation process, Kerry Hill Architects were chosen as the preferred Architect/Lead Design Consultant for the project.

1.5 Design Review Panel Presentation

The proposed Science Building development was presented to the City of Stirling Design Review Panel (DRP), at their meeting on 14 March 2024. The DRP's comments and recommendations, and the design team's response is detailed in Table 1.

Table 1 – Design Review Panel comments and proponent response

DRP Recommendations	Proponent Response
Context and Character	
Strengths - The Panel was pleased with Hale School's commitment to conducting a design competition, the benefits of which are clear in the presented scheme. - The Panel commented that the building is elegant, contains clean lines, and is generally a high-quality design outcome. Areas for Improvement - The Panel expressed concern around missing information in relation to the exploration and integration of context and character. Recommendations - The Panel would like to see more analysis and information including; - additional information about the architectural qualities of the existing campus - vernacular and how the project is responding to the existing character. - floor plans and entrances of adjoining buildings and the campus around it. - extended section drawings to the east, west and south. - additional information about adjacent heritage buildings and their impact on the proposal. - how Hale School blue might be used, as a highlight only, and in good balance with the overall intent of the design. - how the project celebrates science, and its key use as a STEM centre. The Panel mentioned it would be beneficial to see Hale Schools beliefs about Noongar culture and the elements relating to the six seasons further demonstrated.	The proposed building is carefully integrated into the campus master plan, respecting the scale and grain of the existing development and the site's valuable natural areas. The Hale campus contains many large, mature trees, spacious ovals, and natural bushland. The campus celebrates a diverse and rich architectural history with significant buildings such as Memorial Hall with its brute concrete finish and the unique brickwork of the Chapel of St Mark. The campus is currently mostly comprised of single and double storey structures which respond to the natural topography of the site. The development draws on architectural elements and materials already utilised on the site to complement the existing context and character. The built form and scale of the site is respected and maintained, which is shown in cross-sections as part of the application package. Heritage elements on campus are respected, with no impact caused by the proposal. The development response to the existing character of the site through the utilisation of a material palette that features cream-coloured brick and white concrete, invoking a strong connection to the existing campus-built form. The inclusion of landscaped areas has been carefully considered to reflect the natural amenity of the site. The landscape plan demonstrates the integration of the built form and natural environment, which continues this amenity. The design of the buildings has utilised soft and warm materials which integrate themselves seamlessly into the natural environment and reduce the dominance of the building. The primary ordering devices of the campus, the courtyard and the colonnade, are cues which will be crucial in positioning and arranging the built form. This provides a continuity of the spatial experience of the campus into the new development. Extended sections have been provided as per the panels request in section 3 of the application package, which demonstrates that the proposed building integrates seamlessly into the urban form of the site.

DRP Recommendations	Proponent Response
	Hale School's Memorial Hall was constructed in 1960-61 and is of historic value as the first Brutalist style building constructed in Australia. It makes a significant contribution to the evolution of Western Australian contemporary architecture, and as such, the potential for Memorial Hall to be added to the State Heritage Register list has been raised. The location of the new Science Building is approximately 140m to the east of Memorial Hall. Views to and from the site are obstructed by existing buildings and significant vegetation. As a result, the Department of Lands and Heritage (DPLH) have advised a Heritage Impact Study is not required as part of this application. Please refer to views located on this page. Section 3.7 of the application package details the material palette of proposal. In this, Hale School Blue is suggested as only to be used for subtle accents to not overpower the natural material palette proposed for the building. STEM principles are integrated through the design and use of the building, with contemporary architecture and communal areas of the Science Building facilitating cross-disciplinary interaction, nurturing an atmosphere of curiosity and collaboration among students and staff. Serving as the school's focal point for scientific exploration and innovation, the development endeavours to ignite passion and excellence in the fields of science, technology and engineering, among future leaders.
Landscape Quality	
Strengths a) Comment was made by the Panel planting of robust and native plants is a good outcome. Areas for improvement b) The Panel believes the landscape plan should be more developed generally and should include levels and provide additional clarity generally. c) It was noted by the Panel the building interface with the landscape are difficult to decipher and requested clarification. Recommendations 1) Justification should be provided to the Panel around the reason why the existing trees can't be retained and what measures are being taken to preserve the trees that are to remain. 2) The Panel would like an explanation around the impacts of removing existing trees and understand what strategy is being implemented to replace this tree canopy loss, on campus. 3) It was recommended photographic imagery of the view through the grove of trees would be beneficial to provide a real image of what this will be like.	The design responds to the scale, form and function of the architecture and existing campus context in order to create a generous and attractive landscape and public realm. The landscape design aims to create a contemporary, functional and aesthetically pleasing landscape that seamlessly blends with the built form. The northern landscape design integrates amphitheatre seating and shade structures to respond to the formal sports court environment. This area provides students with a versatile outdoor space suitable for gatherings, spectating, lectures, and informal learning. The amphitheatre seating encourages collaboration and interaction, fostering a sense of community among the student population. The southern landscape responds to the informal bush court, preserving existing trees and creating gathering and informal learning spaces. This area offers students opportunities to connect with nature and engage in hands-on learning experiences in the lower-level breakout area. The retained trees provide shade and a tranquil atmosphere to promote relaxation, reflection, and creativity. General Arrangement, Grading plans showing levels and sections drawings have been included within the DA package.

DRP Recommendations	Proponent Response
It was mentioned by the Panel there could be an opportunity to look at strategies to soften the interface of the large retaining wall on the eastern side.	Diagrams addressing accessibility and material and furniture strategy information have been included. The landscape includes robust furnishings and seating walls strategically placed to accommodate a range of gathering spaces throughout the campus. The furnishings offer versatility and durability to withstand the rigors of daily use while providing comfort and practicality for students and faculty alike. Complementing these furnishings is a robust palette of West Australian plants reflecting the region's unique flora and enhancing the campus's aesthetic appeal and biodiversity of the landscape while creating a sense of place rooted in the local context. Ongoing Pruning Requirements: Site photos show the Category A and B trees 298 and 300 significantly overhang the existing buildings. These trees pose a significant risk to property and the safety of students necessitating major pruning. Furthermore, the project arborist has observed defects identifying disease pathogens and excessive end weight of branches of the trees in question and further recommends the reduction of end weight of the canopy irrespective of development. Replacement and Mitigation: In cases where tree removal is deemed necessary, efforts have been made to mitigate the environmental impact by new tree planting across the site at a rate of 4 to 1, for a total of 21 trees across the site. Where space provides the Tuarts removed will be replaced maintaining the character of the location and assisting with succession planting for the future. The majority of the proposed trees are located in the northern court introducing canopy cover where there was none prior which increases habitat, visual amenity and comfort through shade. Current surface levels have been maintained where possible in proximity to existing trees and any retaining works have been located outside of critical structural root zones to minimise their impact. Trees to be retained are to be protected as directed by AS 4970-2009 Protection of Trees on Development Sites and as directed within the Arborist report. Architectural renders have been included in the Landscape report to illustrate the area. In response to the last point, the large retaining wall has been softened with landscaping. Refer to <i>Section 02 – East West</i> of the landscaping plans which shows ground cover plants are proposed on top of the retaining wall. These plants will grow over the retaining wall, creating a cascading effect which will soften and obscure the wall from view. Refer to Appendix 3.

DRP Recommendations	Proponent Response
Built Form and Scale	
Strengths a) This design principle was supported by the Panel. b) The formal insertion into the existing campus is a well-considered response which is seen as an excellent outcome	DRP support for this design principle is noted.
Functionality and build quality	
Strengths a) The Panel commented the internal planning is generally well arranged. Areas for Improvement b) The Panel expressed concern around the toilets on the ground floor and questioned if these are sufficient for the number of students. Recommendations 1) Comment was made by the Panel it would be beneficial to be provided with an accessibility plan and it should be demonstrated how this is being met. 2) It was mentioned by the Panel (and confirmed by the proponent) that Austral Chillingham bricks, which are appealing visually, can be difficult to lay without damaging the soft faces.	The main entrance to the building is signified by the arrival veranda oriented towards the primary approach from the administration building and the quadrangle. Other entry points relate to existing campus circulation and clearly signalled by the architecture and landscape. Within the building the student circulation is within the central breakout atrium space via generous staircases that are no less than 2.1m wide. A single lift is optimally positioned in the centre of the floorplate, providing equitable and dignified universal access to all parts of the building. The lift is double-sided so that it can also facilitate the safe and segregated movement of hazardous materials from loading and storage at lower ground directly into the two preparation laboratories on the upper levels. The existing sports court ramp is maintained for universal access to sports court. A universal accessibility diagram has been provided in the revised design package.
Sustainability	
Recommendations a) The Panel commented that this project is a compelling opportunity for Hale School to be highly aspirational and demonstrate to our future leaders the importance of sustainability in our built environment. It is suggested that the school make a strong and clear commitment to sustainability in the design and delivery (and operations) of this facility. The Panel strongly encouraged the Applicant push to achieve a 5- star green star accreditation. b) There is opportunity to introduce biophilic design opportunities to openly demonstrate sustainable scientific, technological, and engineering (STEM) principles that might be otherwise embedded or hidden into the design. The panel believes there are also opportunities to integrate curriculum and the student use of the building into the sustainability outcomes. c) It was commented by the Panel that the proposed shading devices are supported and a good outcome.	This development is committed to achieving best practise sustainable design and has incorporated several elements to enhance the efficiency and sustainability of the building. Best-practice principles of passive environmental design have been followed in this design concept to minimise the energy required to operate the building. These principles, illustrated in the diagram on this page, include: • Maximise benefit of winter sun to main foyer and outdoor gathering spaces. • Shelter of outdoor spaces from cold southerly winds with landscape and building placement. • Trees and landscape for comfortable micro-climate. • Generous windows and skylights for optimum daylighting, accompanied by orientation-specific shading to control solar-gain. • Provision for natural and mixed mode ventilation. • Rooftop PVs.

DRP Recommendations	Proponent Response
	The building plan is designed to be both transparent and flexible, which are core principles of the SITES initiative for sustainable and ecological land development. A variety of teaching spaces are provided, some suitable for highly specific teaching resources and technology, others are open and flexible to allow for cross-disciplinary use and industry collaboration. Glazed and operable walls connect classrooms and labs to breakout and circulation spaces and to preparation laboratories. Views into the double volume engineering workshop from within the general science zone signifies the strong link between engineering and science at Hale. The central circulation spine allows all activities to be viewed by students and teachers and creates opportunities for learning and teaching in multiple environments. STEM principles are integrated through the design and use of the building, with contemporary architecture and communal areas of the Science Building facilitating cross-disciplinary interaction, nurturing an atmosphere of curiosity and collaboration among students and staff. Serving as the school's focal point for scientific exploration and innovation, the development endeavours to ignite passion and excellence in the fields of science, technology, and engineering, among future leaders. The landscape design contributes to Greenstar accreditation by way of biodiversity in species selection and waterwise irrigation design.
Amenity	
Strengths a) Comment was made by the Panel the quality of the amenity provided for students and staff is of a high level. b) The design Principle was supported by the panel. c) The Panel commented the north facing pavilion is a pleasant space	DRP support for this design principle is noted.
Legibility	
Strengths a) The design principle is supported by the panel. b) Comment was made by the panel the legibility of the development is working well	DRP support for this design principle is noted.
Safety	
Strengths 1) This design principle is supported by the panel.	DRP support for this design principle is noted.
Community	

DRP Recommendations	Proponent Response
Areas for improvement a) It was mentioned by the Panel the Applicant should be cautious with the quantity of the Hale School blue colour being included in the final design. Recommendations 1) It was noted by the Panel there should be “public” art included in the proposal which might celebrate Hale School and Science. It was recommended that the Architects be included by the school in any “public” art selection or procurement process to enable the highest quality outcome.	While the development does not specifically propose ‘public art’, it intends to incorporate multiple artworks into the building’s design. These artworks, inspired by science-based muses, will enhance the character of the building. Considerations for these muses might include: • Sun path diagrams through the oculus highlighting indigenous seasons • Periscopes • Gears and pulleys • Nature elements like aquaponics, vegetation, or hives • Kinetic Energy • Data Visualisation These will also give students the opportunity to interact with the artworks and enhance their overall learning experience.
Aesthetics	
Strengths a) The Panel is pleased with the quality of the project’s appearance and believes it will be a beautiful insertion into the campus. Recommendations 1) The Panel encouraged the design team to maintain focus on delivering a high-quality outcome through detailed design including consideration of how banners, way finding devices, fire extinguishers, and building services will impact the final aesthetics of the building. It was suggested these should not reduce the clean and simple look of the design.	DRP support for this design principle is noted.

Comments from the DRP were considered holistically and were integrated and reflected in the final proposal submitted to the City of Stirling and DAP. Given the initial satisfaction with the design of the proposal by the DRP and the suitable integration of feedback by the design team, a second meeting was not initiated for the proposed development prior to lodgement of this application.

2 SITE DETAILS

2.1 Land description

The subject site comprises two green title lots held under private ownership by The Governors of Hale School. Refer to **Table 2** for a description of the land subject to this development application, which includes only one of the two Hale School lots, Lot 50. The proposed development is entirely within the boundaries of Lot 50.

Table 2 – Lot details

Lot	Plan/Diagram	Volume	Folio	Area (ha)
50	26521	1279	454	24.91

The site is not subject to any limitations, interests, encumbrances and/or notifications materially relevant to the proposed development. Refer Error! Reference source not found. for a copy of the Certificate of Title and Deposited Plan.

2.2 Location

2.2.1 Regional context

The subject site is located in the suburb of Wembley Downs within the municipality of the City of Stirling (City).

The subject site has direct frontages to Hale Road, Unwin Avenue, Glenelg Avenue and Cobb Street. The southern boundary of the subject site has a direct frontage to Hale Road, which is reserved 'Other Regional Road' under the MRS. Hale Road is a key transport route that connects West Coast Highway to the west and Pearson Street to the east, creating links to the wider metropolitan region.

The subject site is approximately 8km northwest of the Perth CBD, and approximately 2km to the ocean.

2.2.2 Local context, land use and topography

The subject site is generally surrounded by residential land uses, characterised by single and two-storey single detached houses. The subject site abuts Hale Road to the south, which forms the primary street frontage for the subject site. Due to its irregular shape, the subject site also has frontages to Glenelg Avenue, Stockdale Crescent, Unwin Avenue and Williamstown Road which provide various alternative vehicles access to the subject site.

A number of bus stops are located in proximity to the subject site, with bus services running along Hale Road to the south, Unwin Avenue to the west and Cobb Street to the North.

Refer to **Figure 1**, aerial photograph.

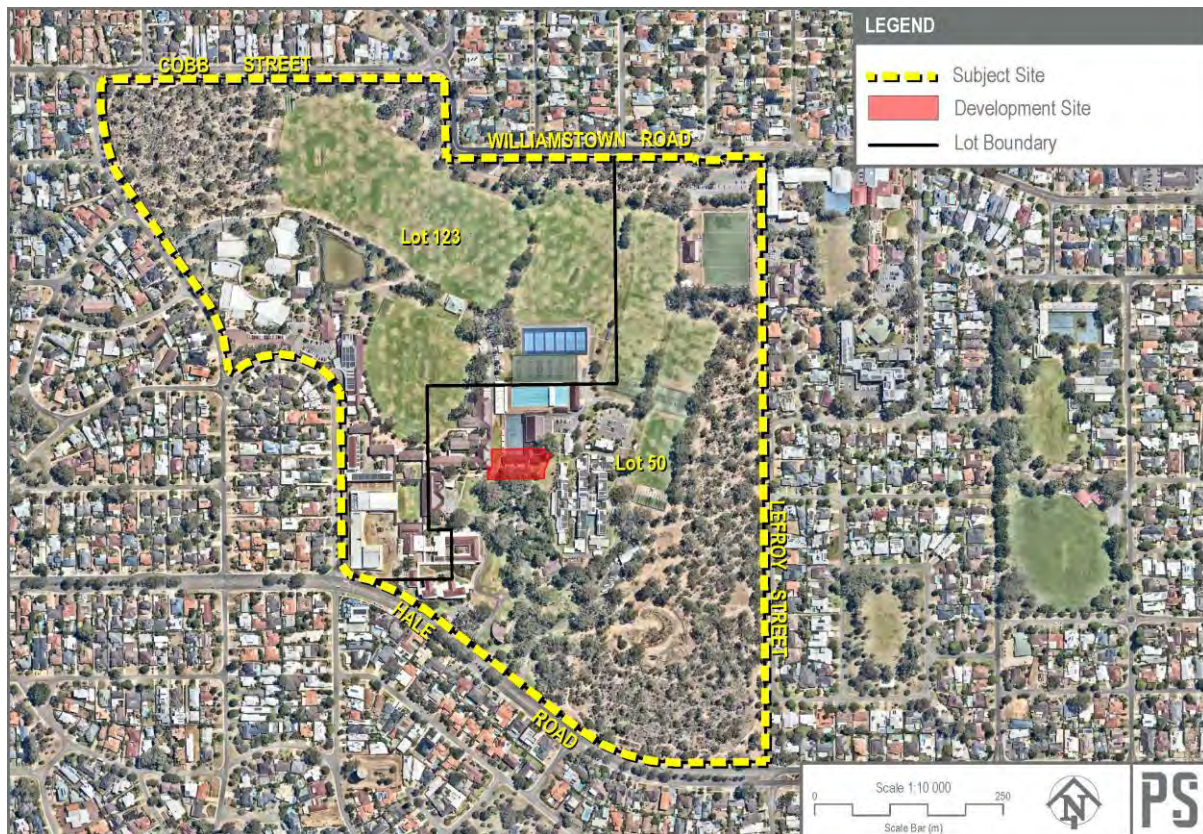


Figure 1 - Aerial photograph of the subject site

2.2.3 Site photos

Several photographs were taken on site visits, which help provide context for the staging of the development (see below).



Image 2 – Existing basketball court looking southward toward development site



Images 3 & 4 – Southern grove of trees adjacent to the development site

2.2.4 Land use and topography

The topography of the site can be described as undulating. The subject site sits near the crest of a hill with the land gently falling from west to east along Hale Road towards the eastern boundary of the subject site. The highest point of the site is adjacent to the intersection with Hale Road and Unwin Avenue at the southwest corner of the subject site.

The administration building, Memorial Hall, Tom Hoar Dining Hall, Stow Theatre, Forrest Library, Chapel of St Mark, cafeteria, clothing store, IT department and Old Haleians' Boardroom are all located on the southwest corner of the campus near the main entrance.

General classrooms ('A-block' & 'B-block'), science laboratories and classrooms ('S-block') and mathematics classrooms ('N-block') are all located to the south of the main sports oval, Craig Oval, which sits in the centre of the campus.

The design and technology workshop as well as computer and design suites sit adjacent to the aquatic precinct. Also adjacent to the aquatic precinct is the art complex, gymnasium and change-rooms.

The John Inverarity Music and Drama (**MAD**) Centre is located on the western side of the campus facing Unwin Avenue. This building separates the Senior School from the Junior School which is located on the northwest corner of the campus, along with the junior boarding residence, Brine House.

The senior boarding house is located on the eastern side of the campus while the sports playing fields occupy the northeast.

The subject site includes several areas of existing vegetation dispersed through the campus.

An existing site feature survey is provided within the design package contained in **Appendix 2**.

3 PROPOSED DEVELOPMENT

3.1 Development Summary

The proposed development seeks to develop a new Science Building at Hale School, located at Lots 123 and 50 (160) Hale Road, Wembley Downs (**subject site**). The scale and form of the proposed Science Building respects the context and character of the site, and positively contributes to its overall amenity.

The development is proposed to occur in the centre of the site (**Figure 1**).

The project will include the removal of the existing Senior Art Building and a portion of the adjoining basketball court, walkway shelter and surrounding landscaping. Works proposed comprise of a three-storey Science Building and supplementary landscaping and circulation areas. Access to the building will be predominantly pedestrian through existing pathways within the campus grounds. The closest vehicular access point is via a proposed accessway from the existing onsite carpark immediately northeast of the proposal area. This development is not considered to intensify the use of the subject site, with student and staffing numbers remaining consistent upon this development's completion and occupation.

The proposal is supported by the following technical inputs demonstrating its suitability:

- An architectural design package prepared by KHA
- An arboricultural impact assessment prepared by Civica Arborsafe
- A technical advice note prepared by Bushfire Prone Planning
- A technical advice note and visual impact study prepared by Griffiths Architects
- A landscaping package prepared by Aspect Studios

- Concept drainage plans prepared by WGA
- A sustainability strategy prepared by Full Circle Design Services
- An acoustic assessment prepared by Gabriels Hearne Farrell

Specifics of the proposed development and its built form are discussed below.

3.2 Built Form

Having regard to the applicable planning framework, the works proposed as part of this development are an exemplar response to the building's context and operational requirements of a modern secondary educational facility. The proposal is generally compliant with the development standards of the City of Stirling Local Planning Scheme No. 3 (LPS3) and the City's Local Planning Policy 4.5 – Private Institution Design Guidelines (LPP4.5).

Specifically, the proposed development comprises:

- A Science Building that is 3 storeys in height, with a total ground floor area of 4,901m² containing:
 - 6 biology/general science classrooms, one prep lab and one office.
 - 4 physics classrooms, one prep lab and one office.
 - 4 chemistry classrooms, one prep lab and one office.
 - 3 workshops (engineering/AIT/STEM).
 - 2 House hubs including offices and lockers for each.
 - General amenities, storage and services on all floors.
- Landscaping and site works surrounding the new Science Building.

Refer to **Appendix 2** for a copy of the design package which includes the architectural drawings, and **Figures 2-5** below for perspective of the proposed development and how it integrates with its surrounds.



Figure 2 - Northern view of proposed development



Figure 3 – Southern view of proposed development (screened by vegetation overlaid)



Figure 4 – View from bush court and school arrival



Figure 5 – View of proposed development from Hale School's Administration Building

3.3 Transport

In accordance with the City's Local Planning Policy 6.7 (LPP6.7), a non-technical Brief Transport Analysis Statement is required to be prepared for all 'Educational Establishment' development applications.

The proposed development is located in the centre of the site, not adjoining any roads. In addition, it will not generate any additional staff, student numbers or traffic flow and will therefore have no tangible impact on the functionality of the internal or external road network. In addition, the proposal makes no modifications to any parking arrangements on the subject site. As such, a transport impact statement/assessment has not been undertaken as part of this development application.

Refer section 4.3.5 below for further details.

3.4 Landscaping

The proposed development provides generous provision of high-quality landscaped areas in the vicinity of the development that will enhance the overall presentation of the development. Landscaped areas have been carefully designed to integrate the development within the site. The landscaping treatment will result in an improvement to existing vegetated spaces and will offset any impact as a result of the proposed development and tree removal.

It is noted that this development would result in the loss of some mature trees to facilitate the works proposed. Five (5) trees require removal, including 3 bottlebrush trees located on the building footprint, and two tuart trees which would be heavily impacted by the proposal. The landscape proposal has been carefully considered to mitigate the loss of these trees and enhance the overall canopy cover of the site. This includes a 4:1 ratio of tree re-planting for those trees lost, which is seen as a good outcome, and one that will enhance the natural areas of the site.

Refer to **Appendix 3** for a copy of the landscaping package prepared by Aspect Studios.

3.5 Sustainability

An Environmentally Sustainable Design (ESD) Strategy has been prepared in support of the application (**Appendix 5**). The development places a strong emphasis on management, energy efficiency and indoor environment quality to reduce operational costs and enhance the sustainability of the project and aims to achieve a 4-star green star rating. Best-practice principles of passive environmental design have been followed in this design concept to minimise the energy required to operate the building. These principles, illustrated in the diagram on this page, include:

- Maximise benefit of winter sun to main foyer and outdoor gathering spaces.
- Shelter of outdoor spaces from cold southerly winds with landscape and building placement.
- Trees and landscape for comfortable micro-climate.
- Generous windows and skylights for optimum daylighting, accompanied by orientation-specific shading to control solar-gain.
- Provision for natural and mixed-mode ventilation.
- Rooftop PVs.

Further opportunities include:

- Provision of bike racks.
- Low VOC materials.
- Battery storage for PV's.
- Highly efficient water-cooled chillers.
- Low energy LED Lighting.
- Smart Building Operating Systems linked to BMS.
- Energy and water consumption display system.

3.6 Civil Design and Stormwater Management

A Drainage Plan has been prepared by WGA which supports this development (**Appendix 4**). Local infiltration is proposed for stormwater captured on the roof of the building, including portion of the unsheltered shared space via modular infiltration cells. Existing drainage north of the existing building will also be diverted to go around the Science Building and will be joined and connected to an existing stormwater pipe. Minimum proposed stormwater infrastructure has been positioned strategically to connect to existing drainage infrastructure, which has been positioned be clear of footings, trees, and related obstacles for ease of maintenance. An existing small network of stormwater pipe and two soak wells east of the existing building will be relocated slightly to clear the Science Building.

4 STATUTORY PLANNING FRAMEWORK

4.1 Metropolitan Region Scheme

The subject site is zoned Urban under the provisions of the Metropolitan Region Scheme (MRS). The proposed development is consistent with the MRS and may be approved accordingly.

The subject site has a frontage to Hale Road, a dual lane road separated by a vegetated landscaping strip. Hale Road is reserved as an 'Other Regional Road' and designated as a 'Category 2' Road under the MRS.

The proposed development is consistent with the provisions of the MRS and is appropriate to service the subject site and the surrounding locality.

4.2 Local Planning Scheme

4.2.1 Zoning

The subject site is zoned 'Private Institution' under the City's Local Planning Scheme No. 3 (LPS3). The existing and proposed land use is classified as an 'Educational Establishment', which is defined under LPS3 as follows:

"Educational Establishment: Means premises used for the purposes of education and includes a school, tertiary institution, business college, academy or other educational centre;"

The proposed development does not seek to modify the existing land use. The various administration, office and storage activities conducted on the site are directly related to the Educational Establishment land use, and do not operate as separate or distinct uses.

4.2.2 Land use permissibility

This development application does not seek to change the overall land use of the site, which will remain as 'Educational Establishment', with associated incidental land uses. The use of the site will not be intensified by this development, with all staff and student numbers proposed to remain the same. It is our view that the land use component of this development is considered to be suitable and does not require further justification.

4.2.3 Development standards and requirements

Part 5 of LPS3 stipulates the general development requirements applicable to all development within the scheme area. Table 3 below provides an assessment against the requirements relevant to this proposal.

Table 3 - Assessment against scheme development objectives

Objective	Provided	Compliance
CI 5.12 - Local Development Plan		
<i>CI 5.12 - Council may require the preparation of a Detailed Area Plan for any lot or lots in accordance with Clause 6A.16.</i> <i>All Development on land the subject of an adopted Detailed Area Plan is to comply with that Detailed Area Plan.</i>	The City's Private Institutions Guidelines LPP relies on this scheme provision and clause 47(b) of Schedule 2 of the <i>Planning and Development (Local Planning Schemes) Regulations (deemed provisions)</i> to require an LDP under certain instances. The proposed development replaces an existing building on site. The development does not conflict with the principles of orderly and proper planning, nor will it prejudice the development of the subject site.	✓

Objective	Provided	Compliance
	As confirmed by the City during pre-lodgement meetings, an LDP will not be required to be prepared prior to lodging a development application for the proposed works.	
CI 5.13 – Trees and Development		
<i>CI 5.13.2(a) To promote development that enables existing significant trees to be retained on zoned land and to protect existing street trees on abutting road reserves.</i>	The proposed development has been designed to retain as many trees as possible within the existing vegetated portions of the subject site. In order to mitigate the impact associated with the removal of trees, they will be replaced by associated landscaping works throughout the site as detailed in the landscaping plans contained within Appendix 3. Furthermore, the arborist report assessed the existing vegetation surrounding the proposed development footprint to identify trees and vegetation that positively contributed to the ecological and overall amenity on the subject site. This report identified that 5 trees would be required to be removed. Two trees were specifically recommended for retention. These trees will be retained, and a number of recommendations have been made by the arborist to ensure these trees are protected. The measures outlined in the arborist report detail how to best protect trees in proximity to the proposed development from being damaged during construction. These recommendations will be implemented as part of the overall development.	✓
<i>CI 5.13.2(b) To minimise the removal of significant trees on zoned land and street trees on abutting road reserves as a consequence of development; and</i>	The proposed development seeks to minimise the removal of significant trees and all efforts have been undertaken to ensure as many trees as possible are retained. Only five (5) trees are proposed to be removed to facilitate the development. Two trees were specifically recommended for retention. These trees will be retained, and a number of recommendations have been made by the arborist to ensure these trees are protected.	✓
<i>CI 5.13.2(c) To ensure suitable advanced trees of appropriate size and maturity are planted where, on-site significant trees and street trees on abutting road reserves, have been removed or do not exist.</i>	To offset the 5 trees being removed, 21 comparable trees will be planted, as well as the provision of additional landscaping treatments and solutions as detailed in the landscaping plans contained within Appendix 3 .	✓

4.2.4 Heritage

Schedule 2 Part 1 cl. 1A of the *Planning and Development (Local Planning Schemes) Regulations 2015* and Part 7 of LPS3 stipulates general heritage protection requirements to all development within the scheme area. The subject site is not identified on City's Heritage List, however the Memorial Hall is classified on the City's Municipal Inventory (No. 1493978) as a Category 2a conservation place. The Memorial Hall located approximately 120m west of the development area is under consideration by the Heritage Council of Western Australia (HCWA) for entry on the State Register of Heritage Places. The Science Building proposal will not impact the potential values of the Memorial Hall, given it is still under consideration.

Heritage advice has been provided by Griffiths Architects noting that the Department of Planning Lands and Heritage (DPLH) would be unlikely to make comments on the proposal as it has negligible impact to any listed buildings on the subject site. Confirming this, advice was received from the DPLH on 8 April 2024 stating that given the distance between the Memorial Hall and the proposed Science Building, a Heritage Impact Statement is not necessary.

A Visual Impact Study had also been provided in support of this application, which shows that the Memorial Hall is not visible from the development site.

Refer **Appendix 7** for a copy of the heritage advice and supporting documents.

4.2.5 Draft Local Planning Scheme No.4

It is noted that the City has prepared Draft Local Planning Scheme No. 4 (LPS4), which is currently under review by the Department of Planning, Lands, and Heritage. In accordance with LPS4, the subject site is zoned 'Private Community Purpose', and the 'Educational Establishment' land use will continue to be capable of approval ('P' permitted use) in this zone. The proposed development does not create any conflicts with the draft provisions of LPS4. Since draft LPS4 has not been formally advertised, it is not yet considered a 'due regard' planning instrument.

4.3 Local Planning Policies

4.3.1 Local Planning Policy 4.5 – Private Institution Design Guidelines

Local Planning Policy 4.5 – Private Institutions Design Guidelines (LPP4.5) provides design guidelines applicable for all development within the Private Institution zone. **Table 4** below details the objectives of LPP4.5 and how the proposed development satisfies and responds to these objectives.

Table 4 - Objectives of LPP4.5

Objectives of LPP4.5	Response	Compliance
<i>To ensure that development does not adversely affect the amenity of surrounding properties;</i>	The proposed development is consistent with the scale and design of the built form of the site. The design of the development is of exemplary standard and will enhance the overall amenity of the site. The setback of the development from the lot boundary means it will not be visible from the public realm. A TIA/TIS was not considered necessary as supporting documentation for this development as there is no proposed increase in student numbers or staff, nor additional parking or access infrastructure.	✓
<i>To encourage development that is sympathetic to the scale and bulk of surrounding properties;</i>	The proposed development, given the topography of the land, is of a scale that is sympathetic to the surrounding residential character. The new buildings are not considered to generate any adverse impact to surrounding residential lots given the location of the development the middle of the subject site. Furthermore, the scale of the proposed development is consistent with the existing built form of the school.	✓
<i>To ensure that the efficiency of the local transport network is not encumbered by development;</i>	The proposed works are not considered to have any impact on internal, or external road networks. This development will not increase the number of students, or teachers attending the site meaning no additional stress will be placed on the capacity of parking areas.	✓

<i>To support the provision of viable and high quality retirement and aged care developments; and</i>	Not applicable – the proposal seeks additions to an existing Educational Establishment.	✓
<i>To ensure that development is well integrated with the surrounding community.</i>	The proposed additions and upgrades improve both the appearance and the range of facilities provided on the site and remain sufficiently integrated with the built form established on the subject site and with the surrounding community.	✓

4.3.1.1 Requirement for a Local Development Plan

Under LPP4.5 a Local Development Plan (LDP) is required to be prepared for any major development with the exception of the following:

All applications for development shall be accompanied by a Detailed Area Plan for the site, as per clause 5.12 of Local Planning Scheme No. 3, with the exception of:

- *Single storey proposals.*
- *Additions to buildings less than 10% of the subject lot area; and*
- *Family Day Care and Rural Pursuit.*

As the application involves construction of a new Science Building on the site, it is open to the City to seek an LDP. However, for the reasons outlined below we consider an LDP is not required:

- In the context of the overall site, the building works are and do not significantly alter the form or function of the school.
- The development is in a location that is already developed with similar activities, noting that the new Science Building is replacing existing classroom structures on site.
- The buildings are suitably setback from all lot boundaries in accordance with the requirements of the LPP, and is unlikely to generate any bulk, or additional amenity impact to surrounding lots.
- The proposed development is not considered to cause any impact and complies with the height requirements under the policy.
- The development is in a location that will not prejudice any other aspect of the school or undermine the principles of orderly and proper planning.

During the pre-lodgement engagement process with the City, it was agreed that an LDP would not be required to facilitate the proposed development in light of the above.

4.3.1.3 Development Standards

The relevant development standards of LPP4.5 applicable to the proposed development are addressed in Table 5 below:

Table 5 - Development standards of LPP4.5

Built form provisions of LPP4.5	Provided	Compliance
Orientation		
The portion of the development fronting the street shall be orientated towards the street.	Due to its location on the subject site, there is no portion of the development which abuts a street frontage	✓
Building Height		
Development shall be restricted to two (2) storeys (6.0 metres wall height) above natural ground level within 10 metres of any residential lot or street boundaries in areas coded R50 or below and a maximum of four (4) storeys (12.0 metres wall height) above natural ground level on the remainder of the site	The proposed development is not situated within 10m of any adjoining residential properties. Overall, the proposed Science Building is 3 storeys tall with a maximum wall height of 11.55m above natural ground level.	✓
Where buildings over two (2) storeys above natural ground level are proposed, an application shall include justification which addresses the impact of the proposal having regard to matters such as amenity, overshadowing, wind impacts and building design, siting, bulk, materials, scale and colour.	The following below outlines why this three-storey development is appropriate in terms of amenity, overshadowing, wind impacts and building design, siting, bulk, materials, scale and colour. • The development is located in the middle of the subject site (refer to Figure 1), and not located within any close proximity to any surrounding residential properties. This negates any actual or perceived impact of building bulk, overshadowing or any other issues which may negatively impact on the amenity of adjoining lots. • The height of the proposed development is not considered to produce any adverse wind impacts. • The proposed development is screened from view of the street by other buildings onsite, and existing vegetation. Consequentially, it is not likely for there to be any streetscape impact felt by this proposal. • The massing and scale of the development are consistent with the scale and built form established through the existing buildings on the subject site and surrounding area. The proposed development is compliant with the prescribed height requirements which acts to mitigate any perceived impact from a bulk and scale perspective. The provision of landscaping acts to soften the perceived bulk of the development. • The development will be constructed using high-quality materials, creating a building that contributes positively to the character of the area. The materials and colours have been carefully selected to be sympathetic to the context of the site and wider area.	✓

Built form provisions of LPP4.5	Provided	Compliance
Where buildings over 6.0 metres in height are proposed: i. An application requiring the approval of the Council under Clause 8.1 of the Scheme shall include information which addresses the impact of the proposal having regard to matters such as amenity, overshadowing, wind impacts and building design, siting, bulk, scale and colour. ii. Before the determination of an application requiring the approval of the Council under Clause 8.1 of the Scheme, the Council shall cause the provision of Clause 9.4 (advertising for public comment) of the Scheme to be invoked in respect of the application.	Refer to the section above.	✓
Setbacks		
Front setback – 6m	The proposed development is situated greater than 6m from any site boundary.	✓
Side and Rear – in accordance with the Residential Design Codes (R-Codes)	The proposed development is situated in the centre of the site, greater than 100m away from any lot boundary.	✓
Uses		
New uses shall not cause a detrimental impact on the amenity of the surrounding lots in terms of traffic and parking impacts, noise, dust, vibration, odour and the like.	The proposal seeks to demolish existing structures and construct a new Science Building at the existing educational establishment. This is not considered to result in undue impacts on the amenity of the surrounding lots. The proposed development will not increase the intensity of the use of the site or generate any additional traffic volume. As discussed, no additional on-site parking is required to facilitate this development.	✓
Parking (Access and Parking provisions of LPP4.5)		
<i>Parking bays for cars and other vehicles shall be provided for in accordance with the City's Parking Policy.</i>	As discussed in previous sections of this report, the proposal will not increase vehicle movements to and from the site and does not necessitate additional on-site parking to be provided. This was confirmed in initial pre-lodgement meetings with the City.	✓
<i>Service and delivery vehicle loading areas shall be located away from dwellings and out of view of the street.</i>	The proposed development will not have any impact on the service arrangements of the site.	✓

Built form provisions of LPP4.5	Provided	Compliance
Traffic Management Plan (Access and Parking provisions of LPP4.5)		
<i>As required by the City's Parking Policy, applications for developments shall be accompanied by a Brief Transport Statement, or by a Full Transport Statement, as the case may be.</i>	Pre-lodgement discussions with the City determined that technical reports regarding traffic (TIA and TMP) were not necessary as this proposal will not have an impact on the surrounding road network.	✓
Emergency Vehicle and Service Access (Access and Parking provisions of LPP4.5)		
<i>Applicants are required to demonstrate sufficient access and manoeuvring space for emergency vehicles (such as ambulances and fire engines) and service vehicles (delivery and pickup).</i>	The existing and approved emergency vehicle access is not proposed to be modified.	✓

4.3.2 Local Planning Policy No. 6.2 – Bicycle Parking

Local Planning Policy 6.2 – Bicycle Parking (LPP6.2) requires one bicycle parking space for every five students over year 4.

As outlined above in Section 3.2 there is no change to the number of students or staff as a result of the proposed development. As such, the overall bicycle parking requirement does not increase, meaning the proposed development does not warrant an assessment against the provisions of LPP6.2.

Hale School services a regional catchment of students. This differs from other primary and secondary schools, which are generally provided with a 'local catchment area' for students. As students must travel farther (on average), the distance is often not conducive to bicycle travel. In addition, Hale School provides private school buses which reduce the demand for bicycle travel.

4.3.3 Local Planning Policy No. 6.6 – Landscaping

The City's Local Planning Policy No 6.6 – Landscaping (LPP6.6) stipulates the landscaping requirements for non-residential developments within the City.

The landscaped areas will be planted with species consistent with the City's desired plant species and have been carefully designed to enhance the amenity of the subject site. Landscaped areas will be reticulated and mulched as per LPP6.6 requirements. An assessment against the provisions of LPP6.6 is provided in **Table 6** below.

Table 6 - Landscaping requirements as per LPP6.6

Landscaping (LPP 6.6)		
Requirement	Provided	Compliant
All individual planting areas, excluding those in or adjacent to car parks, must have a minimum width in any direction of 500mm and a minimum plantable area of 2m ² ; and the inclusion of verge areas (abutting the site) in the overall landscaping design is required.	All planter areas are of suitable size and have been carefully considered with regards to the needs of proposed plant species. Generally, the landscaped areas of the site contain garden beds which allow ample deep soil space for roots to establish themselves.	✓
All landscaped areas to be planted with a suitable number and species of plants in	The landscaping plan provides a species list inclusive of native vegetation, which is generally consistent with the City's	✓

accordance with LPP6.6. Native species encouraged.	schedule of recommended plant species. Where trees are removed, they are proposed to be replaced with the same or similar species to maintain the natural amenity of the site.	
Applications for commercial development must contain a minimum of 10% landscaping of the total site area. Must include 'soft' landscaped buffers where setbacks are provided.	Generous areas of soft landscaping have been proposed to the southern, northern, and eastern portion of the proposed development.	✓
A minimum of 1 tree per 6 bays (minimum 45 litres for exotics and 11 litres for natives) is required in open parking areas. Shrubs are generally not permitted as they may interfere with sight lines in and around parking areas and driveways. Acceptable examples of tree planting patterns within car parking areas are shown in the following illustrations.	NA – no new parking bays proposed.	✓

4.3.4 Local Planning Policy No. 6.11 – Trees and Development

The City's Local Planning Policy No. 6.11 – Trees and Development (**LPP6.11**) sets out tree retention and planting requirements applicable to development sites within the City of Stirling.

The objectives of LPP 6.11 are:

- To promote and facilitate development that enables existing significant trees to be retained;
- To minimise the removal of significant trees on zoned land as a consequence of development;
- To protect significant trees which are to be retained on zoned land and existing street trees during the demolition and construction phase of development;
- To ensure appropriate advanced trees are planted which are suited to their environment and location where significant trees have been removed or do not exist on zoned land;
- To ensure suitable advanced trees are planted on verges forming part of the road reserves abutting a development site where street trees have been removed;
- To protect and increase the long-term viability of City trees on verges adjacent to development sites; and
- To preserve the existing streetscapes within the City.

Given the subject site has an area exceeding 50ha and the proposed development only seeks to develop on one small portion of the site, the following assessment against the provision of LPP6.11 has been undertaken based on the areas of the site proposed to be developed (**Table 7**).

Table 7 - Assessment against requirements of LPP6.11

Required	Provided	Compliance
Retain existing trees on site, where possible.	The proposed development has been designed with the intent of retaining as many of the existing established trees as possible. Notwithstanding, given the amount of existing vegetation on the subject site, any development of the proposed nature would require the removal of certain trees.	✓
1 tree per 500m ²	This development proposes the removal of five trees which are generously replaced at a 4:1 ratio. As such, the development increases the overall tree yield on the subject site which is considered to be a good development outcome.	✓
9m ² deep soil area per tree (45m ²)	All trees are proposed to be planted in garden bed areas which allow for adequate space for roots to establish themselves. This will not restrict the growth of proposed trees.	✓

To offset the 5 trees with a moderate to high retention value being removed, the landscaping plan proposes a 4:1 replacement strategy. These trees are proposed to be planted to the North and South of the subject site. Given the overall canopy cover of the site and other nearby vegetation, the loss of five trees should not substantially impact on the natural amenity of the site. The planting of 21 additional trees will enhance the development and provide high quality natural areas for the enjoyment of students and staff.

4.3.5 Local Planning Policy No. 6.7 – Parking and Access

The City's Local Planning Policy No. 6.7 – Parking & Access (LPP6.7) details the car parking standards and requirements for various developments. As mentioned in previous sections of this report, this development will have no impact on the yield, functionality, or layout of parking spaces and vehicle movements on the subject site. Furthermore, the proposal will not change the number of students or staff using the site. Therefore, since no additional parking is required, a traffic impact statement/assessment is not necessary for this proposal.

Section 10.1 of LPP6.7 outlines the requirement for transport analysis, including a 'Brief Transport Analysis Statement'. This is required for:

- a) Child Care Centres, Education Establishments and non-residential developments fronting a District Distributor Road or above or;*
- b) A proposal seeking payment in lieu or shared parking arrangements as per the Planning and Development (Local Planning Schemes) Regulations 2015 Schedule 2 Part 9A.*

Given that the development site does not front any roads and is located at the centre of the site, it is not necessary to assess the proposal against the provisions of LPP6.7.

4.3.6 Local Planning Policy 6.12 – Public Art on Private Land

The City of Stirling *Local Planning Policy 6.12 – Public Art on Private Land* provides the expectation for public art as a means to complement urban development. The policy is applicable to development which exceeds \$2 million, and contains four key objectives (listed below);

- To complement the impacts of urban intensification through providing functional private and public realm infrastructure that contributes to the overall amenity of an area;
- To develop a positive sense of place through the provision of public art where urban intensification is occurring;
- To improve the appearance, vibrancy, character, and amenity of the City's built environment; and
- To improve the attractiveness and functionality of the private and public domain for those living, using or passing by development sites through the use of public art.

The policy states that any variation to the policy will be assessed against the objectives of the policy. In this instance, no public art contribution is proposed. Notwithstanding, the development warrants approval as it is consistent with LPP6.12 objectives, as discussed below:

- The development does not propose to intensify the overall use, or urban footprint of the site. The development is completely invisible from Hale Road and is considered to have absolutely no impact to the external amenity or public interface of the site. The development plans to incorporate individual artworks throughout the Science Building which reflect the overall character of its use, which will undoubtedly create a strong sense of place.
- Overall, the design of the new Science Building is exemplary and will enhance the character and amenity of the subject site. The proposal will not impact on the amenity of the City's built environment given it does not interact with the public realm at all.
- As discussed, the development plans to integrate several science-inspired art pieces to reflect the character of the building. This will act to improve the attractiveness and feel of the building and create a connectivity between the artwork and the use of the Science Building.

While the development does not specifically propose 'public art', it intends to incorporate multiple artworks into the building's design. These artworks, inspired by science-based muses, will enhance the character of the building. Considerations for these muses might include:

- Sun path diagrams through the oculus highlighting indigenous seasons
- Periscopes
- Gears and pulleys
- Nature elements like aquaponics, vegetation, or hives
- Kinetic Energy
- Data Visualisation

These will also give students the opportunity to interact with the artworks and enhance their overall learning experience.

Refer **Figure 6** which highlights proposed science inspired art examples to be incorporated into the building design.



4.4 State Planning Policies

4.4.1 State Planning Policy 3.7 – Planning in Bushfire Prone Areas

Part of the subject site is identified as 'bushfire prone' under the Department of Fire and Emergency Services (DFES) bushfire prone mapping system. Despite this, the proposed development lies on a portion of the subject site that is outside the designated bushfire prone area. A technical note has been prepared by bushfire consultant *Bushfire Prone Planning* which notes that a Bushfire Management Plan (BMP) is not considered necessary to support this development, given the specific siting of the development is not on a portion of the site impacted by SPP3.7.

Refer to **Appendix 8** for a copy of the technical advice note prepared by Bushfire Prone Planning.

4.4.2 State Planning Policy 7.0 – Design of the Built Environment

State Planning Policy 7.0 – Design of the Built Environment (SPP7.0) addresses the importance of design quality, and sets out the principles, processes and considerations which apply to the design of the built environment in Western Australia, across all levels of planning and development.

SPP7.0 establishes a set of ten (10) 'Design Principles', providing a consistent framework to guide the design, review and decision-making process for planning proposals. An assessment of the proposed development against the 10 Design Principles of SPP7.0 is provided in **Table 8** below.

Table 8 - SPP7.0 Design Principles Statement

SPP7 Design Principle	Design Response
Context and character Good design responds to and enhances the distinctive characteristics of a local area, contributing to a sense of place.	The existing school is located within the established suburb of Wembley Downs which is comprised of residential and commercial land uses. Development on the adjoining road network including Hale Road, Unwin Avenue and Lefroy Street predominantly comprises single and two-storey residential buildings. The subject site contains Hale School, which comprises numerous single and double storey classrooms and school buildings, as well as large portions of landscaped areas. The proposed development complements the character of the subject site and seamlessly integrates with the existing built form, and natural amenity of the site. Design of the building has been carefully considered to reflect the scale and nature of existing development on site and respects the planning framework.

SPP7 Design Principle	Design Response
Landscape quality Good design recognises that together landscape and buildings operate as an integrated and sustainable system, within a broader ecological context.	The proposed development will ensure the provision of quality landscaped areas within the subject site. Landscaping plans have been prepared which depicts landscape planting, with species selected that suit the climate, environment, location and required function of the subject site. Where vegetation removal was required, this has been compensated for through a generous 4:1 replanting schedule which will significantly enhance the overall landscaped and natural areas of the site.
Built form and scale Good design provides development with massing and height that is appropriate to its setting and successfully negotiates between existing built form and the intended future character of the local area.	The development is strategically sited on the site to complement the existing built form. The proposed Science Building is in the middle of the site and therefore not visible from any boundaries. It is of an appropriate scale and height for the surrounding school site, responding to the sloping topography. As the proposed works are situated in the middle of the site, its scale does not restrict light or ventilation to surrounding properties, nor does it cast any shadow to other lots, which ensures there is no undue impact on the surrounding area.
Functionality and build quality Good design meets the needs of users efficiently and effectively, balancing functional requirements to deliver optimum benefit and performing well over the full life cycle	Functionality and quality are at the core of the proposed design, to ensure the needs of the students are satisfied. An emphasis on good quality and robust building materials will ensure that the building remains resilient to 'wear and tear' from its intended use. Functionality of the developed is enhanced through providing safe and legible access ways as well as site wide universal access. The build quality and design of this development demonstrates an exceptional built form and attractive façade, which across all aspects has been designed to seamlessly tie into the surrounding school site.
Sustainability Good design optimises the sustainability of the built environment, delivering positive environmental, social and economic outcomes.	The proposed development achieves a minimum four-star Green Star rating, and incorporates environmentally conscious elements including 30kW solar array, fossil fuel free heating and hot water, mixed mode air conditioning, and more. Refer Appendix 5 for the ESD Strategy. Socially, the proposed development will deliver critical benefits like providing upgrades to educational, recreational and staff facilities that will be available to users of the site. This will act to enhance the learning experience of pupils and provide an advanced and contemporary learning environment. Economically, the proposed development will sustain the significant net benefits the school currently provides, this includes: • Actively contribute to meeting the demand for education with the immediate and wider area; and • Help retain direct and indirect employment opportunities.

SPP7 Design Principle	Design Response
Amenity Good design optimises internal and external amenity for occupants, visitors and neighbours, contributing to living and working environments that are comfortable and productive.	This proposal will enhance the amenity and functionality of the subject site and surrounding area. No adverse impacts on amenity are anticipated externally. The high-quality design of this building presents an exemplary outward aspect, with a façade that seamlessly transitions into the school site. The design is modern, attractive and will act as a visual focal point on site. The development also contributes to the natural amenity of the site, with high quality landscaped spaces and a generous planting schedule proposed. Given its situation within the middle of the campus, the proposed works will not have any adverse impact to the amenity of surrounding residents. Likewise, no traffic increase will occur as result of this development.
Legibility Good design results in buildings and places that are legible, with clear connections and memorable elements to help people find their way around.	The proposed works are not considered to negatively impact on the legibility of the site. No changes to internal road networks or parking spaces are proposed through this application. New pedestrian circulation areas are functional and well defined to make navigating the site easy for users, and the development integrates universal access throughout to make it accessible for all users.
Safety Good design optimises safety and security, minimising the risk of personal harm and supporting safe behaviour and use.	The facility will be constructed in accordance with regulatory and industry standards which optimise safety and security for occupants. Safety and security are promoted through maximising opportunities for passive surveillance and clear sightlines throughout the subject site. This development is not considered to exaggerate the risk to public safety and is unlikely to generate any nuisance or social nuisances.
Community Good design responds to local community needs as well as the wider social context, providing buildings and spaces that support a diverse range of people and facilitate social interaction.	The campus is an existing community focal point, drawing in students from the local area and abroad. This development responds to the need for users of the campus, providing a contemporary learning space which will enhance the experience of students. The development will also act as a selling point to parents of prospective students, who will be more likely to seek to enrol their children at Hale School after this upgrade to its facilities.
Aesthetics Good design is the product of a skilled, judicious design process that results in attractive and inviting buildings and places that engage the senses.	The proposed development is designed by Kerry Hill Architects. Their proposal includes an exemplary building design and façade which is compatible to the existing built form of the subject site and creates generous and attractive landscaped spaces. The proposal integrates high quality materials, and design features which produces an engaging and attractive building aesthetic.

The proposed development suitably responds to the SPP7.0 design principles and warrants approval accordingly.

5 CONCLUSION

As detailed within this report, Hale School seeks to upgrade its facilities by demolishing the existing art building and other structures and replace them with a new Science Building.

In summary, the proposal appropriately responds to all relevant aspects of the planning framework and warrants approval for the following reasons:

- The proposed land use is entirely suitable in the Private Institution zone.
- The proposed development has been accompanied by comprehensive technical reporting demonstrating landscaping, arborists report, heritage, noise, and bushfire impacts are acceptable, and will not create a nuisance in the locality.
- The proposed development is consistent with the relevant development standards and provisions of LPS3, meets all the objectives of the Private Institution zone and are consistent with the intended use of the subject site.
- The proposed development is consistent with the relevant State and local planning policies and guidelines.

Having regard to the above, the proposal has been assessed to meet the requirements of the applicable planning framework and the application warrants approval accordingly.

Attachment 6 - Applicant's Final Submission:
b.Architectural Design Package prepared by Kerry Hill Architects (KHA) received on 6 May 2024



ARCHITECTURAL DESIGN REPORT

HALE SCIENCE BUILDING, HALE SCHOOL

DATE	AMENDMENT	REV
23 APRIL 2024	DA SUBMISSION	A

CONTENTS

1 EXECUTIVE SUMMARY

- 1.1 PURPOSE AND CONTEXT
- 1.2 THE VISION
- 1.3 PROJECT DETAILS
- 1.4 PROJECT TEAM

2 THE SITE

- 2.1 LOCATION AND CONTEXT
- 2.2 EXISTING BUILDING STOCK
- 2.3 SCALE & MASSING
- 2.4 HALE SCHOOL CAMPUS SITE ANALYSIS
- 2.5 PROPOSED SITE
- 2.6 PLANNING FRAMEWORK OVERVIEW
- 2.7 SURROUNDING GREEN SPACE
- 2.8 EXISTING TREE SURVEY
- 2.9 CIRCULATION
- 2.10 ACTIVATION
- 2.11 LANDSCAPE
- 2.12 TOPOGRAPHY
- 2.13 EXISTING MATERIALITY AND SITE CONDITIONS
- 2.14 CANOPY TYPOLOGIES
- 2.15 LOCATION PLAN AND DA SCOPE
- 2.16 HERITAGE CONSIDERATIONS

3 PROPOSED DEVELOPMENT

- 3.1 KEY DESIGN PRINCIPLES
- 3.2 THE BUILDING IN CONTEXT
- 3.3 SITES AND 'SCIENCE ON DISPLAY'
- 3.4 LANDSCAPING
- 3.5 SUSTAINABILITY AND WHOLE LIFE PRINCIPLES
- 3.6 DEPARTMENT PLANS
- 3.7 MATERIAL PALETTE
- 3.8 CIRCULATION LEGIBILITY AND UNIVERSAL ACCESS
- 3.9 ABPTED PRINCIPLES
- 3.10 TRAFFIC AND WASTE MANAGEMENT
- 3.11 ART STRATEGY

4 SHADOW DIAGRAMS

5 AREA SCHEDULE

6 VISUALISATIONS

A APPENDIX A

- A.1 ARCHITECTURAL DRAWINGS

1 INTRODUCTION

- 1.1 PURPOSE AND CONTEXT
- 1.2 THE VISION
- 1.3 PROJECT DETAILS
- 1.4 PROJECT TEAM



This design report has been prepared by KHA on behalf of Hale School to support the development application of a new science and technology building within the Hale School campus in Wembley Downs.

Hale is a world-renowned Anglican day and boarding school in Perth WA, offering comprehensive and tailored education experiences to boys from Pre-Primary to Year 12. Hale's students come from across the State, country and globe, bringing their unique personalities, perspectives and experiences into a culturally enriched community.

The project will support Hale's vision which is to enrich the experience for all Haleians using the facility and ensure that the new science building is not just a standard teaching block, rather creating inspiring spaces that will allow a continuous hive of activity throughout the year, offering alternative and innovative learning principles, curriculum, and research that promotes Hale's science pedagogy.

1.1 PURPOSE AND CONTEXT

This report has been prepared by KHA as a summary of the design process to date of the proposed science and technology building.

1.2 THE VISION

In response to the key requirements of the brief, the proposed building will:

- Create a strong and distinguished presence on campus that visibly celebrates Hale's leadership in science and engineering
- Integrate comfortably into its setting, enhancing legibility and amenity of circulation and landscape
- Offer a flexible, collaborative and fully activated learning environment that can accommodate state-of-the-art technology and evolving pedagogical practices
- Allow for cost-effective construction and incorporation of 'whole-of-life' design principles, with a simple and efficient modular structure

1.3 PROJECT DETAILS

The proposed development will include the following key elements:

- Engineering and AIT/STEM workshops
- General science and biology classrooms and prep lab
- Physics classrooms and prep lab
- Chemistry classrooms and prep lab
- House hubs and house hub offices
- General amenity for staff and students



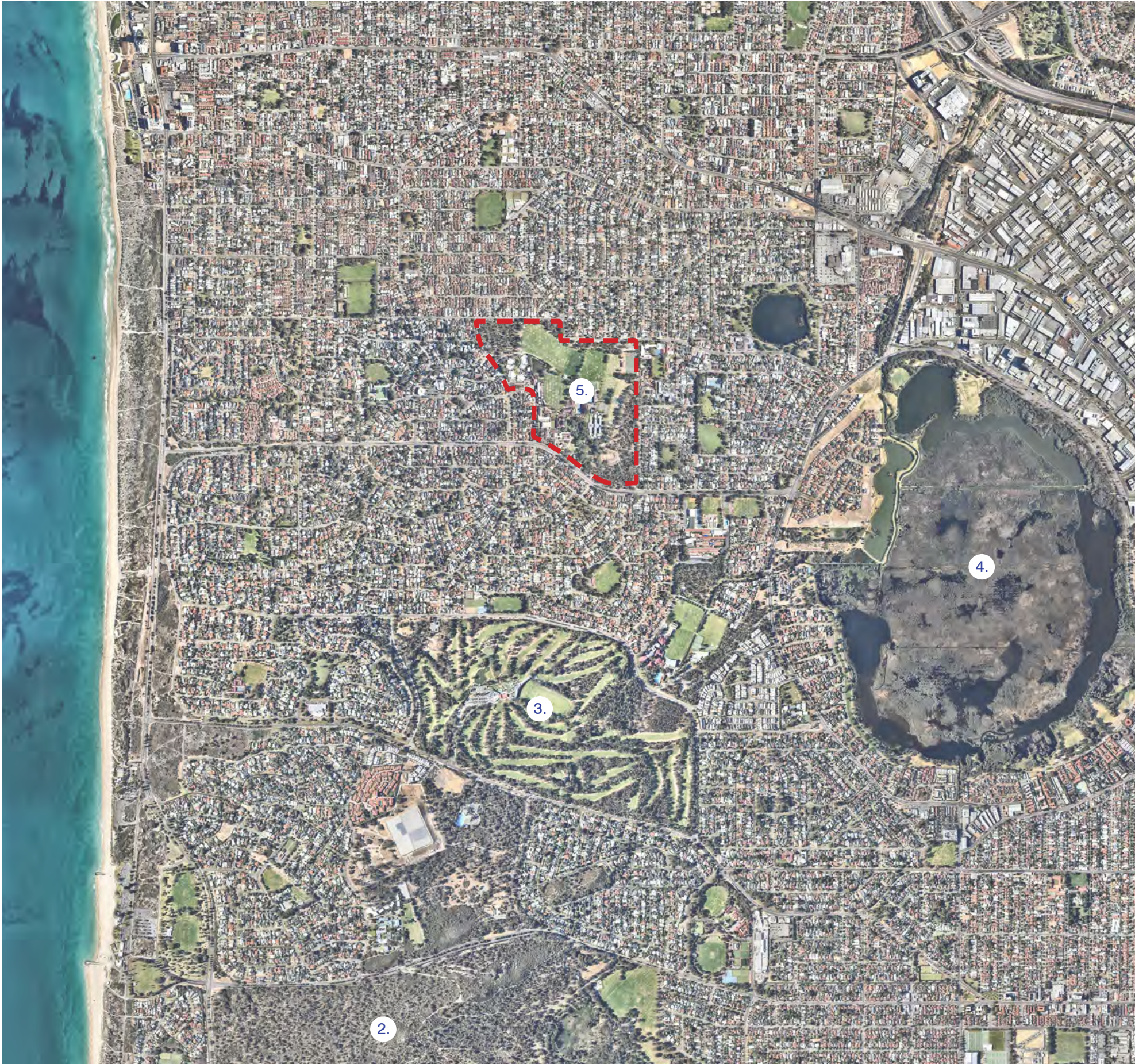
1.4 PROJECT TEAM

CLIENT	HALE SCHOOL
ARCHITECT	KHA
PROJECT MANAGER	TOTAL PROJECT MANAGEMENT
LANDSCAPE ARCHITECT	ASPECT STUDIOS
QUANTITY SURVEYOR	RIDER LEVETT BUCKNALL
STRUCTURAL & CIVIL ENGINEERS	WGA
MECHANICAL	SMW&C
HYDRAULIC ENGINEER	HYDRAULIC DESIGN AUSTRALIA
ELECTRICAL & LIFT ENGINEER	ESC ENGINEERING
FIRE ENGINEER	STRATEGIC FIRE CONSULTING
NCC COMPLIANCE CONSULTANT	RESOLVE GROUP
ACOUSTIC ENGINEER	GABRIELS HEARNE FARRELL
ESD CONSULTANT	FULL CIRCLE DESIGN SERVICES
TOWN PLANNER	PLANNING SOLUTIONS



2 THE SITE

- 2.1 LOCATION AND CONTEXT
- 2.2 EXISTING BUILDING STOCK
- 2.3 SCALE & MASSING
- 2.4 HALE SCHOOL CAMPUS SITE ANALYSIS
- 2.5 PROPOSED SITE
- 2.6 PLANNING FRAMEWORK OVERVIEW
- 2.7 SURROUNDING GREEN SPACE
- 2.8 EXISTING TREE SURVEY
- 2.9 CIRCULATION
- 2.10 ACTIVATION
- 2.11 LANDSCAPE
- 2.12 TOPOGRAPHY
- 2.13 EXISTING MATERIALITY AND SITE CONDITIONS
- 2.14 CANOPY TYPOLOGIES
- 2.15 LOCATION PLAN AND DA SCOPE
- 2.16 HERITAGE CONSIDERATIONS



SATELLITE IMAGE

2.1 LOCATION AND CONTEXT

The Hale School Campus is located in the Perth Metropolitan Area, above the Swan River, in between the Indian Ocean and Herdsman Lake.

- 1. Indian Ocean
- 2. Bold Park
- 3. Wembley Golf Course
- 4. Herdsman Lake
- 5. Hale School Campus



PERTH METROPOLITAN AREA



2.1 LOCATION AND CONTEXT

Hale School's main campus is located on Hale Road in Wembley Downs, approximately 13km north-west from the Perth CBD and 2 kilometres from the coastline.

The site area of Hale School is approximately 48 hectares and is bordered by:

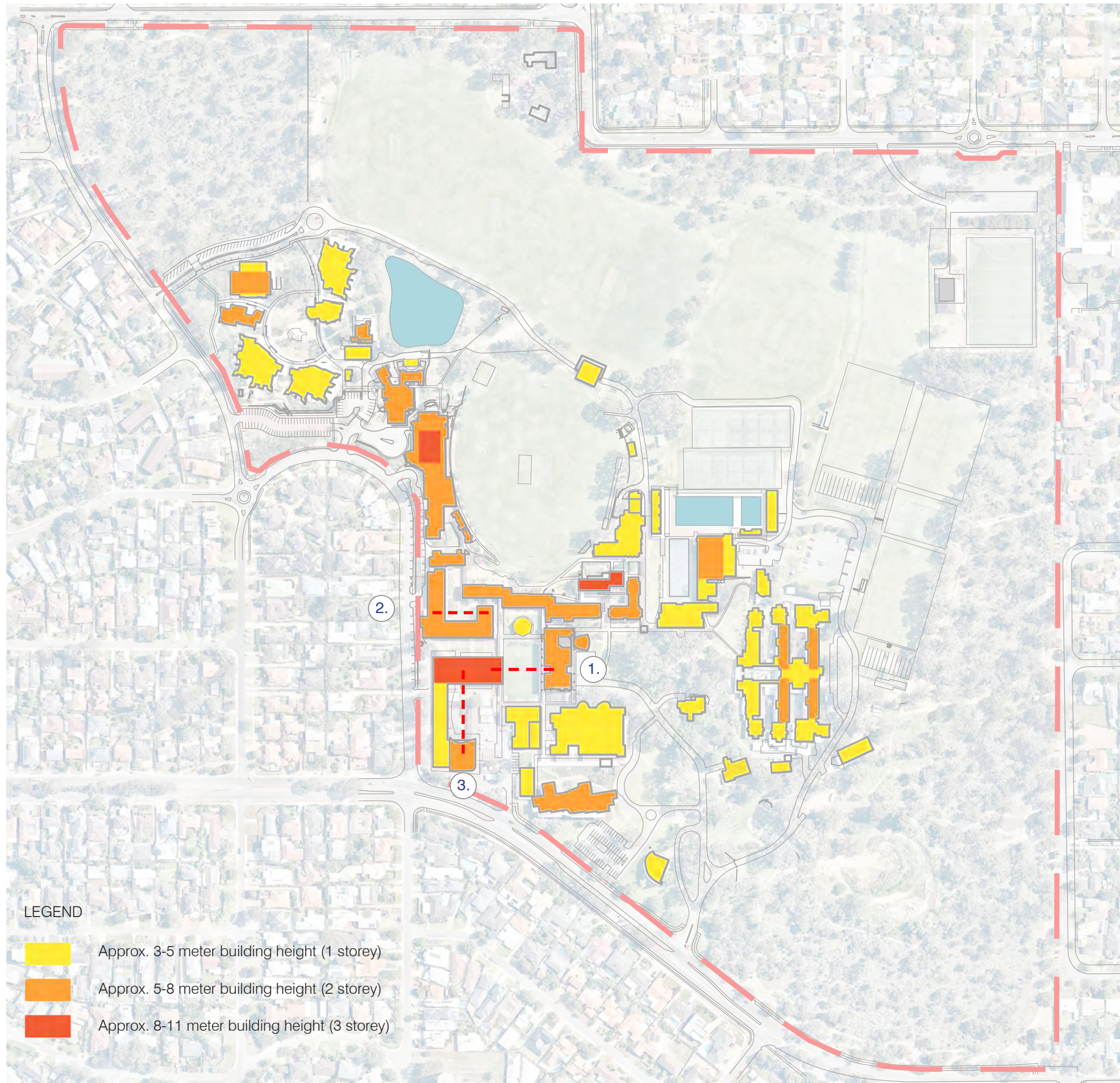
- Hale Road to the south
- Lefroy Street to the east
- Cobb Street and Willimstown Road to the north
- Unwin Avenue, Stockdale Crescent and Glenelg Avenue to the west

In 2022, KHA prepared a masterplan report analysing and identifying suitable site strategies and potential campus projects. The following pages illustrate the findings of this analysis.



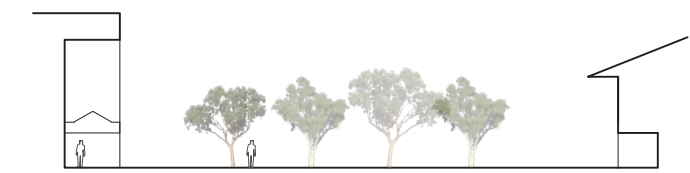
2.2 EXISTING BUILDING STOCK

1. Senior School Main Reception Building
2. Forrest Library
3. Memorial Hall
4. Stow Theatre
5. Dining Hall and Cafeteria
6. F Block
7. Chapel
8. Headmaster Residence
9. Head of Senior School Residence
10. Chaplain Residence
11. Outdoor ED Shed
12. Boarding - Senior House
13. Health Centre
14. Pool plant room
15. Senior Gym
16. Senior Art Building
17. Peter Wright Technology Centre
18. Pool Change rooms
19. N Block
20. S Block
21. Round House
22. Sports Pavilion
23. Morrison Teaching Wing
24. L Block
25. Design & Technology
26. Middle School
27. John Inverarity Music and Drama Centre
28. Boarding - Brine House
29. Art and The Annexe
30. Middle Junior
31. Learning Hub and Upper Junior
32. Lower Junior
33. Junior School Reception
34. Junior School Gym
35. Cobb Street Residence and associated sheds



2.3 SCALE & MASSING

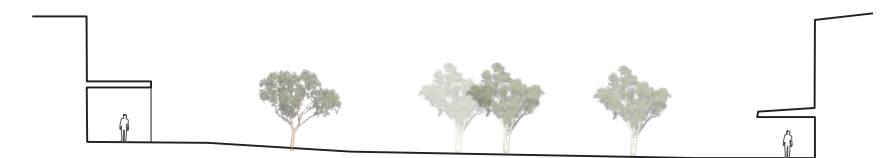
Refer adjacent diagram for the analysis of the existing building heights and scale. The existing buildings are predominantly single and double storey. Many of the successful courtyards and open spaces are bordered by building volumes between 5-11 meter height, while trees provide amenity to these spaces.



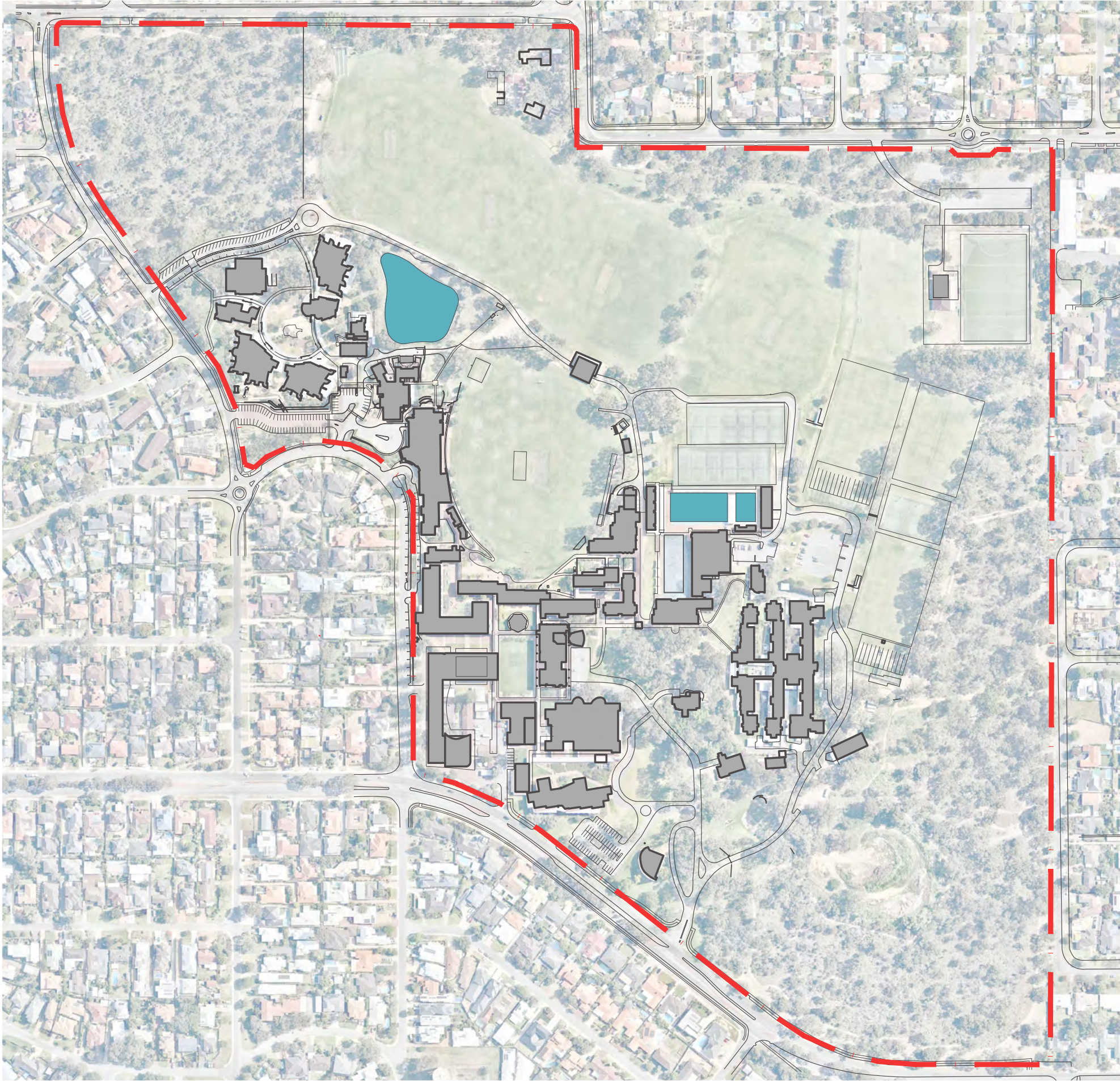
Site profile 1: East-West section Quad



Site profile 2: East-West section Middle School



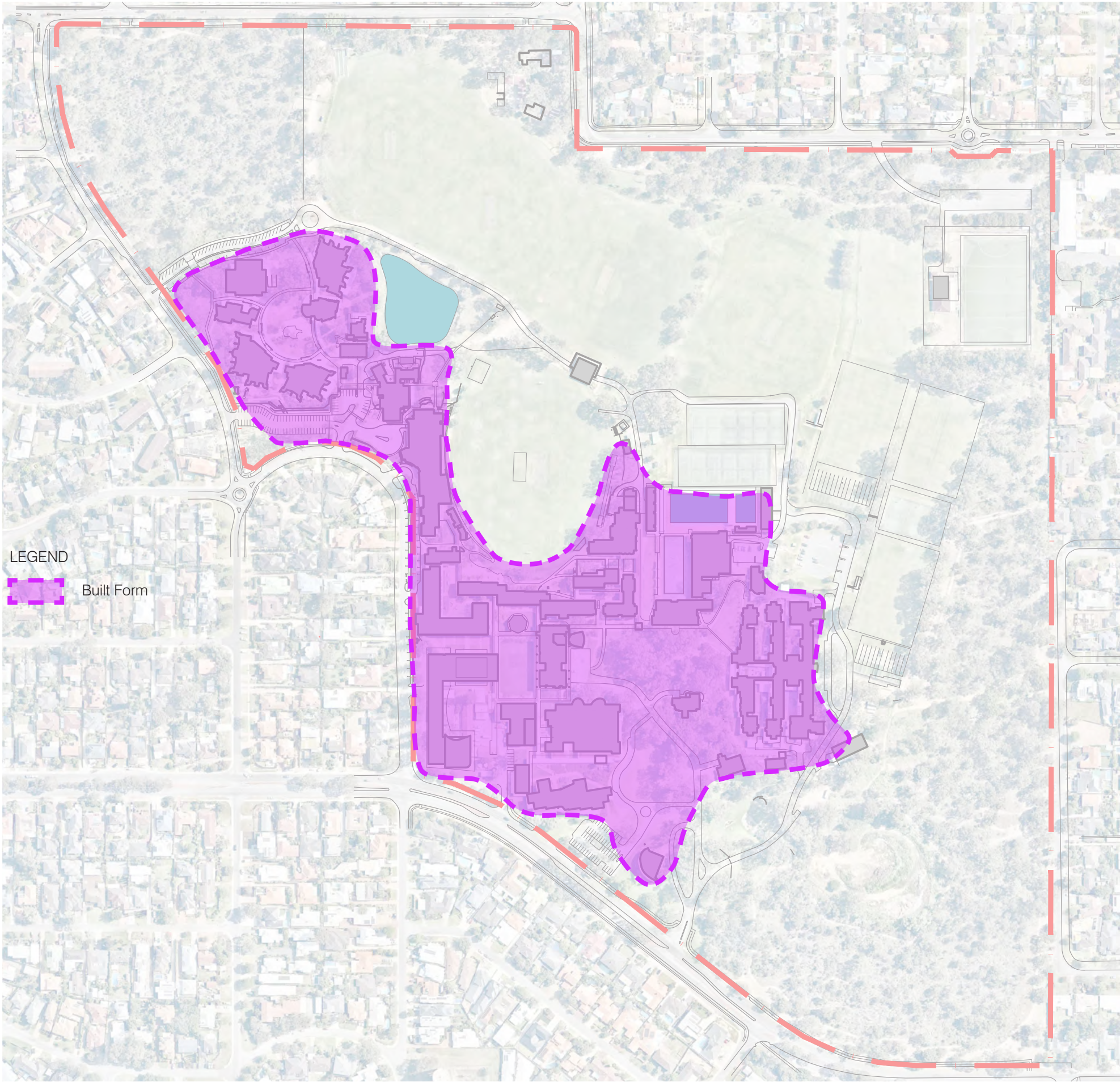
Site profile 3: North-South section Memorial Hall Precinct



2.4 HALE SCHOOL CAMPUS SITE ANALYSIS

The following aspects have been identified through analysing of the existing Hale School Campus Site:

- 1. Current condition (including Memorial Hall Precinct)

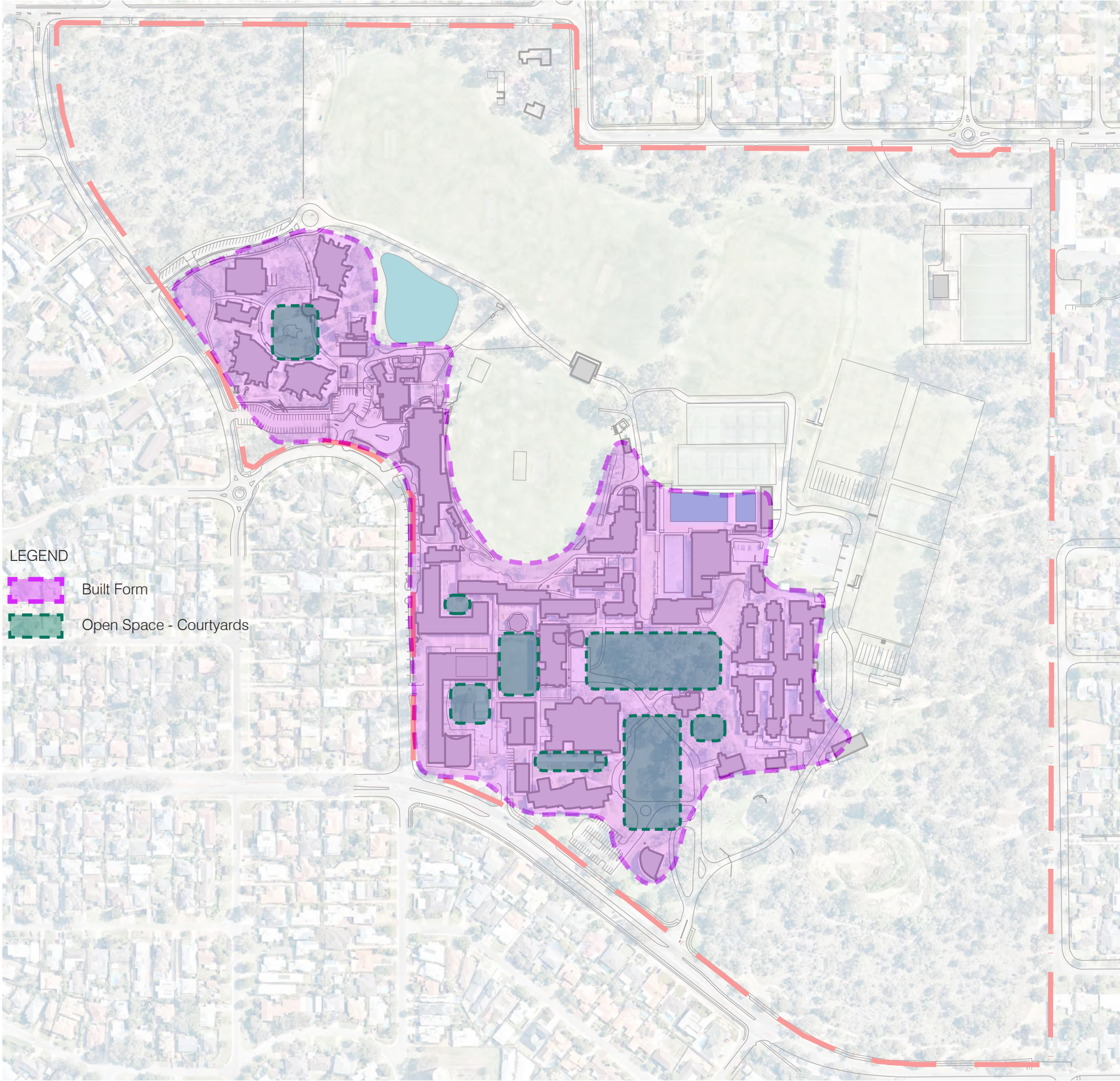


2.4 HALE SCHOOL CAMPUS SITE ANALYSIS

The following aspects have been identified through analysing of the existing Hale School Campus Site:

1. Current condition (including Memorial Hall Precinct)
2. Built form



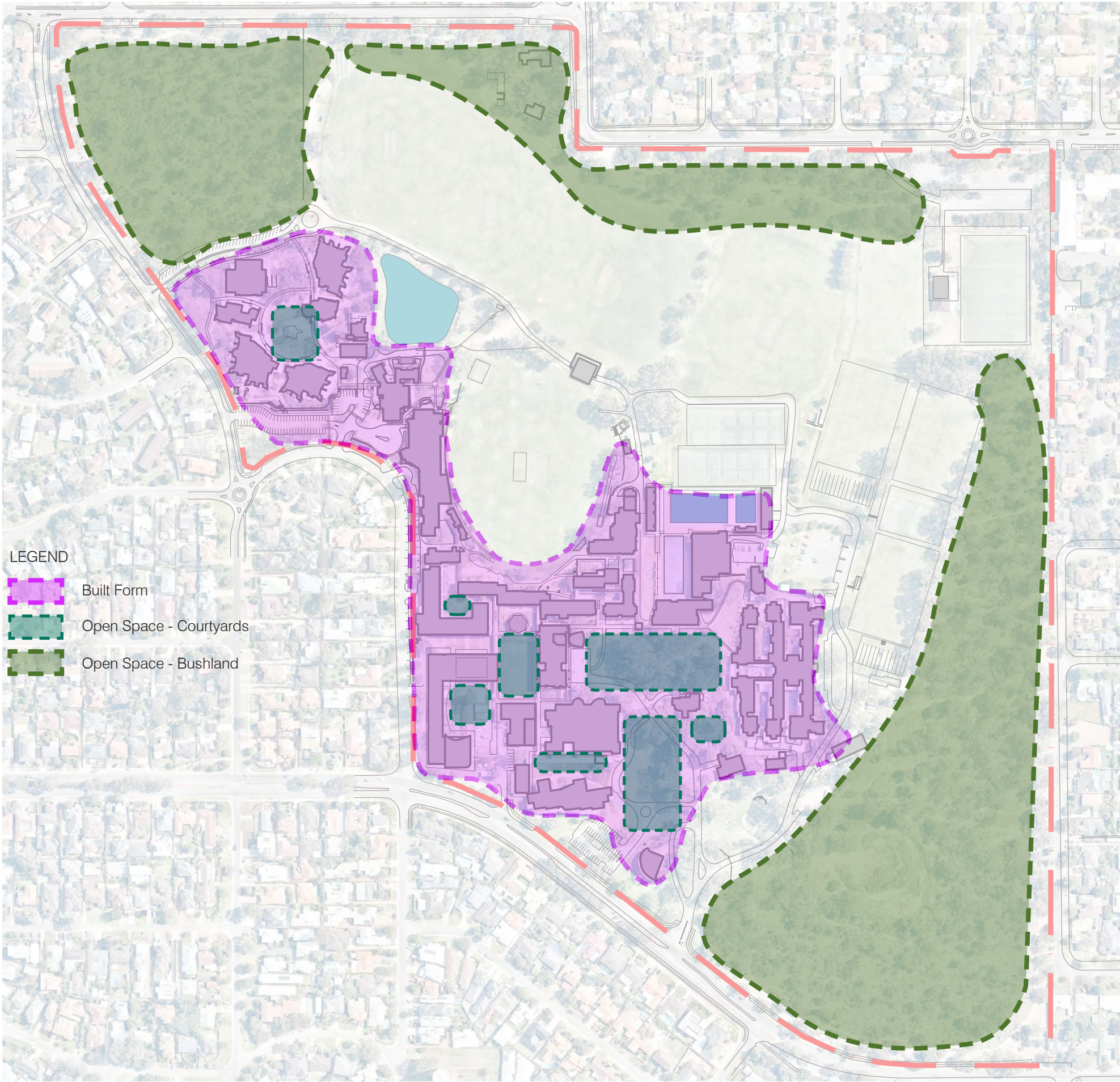


2.4 HALE SCHOOL CAMPUS SITE ANALYSIS

The following aspects have been identified through analysing of the existing Hale School Campus Site:

1. Current condition (including Memorial Hall Precinct)
2. Built form
3. Open space - Main courtyards



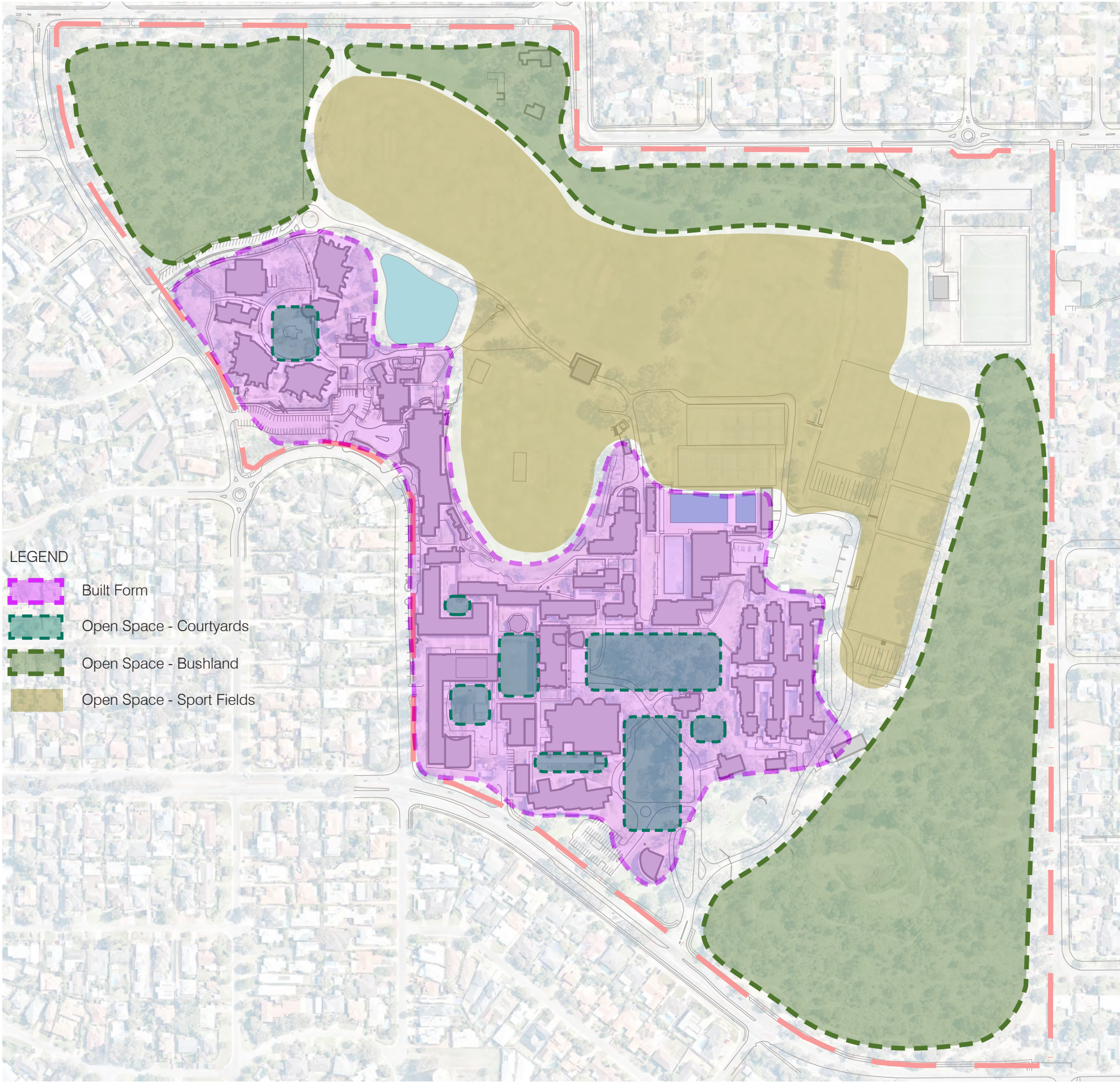


2.4 HALE SCHOOL CAMPUS SITE ANALYSIS

The following aspects have been identified through analysing of the existing Hale School Campus Site:

- 1. Current condition (including Memorial Hall Precinct)
- 2. Built form
- 3. Open space - Main courtyards
- 4. Open space - Bushland



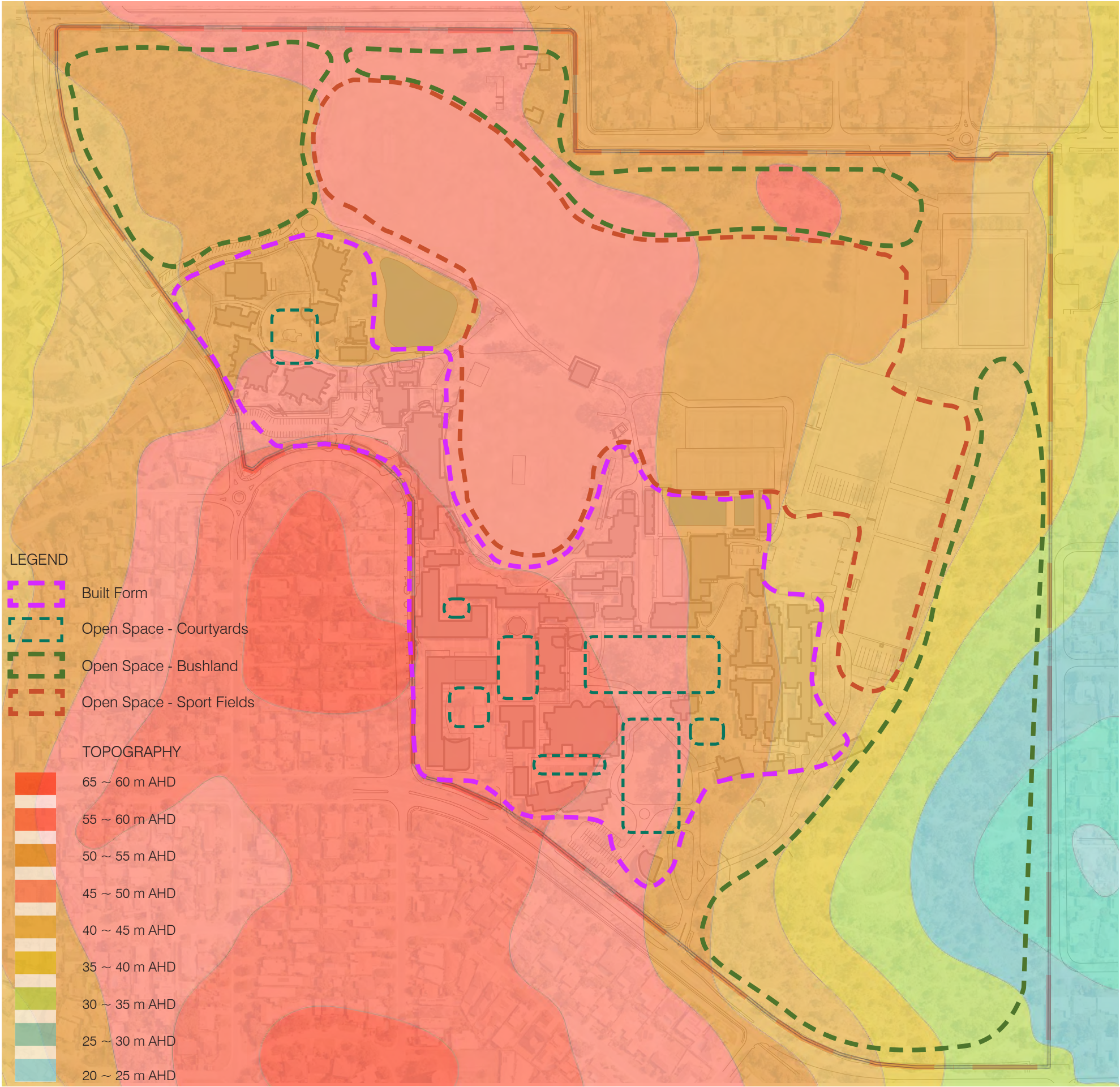


2.4 HALE SCHOOL CAMPUS SITE ANALYSIS

The following aspects have been identified through analysing of the existing Hale School Campus Site:

1. Current condition (including Memorial Hall Precinct)
2. Built form
3. Open space - Main courtyards
4. Open space - Bushland
5. Open space - Sport fields



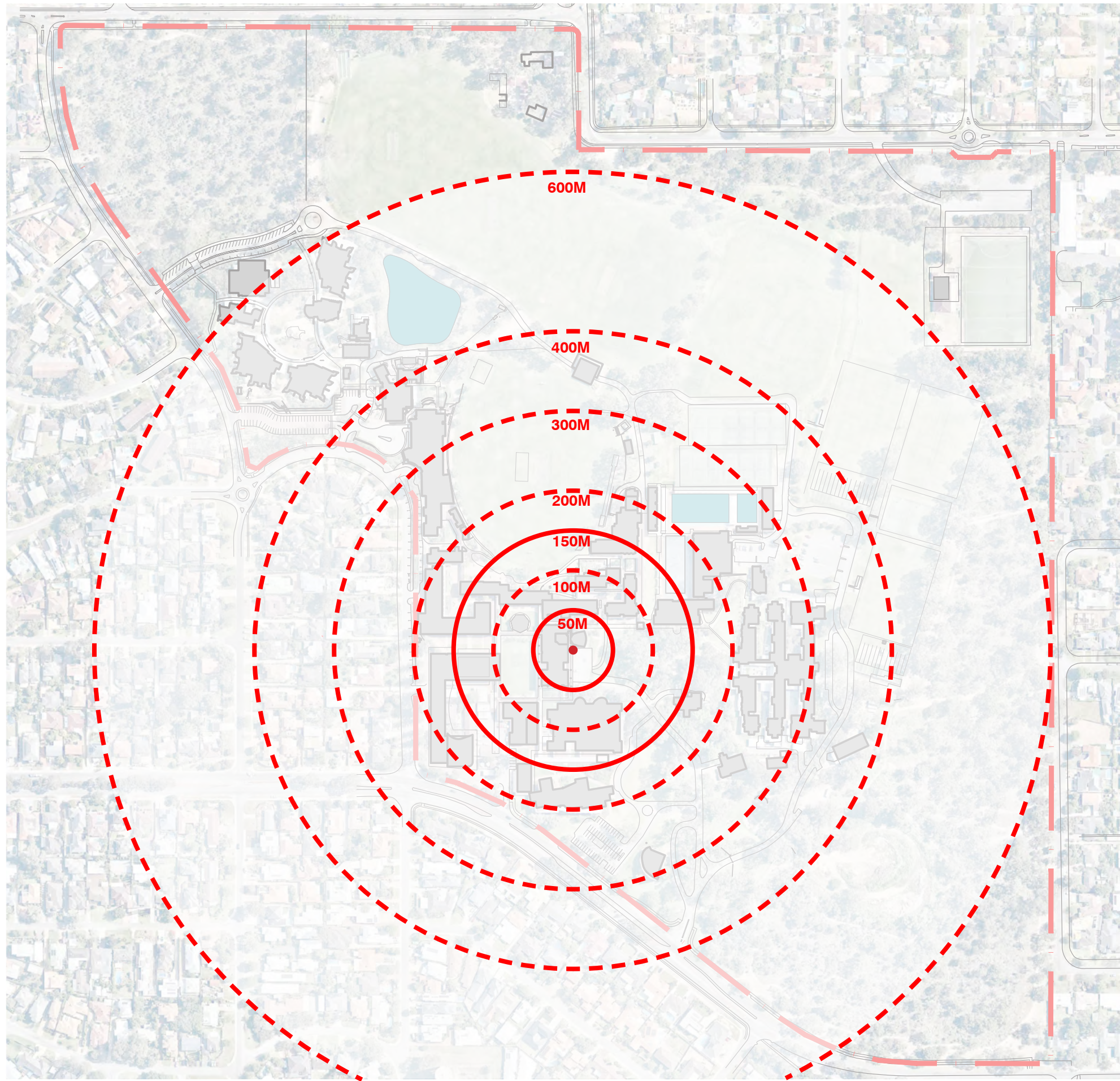


2.4 HALE SCHOOL CAMPUS SITE ANALYSIS

The following aspects have been identified through analysing of the existing Hale School Campus Site:

1. Current condition (including Memorial Hall Precinct)
2. Built form
3. Open space - Courtyards
4. Open space - Bushland
5. Open space - Sport fields
6. Topography



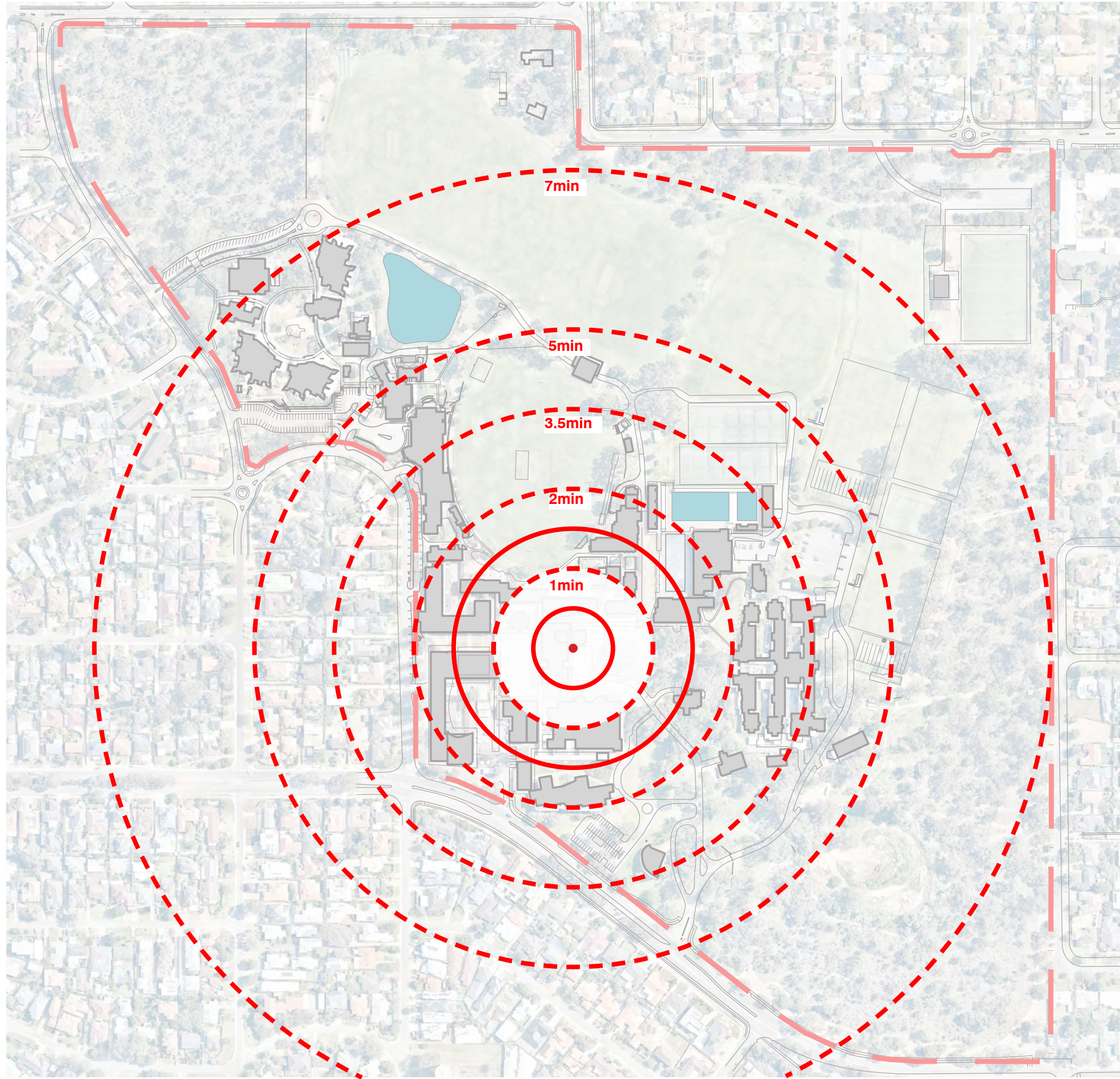


2.4 HALE SCHOOL CAMPUS SITE ANALYSIS

The following aspects have been identified through analysing of the existing Hale School Campus Site:

1. Current condition (including Memorial Hall Precinct)
2. Built form
3. Open space - Courtyards
4. Open space - Bushland
5. Open space - Sport fields
6. Topography
7. Climatic considerations
8. Walking Distances (Radii taken from centre of Administration Building)



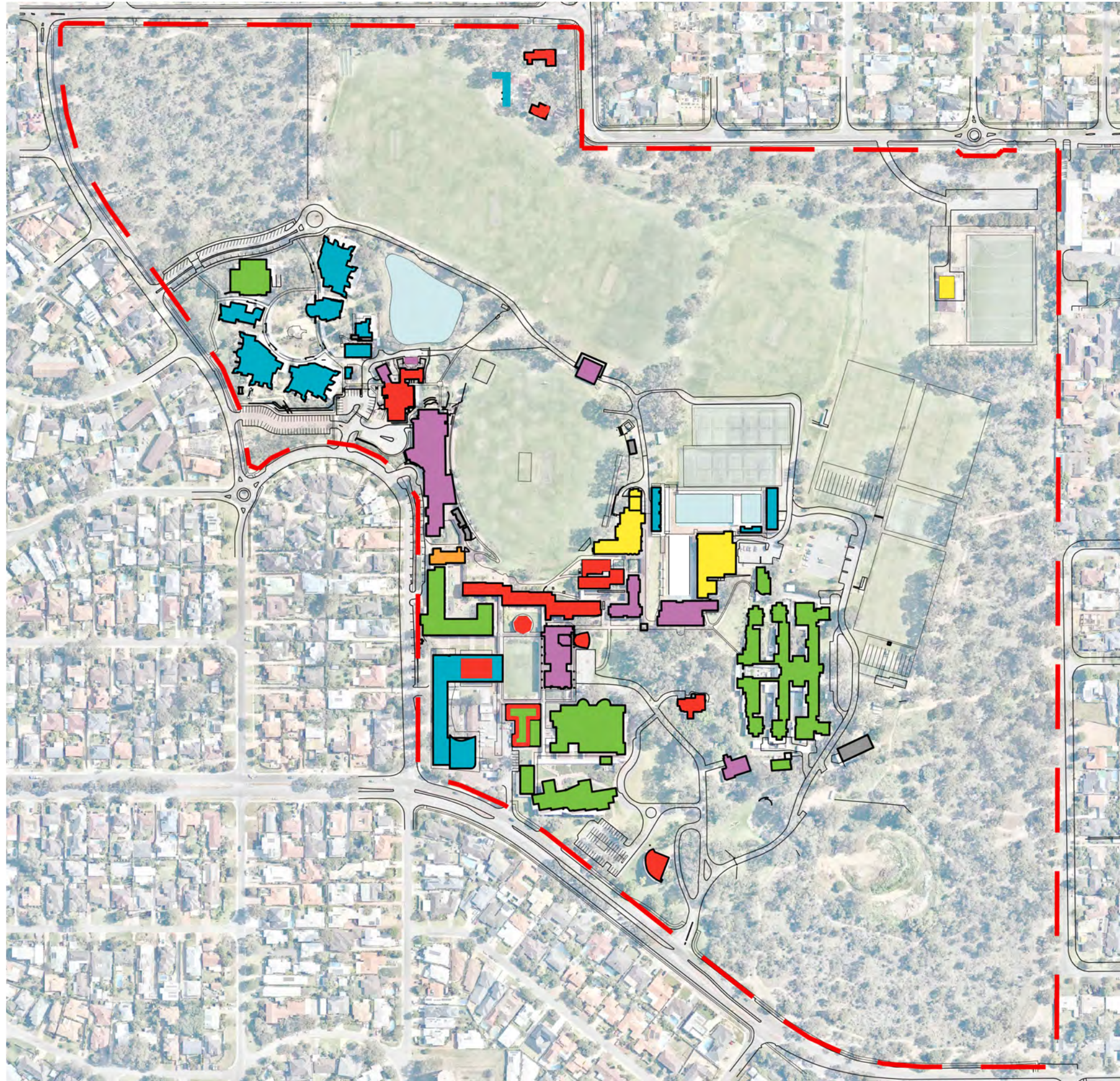


2.4 HALE SCHOOL CAMPUS SITE ANALYSIS

The following aspects have been identified through analysing of the existing Hale School Campus Site:

1. Current condition (including Memorial Hall Precinct)
2. Built form
3. Open space - Courtyards
4. Open space - Bushland
5. Open space - Sport fields
6. Topography
7. Climatic considerations
8. Walking Distances (Radii taken from centre of Administration Building)
9. Approximate Walking Times (Radii taken from centre of Administration Building)





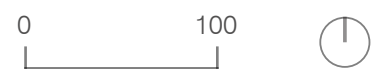
2.4 HALE SCHOOL CAMPUS SITE ANALYSIS

The following aspects have been identified through analysing of the existing Hale School Campus Site:

1. Current condition (including Memorial Hall Precinct)
2. Built form
3. Open space - Courtyards
4. Open space - Bushland
5. Open space - Sport fields
6. Topography
7. Climatic considerations
8. Walking Distances (Radii taken from centre of Administration Building)
9. Approximate Walking Times (Radii taken from centre of Administration Building)
10. Existing Buildings Construction Year

LEGEND

Red	1960 - 1970
Orange	1971 - 1980
Yellow	1981 - 1990
Purple	1991 - 2000
Green	2001 - 2010
Blue	2011 - PRESENT





2.5 PROPOSED SITE

The project site sits between the Peter Wright building and senior boarding houses to the east and west, and bound by the basketball court and senior gymnasium to the north and bush court to the south.

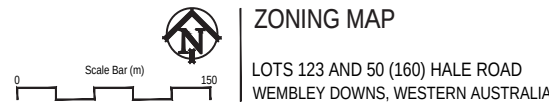
The proposed site has been identified as an opportunity to improve both the physical and visual north-south and east-west connections across the campus, given its close proximity to the administration building, bush court and frontage to the school arrival sequence.

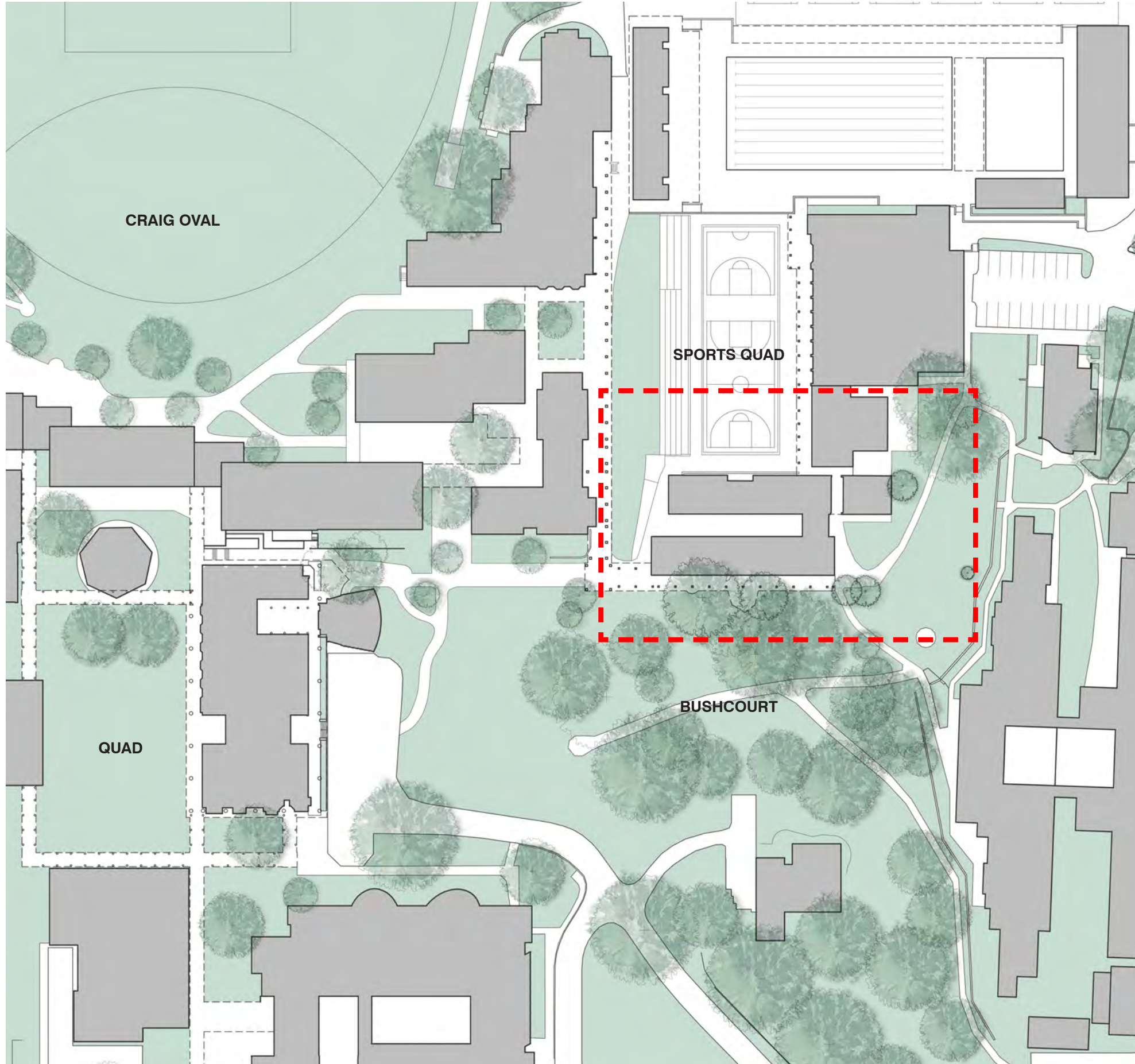
PROPOSED SITE



2.6 PLANNING FRAMEWORK OVERVIEW

- Zoned Private Institution under the City of Stirling's Local Planning Scheme No. 3 (LPS3).
- Proposed use under LPS3 is "Educational Establishment" which is a D use in the Private Institution zone.
- Building height limit under the City's Local Planning Policy – Private Institution Design Guidelines (LPP4.5) is 4 storeys (12m wall height above NGL).



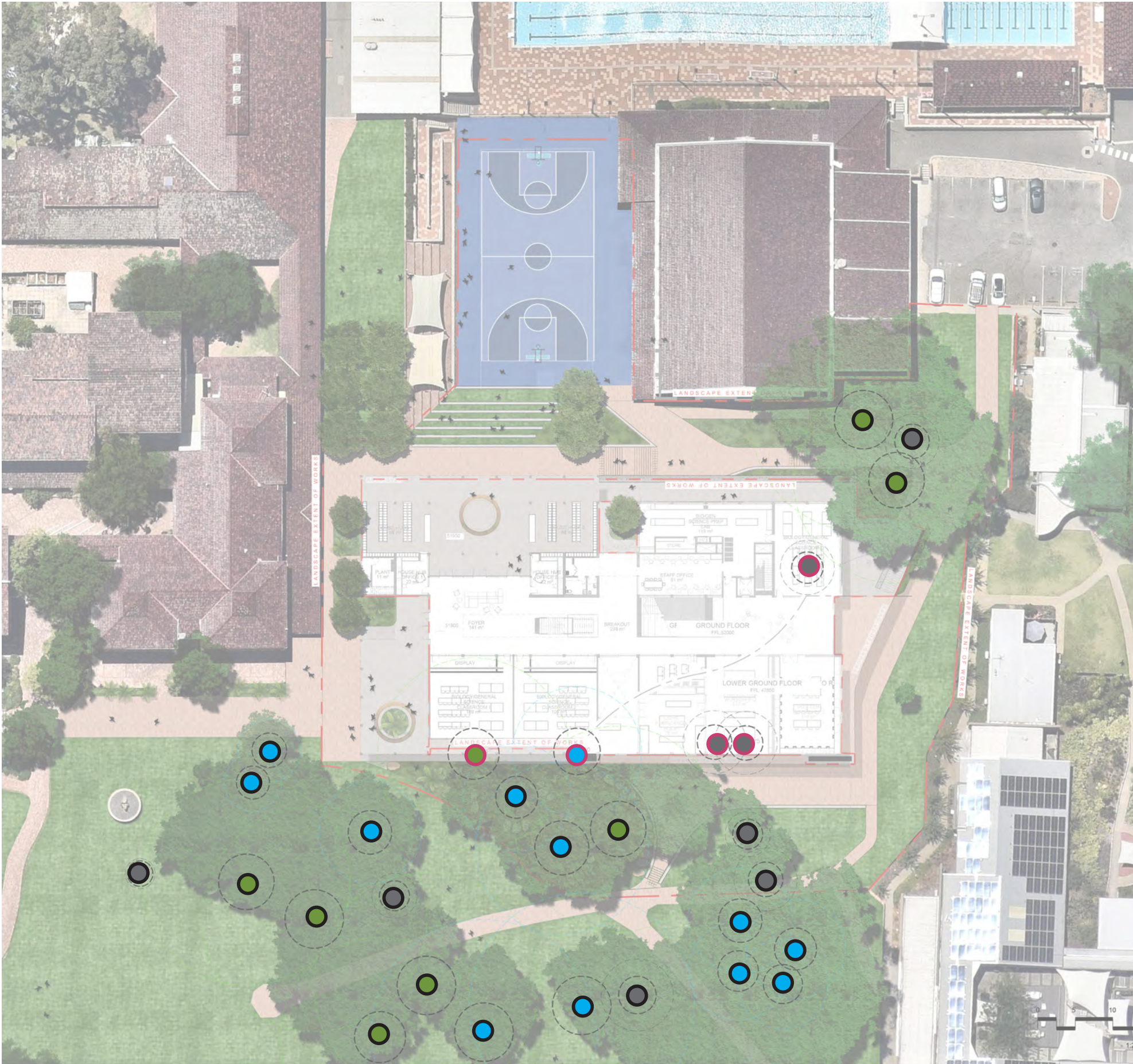


2.7 SURROUNDING GREEN SPACE

The surrounding green space in proximity to the proposed site contains natural bushland, large ovals and an abundance of mature trees. The Bush Court to the south of the site being a key space in the arrival experience to the school's administration building.

To the west of the site are more formal lawns bordered by colonnades connecting the existing buildings. The oval to the north west of the proposed site anchors an important east west landscape connection. The quads serve as focal points for student activities and gatherings, providing dynamic spaces for recreation, study, and social interaction.





ASPECT Studios

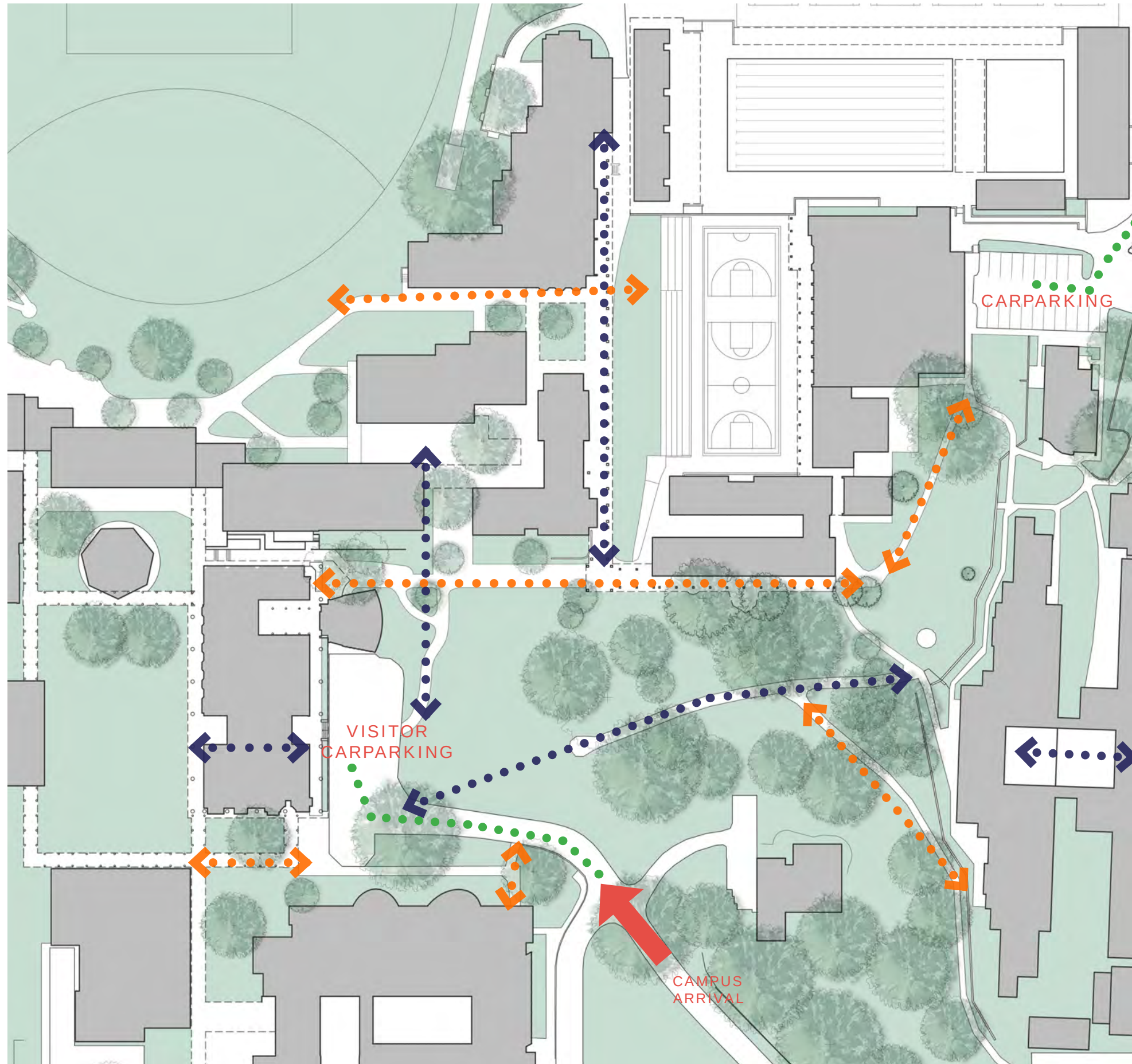
2.8 EXISTING TREE SURVEY

The majority of the existing trees are made up of Jarrah, Tuarts and Melaleuca and Gum trees. The project requires the removal of two tuarts and the bottle brushes to accommodate the footprint of the building ranging from 15-30m in height.

Civica undertook an Arboricultural Impact Assessment (AIA) report encompassing approximately twenty-five (25) tree located within the vicinity of the proposed development works. The survey identified trees worthy of retention and preservation and those that would require removal to facilitate the proposed development. In addition the survey highlighted any potential conflicts between proposed works and those trees worthy of retention and preservation. The subject trees were assessed in relation to their current arboricultural traits and future viability within the landscape.

KEY

	Cat. A:- Trees of high quality and value. Cat. A retention value trees should be retained, planned around and be protected from damage.
	Cat. B:- Trees of moderate quality and value Cat. B retention value trees should be retained if possible
	Cat. C:- Trees of low quality and value Cat. C retention value trees will not be retained where they impose a significant constraint on development.
	Tree removal required



2.9 CIRCULATION

The site is influenced by key movement desire-lines traversing the Bush Court in an east-west direction. It is the gateway to north-eastern zone of the campus with its sporting facilities and potential for future growth.

The location can become a significant circulation node and a hub of activity for the school as a whole.

LEGEND

-  ENTRY TO SITE
-  PRIMARY CAMPUS PEDESTRIAN CIRCULATION
-  SECONDARY CAMPUS PEDESTRIAN CIRCULATION
-  CAMPUS VEHICLE CIRCULATION





2.10 ACTIVATION

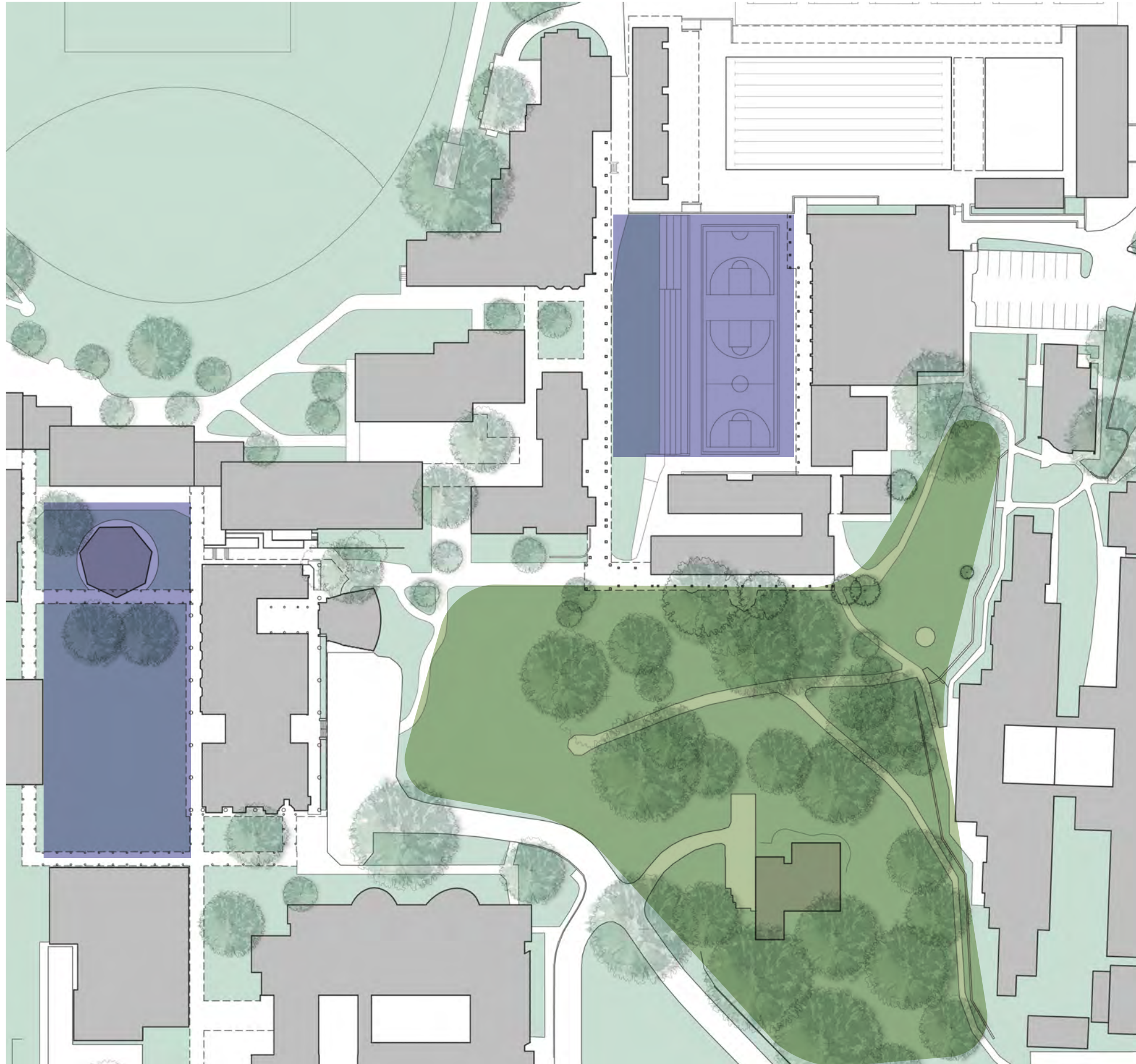
The site is predominantly visible from the school arrival sequence, with frontages to Administration, the natural landscape of the Bush Court to the south and the more structured basketball court to the north. The site presents opportunities for activation to these frontages through the placement of program and building form.

LEGEND

--- PRINCIPAL ELEVATION

← PROPOSED ACTIVATION





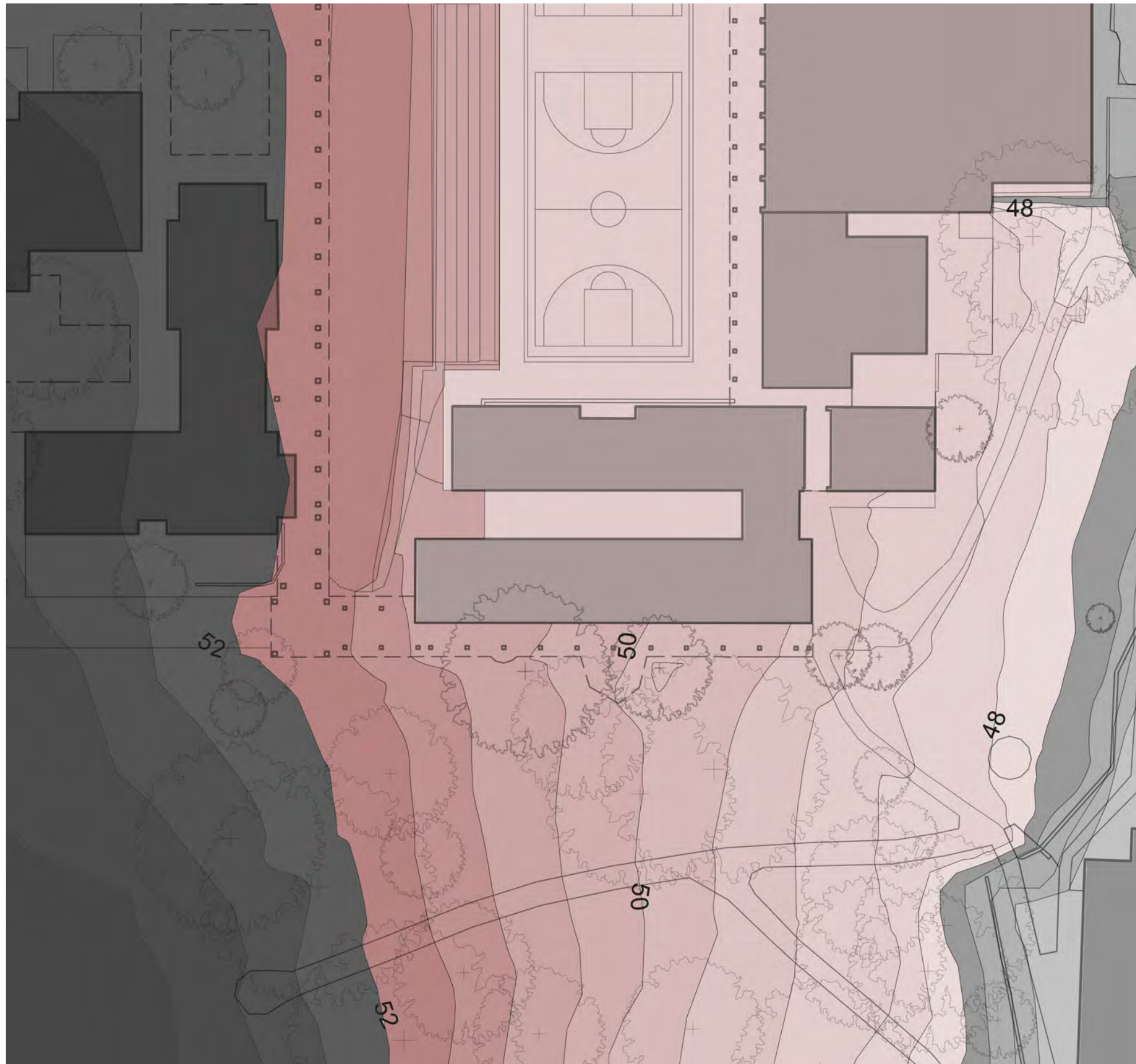
2.11 LANDSCAPE

The Bush Court to the south of the site is a highly valued natural landscape with mature trees of impressive scale. The basketball courts to the north offer potential for a more structured active landscape space which will benefit from more definition, amenity and shade.

LEGEND

- STRUCTURED COURTYARD
- NATURAL LANDSCAPE



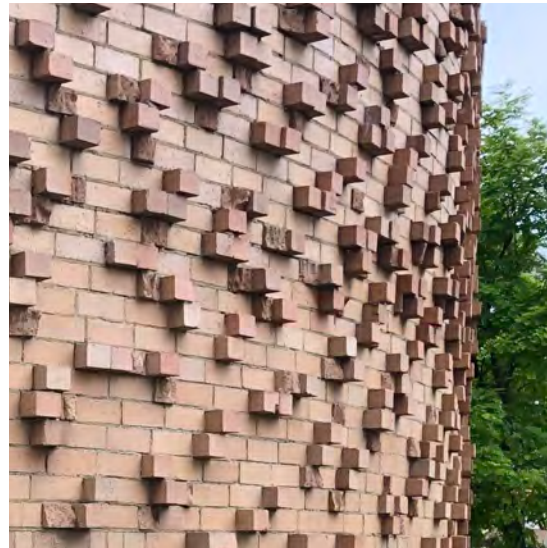
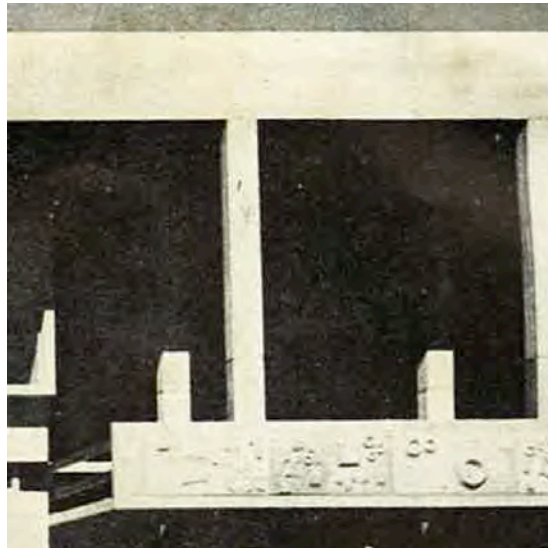


2.12 TOPOGRAPHY

The site is an east-facing slope, with a change in level of approximately 4.5m, suggesting the possibility of a lower-ground floor with access and daylight in the eastern portion of the site.

LEGEND

- 52.0M - POTENTIAL GROUND FLOOR
- 47.65M - POTENTIAL LOWER GROUND FLOOR

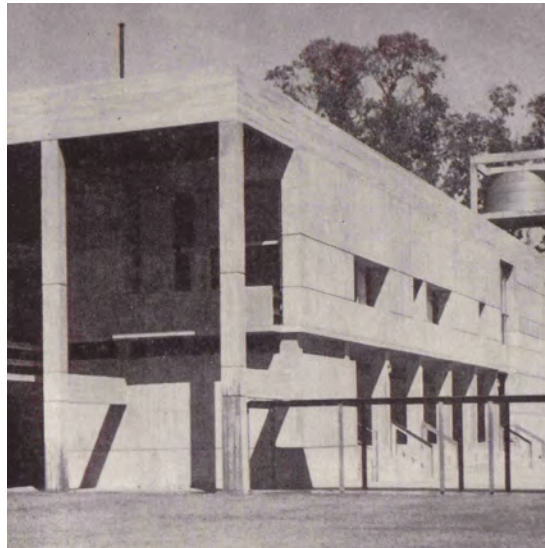


2.13 EXISTING MATERIALITY

The Hale School Campus celebrates a diverse and rich architectural history with significant buildings such as Memorial Hall with its beton brute concrete finish and the unique brickwork of the Chapel of St Mark.

The campus is surrounded by large mature trees, spacious ovals and natural bushland. The primary ordering devices of the campus, the courtyard and the colonnade, are cues which will be crucial in positioning and arranging the built form. This provides a continuity of the spatial experience of the campus into the new development.





Transformation of canopies adjacent Memorial Hall over time from lightweight structures to more solid masonry type structures

2.14 CANOPY TYPOLOGIES

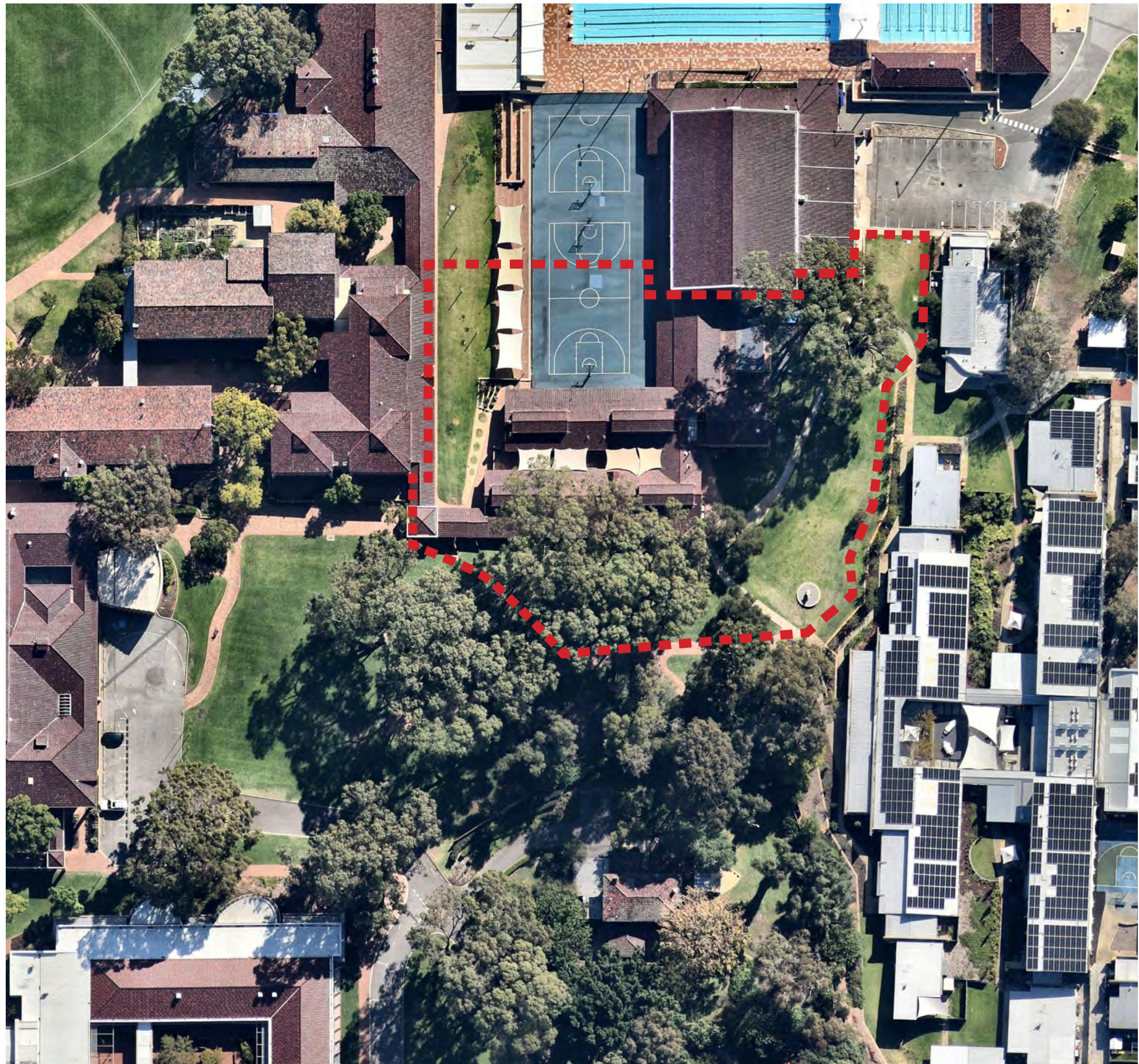
The Hale School Campus is characterised by the numerous canopies that form walkways and covered spaces throughout. Current existing canopies on the Campus are varied in typology. Adjacent images show some of the current canopies, including imminent future canopies to the Memorial Hall Precinct. There appears to be no defined typology for the canopies across the Campus. Historical and more recent canopy structures include both lightweight and more solid masonry structures.



Lightweight canopies typology



Examples of current and future solid masonry canopy typology



2.15 LOCATION PLAN AND DA SCOPE

The project site sits between the Peter Wright building and senior boarding houses to the east and west, and bound by the basketball court and bush court to the north and south. The current Senior Arts building and gymnasium extension will be demolished to make way for the proposed development.

The proposed development will include the following key elements:

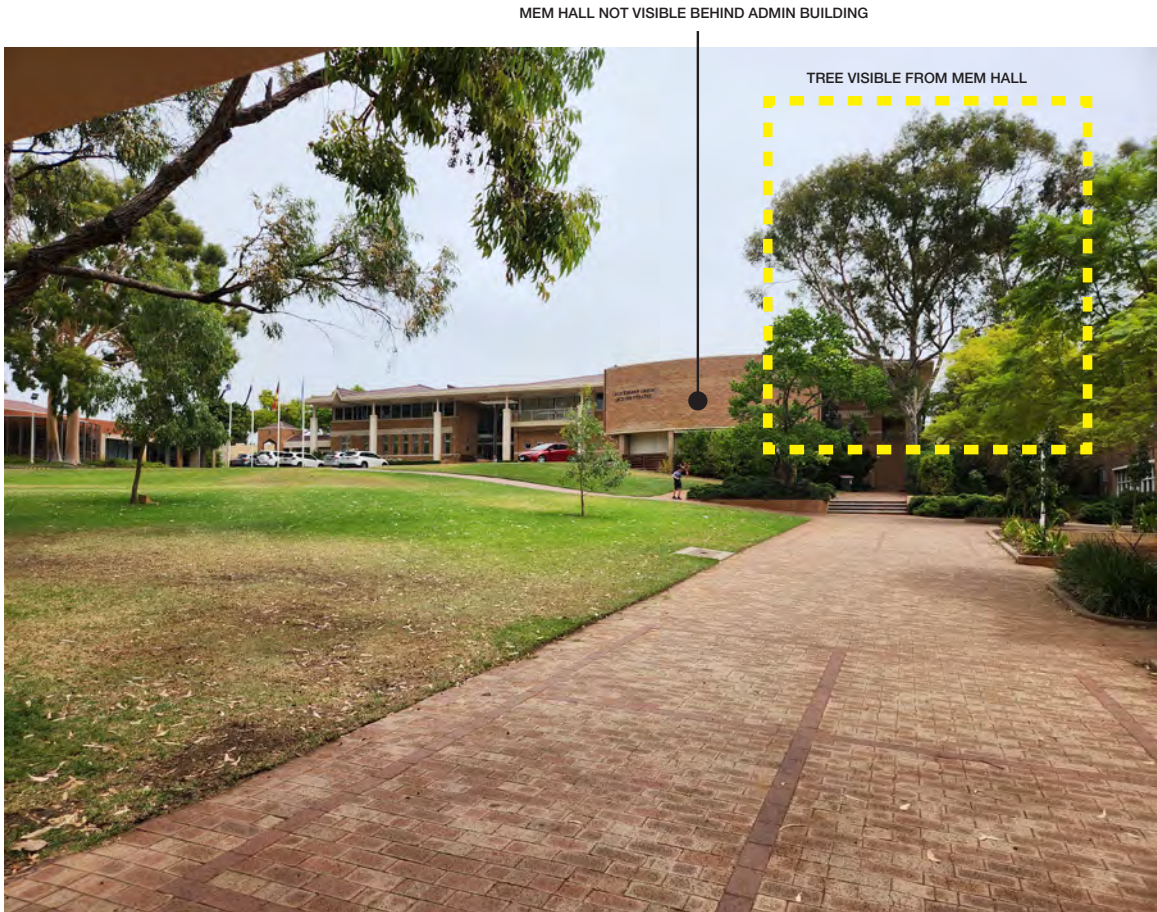
- Engineering and AIT/STEM workshops
- General science and biology classrooms and prep lab
- Physics classrooms and prep lab
- Chemistry classrooms and prep lab
- House hubs and house hub offices
- General amenity for staff and students to gather

LEGEND

■ DA SCOPE



VIEW TO NEW SCIENCE LOCATION FROM MEM HALL BALCONY



VIEW TO MEM HALL FROM NEW SCIENCE LOCATION

2.16 HERITAGE CONSIDERATIONS

Hale School's Memorial Hall was constructed in 1960-61 and is of historic value as the first Brutalist style building constructed in Australia. It makes a significant contribution to the evolution of Western Australian contemporary architecture, and as such, the potential for Memorial Hall to be added to the State Heritage Register list has been raised.

The location of the new science building is approximately 140m to the east of Memorial Hall. Views to and from the site are obstructed by existing buildings and significant vegetation. As a result the Department of Lands and Heritage (DPLH) have advised a Heritage Impact Study is not required as part of this application. Please refer to views located on this page.



3 DESIGN RESPONSE

- 3.1 KEY DESIGN PRINCIPLES
- 3.2 THE BUILDING IN CONTEXT
- 3.3 SITES AND 'SCIENCE ON DISPLAY'
- 3.4 LANDSCAPING
- 3.5 SUSTAINABILITY AND WHOLE LIFE PRINCIPLES
- 3.6 DEPARTMENT PLANS
- 3.7 MATERIAL PALETTE
- 3.8 CIRCULATION LEGIBILITY AND UNIVERSAL ACCESS
- 3.9 ABPTED PRINCIPLES
- 3.10 TRAFFIC AND WASTE MANAGEMENT
- 3.11 ART STRATEGY



3.1 KEY DESIGN PRINCIPLES

The proposed building is carefully integrated into the campus masterplan, respecting the scale and grain of the existing development and the valuable landscape of the Bush Court. The building gives structure to existing circulation patterns and provides a new and generous gathering space in the north-facing verandah.

The new science building is articulated as two volumes. A light and transparent volume, prominently visible from the school administration and arrival, is the public face of science at Hale. Entrance is signified with a double-height verandah leading into the flexible foyer space from where the teaching functions and the activity of the engineering workshop are on display.

Classrooms and labs are arranged around a central breakout space that provides opportunities for informal learning and casual encounters between students and the staff who are deliberately dispersed throughout the building. Student circulation is fully surveilled and corridors have been entirely avoided within student areas.

The house hubs are located on the generous north-facing verandah which opens to an upgraded landscape courtyard that retains one basketball court. This will become a significant hub of activity and an important point of orientation for the campus as a whole.

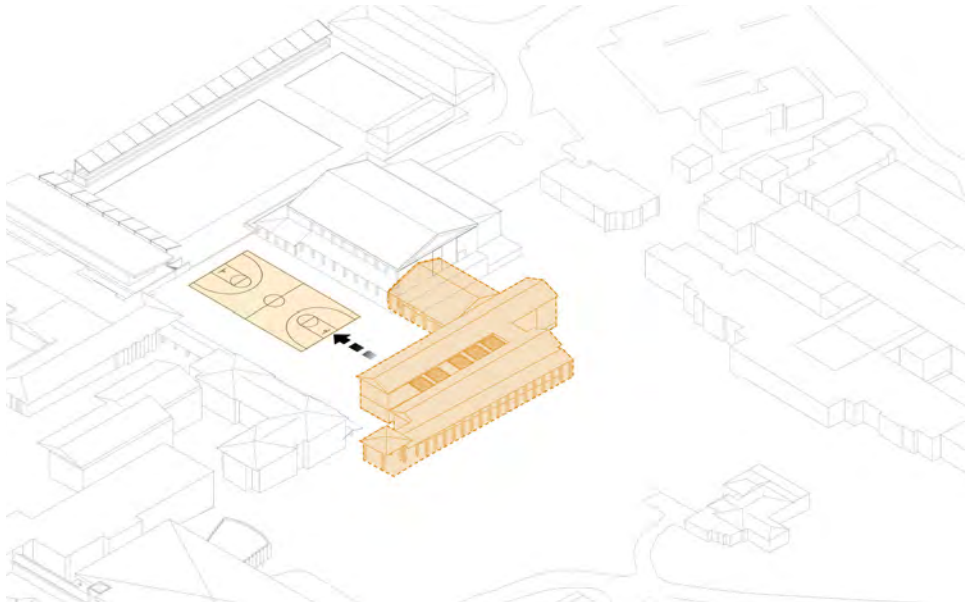
The building takes advantage of the sloping topography with the engineering workshops at the lower-ground level opening onto the bush-court where a shady space for making, learning and exhibition is created around the existing mature trees. Best practice principles of passive environmental design have been followed in this design concept to minimize the energy required to operate the building.

The proposed material palette of compacted limestone and white concrete invokes a strong material connection to the materiality of the evolving campus.

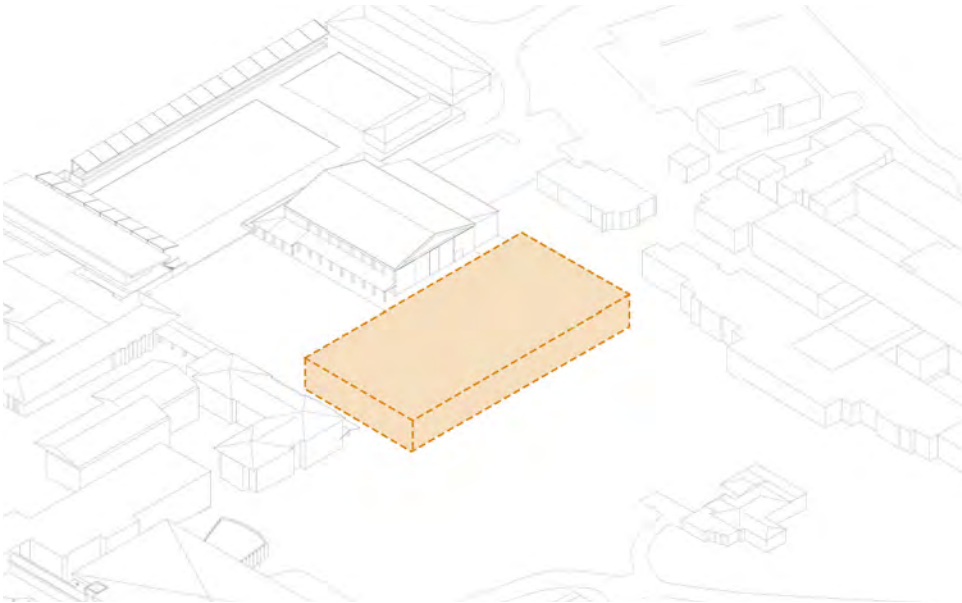
3.1 KEY DESIGN PRINCIPLES



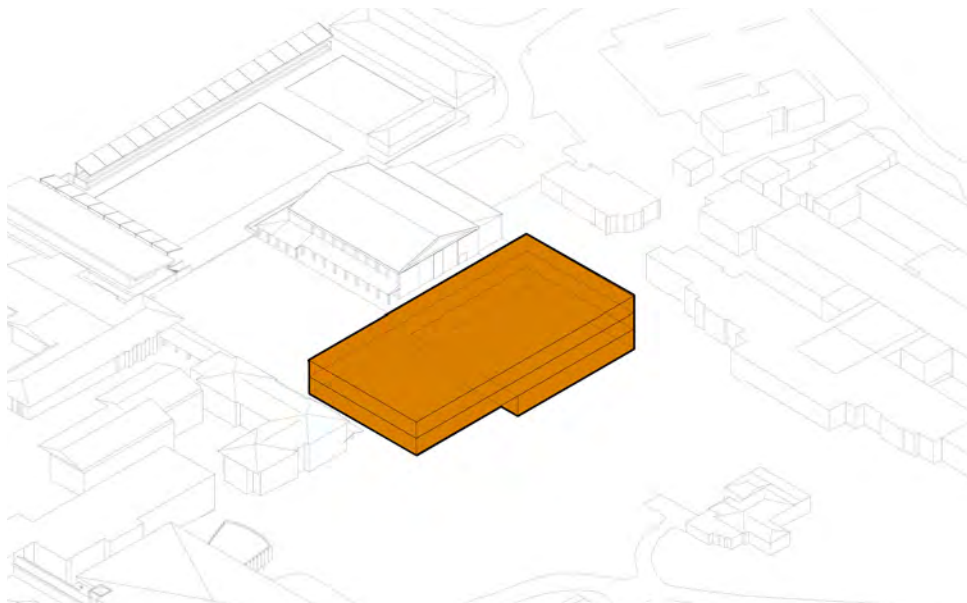
EXISTING SITUATION



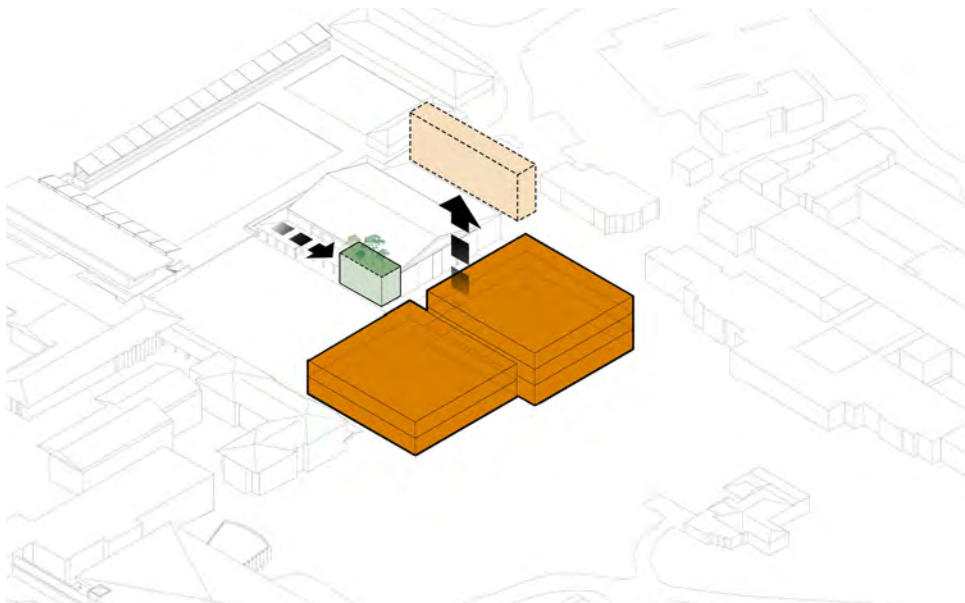
DEMOLITION
Arts building, rowing annex and one half basketball court removed



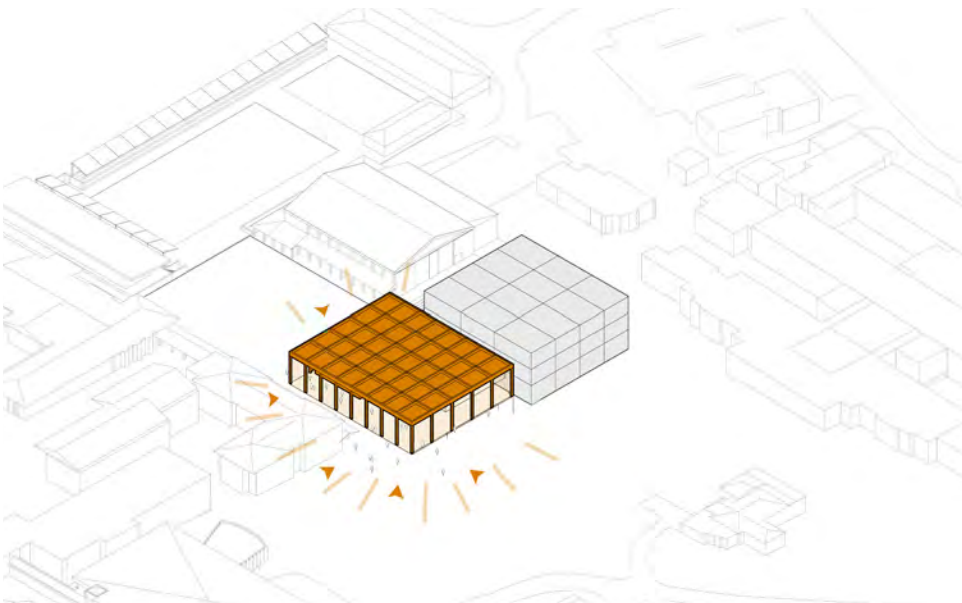
BRIEFED AREA
Programmed spaces provided in an efficient rectangular footprint



TERRAIN
Floorplates follow topography, creating opportunity for spaces at lower-ground level opening to Bush Court

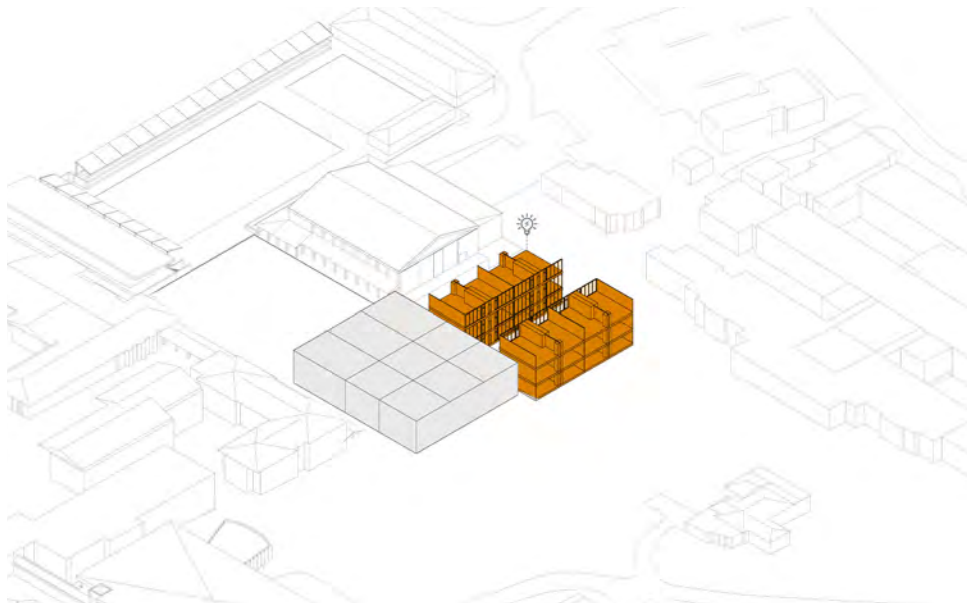


SPLIT VOLUME
Reduces the visual mass of the building, creates permeability and connection of circulation spaces to landscape

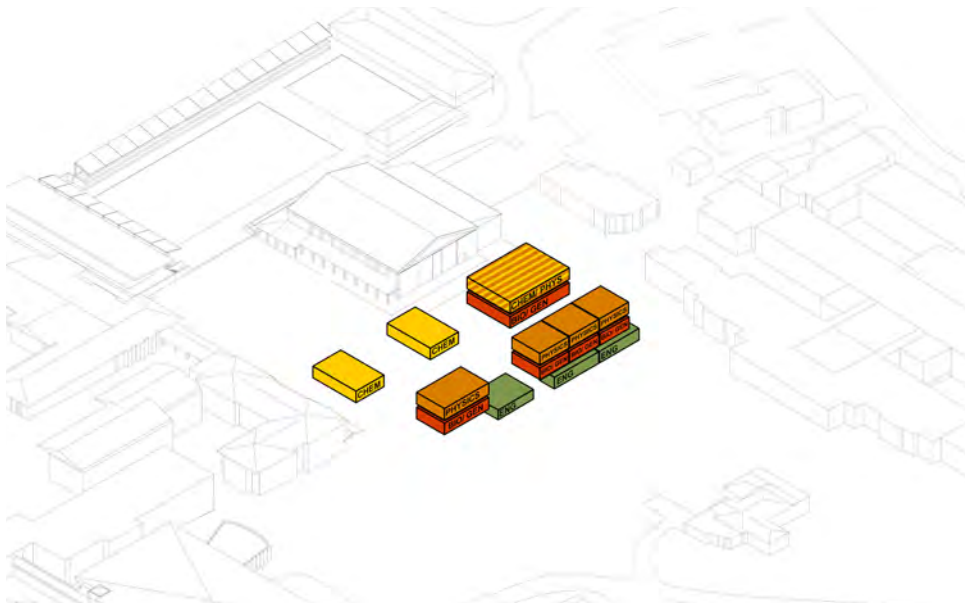


PAVILION
Generous covered areas, open, welcoming and highly active

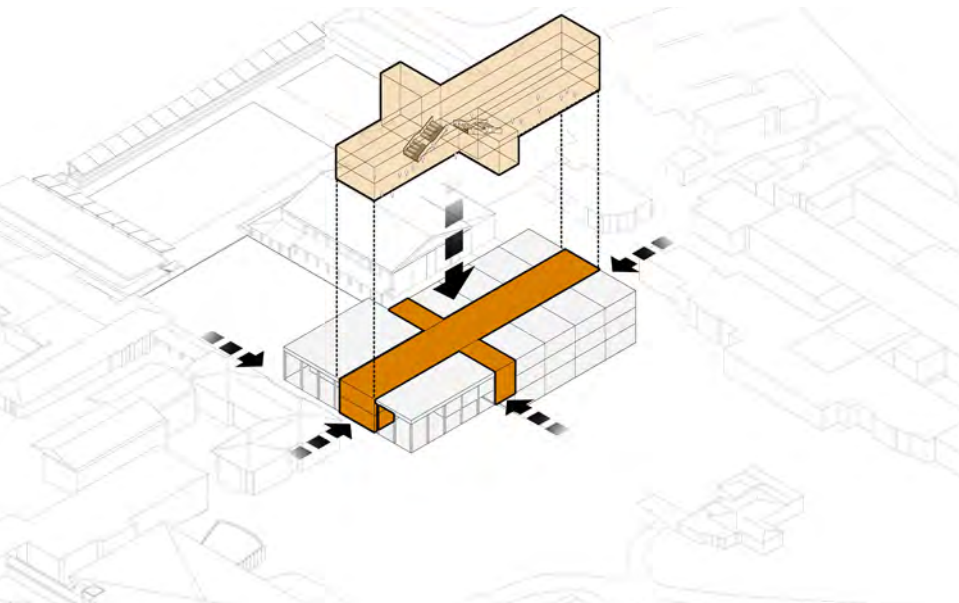
3.1 KEY DESIGN PRINCIPLES



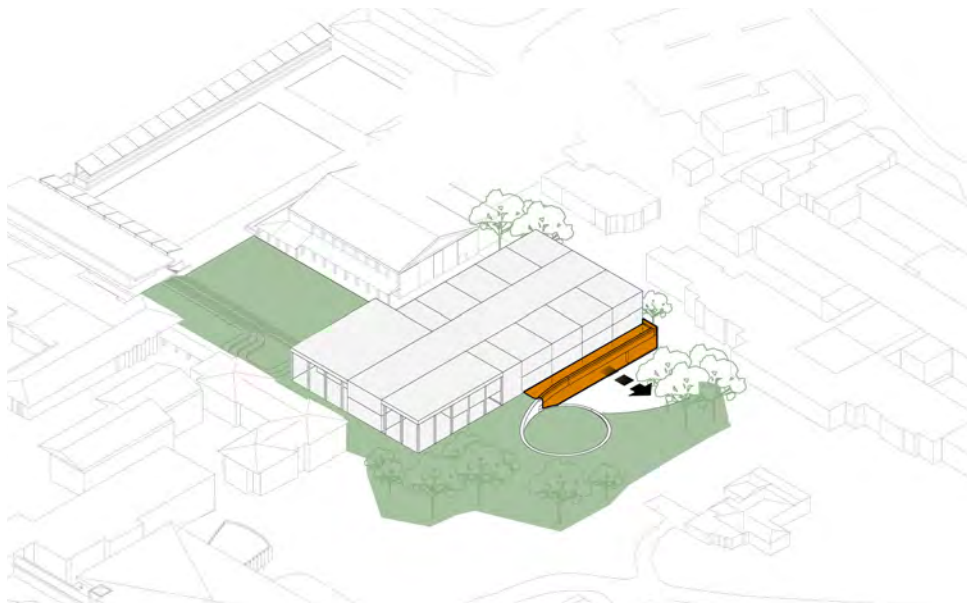
CLASSROOMS AND LABS
Most classrooms and labs consolidated in eastern volume for efficient circulation and servicing



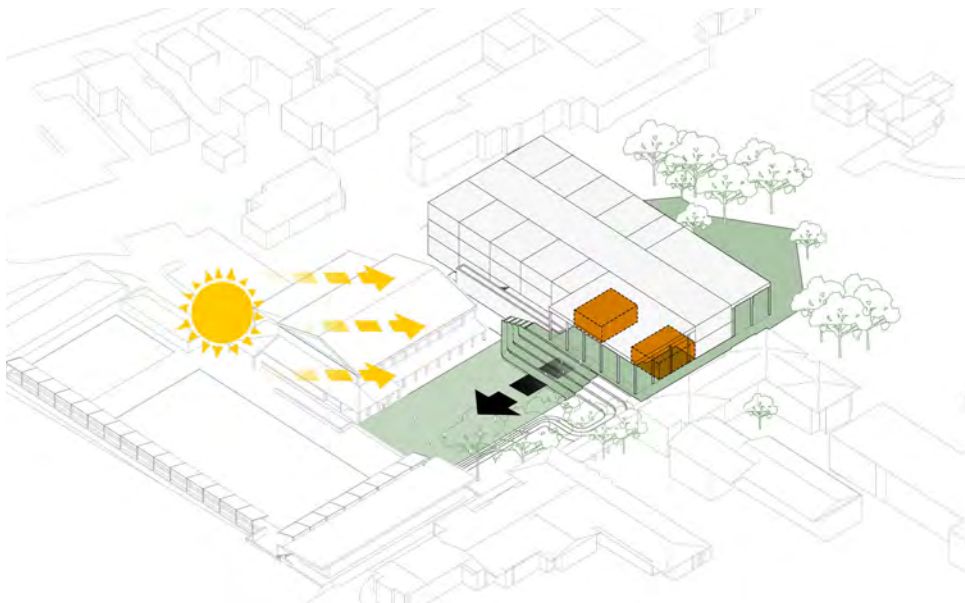
ZONING
Physics & Chemistry co-located at level 1, Biology & General Science at ground and Engineering at lower ground, connected by direct, legible vertical circulation.



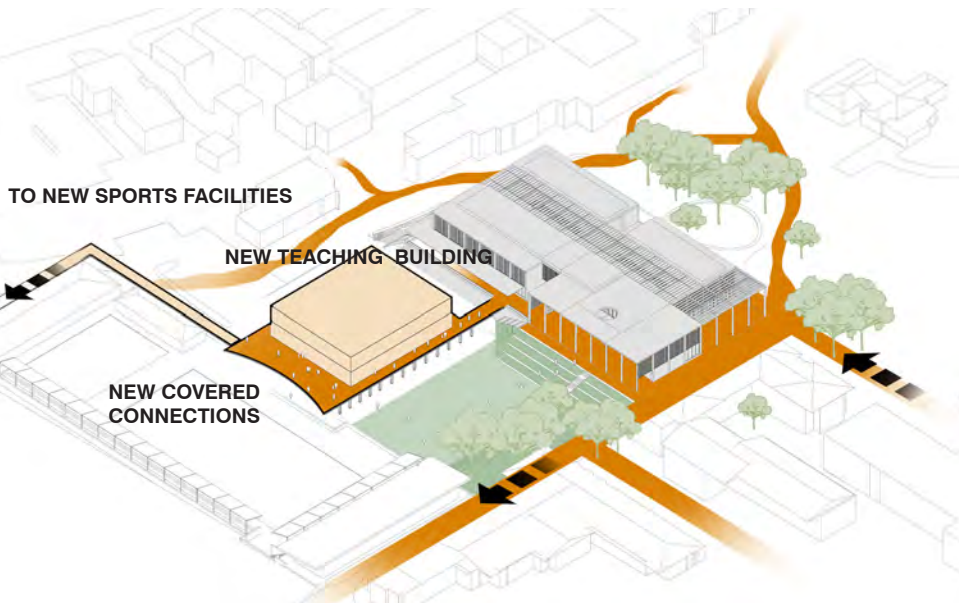
CIRCULATION & BREAKOUT
Points of connection with the surrounding campus and generous breakout spaces for informal interaction and study, with multiple opportunities for engagement between staff and student



OUTDOOR LEARNING SPACES
The deep verandah, house hubs and north-facing sloping lawn create a lively and versatile outdoor space that can be pivotal as the campus masterplan develops



ACTIVE NORTH-FACING COURTYARD
A strong landscape intervention helps to embed the building in the Bush Court and provides generous outdoor space for engineering learning and display



POTENTIAL FUTURE DEVELOPMENT & LINKAGES



🕒 LOCATION PLAN

3.2 THE BUILDING IN CONTEXT

The north-facing verandah and upgraded courtyard becomes a significant space and hub of activity for the school



3.2 THE BUILDING IN CONTEXT

Utilising the level change across the site the proposed building fits comfortably with the height and scale of the campus

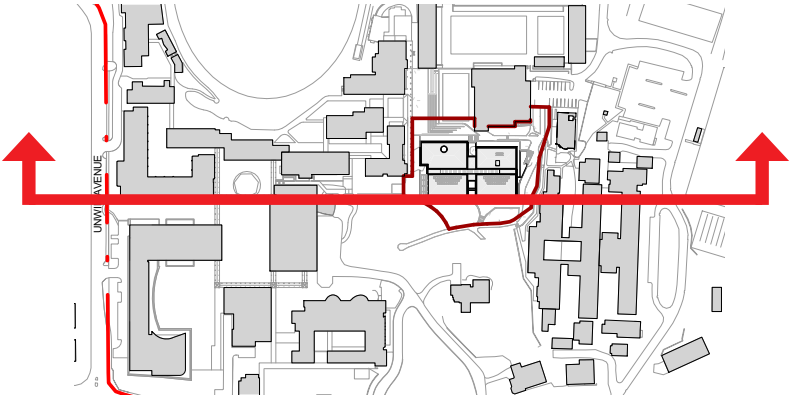
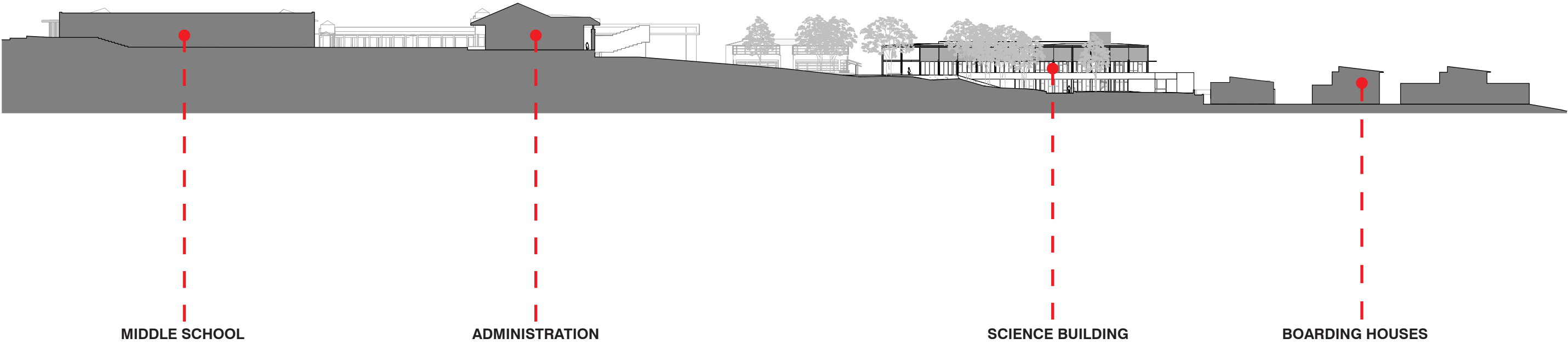




① GROUND SITE PLAN

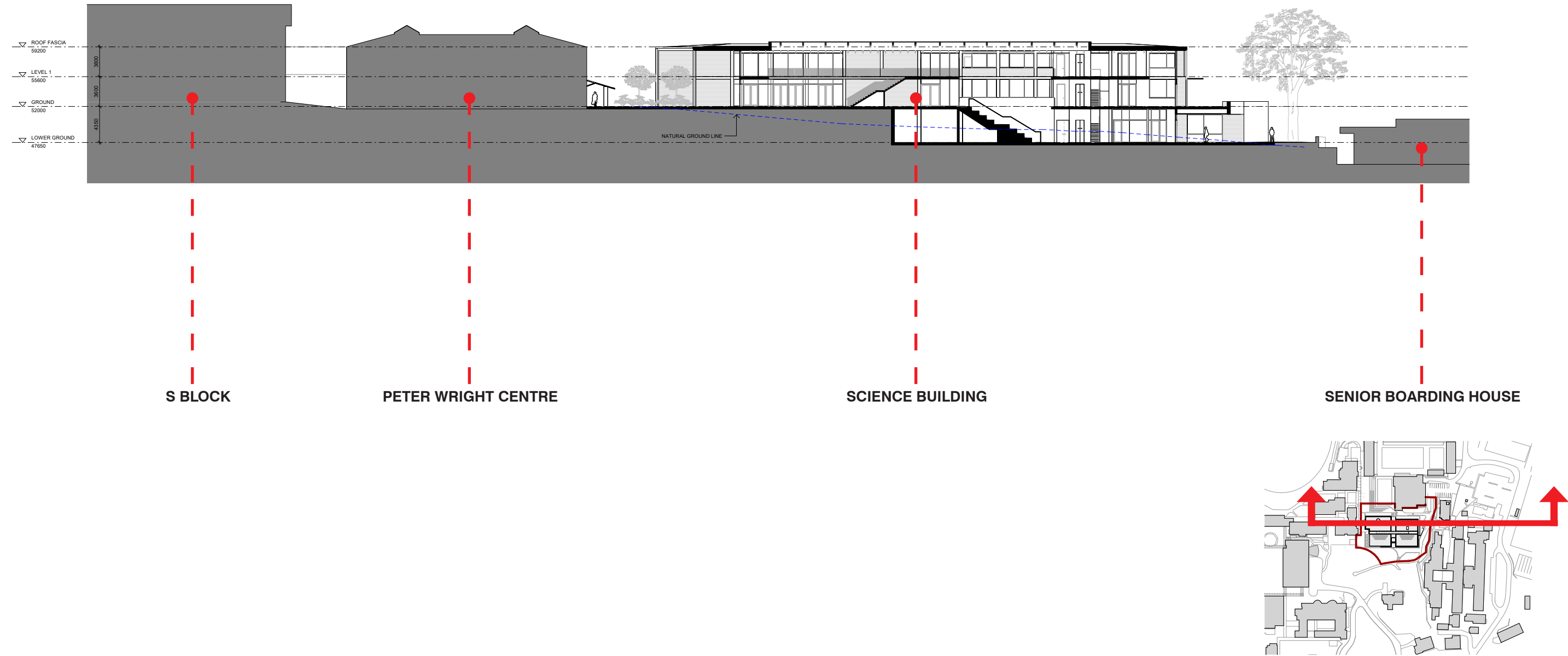
3.2 THE BUILDING IN CONTEXT

The proposed building is carefully integrated into the campus masterplan, respecting the scale and grain of the existing development and the valuable landscape of the Bush Court. Utilising the level change across the site the proposed building fits comfortably with the height and scale of the campus.



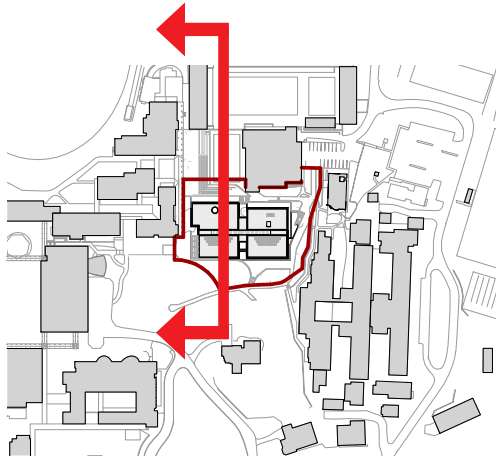
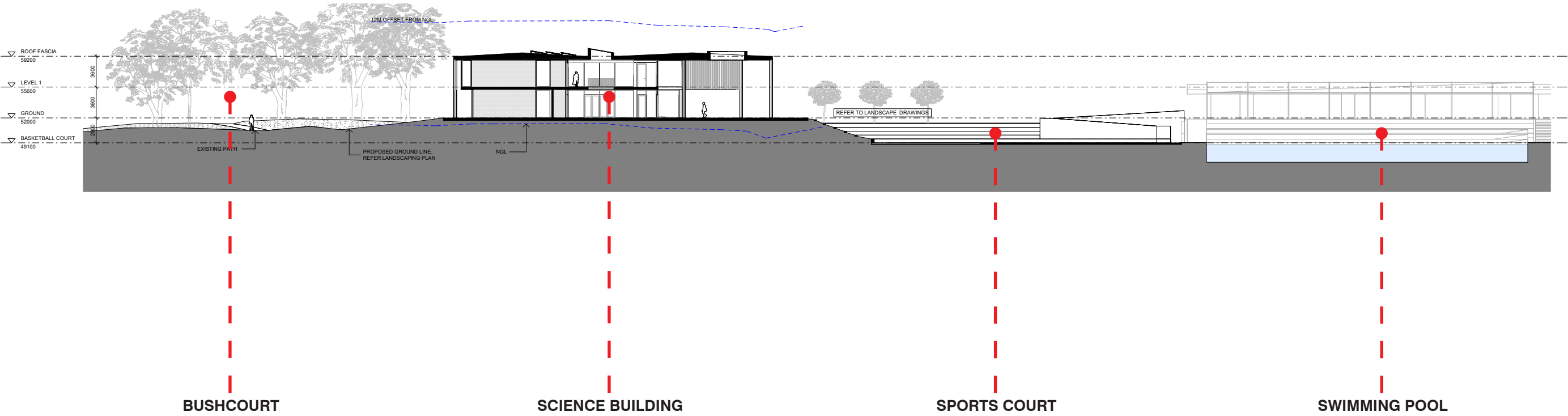
3.2 THE BUILDING IN CONTEXT

Site Section



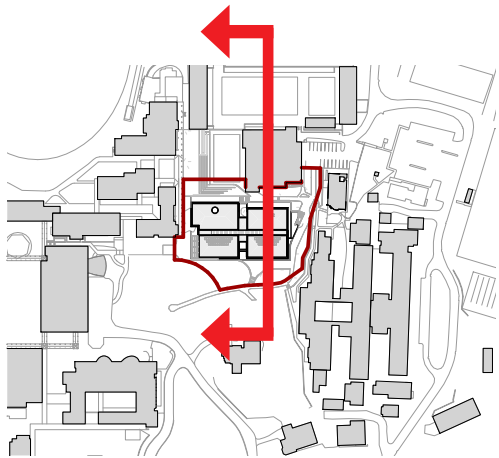
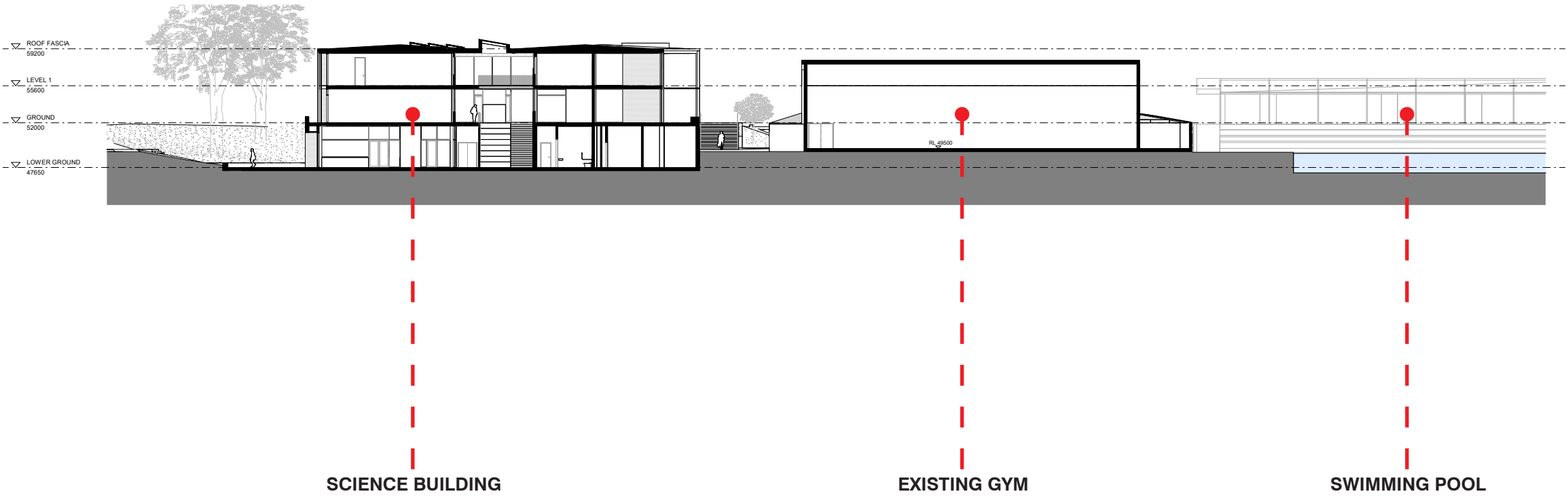
3.2 THE BUILDING IN CONTEXT

Site Section



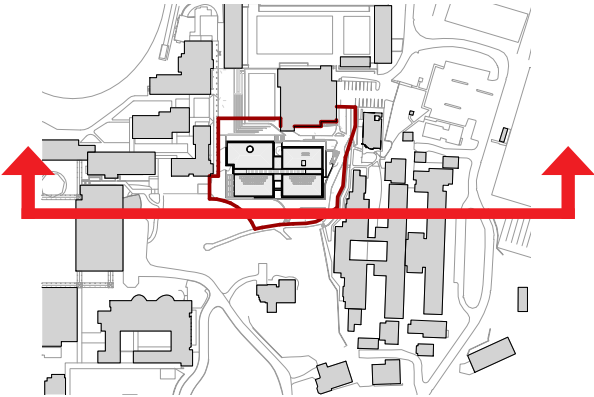
3.2 THE BUILDING IN CONTEXT

Site Section



3.2 THE BUILDING IN CONTEXT

Site Section





3.3 SITES AND 'SCIENCE ON DISPLAY'

SCIENCE

Hale leadership in science and engineering

INNOVATION

Industry equivalent laboratory resourcing, technology integration across curriculum

TECHNOLOGY

Classroom audio-visual, lab equipment, visualisations & simulations, computer processing

EXPERIMENTATION

Applied science, skills & capabilities, practical experiences, industry connections, real-world data

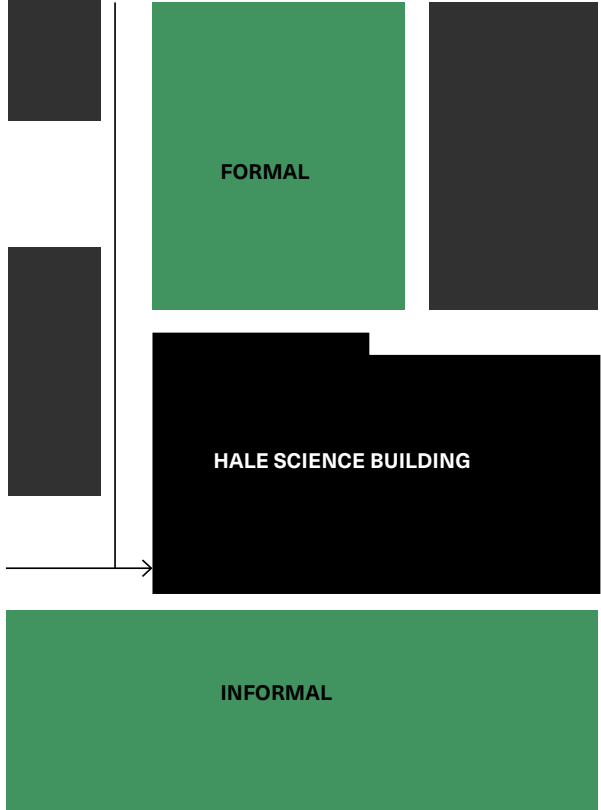
SUSTAINABILITY

Building design & materials, connections to curriculum, culture of building use

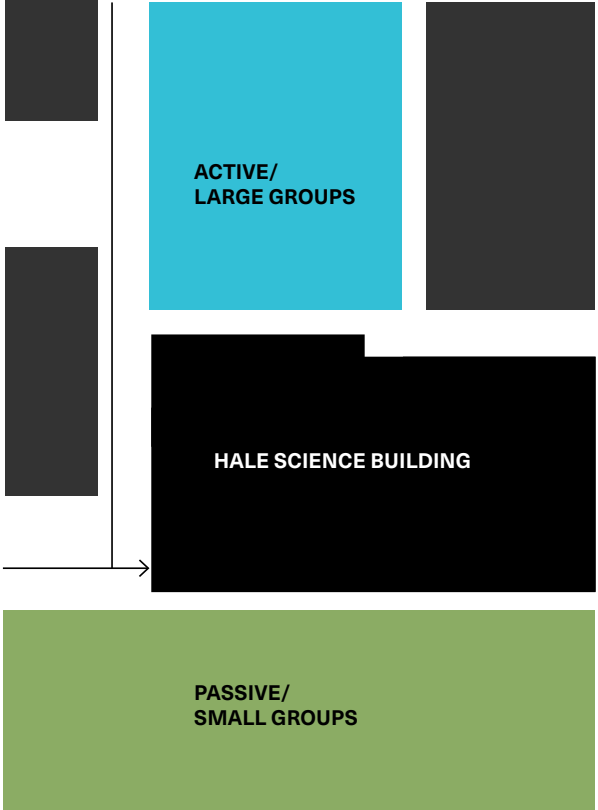
The SITES principles are embodied in the transparency and inherent flexibility of the building plan. A variety of teaching spaces are provided, some suitable for highly specific teaching resources and technology, others are open and flexible to allow for cross-disciplinary use and industry collaboration.

Glazed and operable walls connect classrooms and labs to breakout and circulation spaces and to preparation laboratories. Views into the double-volume engineering workshop from within the general science zone signifies the strong link between engineering and science at Hale.

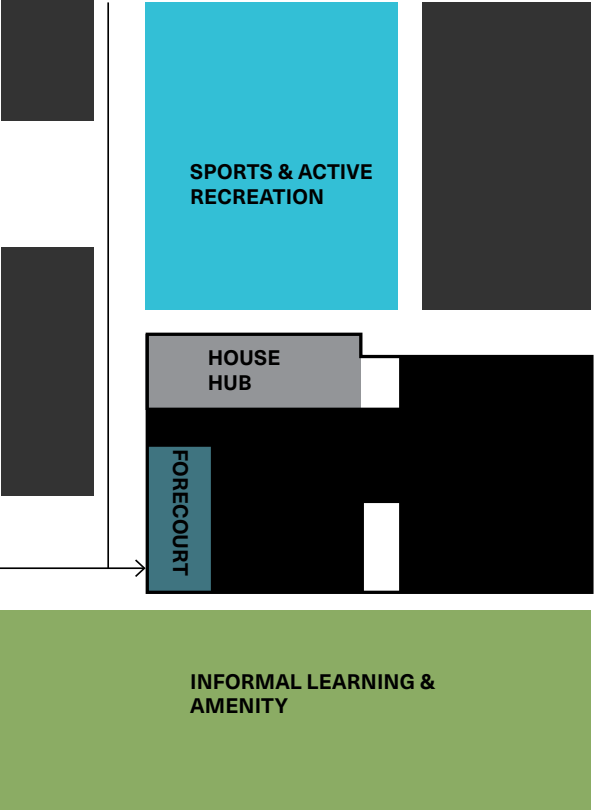
The central circulation spine allows all activities to be viewed by students and teachers and creates opportunities for learning and teaching in multiple environments.



QUADS



FUNCTION



LANDSCAPE PROGRAM

3.4 LANDSCAPE

The landscape design for the Hale School Science Building, has been prepared by ASPECT Studios in collaboration with KHA. The design responds to the scale, form and function of the architecture and existing campus context in order to create a generous and attractive landscape and public realm.

The northern landscape design integrates amphitheatre seating and shade structures to respond to the formal sports court environment. This area provides students with a versatile outdoor space suitable for gatherings, spectating, lectures, and informal learning. The amphitheatre seating encourages collaboration and interaction, fostering a sense of community among the student population.

The southern landscape responds to the informal bush court, preserving existing trees and creating gathering and informal learning spaces. This area offers students opportunities to connect with nature and engage in hands-on learning experiences in the lower level breakout area. The retained trees provide shade and a tranquil atmosphere to promote relaxation, reflection, and creativity.

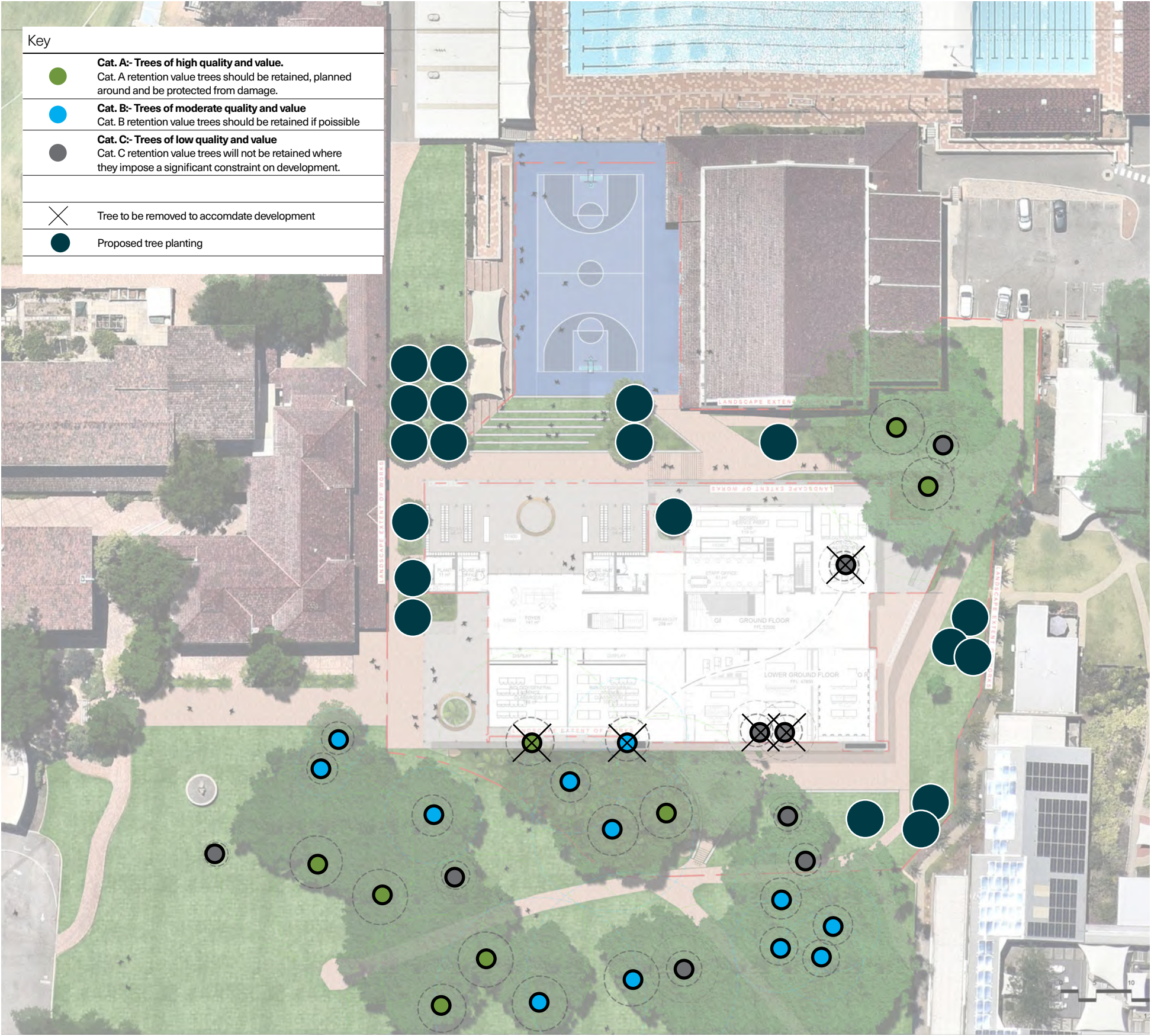
The landscape includes robust furnishings and seating walls strategically placed to accommodate a range of gathering spaces throughout the campus. The furnishings offer versatility and durability to withstand the rigours of daily use while providing comfort and practicality for students and faculty alike. Complementing these furnishings is a robust palette of West Australian plants reflecting the region's unique flora and enhancing the campus's aesthetic appeal and biodiversity of the landscape while creating a sense of place rooted in the local context.

LANDSCAPE APPROACH

The landscape design aims to create a contemporary, functional and aesthetically pleasing landscape that seamlessly blends with the built form. The following principles form the landscape approach to the site:

- Use high quality landscape design to integrate the proposed development with the surrounding topography, quads and broader precinct;
- Develop a legible network of spaces that fully integrate with and connect to the surrounding context.
- Develop a legible network of spaces that support the building program;
- Maximise opportunities for social interaction through arrangement of seating and walling;
- Selection of local and native plant species that benefit surrounding ecologies.
- Create a robust landscape made from simple materials, proven planting and bold forms that can be managed and maintained;





3.4 LANDSCAPE

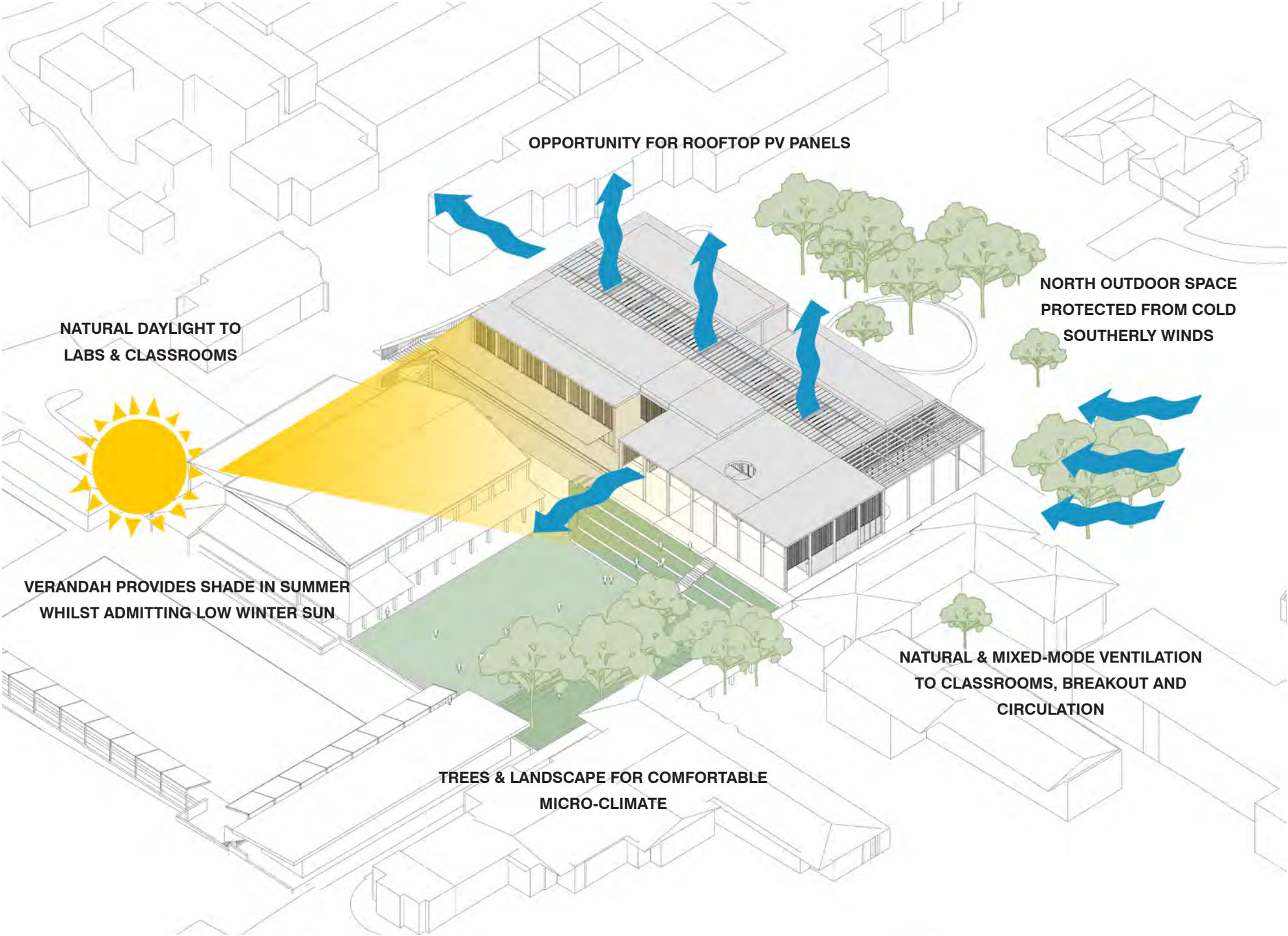
Civica undertook an Arboricultural Impact Assessment (AIA) report encompassing approximately twenty-five (25) tree located within the vicinity of the proposed development works. The survey identified trees worthy of retention and preservation and those that would require removal to facilitate the proposed development. In addition the survey highlighted any potential conflicts between proposed works and those trees worthy of retention and preservation. The subject trees were assessed in relation to their current arboricultural traits and future viability within the landscape.

The majority of the existing trees are made up of Jarrah, Tuarts and Melaleuca and Gum trees. The project requires the removal of two tuarts and the bottle brushes to accommodate the footprint of the building.

In cases where tree removal is deemed necessary, efforts have been made to mitigate the environmental impact by new tree planting across the site at a rate of at least 4 to 1 for a total of 21 trees across the site. Where space provides, the Tuarts removed will be replaced maintaining the character of the location and assisting with succession planting for the future.

The majority of the proposed trees are located in the northern court introducing canopy cover where there was none prior thereby increasing habitat, visual amenity and comfort through shade. Current surface levels have been maintained where possible in proximity to existing trees and any retaining works have been located outside of critical structural root zones to minimise their impact.

Trees to be retained are to be protected as directed by AS 4970-2009 Protection of Trees on Development Sites and as directed within the Arborist report.



3.5 SUSTAINABILITY AND WHOLE LIFE PRINCIPLES

Best-practice principles of passive environmental design have been followed in this design concept to minimise the energy required to operate the building.

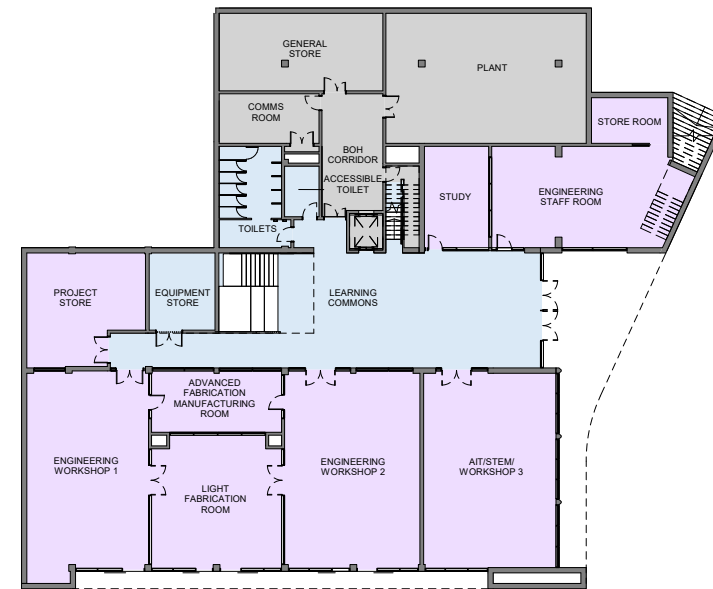
These principles, illustrated in the diagram on this page, include:

- Maximise benefit of winter sun to main foyer and outdoor gathering spaces
- Shelter of outdoor spaces from cold southerly winds with landscape and building placement
- Trees and landscape for comfortable micro-climate
- Generous windows and skylights for optimum daylighting, accompanied by orientation-specific shading to control solar-gain
- Provision for natural and mixed-mode ventilation
- Rooftop PVs

Further opportunities include:

- Provision of bike racks
- Low VOC materials
- Battery storage for PV's
- Highly efficient water cooled chillers
- Low energy LED Lighting
- Smart Building Operating Systems linked to BMS
- Energy and water consumption display systems

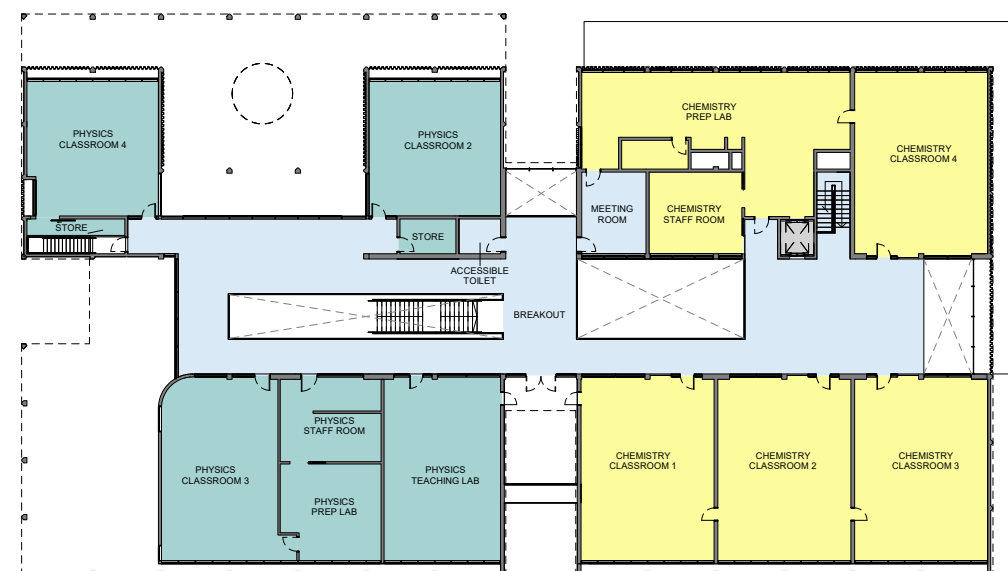
3. DESIGN RESPONSE



LOWER GROUND



GROUND



LEVEL 1

3.6 DEPARTMENT PLANS

The proposed development is organised vertically by teaching departments. Utilising the sloping slight, the engineering department and back of house spaces are located on the eastern lower ground allowing for greater ceiling height.

Public and non teaching spaces are located to the western end of the building. Biology and General science are consolidated to the eastern end connected by a central circulation spine. Level 1 co-locates Physics and Chemistry connected by the central spine and triple height void. All classrooms are transparent allow for views to the north and south.

The following provides a breakdown of function on each level.

LOWER GROUND

LEVEL 1

Plant Rooms & Storage			
Engineering Workshop	2	Chemistry Classroom	4
AIT/STEM Workshop	1	Chemistry Prep lab	1
Staff Room	1	Chemistry Staff Room	1
Toilets		Physics Classroom	3
Foyer, Study & Breakout		Physics Prep lab	1
		Physics Teaching Lab	1
		Physics Staff Room	1
		Toilets	
GROUND		Breakout, Study & Storage	
House Hubs & Office	2		
Biology/Gen Science Classroom	6		
Biology/Gen Science Prep lab	1		
Staff Room			
Toilets			
Foyer, Display & Breakout			

-  Biology/General Science
-  BOH
-  Chemistry
-  Core
-  Engineering
-  FOH
-  House Hubs
-  Physics

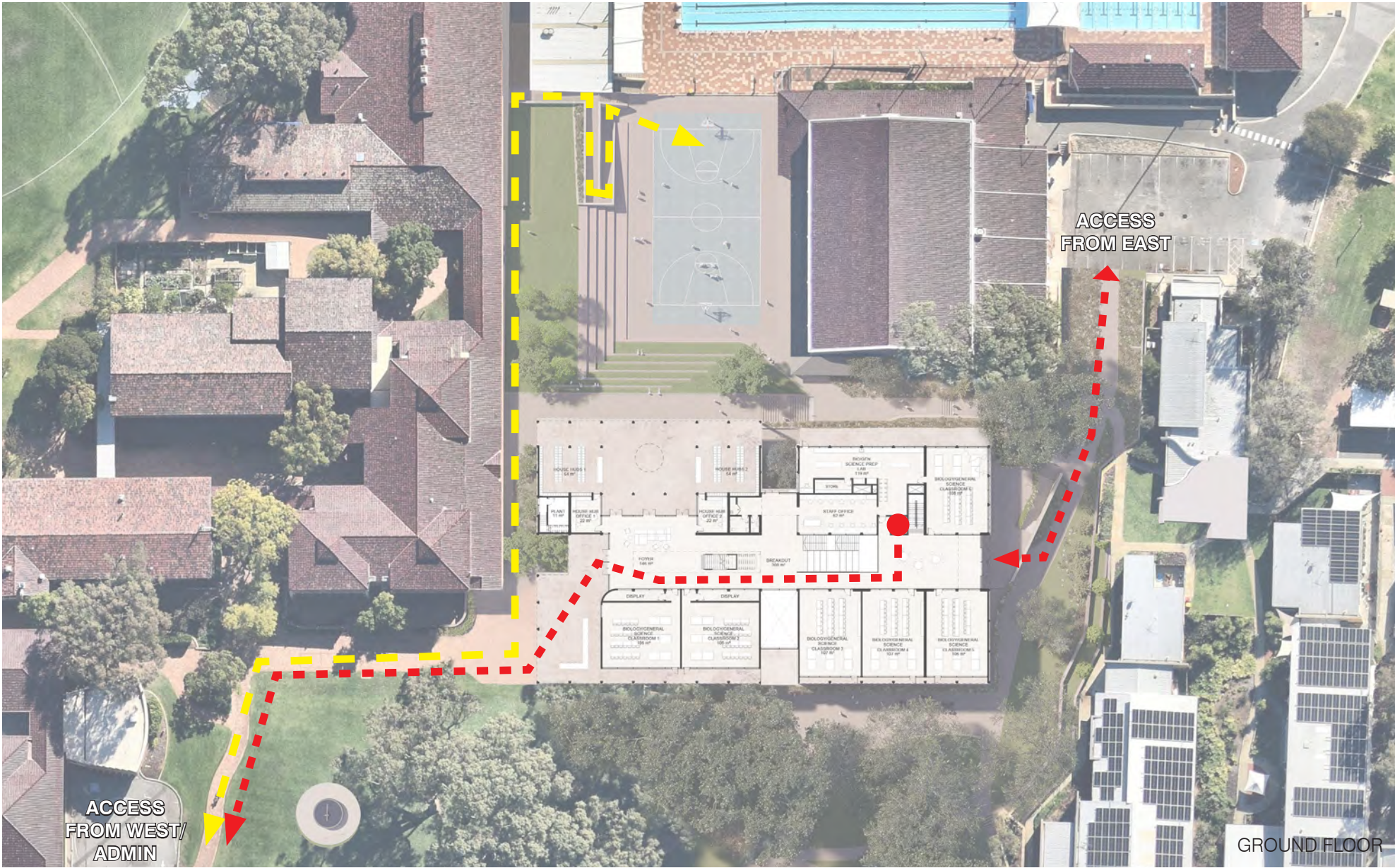
3.7 MATERIAL PALETTE

This material palette, as shown in our rendered images, features cream-coloured brick and white concrete, invoking a strong connection to the existing campus. Along with subtle Hale blue accents, the internal material palette will respond to and take cues from the bushland landscape which surrounds it.



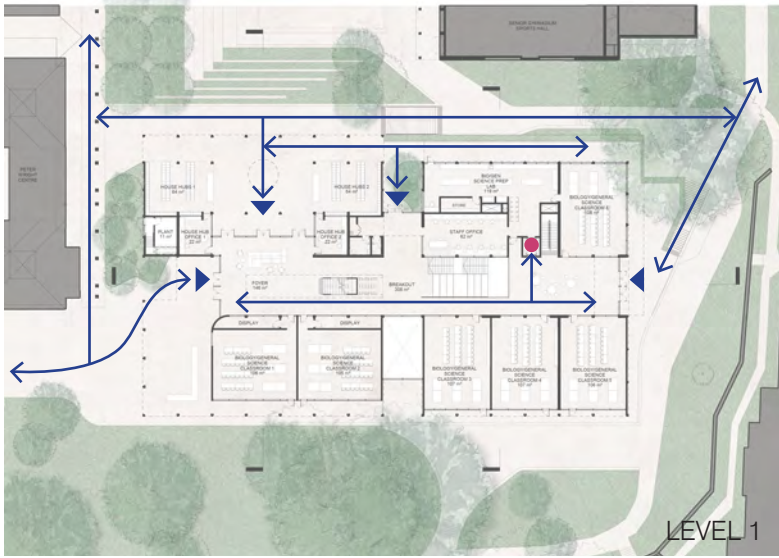
MATERIAL LEGEND

- | | |
|-------------------------------------|-----------------------------|
| 1 AUSTRAL BRICK CHILLINGHAM WHITE | 5 TERRAZZO TILES |
| 2 WHITE CONCRETE | 6 HALE BLUE PAINT |
| 3 TIMBER | 7 BRICK PAVING - BRIKMAKERS |
| 4 ANODIZED BRONZE WINDOWS & SCREENS | - AUTUMN BLEND |

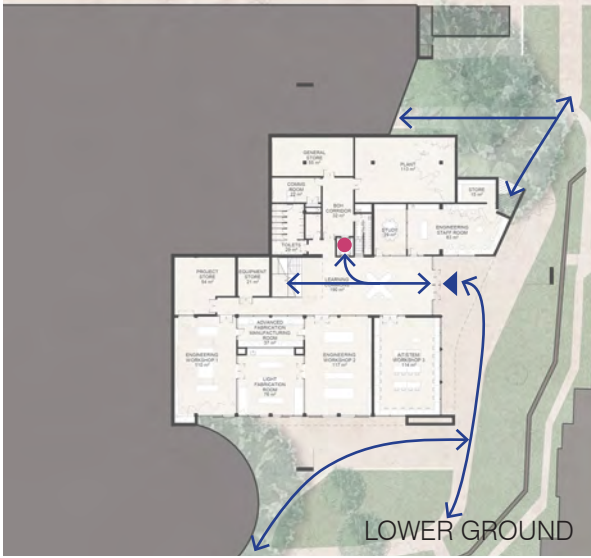


UNIVERSAL ACCESS

- UNIVERSAL ACCESS TO GYM/SPORTS COURT
- UNIVERSAL ACCESS TO SCIENCE BUILDING/ LOWER/UPPER LEVELS



CIRCULATION



LEGEND

- PRIMARY ENTRY FROM CAMPUS
- CIRCULATION
- SHARED LIFT

3.8 CIRCULATION LEGIBILITY & UNIVERSAL ACCESS

The main entrance to the building is signified by the arrival verandah oriented towards the primary approach from the administration building and the quadrangle. Other entry points relate to existing campus circulation and clearly signalled by the architecture and landscape.

Within the building the student circulation is within the central breakout atrium space via generous staircases that are no less than 2.1m wide. A single lift is optimally positioned in the centre of the floorplate, providing equitable and dignified universal access to all parts of the building.

The lift is double-sided so that it can also facilitate the safe and segregated movement of hazardous materials from loading and storage at lower ground directly into the two preparation laboratories on the upper levels.

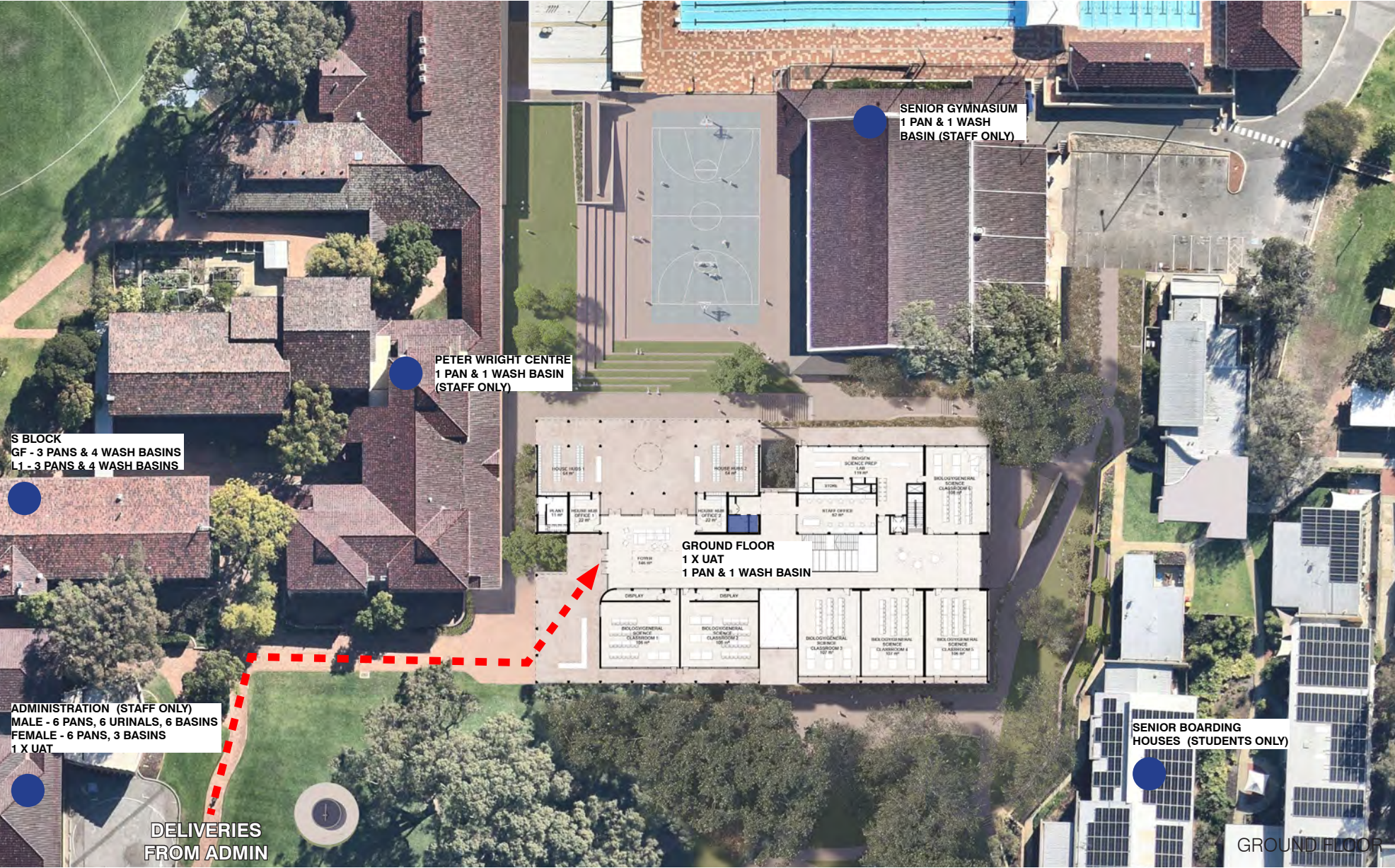
The existing sports court ramp is maintained for universal access to sports court.



3.9 ABPTED PRINCIPLES

The following Antisocial Behaviour Prevention through Environmental Design (ABPTED) Principles are incorporated in the design:

- Well-defined routes, spaces and entrances without spatial cul-de-sacs.
- Corridors are avoided throughout the building, with circulation around the central breakout space surveilled from teaching areas and staff rooms.
- Gathering spaces are well-surveilled, for example the northern verandah and lawn surveilled from the head-of-house offices.
- Staff interface points are clearly visible from all building entrances.
- Landscape areas are deliberately designed for activation, to create a sense of safety and deter anti-social behaviour.



3.10 TRAFFIC & WASTE MANAGEMENT

TRAFFIC

The development proposed no new car bays and instead will utilise the existing traffic and parking infrastructure. Primary users of the building are existing school students with the building being in operation during normal school hours. For special events or out of school hours events the existing parking and traffic policies utilised by Hale would be in place.

There are no large deliveries anticipated for the general day to day use of the proposed development. All deliveries and loading for the proposed development would be as per the current arrangements, in which all deliveries would be to the main administration building. The administration building would be responsible for distributing deliveries to the various departments.

WASTE

The proposed development will not have a dedicated waste room. Waste disposal is to follow the current Hale science guidelines.

AMENITIES

At present, it has been estimated that the student and staff numbers in the building at any given time will be in the order of –

- 442 male students (i.e 17 classrooms x 26 students / classroom); and
- 32 staff

Based on these occupancy numbers and for compliance purposes the following toilet amenities are being provided within the current design.

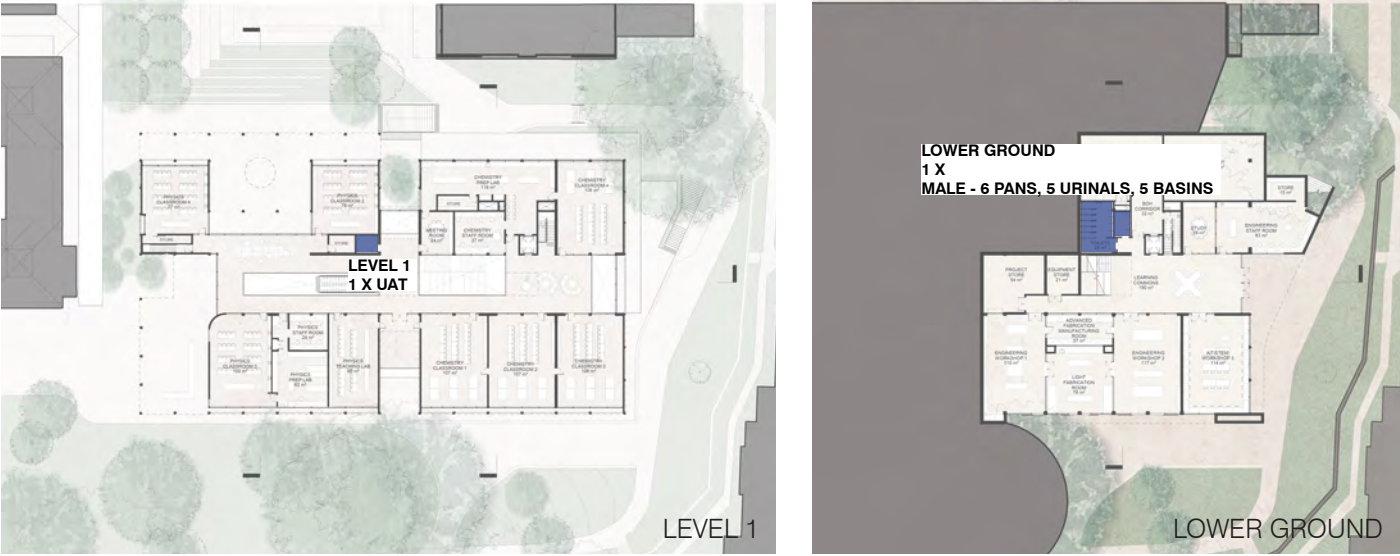
Student Toilets

- 7x pans, 5x urinals, 8x wash basins

Staff Toilets

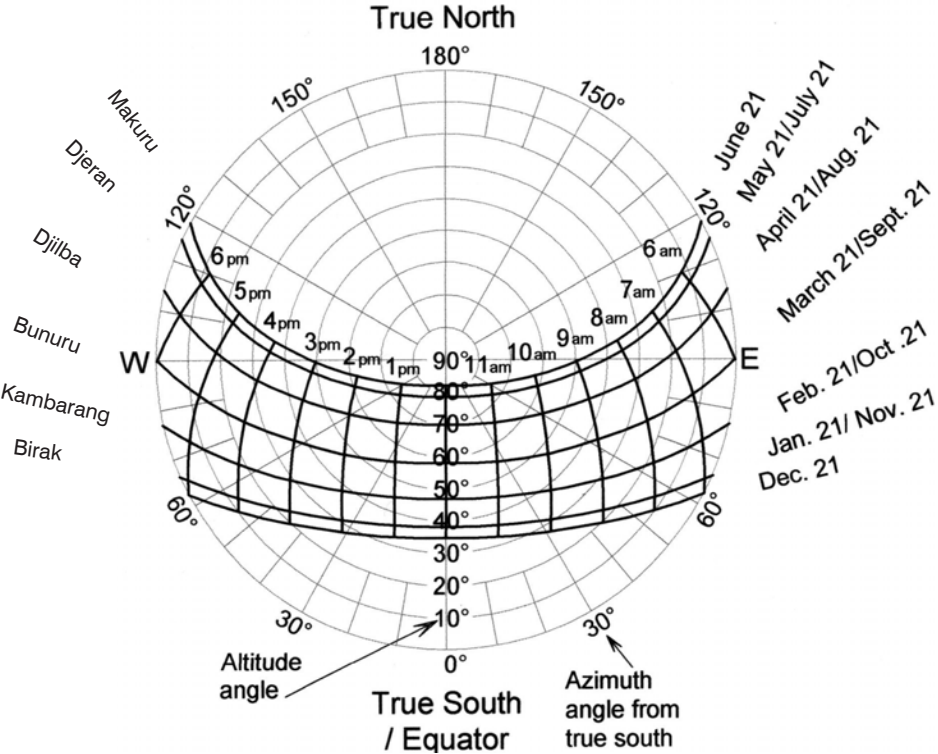
- Male – 1x pan, 1x urinal, 1x wash basins
- Female – 2x pans, 2x wash basins

Refer to the plans adjacent for locations of student and staff amenities within and in close proximity to the building.



INDIGENOUS
SEASONS

CALENDAR
MONTHS



3.11 ART STRATEGY

The proposed building will have 'Science' integrated and celebrated in the design. There is an opportunity for these science ideas to form part or all of the art strategy.

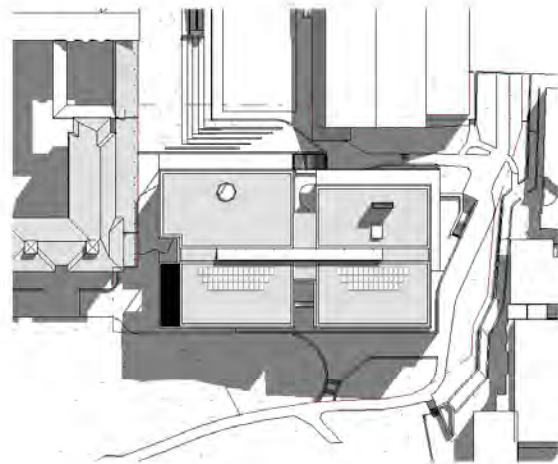
Some of the ideas discussed are as follows;

- Sun path diagrams through the oculus highlighting indigenous seasons
- Periscopes
- Gears and pulleys
- Nature - aquaponics, vegetation or hives
- Kinetic Energy
- Data Visualisation

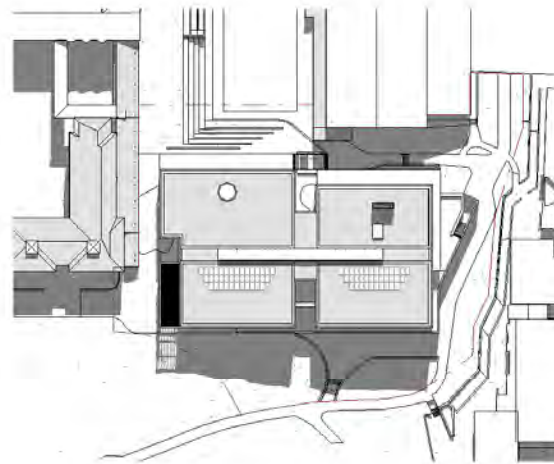


4 SHADOW DIAGRAMS

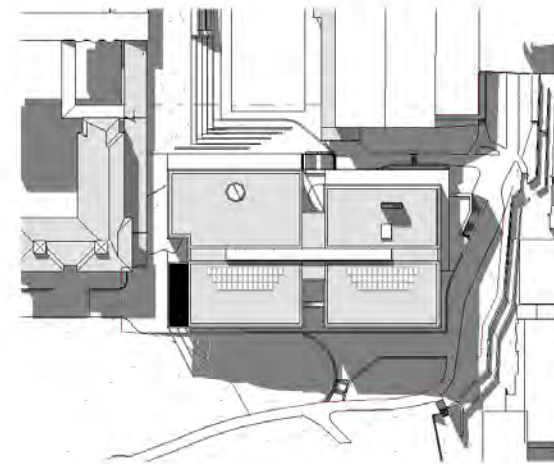
4. SHADOW DIAGRAMS



22ND JUNE 10AM



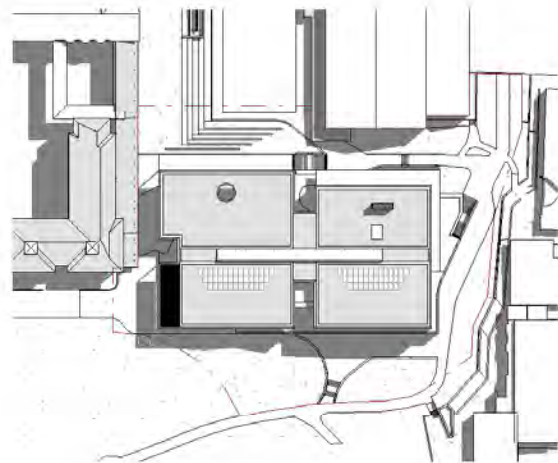
22ND JUNE 12PM



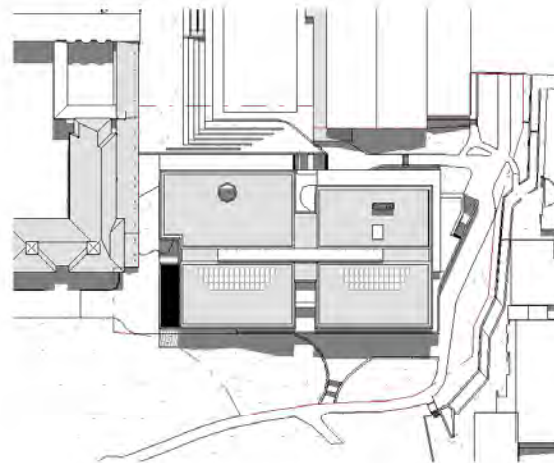
22ND JUNE 2PM

The adjacent Shadow Diagrams 01 – 09 illustrate the shadows created by the development at 10am, 12pm and 2pm in June 22, September 22 and December 22.

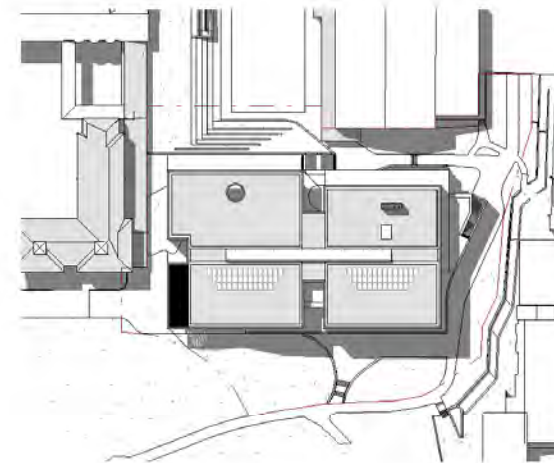
Refer to the Development Application Report, prepared by Planning Solutions for details of compliance with the design principles.



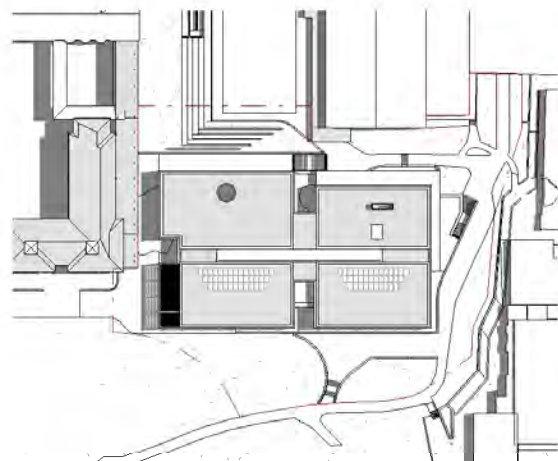
22ND SEPTEMBER 10AM



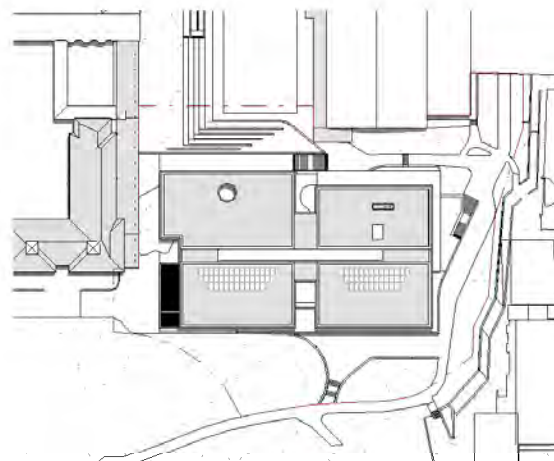
22ND SEPTEMBER 12PM



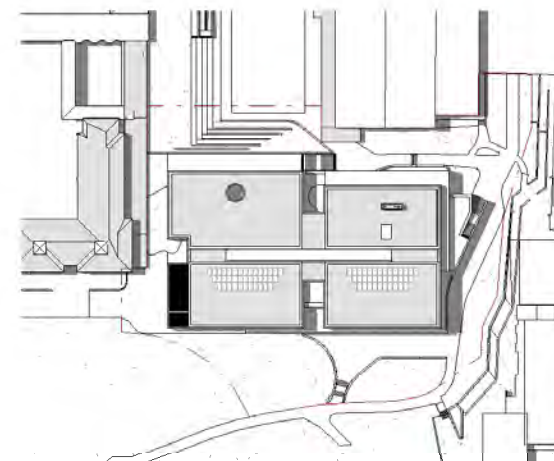
22ND SEPTEMBER 2PM



22ND DECEMBER 10AM



22ND DECEMBER 12PM



22ND DECEMBER 2PM

5 AREA SCHEDULE

	FECA Total m2	UCA Total m2
Lower Ground	1157	115
Eng Class / Worskhop 1	110	
Eng Class / Worskhop 2	117	
AIT/STEM Class / Worskhop 3	114	
Student Project Store	54	
Light Fabrication Rm	76	
Staff Office and Store Room	98	
Equipment Store	21	
Study	29	
Advanced Fabrication Manufacturing Room	37	
General Store/Loading	55	
Staff Toilets	7	
Student Toilets	29	
M+E Plant	113	
Comms	22	
Cleaners Store	2	
General BOH Corridors, Lobbies etc	49	
Learning Commons	224	
UCA		115
Ground Level	1357	871
Bio / Gen Science Classroom 1	106	
Bio / Gen Science Classroom 2	106	
Bio / Gen Science Classroom 3	107	
Bio / Gen Science Classroom 4	107	
Bio / Gen Science Classroom 5	106	
Bio / Gen Science Classroom 6	108	
Prep Lab	119	
Staff Office	62	
Staff WC	9	
Cleaners Store	2	
Plant	11	
Foyer	133	
Display	28	
General FOH/Breakout	291	
Stair	13	
Lift	5	
House Hub 1 - Office	22	
House Hub 1 - Lockers		64
House Hub 2 - Office	22	
House Hub 2 - Lockers		64
UCA		743

	FECA Total m2	UCA Total m2
Level 1	1401	
Physics Classroom 1	80	
Physics Classroom 2	86	
Physics Classroom 3	100	
Physics Classroom 4	86	
Physics Prep Lab	62	
Physics Staff Office	24	
Chemistry Classroom 1	107	
Chemistry Classroom 2	107	
Chemistry Classroom 3	106	
Chemistry Classroom 4	107	
Chemistry Prep Lab	119	
Chemistry Staff Office	37	
UAT	7	
Breakout	331	
Lift	5	
Stair	13	
Meeting Room	24	

5. AREA SCHEDULE

FECA - Fully Enclosed Covered Area
Sum of all such areas at all building floor levels, including basements (except unexcavated portions), floored roof spaces and attics, garages, penthouses, enclosed porches and attached enclosed covered ways alongside buildings, equipment rooms, lift shafts, vertical ducts, staircases and any other fully enclosed spaces and usable areas of the building, computed by measuring from the normal INSIDE face of exterior walls but ignoring any projections such as plinths, columns, piers and the like which project from the normal inside face of exterior walls. It shall not include open courts, lightwells, connecting or isolated covered ways and net open areas of upper portions of rooms, lobbies, halls, interstitial spaces and the like which extend through the storey being computed

UCA - Unenclosed Covered Area
Sum of all such areas at all building floor levels, including roofed balconies, open verandahs, porches and porticos, attached open covered ways alongside buildings, undercrofts and usable space under buildings, unenclosed access galleries (including ground floor) and any other trafficable covered areas of the building which are not totally enclosed by full height walls, computed by measuring the area between the enclosing walls or balustrade. UCA shall not include eaves overhangs, sun shading, awnings and the like where these do not relate to clearly defined trafficable covered areas, nor shall it include connecting or isolated covered ways

GFA - Gross Floor Area
Sum of FECA and UCA

	FECA Total m2	UCA Total m2	
TOTALS			GFA m2
Lower Ground	1157	115	1272
Ground Floor	1357	871	2228
Level 1	1401		1401
TOTAL	3915	986	4901

6 VISUALISATIONS

The following renders are included to present the overall concept design, massing, scale and materiality of the project.

For details and locations of elements, features and landscaping refer to the drawings located in the Architectural and Landscape Drawings.



VIEW FROM BUSH COURT AND SCHOOL ARRIVAL



VIEW FROM ADMINISTRATION BUILDING



APPROACH FROM SENIOR BOARDING HOUSE



UPGRADED BASKETBALL COURTYARD



FOYER



ENGINEERING ON DISPLAY



HOUSE HUBS & NORTH VERANDAH



CIRCULATION & BREAKOUT



CIRCULATION & BREAKOUT



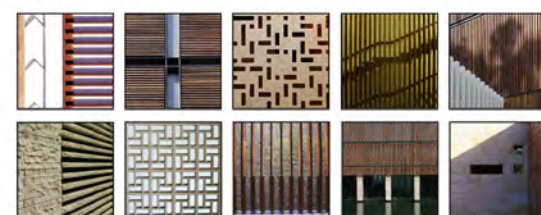
ENGINEERING BREAKOUT



OUTDOOR ENGINEERING LEARNING AND DISPLAY



FIRST FLOOR TEACHING AND BREAKOUT



KHA

A ARCHITECTURAL DRAWINGS

A.1 ARCHITECTURAL DRAWINGS

A ARCHITECTURAL DRAWINGS

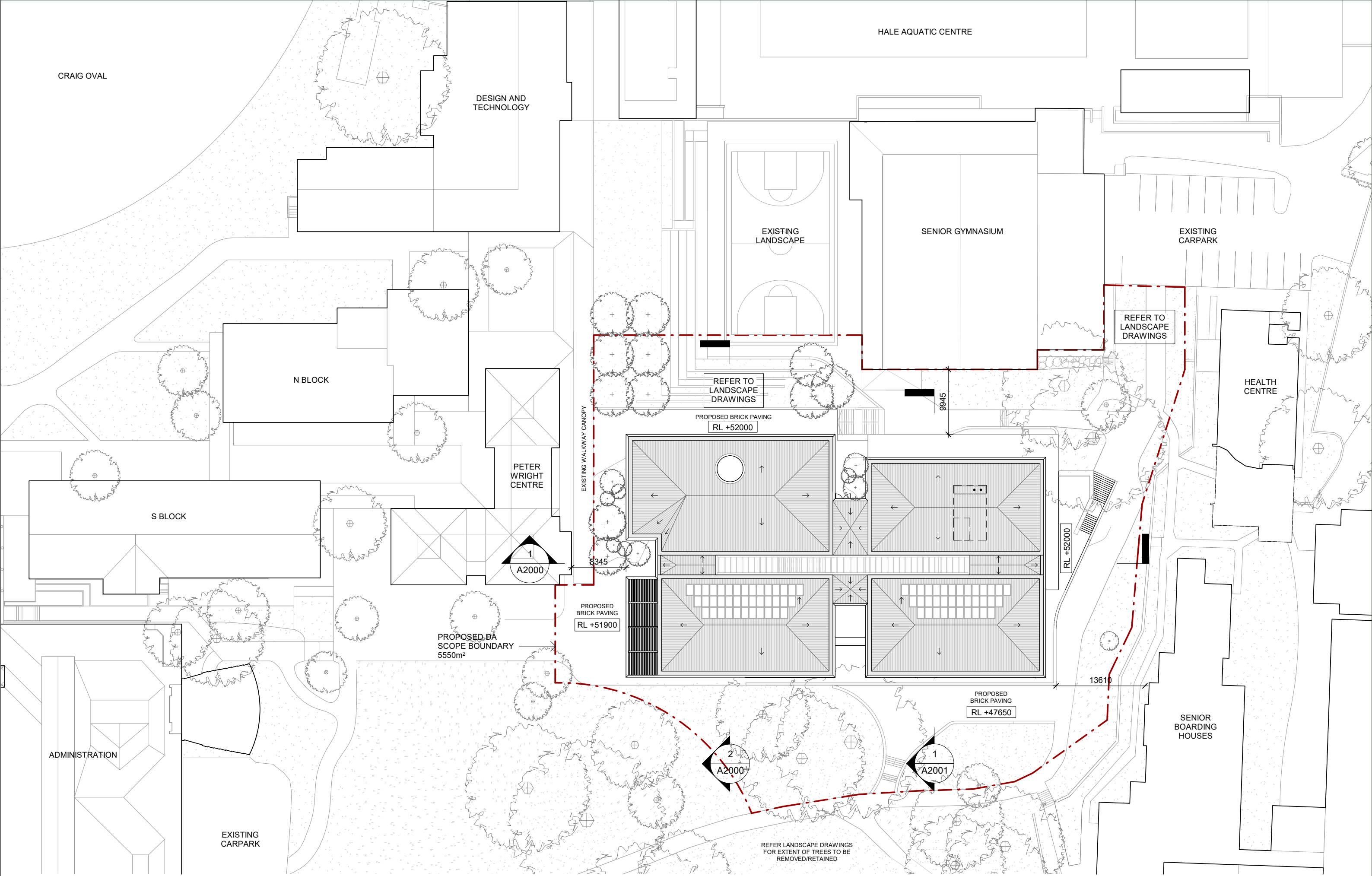
A.1 ARCHITECTURAL DRAWINGS

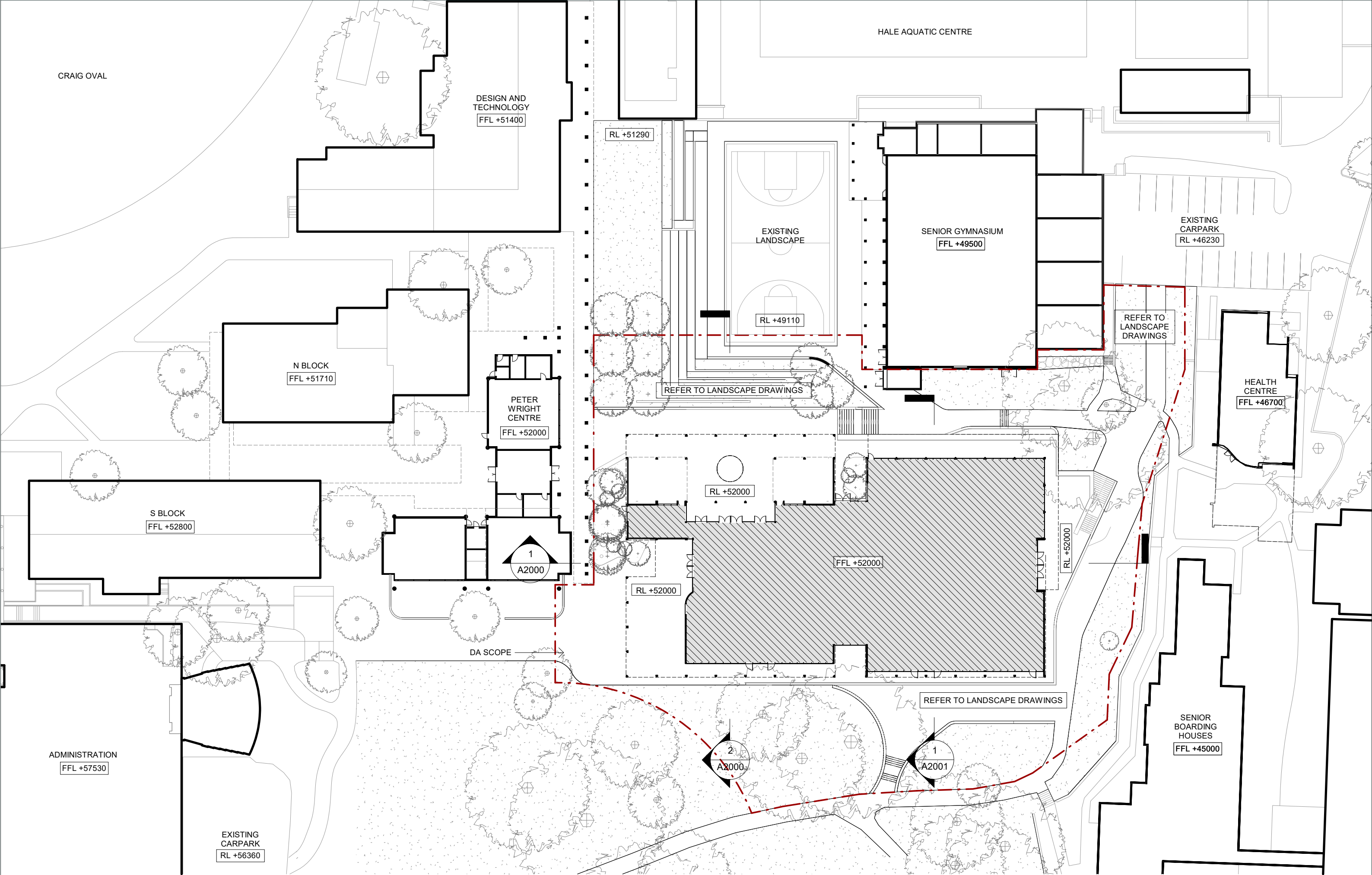
HALE SCIENCE BUILDING

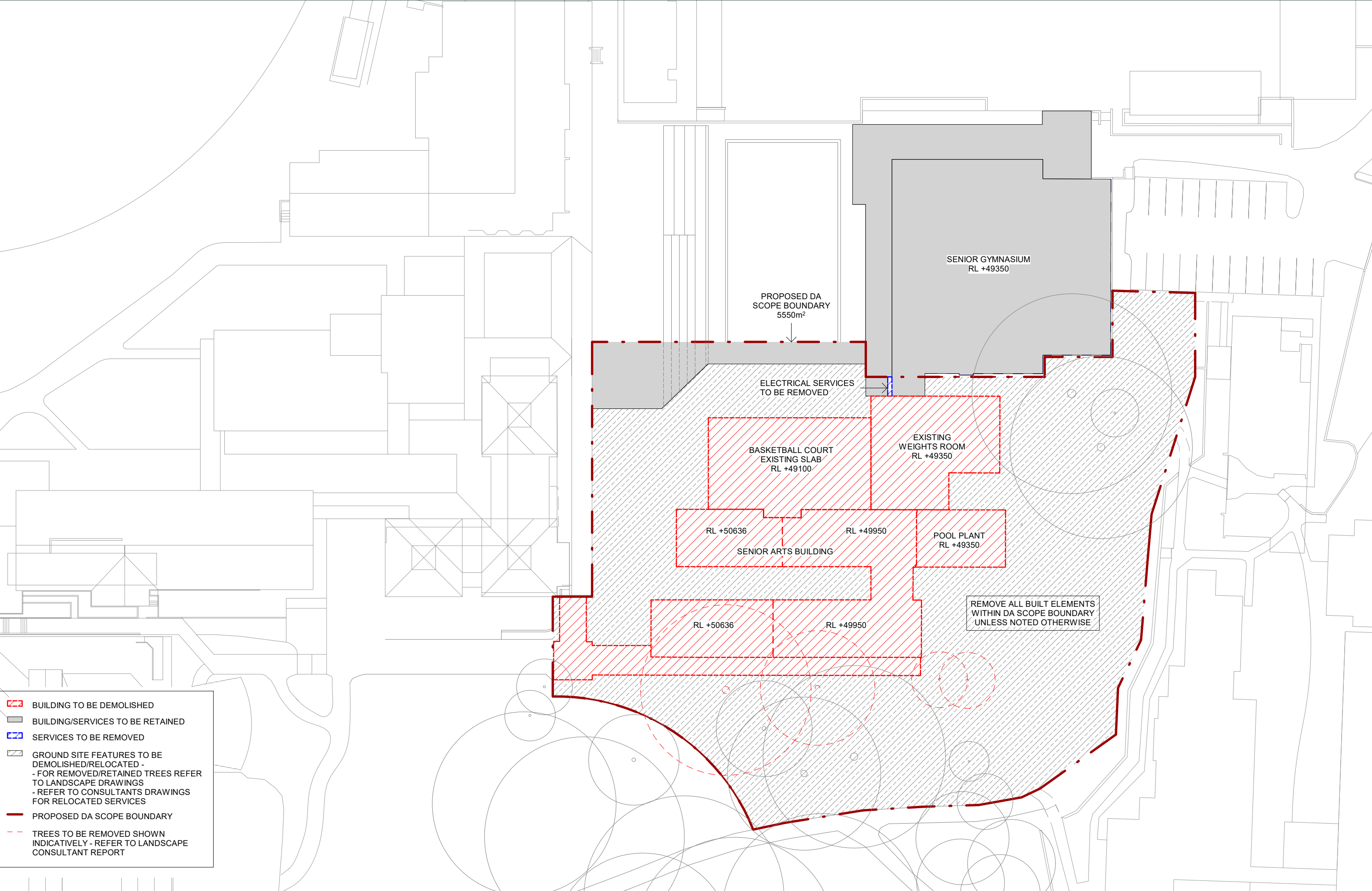
ARCHITECTURAL DRAWINGS FOR DA SUBMISSION

DRAWING TITLE	DRAWING NO.	REV
Contents Page	A0001	A
Proposed Roof Site Plan	A0050	A
Proposed Ground Site Plan	A0051	A
Demolition Plan	A0052	A
Lower Ground Floor Plan	A1001	A
Ground Floor Plan	A1010	A
First Floor Plan	A1011	A
Roof Plan	A1013	A
GA Sections	A2000	A
Elevations	A3001	A
Elevations	A3002	A









BUILDING TO BE DEMOLISHED

BUILDING/SERVICES TO BE RETAINED

SERVICES TO BE REMOVED

GROUND SITE FEATURES TO BE DEMOLISHED/RELOCATED -
- FOR REMOVED/RETAINED TREES REFER TO LANDSCAPE DRAWINGS
- REFER TO CONSULTANTS DRAWINGS FOR RELOCATED SERVICES

PROPOSED DA SCOPE BOUNDARY

TREES TO BE REMOVED SHOWN INDICATIVELY - REFER TO LANDSCAPE CONSULTANT REPORT

KHA

PRINT IN COLOUR

Rev. Date	Amendment
A	23.04.24

Kerry Hill Architects Pty Ltd.
30 Mouat Street, Fremantle
Western Australia
T +61 (8) 9336 4545
© Kerry Hill Architects Pty Ltd.

Disclaimer
1. Do not scale drawings. Written dimensions govern.
2. All Dimensions are in millimeters unless otherwise noted.
3. All Dimensions are to be verified on site prior to proceeding with the work.
4. Kerry Hill Architects are to be notified in writing of any discrepancies.
5. This drawing must be read in conjunction with all relevant contracts, reports specification and drawings.
6. This document has been prepared by Kerry Hill Architects Pty Ltd (KHA) for the purpose of conveying design intent. This document does not represent a complete design and is for the purpose of ongoing coordination between the relevant specialist consultants. KHA has made every effort to maintain the accuracy of the documents. It does not accept liability for loss or damage incurred as a result of the use, or reliance on the accuracy, of this information. All recipients of this document should make their own enquiries to verify the content themselves and with all other relevant disciplines. This document does not form part of any construction contract and should not be relied upon for the purpose of construction.

Project
HALE SCIENCE BUILDING



Project No.
634

Drawing Status
DA Submission

Drawing
Demolition Plan

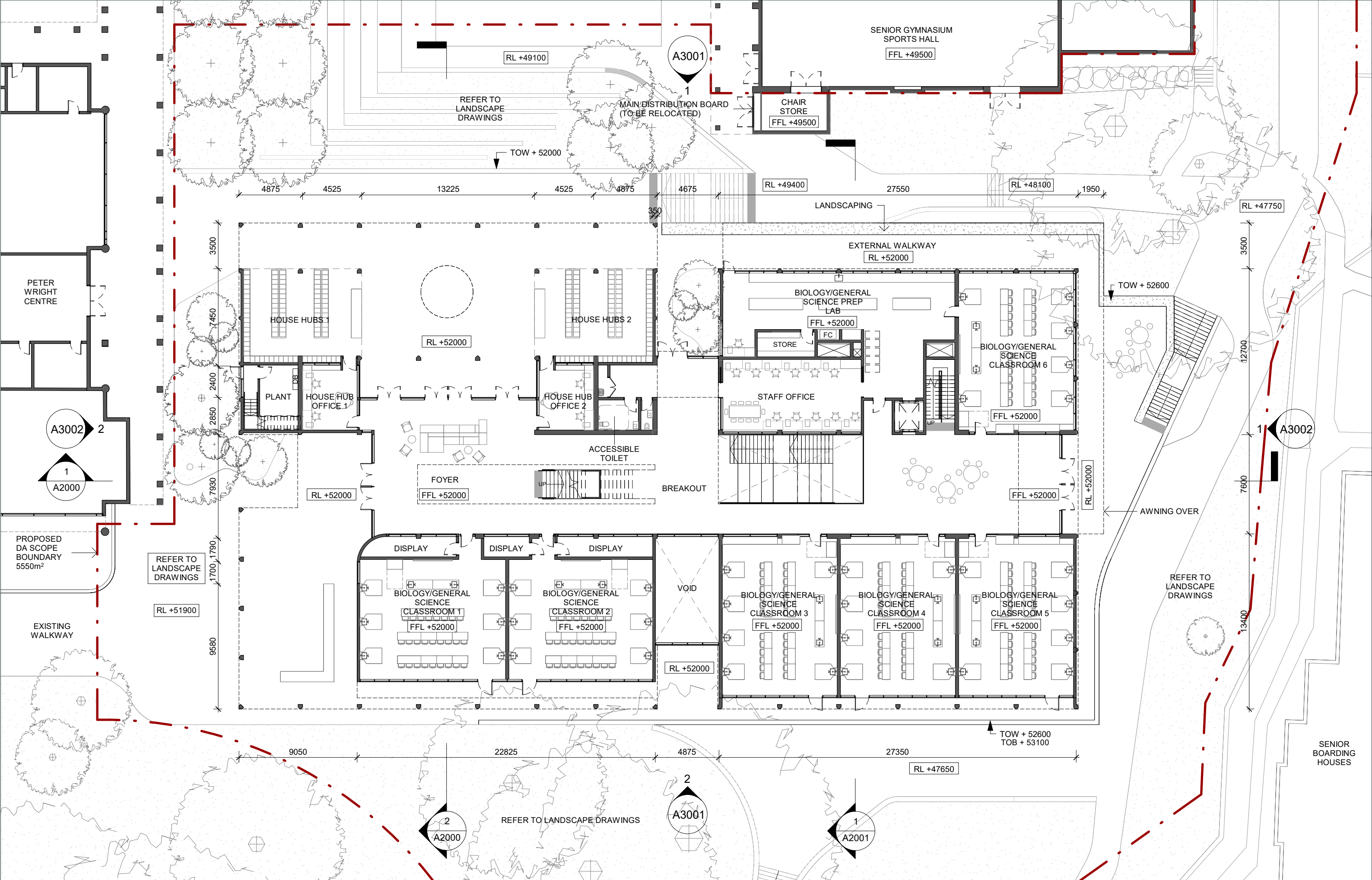


Scale at A1/A3
1 : 500

Drawing No.
A0052

Date
23.04.24

Revision
A



KHA

PRINT IN COLOUR

Rev. Date	Amendment
A 23.04.24	DA Submission

Kerry Hill Architects Pty Ltd.
30 Mount Street, Fremantle
Western Australia
T +61 (8) 9336 4545
© Kerry Hill Architects Pty Ltd.

Disclaimer
1. Do not scale drawings. Written dimensions govern.
2. All dimensions are in millimeters unless otherwise noted.
3. All dimensions are to be verified on site prior to proceeding with the work.
4. Kerry Hill Architects are to be notified in writing of any discrepancies.
5. This drawing must be read in conjunction with all relevant contracts, reports specification and drawings.
6. This document has been prepared by Kerry Hill Architects Pty Ltd (KHA) for the purpose of conveying design intent. This document does not represent a complete design and is for the purpose of ongoing coordination between the relevant specialist consultants. KHA has made every effort to maintain the accuracy of the documents. It does not accept liability for loss or damage incurred as a result of the use, or reliance on the accuracy, of this information. All recipients of this document should make their own enquiries to verify the content themselves and with all other relevant disciplines. This document does not form part of any construction contract and should not be relied upon for the purpose of construction.

Project
HALE SCIENCE BUILDING



Project No.
634

Drawing Status
DA Submission

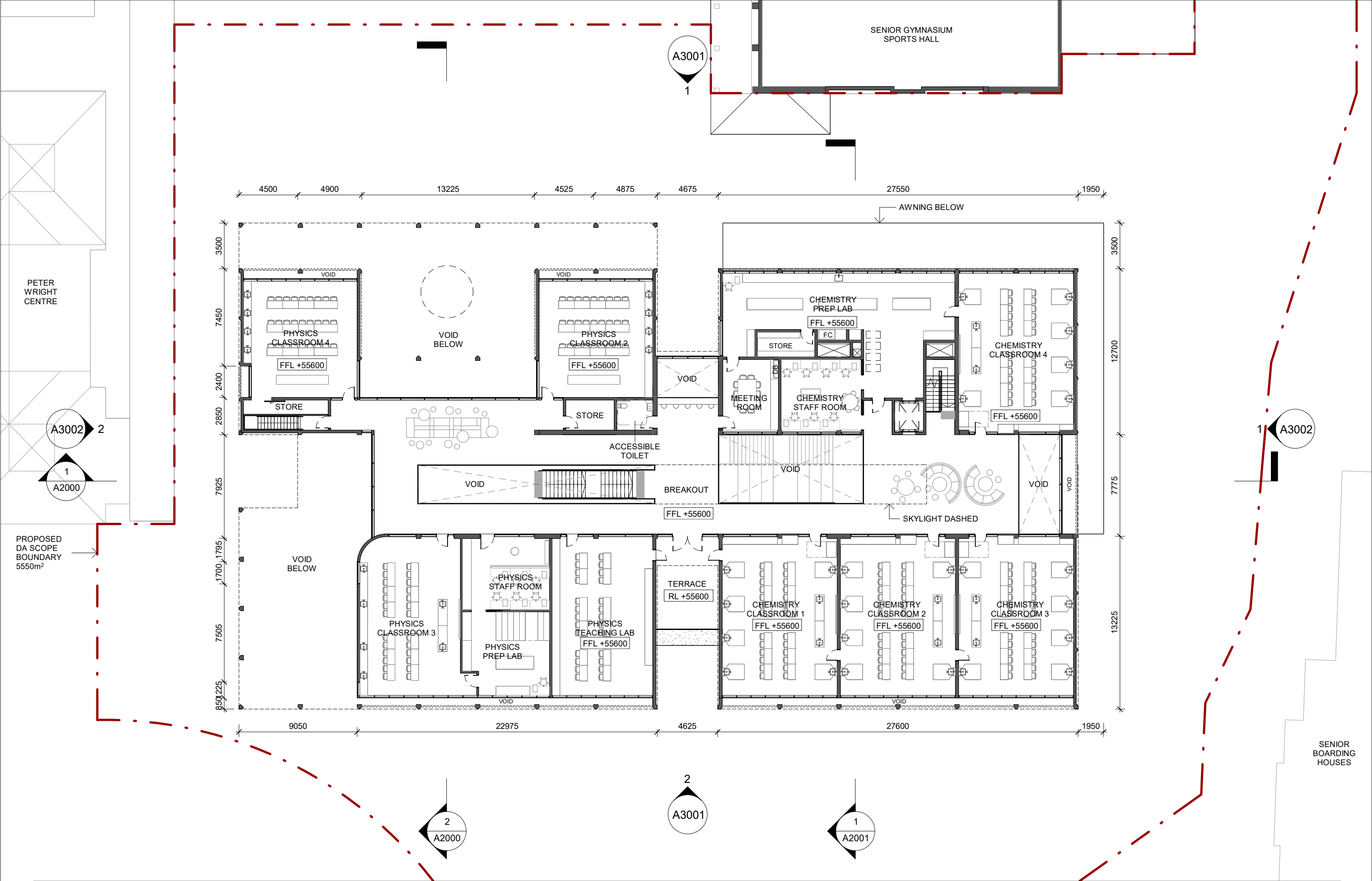
Drawing
Ground Floor Plan



Scale at A1/A3
1 : 250

Drawing No.
A1010

Date
23.04.24
Revision
A



KHA

PRINT IN COLOUR

Rev. Date	Amendment
A 23.04.24	DA Submission

Kerry Hill Architects Pty Ltd.
30 Mount Street, Fremantle
Western Australia
T +61 (8) 9336 4545
© Kerry Hill Architects Pty Ltd.

Disclaimer
1. Do not scale drawings. Written dimensions govern.
2. All Dimensions are in millimeters unless otherwise noted.
3. All Dimensions are to be verified on site prior to proceeding with the work.
4. Kerry Hill Architects are to be notified in writing of any discrepancies.
5. This drawing must be read in conjunction with all relevant contracts, reports specification and drawings.
6. This document has been prepared by Kerry Hill Architects Pty Ltd (KHA) for the purpose of conveying design intent. This document does not represent a complete design and is for the purpose of ongoing coordination between the relevant specialist consultants. KHA has made every effort to maintain the accuracy of the documents. It does not accept liability for loss or damage incurred as a result of the use, or reliance on the accuracy, of this information. All recipients of this document should make their own enquiries to verify the content themselves and with all other relevant disciplines. This document does not form part of any construction contract and should not be relied upon for the purpose of construction.

Project
HALE SCIENCE BUILDING

Client
 HALE SCHOOL

Project No.
634

Drawing Status
DA Submission

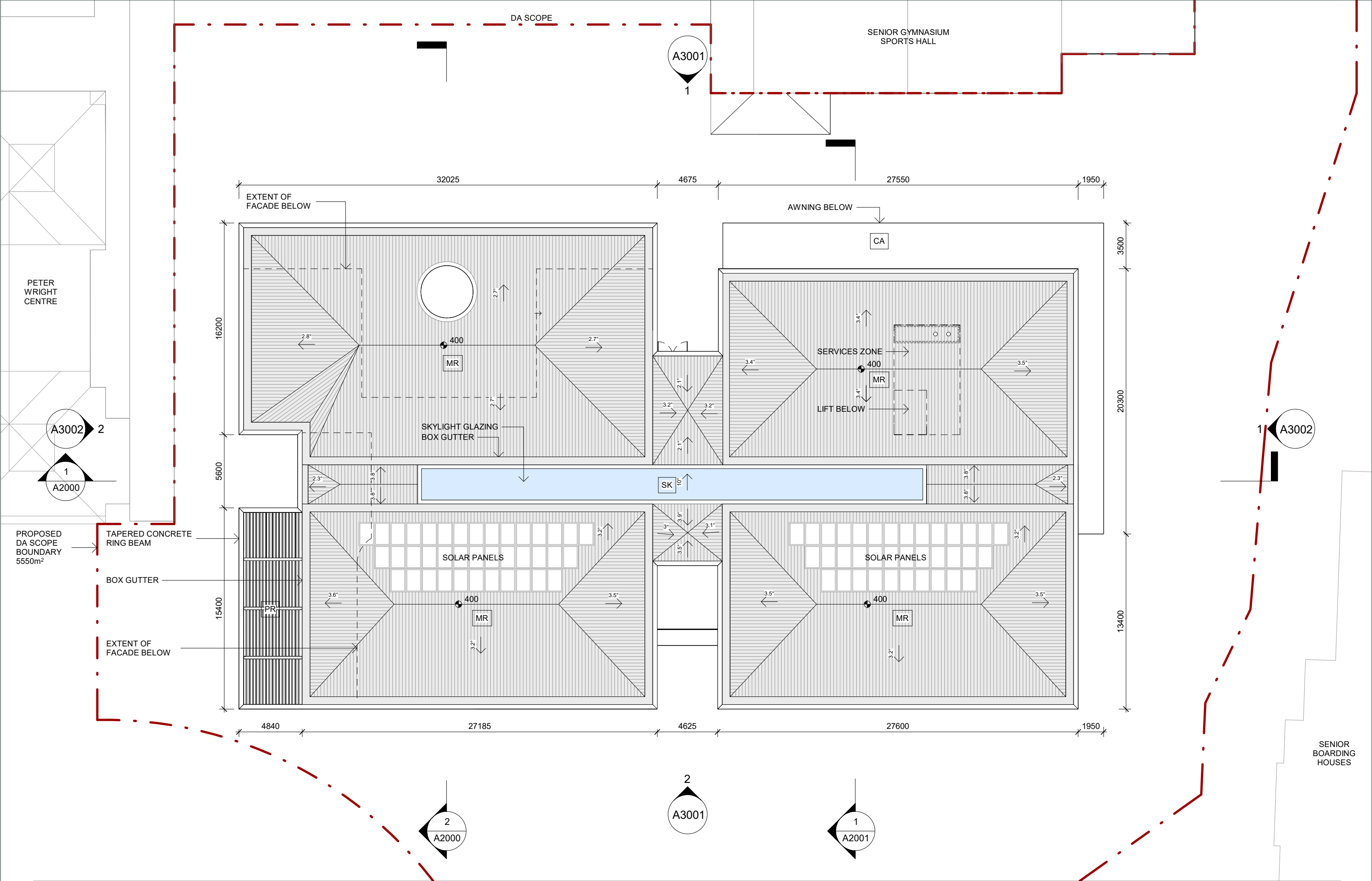
Drawing
First Floor Plan



Scale at A1/A3
1 : 250

Drawing No.
A1011

Date
23.04.24
Revision
A



KHA

PRINT IN COLOUR

Rev. Date	Amendment
A 23.04.24	DA Submission

Kerry Hill Architects Pty Ltd.
30 Mount Street, Fremantle
Western Australia
T +61 (8) 9336 4545
© Kerry Hill Architects Pty Ltd.

Disclaimer
1. Do not scale drawings. Written dimensions govern.
2. All Dimensions are in millimeters unless otherwise noted.
3. All Dimensions are to be verified on site prior to proceeding with the work.
4. Kerry Hill Architects are to be notified in writing of any discrepancies.
5. This drawing must be read in conjunction with all relevant contracts, reports specification and drawings.
6. This document has been prepared by Kerry Hill Architects Pty Ltd (KHA) for the purpose of conveying design intent. This document does not represent a complete design and is for the purpose of ongoing coordination between the relevant specialist consultants. KHA has made every effort to maintain the accuracy of the documents. It does not accept liability for loss or damage incurred as a result of the use, or reliance on the accuracy, of this information. All recipients of this document should make their own enquiries to verify the content themselves and with all other relevant disciplines. This document does not form part of any construction contract and should not be relied upon for the purpose of construction.

Project
HALE SCIENCE BUILDING

Client
 HALE SCHOOL

Project No.
634

Drawing Status
DA Submission

Drawing
Roof Plan

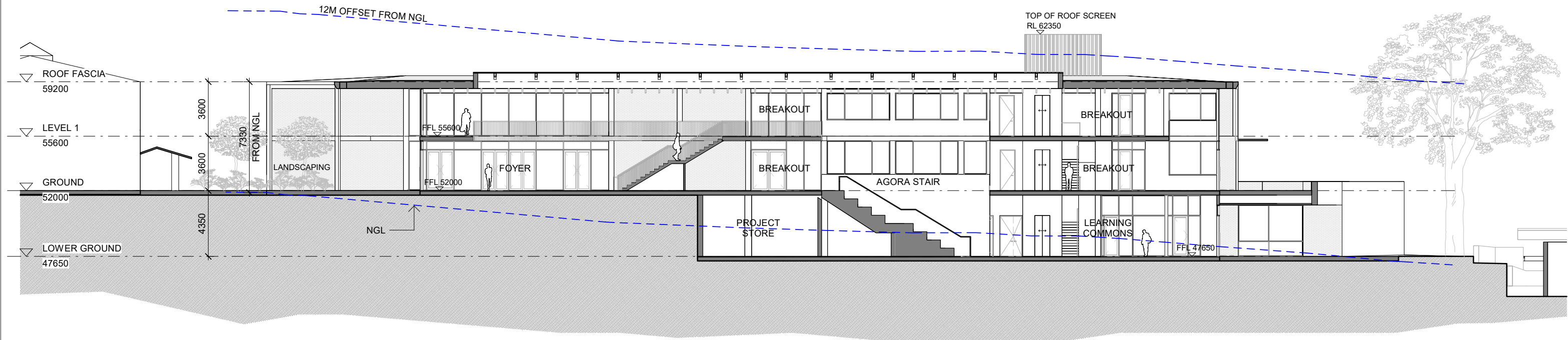


Scale at A1/A3
1 : 250

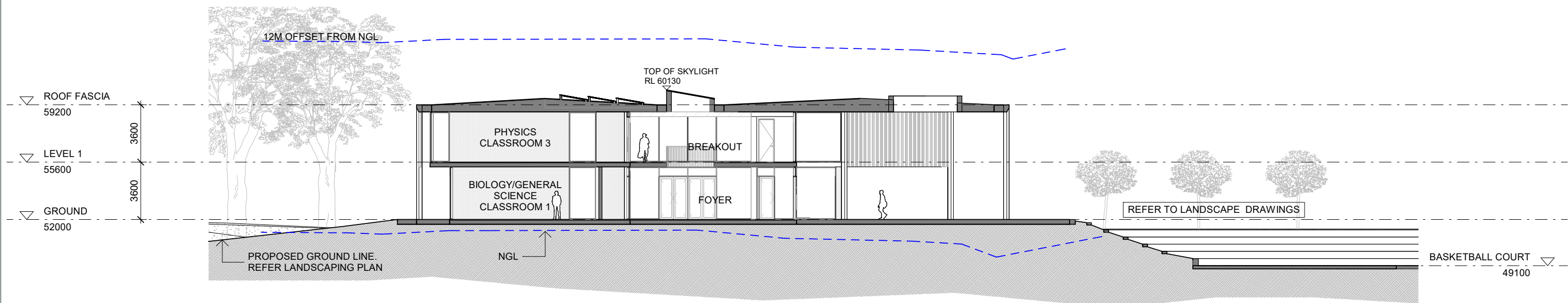
Drawing No.
A1013

Date
23.04.24

Revision
A



1 SECTION A
A2000 1 : 250



2 SECTION B
A2000 1 : 250

-- NATURAL GROUND LINE

KHA

PRINT IN COLOUR

Rev. Date
A 23.04.24

Amendment
DA Submission

Kerry Hill Architects Pty Ltd.
30 Mouat Street, Fremantle
Western Australia
T +61 (8) 9336 4545
© Kerry Hill Architects Pty Ltd.

Disclaimer
1. Do not scale drawings. Written dimensions govern.
2. All Dimensions are in millimeters unless otherwise noted.
3. All Dimensions are to be verified on site prior to proceeding with the work.
4. Kerry Hill Architects are to be notified in writing of any discrepancies.
5. This drawing must be read in conjunction with all relevant contracts, reports specification and drawings.
6. This document has been prepared by Kerry Hill Architects Pty Ltd (KHA) for the purpose of conveying design intent. This document does not represent a complete design and is for the purpose of ongoing coordination between the relevant specialist consultants. KHA has made every effort to maintain the accuracy of the documents. It does not accept liability for loss or damage incurred as a result of the use, or reliance on the accuracy, of this information. All recipients of this document should make their own enquiries to verify the content themselves and with all other relevant disciplines. This document does not form part of any construction contract and should not be relied upon for the purpose of construction.

Project
HALE SCIENCE BUILDING

Client
 HALE SCHOOL

Project No.
634

Drawing Status
DA Submission

Drawing
GA Sections

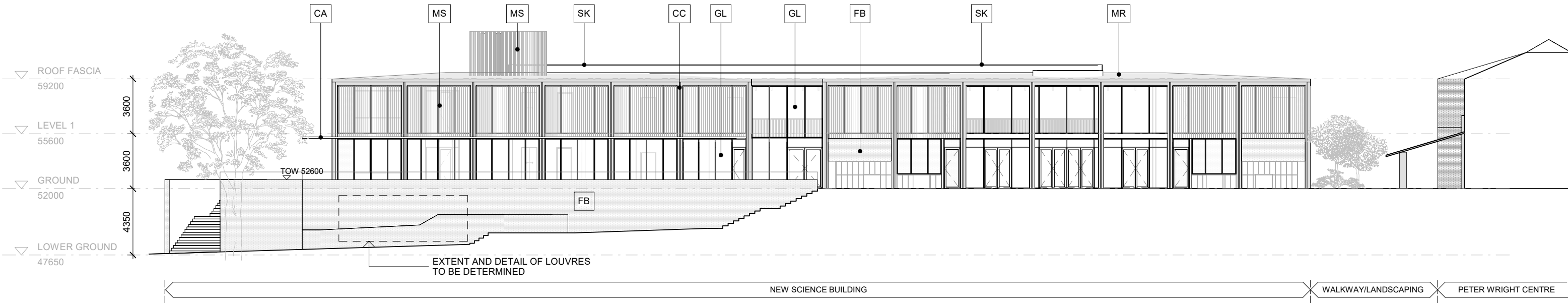


Scale at A1/A3
1 : 250

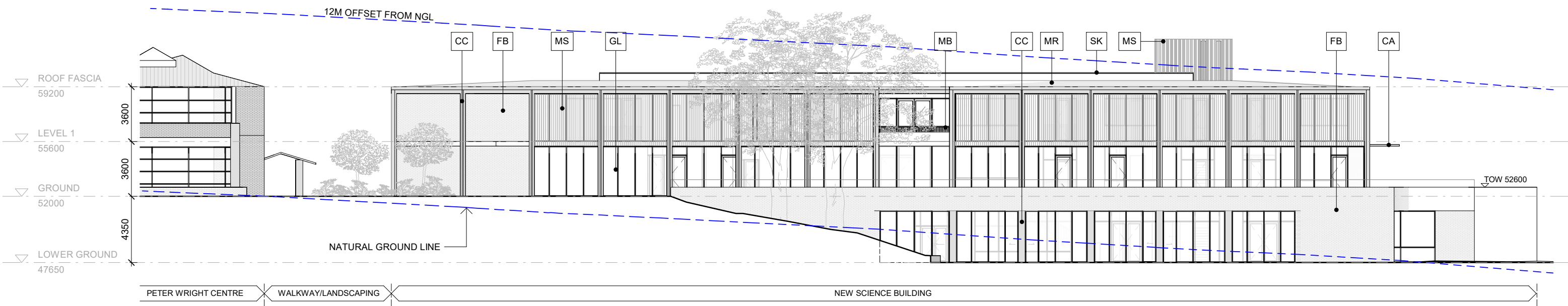
Drawing No.
A2000

Date
23.04.24

Revision
A

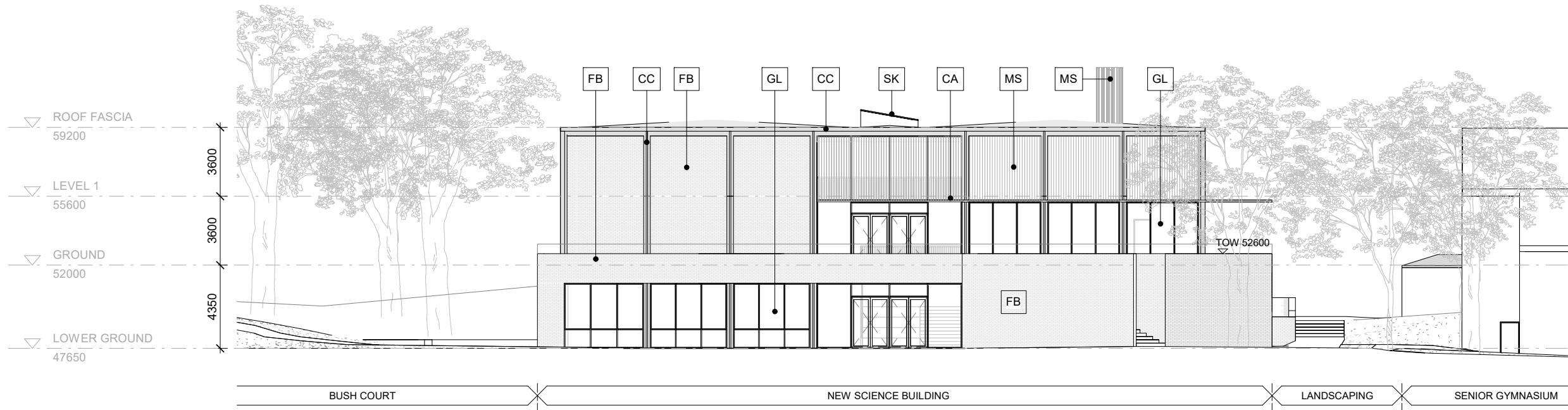


1 NORTHERN ELEVATION
A3001 1 : 250

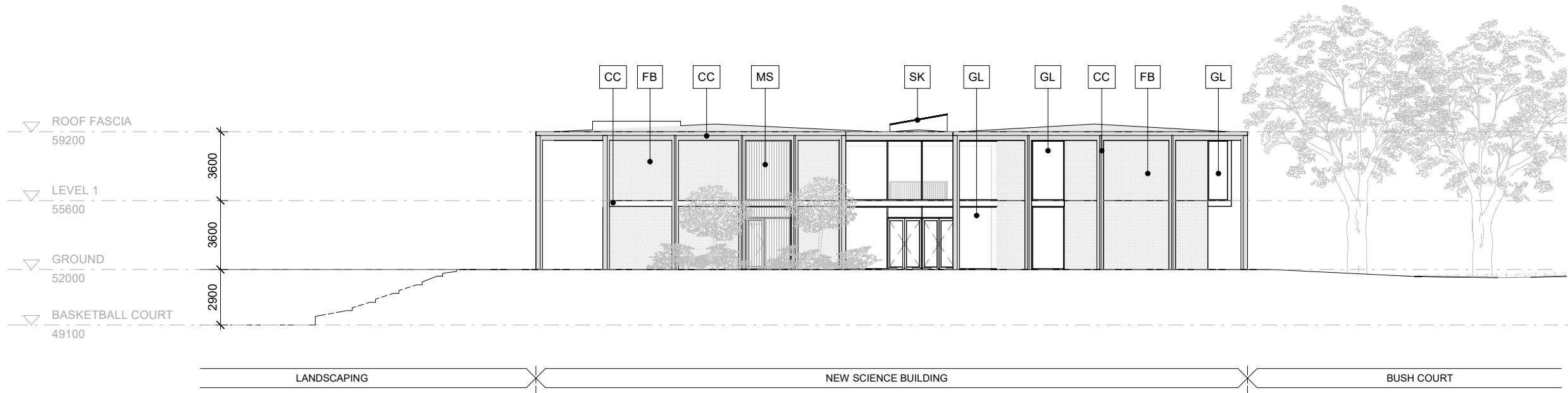


2 SOUTHERN ELEVATION
A3001 1 : 250

- CA CANOPY
- CC COLOURED CONCRETE
- FB FACE BRICKWORK
- GL ALUMINIUM FRAMED GLAZING
- MB METAL BALUSTRADE
- MR METAL SHEET ROOFING
- MS METAL SCREEN
- PR PERGOLA
- SK GLAZED SKYLIGHT



1 EASTERN ELEVATION
A3002 1 : 250



2 WESTERN ELEVATION
A3002 1 : 250

CA	CANOPY
CC	COLOURED CONCRETE
FB	FACE BRICKWORK
GL	ALUMINIUM FRAMED GLAZING
MB	METAL BALUSTRADE
MR	METAL SHEET ROOFING
MS	METAL SCREEN
PR	PERGOLA
SK	GLAZED SKYLIGHT

KHA

PRINT IN COLOUR

Rev. Date	Amendment
A 23.04.24	DA Submission

Kerry Hill Architects Pty Ltd.
30 Mouat Street, Fremantle
Western Australia
T +61 (8) 9336 4545
© Kerry Hill Architects Pty Ltd.

Disclaimer
1. Do not scale drawings. Written dimensions govern.
2. All Dimensions are in millimeters unless otherwise noted.
3. All Dimensions are to be verified on site prior to proceeding with the work.
4. Kerry Hill Architects are to be notified in writing of any discrepancies.
5. This drawing must be read in conjunction with all relevant contracts, reports specification and drawings.
6. This document has been prepared by Kerry Hill Architects Pty Ltd (KHA) for the purpose of conveying design intent. This document does not represent a complete design and is for the purpose of ongoing coordination between the relevant specialist consultants. KHA has made every effort to maintain the accuracy of the documents. It does not accept liability for loss or damage incurred as a result of the use, or reliance on the accuracy, of this information. All recipients of this document should make their own enquiries to verify the content themselves and with all other relevant disciplines. This document does not form part of any construction contract and should not be relied upon for the purpose of construction.

Project
HALE SCIENCE BUILDING

Client
 HALE SCHOOL

Project No.
634

Drawing Status
DA Submission

Drawing
Elevations

Scale at A1/A3
1 : 250

Drawing No.
A3002

Date
23.04.24

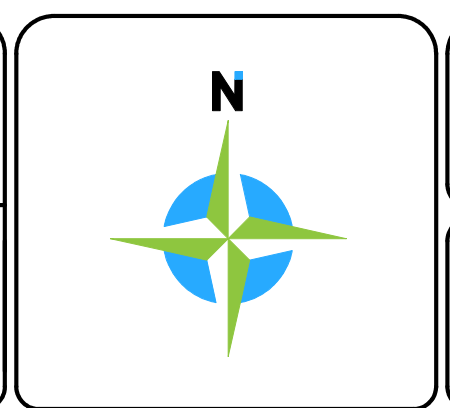
Revision
A



Rev.	Description	Drawn	Date	Checked
G	Additional Trees Added - South of Art Building	SAH	6/03/2024	TAV
F	Additional Detail and Trees Labelled	CJP	1/03/2024	TAV
E	Additional Detail and Trees Added	PLJ	31/05/2023	TAV
D	Extra Trees Added Around Shed and OTM Updated	SAH	21/09/2021	TAV
C	Entry Off Hale Road Added	SAH	21/09/2021	TAV
B	Additional Detail and Trees Survey	TGM	24/03/2021	TAV
A	Initial Issue	OPR	10/07/2020	TAV

ISO 9001:2015 AS/NZS 4801:2005
GlobalMark.com.au®

Surveyor:- PLJ
Survey Date:- 25/05/2023
Precal/Cad:- SCDB



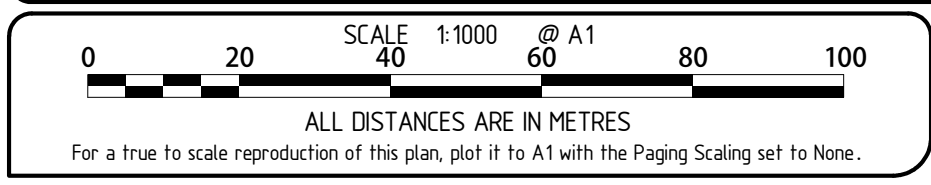
HALE SCHOOL
160 HALE ROAD, WEMBLEY DOWNS WA 6019
DETAIL AND CONTOUR SURVEY

CLIENT:
Hale School

The contents of this plan are current and correct as of the date stated within the revision panel. All consultants and persons wishing to utilise this data should satisfy themselves of this plan's currency by contacting the McMullen Nolan Group.

Project Mng: TREVOR VEEN Datum: PCG94 / AHD

103147 - DE - 001 - F
Job Number Type Plan Number Revision



The boundaries shown on this plan were not re-established as part of this survey, therefore this plan does not guarantee their accuracy. Existing easements, encumbrance or interest are not depicted and a title search is recommended to obtain this information. Re-establishment of the cadastral boundaries is recommended for any proposed works on or near existing boundaries.

MNG
MCMULLEN NOLAN GROUP
Level 1, 2 Sabre Crescent
Jandakot, W.A. 6164
PO Box 3526, Success
W.A. 6964, Australia
Offices in: Perth | Melbourne | Kimberley | South West WA

Tel: (08) 6436 1599
Fax: (08) 6436 1500
info@mngsurvey.com.au
www.mngsurvey.com.au
ABN 90 009 363 311

[illegible]

HALE SCIENCE BUILDING LANDSCAPE



DEVELOPMENT APPLICATION

APRIL 2024

ACKNOWLEDGMENT OF COUNTRY

We acknowledge the Whadjuk people the traditional custodians of this country and its waters and that Hale School stands on Noongar country. We wish to acknowledge and respect their continuing culture and the contribution they make to the life of this city and this region.

Prepared by:

ASPECT Studios
KHA

Landscape Architecture
Architecture

REVISION NO	DATE	DESCRIPTION	PREPARED BY	APPROVED
A	22.02.24	For Information	RG	TG
B	05.03.24	DRP Issue	RG	TG
C	27.03.24	SD Report	RG	TG
D	03.05.24	DA	RG	TG

Contents

1.0	INTRODUCTION	4
2.0	PROJECT CONTEXT	5
3.0	SITE CHARACTER	6
4.0	CAMPUS DNA	7
5.0	LANDSCAPE APPROACH	8
6.0	LANDSCAPE PROGRAM	9
7.0	LANDSCAPE STRATEGIES	10
8.0	LANDSCAPE PLANS	11
9.0	HARDSCAPE & FURNITURE	14
10.0	SOFTSCAPE	15
11.0	SITE PLAN	17
	APPENDIX	
	AP1. LANDSCAPE DRAWINGS	
	AP2. ARBORICULTURAL IMPACT ASSESSMENT	

1.0 Introduction

The landscape design for the Hale School Science Building, has been prepared by ASPECT Studios in collaboration with KHA Studio. The design responds to the scale, form and function of the architecture and existing campus context in order to create a generous and attractive landscape and public realm.

The northern landscape design integrates amphitheater seating and shade structures to respond to the formal sports court environment. This area provides students with a versatile outdoor space suitable for gatherings, spectating, lectures, and informal learning. The amphitheater seating encourages collaboration and interaction, fostering a sense of community among the student population.

The southern landscape responds to the informal bush court, preserving existing trees and creating gathering and informal learning spaces. This area offers students opportunities to connect with nature and engage in hands-on learning experiences in the lower level breakout area. The retained trees provide shade and a tranquil atmosphere to promote relaxation, reflection, and creativity.

The landscape includes robust furnishings and seating walls strategically placed to accommodate a range of gathering spaces throughout the campus. The furnishings offer versatility and durability to withstand the rigors of daily use while providing comfort and practicality for students and faculty alike. Complementing these furnishings is a robust palette of West Australian plants reflecting the region's unique flora and enhancing the campus's aesthetic appeal and biodiversity of the landscape while creating a sense of place rooted in the local context.

Landscape Approach

The landscape design aims to create a contemporary, functional and aesthetically pleasing landscape that seamlessly blends with the built form. The following principles form the landscape approach to the site:

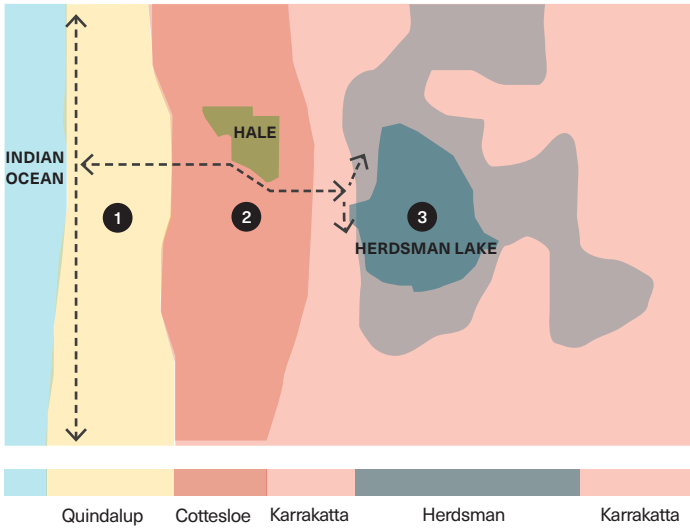
- Use high quality landscape design to integrate the proposed development with the surrounding topography, quads and broader precinct;
- Develop a legible network of spaces that fully integrate with and connect to the surrounding context.
- Develop a legible network of spaces that support the building program;
- Maximise opportunities for social interaction through arrangement of seating and walling;
- Selection of local and native plant species that benefit surrounding ecologies.
- Create a robust landscape made from simple materials, proven planting and bold forms that can be managed and maintained;



Render - KHA

2.0 Project Context

Situated on the Swan Coastal Plain's dunal system, Hale School occupies a unique landscape nestled between the Indian Ocean and Herdsman Lake. The campus is surrounded by diverse vegetation complexes, including the Quindalup, Cottesloe, Karrakatta, and Herdsman complexes, with the closest association to the Cottesloe complex. These complexes are characterized by aeolian soils, primarily composed of marine and sand deposits carried inland by prevailing winds. Overlying limestone deposits, the Tamala sands form the foundation of the landscape, shaping the terrain and vegetation composition. Indicator tree species such as *Acacia*, *Agonis flexuosa* (W.A Peppy), *Banksia*, *Eucalyptus gomphocephala* (Tuart), Sheoaks, *Eucalyptus marginata* (Jarrah), and *Xanthorrhoea preissii* (Grass Tree) populate the area, contributing to the unique ecological diversity and cultural significance of the region.



Soil Association Map - Swan Coastal Plain (Sense of Place, George Seddon, 1972).	
KEY	
1	Coastal Landscape - Indian Ocean /Quindalup Complex
2	Dunal Landscape - Cottesloe Vegetation Complex
3	Herdsman Lake - Herdsman Complex
	Coastal landscape character
	Wetland landscape character
	Remnant bushland landscape character
	Curated & managed landscape character



Coastal Landscape - Indian Ocean



Hale School - Bush Landscape



Herdsman Lake - Wetland Landscape

3.0 Site Character



4.0 Campus DNA

The site character of the campus is defined by the orthogonal layout of the campus which frames a collection of landscaped quads that include a variety of scales and treatments.

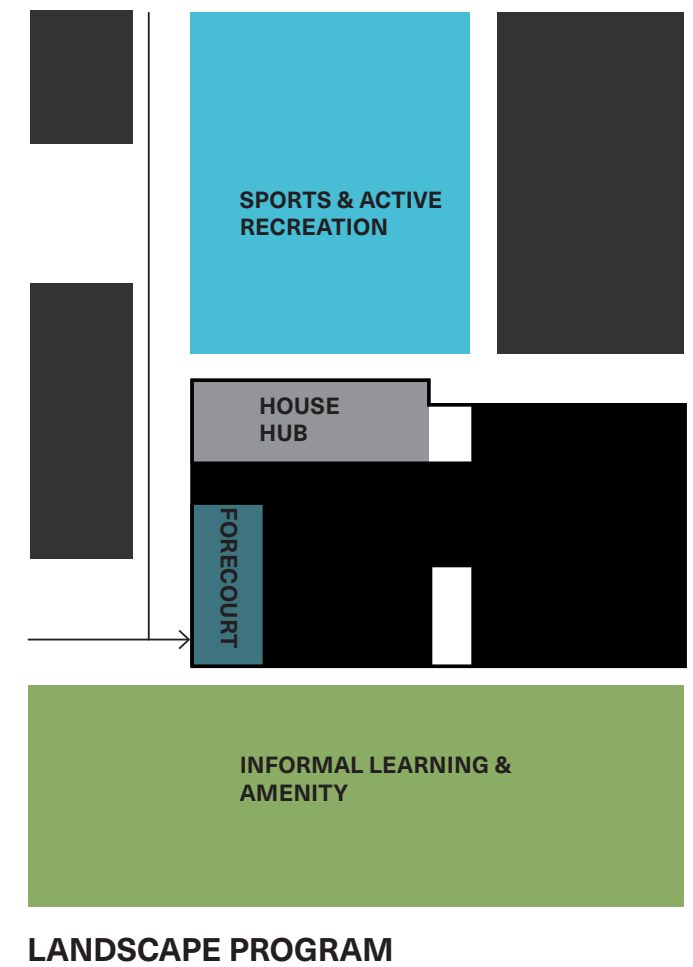
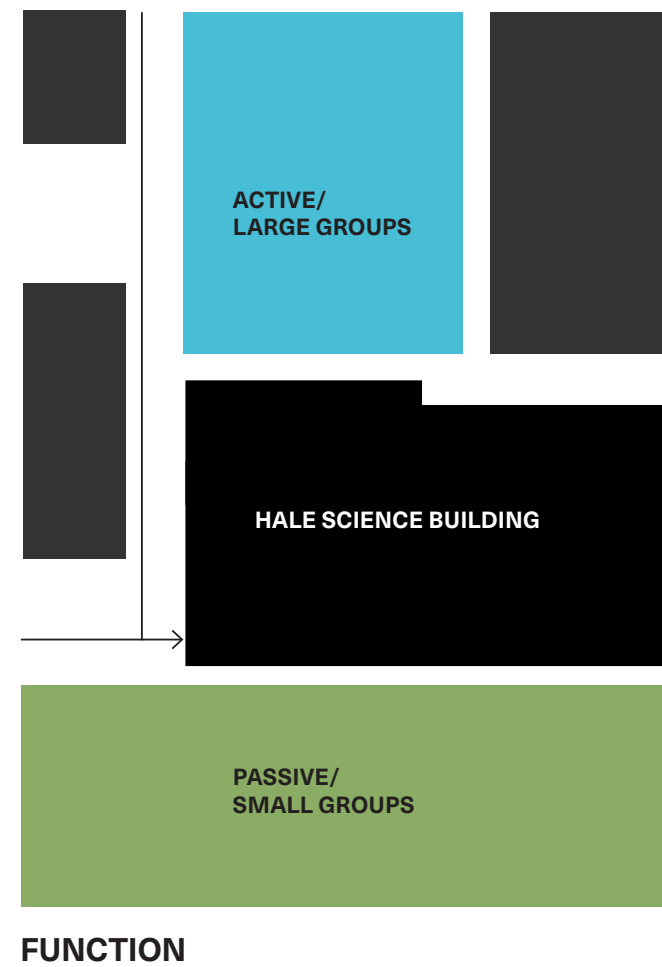
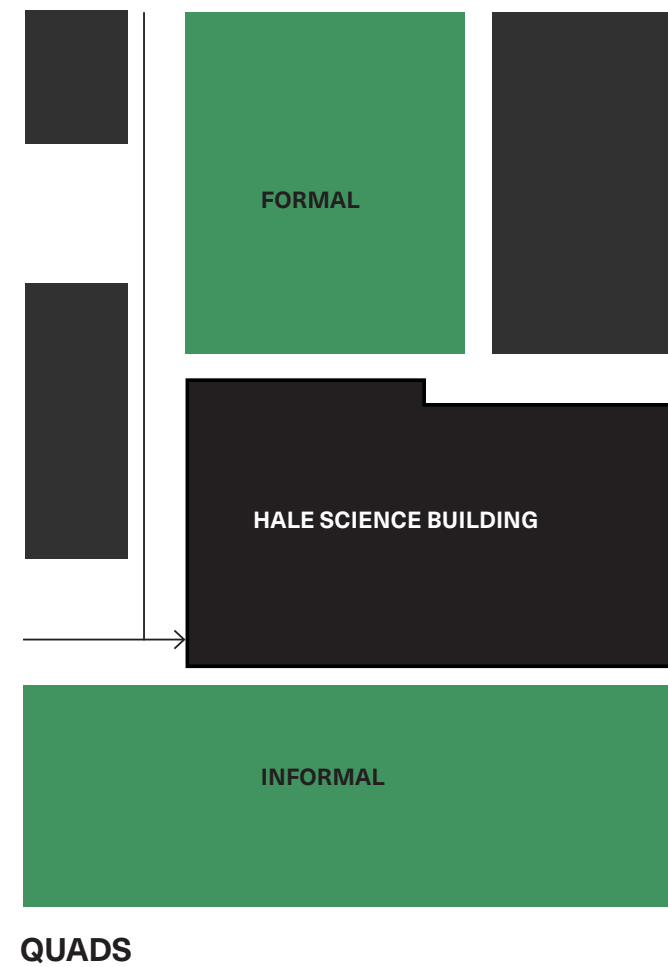
These quads serve as focal points for student activities and gatherings, providing dynamic spaces for recreation, study, and social interaction.

The proposed Science Building and landscape surrounds is an extension of the campus grid and sits between the northern sports quad and the south bush quad. The immediate surrounds of the Science Building are defined by the large stand of native trees to the south which are a key feature of the campus.



5.0 Landscape Approach

The landscape design approach for the site responds to the unique landscape context and adjacent quad spaces to seamlessly integrate the new architectural form into the existing campus. Recognizing the distinct characteristics of each area, the design seeks to create dynamic outdoor environments that support various aspects of student life. In the active northern quad, the landscape design fosters vibrant social interactions and recreational activities, providing spaces for sports, gatherings, and events. The passive southern quad prioritizes informal gathering and outdoor education spaces. By seamlessly integrating with the natural and built environment, the landscape design plays a crucial role in enhancing the campus experience and enriching student life.



6.0 Landscape Program



FORMAL STRUCTURED SEATING /
LARGE GROUPS

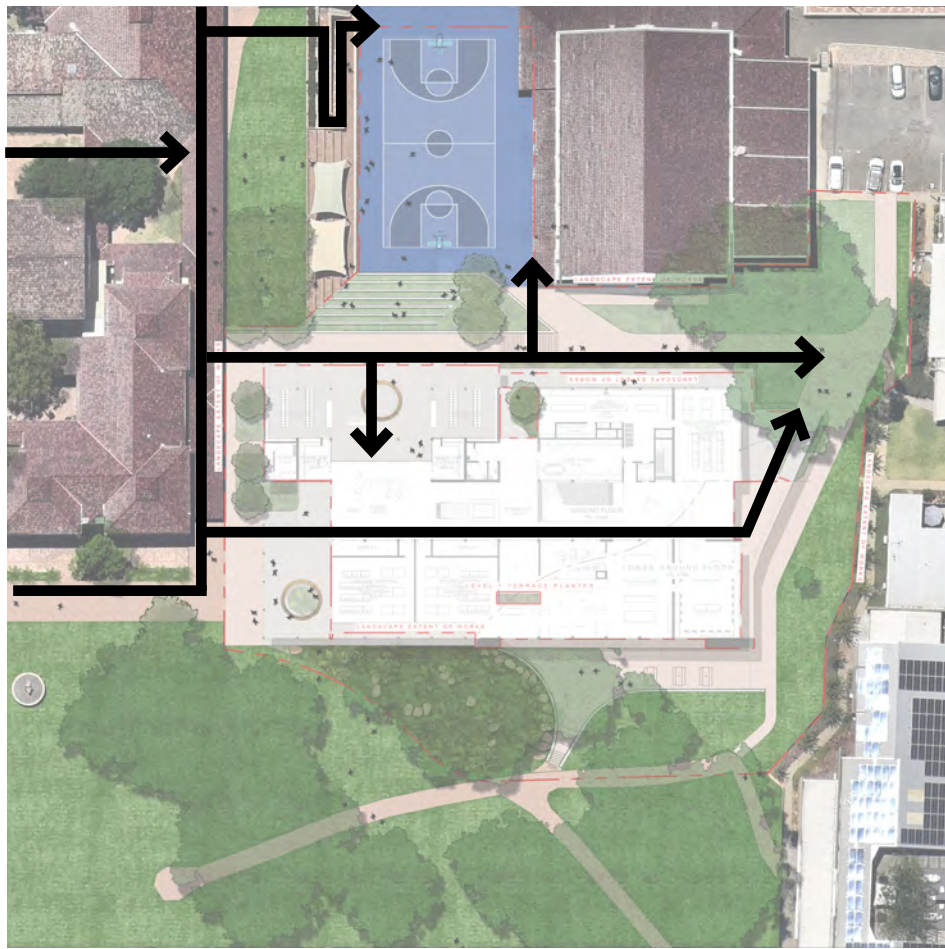


INFORMAL GARDENS AND SEATING /
SMALL GROUPS

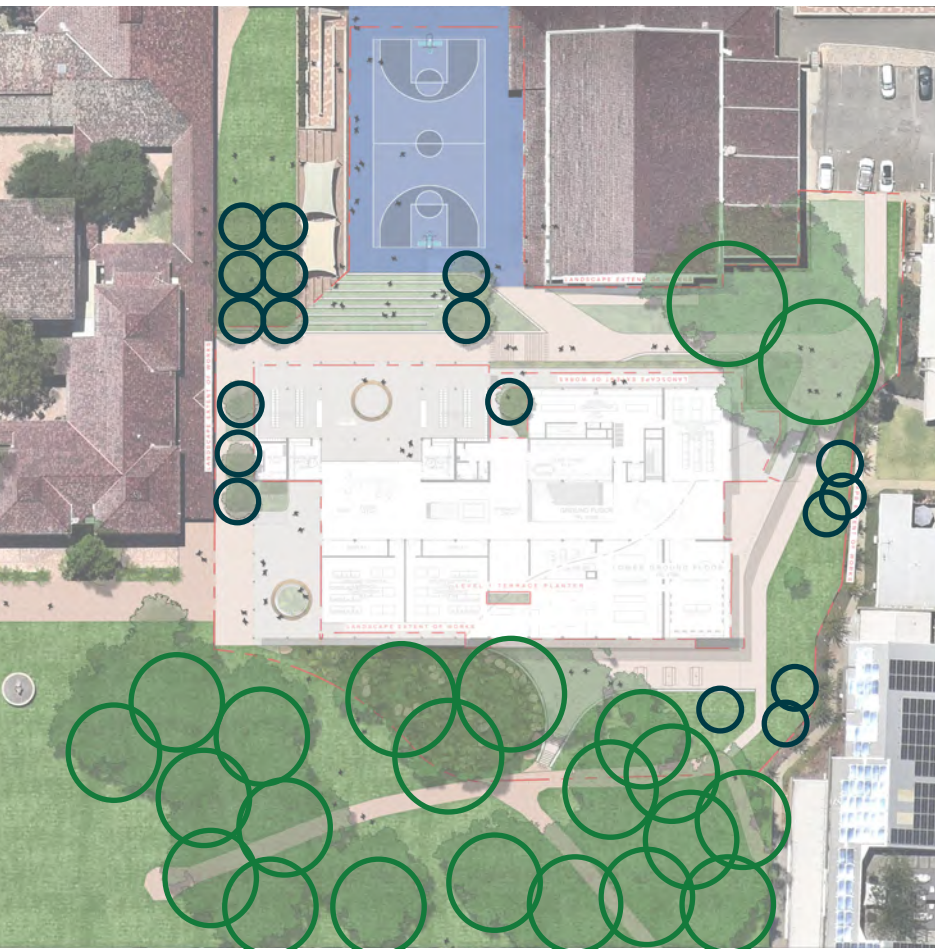


7.0 Landscape Strategies

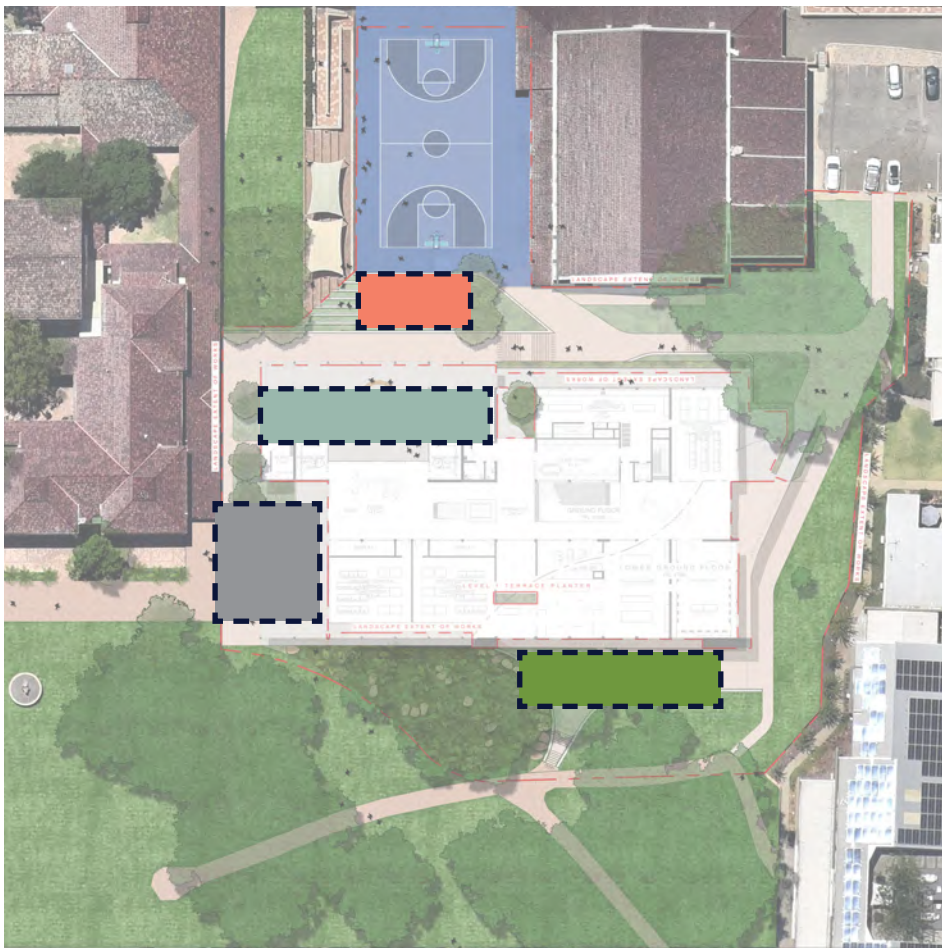
Circulation



Vegetation



New Landscape Spaces



8.0 Landscape Plans

Landscape Areas

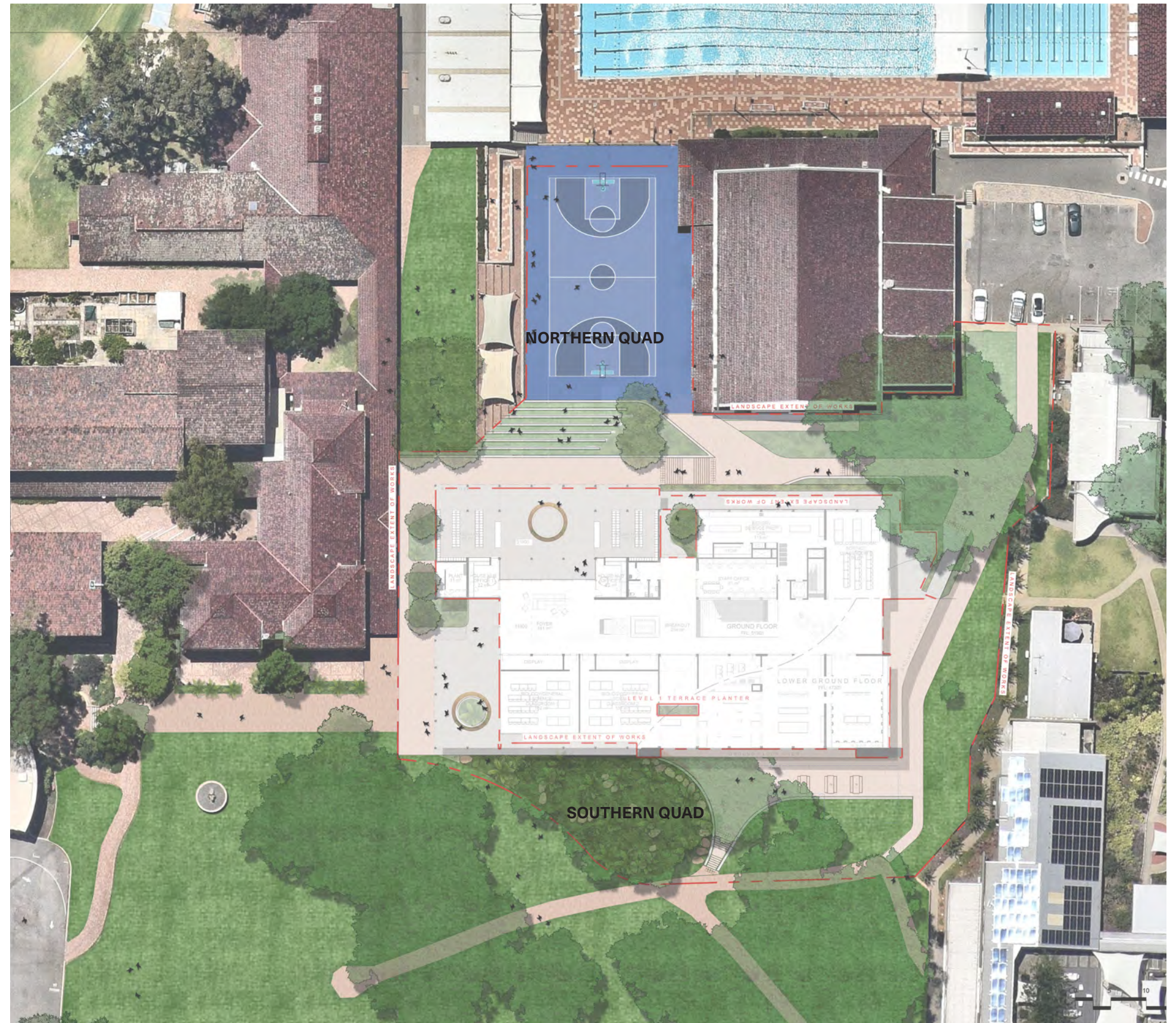
The landscape plan for Hale School Science Building proposes the following key landscape areas:

(1) Northern Quad: Sports Court

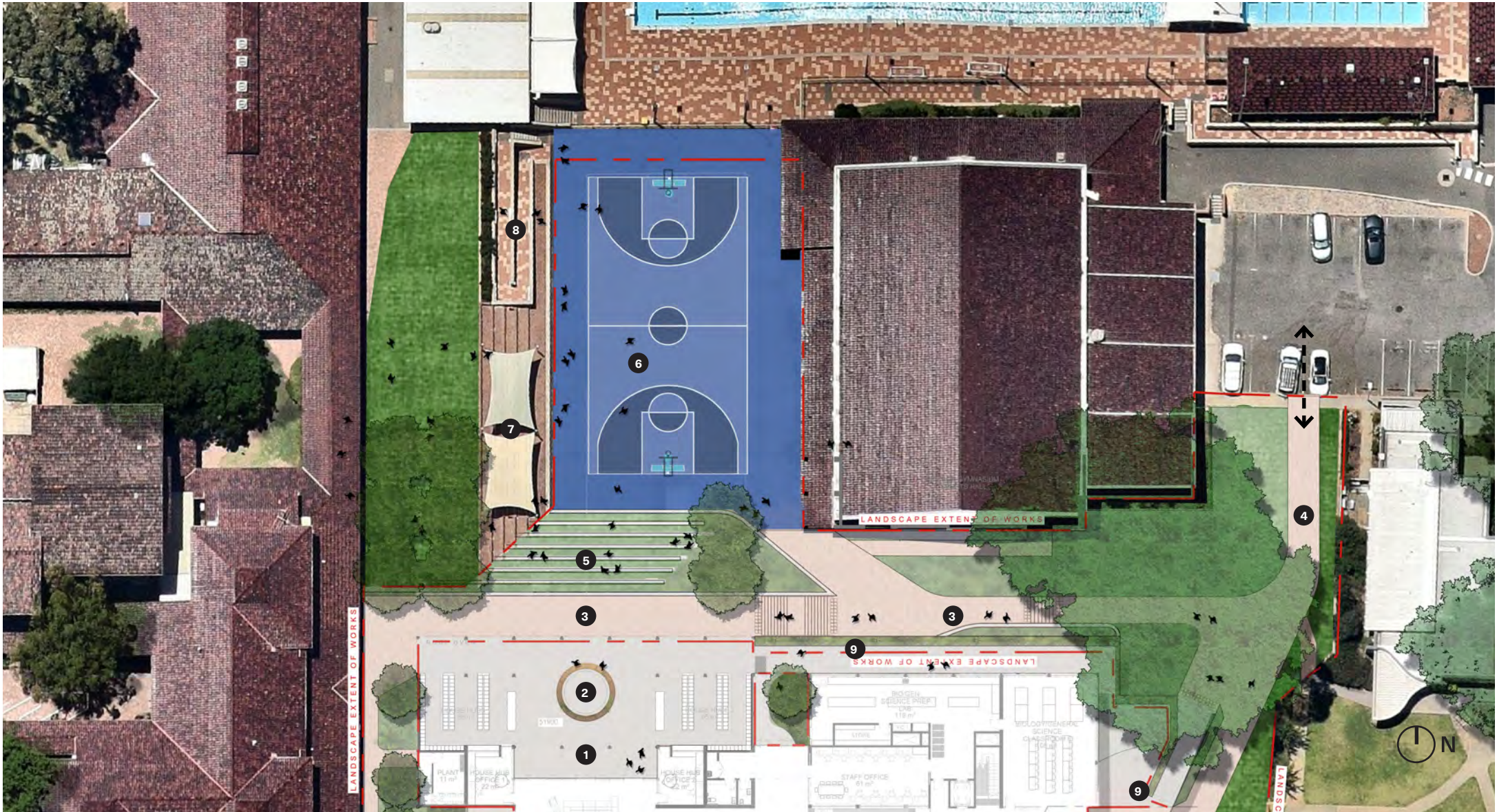
Comprising of revitalised basketball court with shaded terrace seating for spectating and new tree planting

(2) Southern Quad: Bush Court

The existing mature trees and grassed area creates a well shaded, comfortable micro climate while the proposed court provides outdoor learning opportunities by way of furniture and seating walls.



Northern Quad

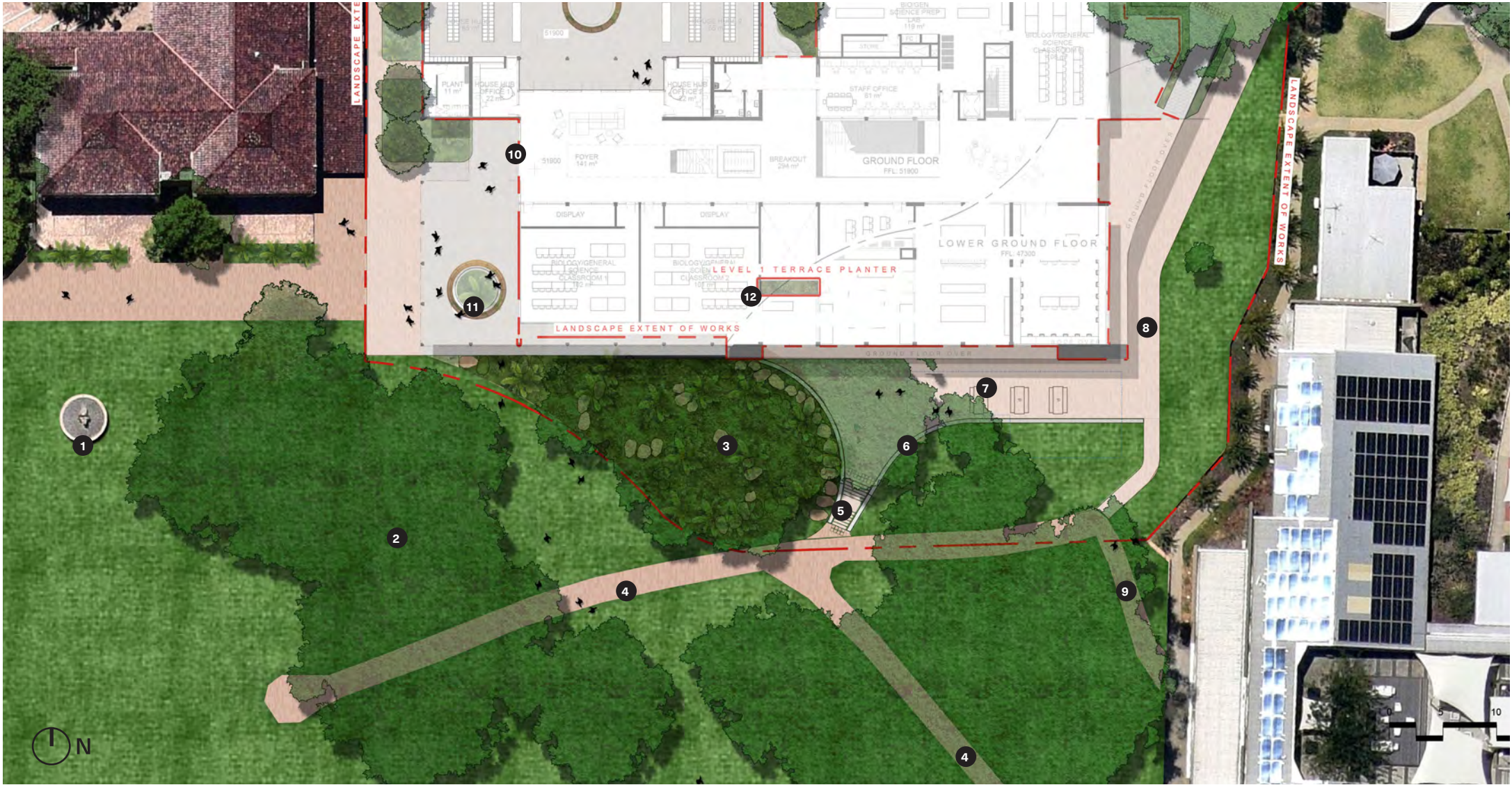


Key

1	House Hub & Entrance
2	Oculus Artwork
3	New pedestrian link
4	Service Access
5	Green terraces
6	Revised court location
7	Existing Terraces & Shade Structures
8	Existing ramp access
9	Balustrade planter with trailing plants



Southern Quad



Key	
1	Relocated sundial
2	Existing trees
3	Rock pitching to trees surrounds
4	Existing path network
5	Proposed stair access to the lower courtyard
6	Retaining/ Seating walls
7	Lower courtyard
8	Service access
9	Access to Boarding School
10	Building Entrance
11	Seating Area
12	Balustrade planter on Level 1 terrace with trailing plants



Accessibility

Equality of access has been maintained by way of the existing ramp to the north adjacent to the basketball court.

As the previous path arrangement to the south of the building were non compliant, the existing condition has been improved. A new DDA compliant path from the north eastern carpark to the existing path network via the building lifts has been proposed and all proposed stairs, ramps and walkways satisfy AS1428 requirements .

Key

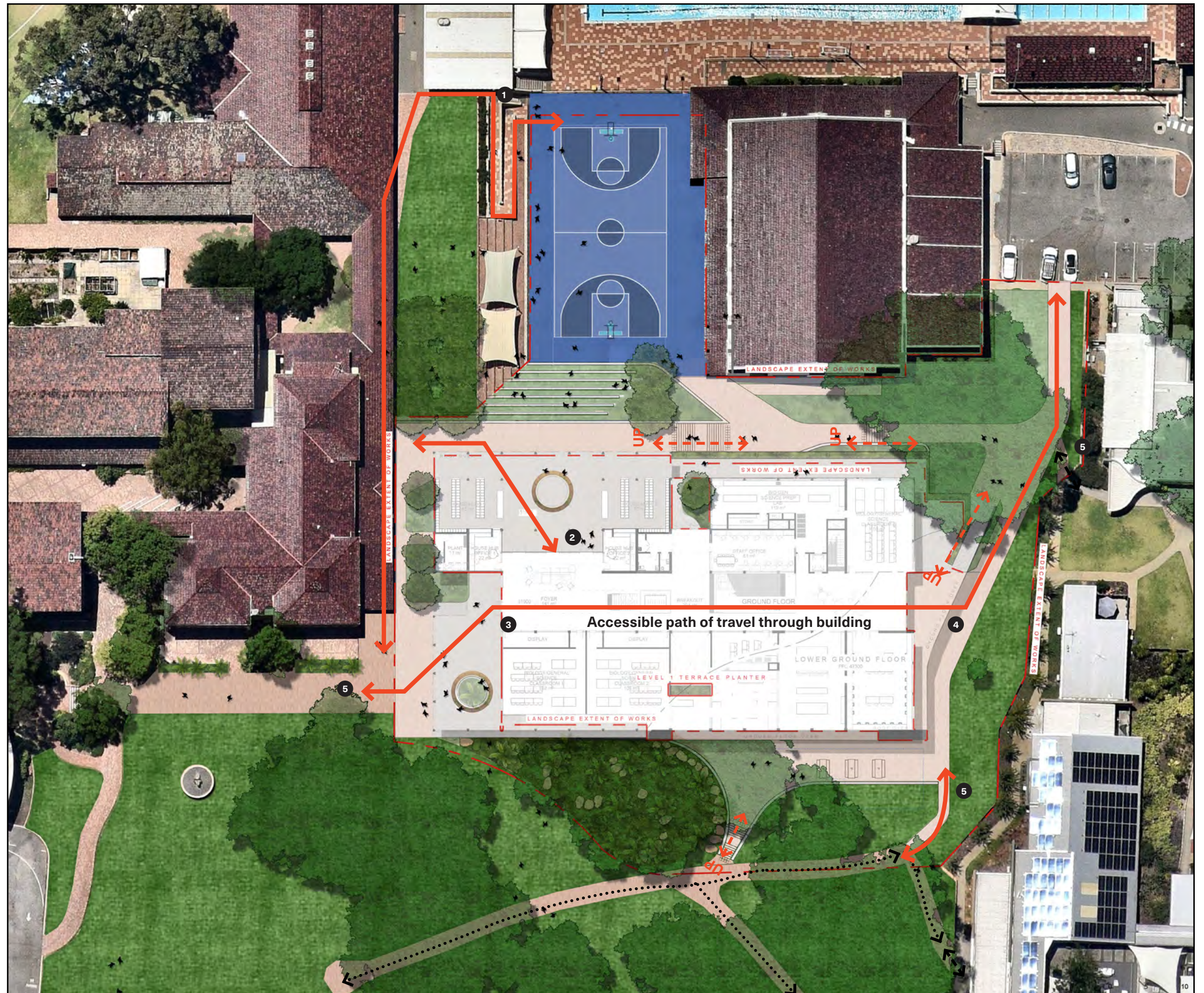
- ① Existing accessible ramp access to sports court
- ② North entrance and forecourt
- ③ West entry - Upper ground
- ④ East entry - Lower ground
- ⑤ Reconnect to existing path network

➡ Accessible path of travel

↕ Stair

⋯ Existing path network

↗ Existing stair



9.0 Hardscape & Furniture

Material Strategy

A refined palette of robust and low maintenance materials are proposed that are in keeping with the project context and Architecture. The proposed landscape scheme will use a palette of high quality materials, selected to reinforce the identity of the spaces.

The Material strategy will:

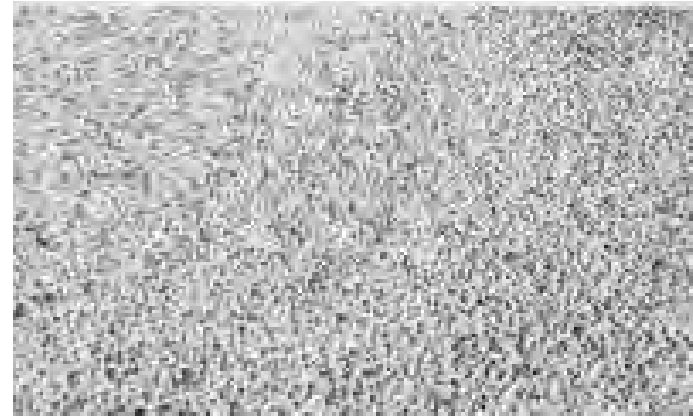
- Use materials that are sympathetic to the local context and are appropriate to their location and use.
- Form a structured palette that is coordinated to create visual unity and integrity within the landscape but allow for variations in texture and colour that can be used to define function and character.
- Give consideration to long-term performance, durability and maintenance requirements.
- Consider impact on the environment and sourcing, cost and project sustainability.

Furniture Strategy

A variety of seating walls and fixed furniture elements will be provided within the landscape to support a variety of social and informal settings.

The furniture strategy will:

- Reinforce the overall design concept and relationship to the architecture.
- Share a common material language and robust detailing.
- Locate furniture in favourable climatic zones. i.e. wind protected areas with suitable solar access.
- Restrained selection of materials to be robust, vandal resistant and durable.



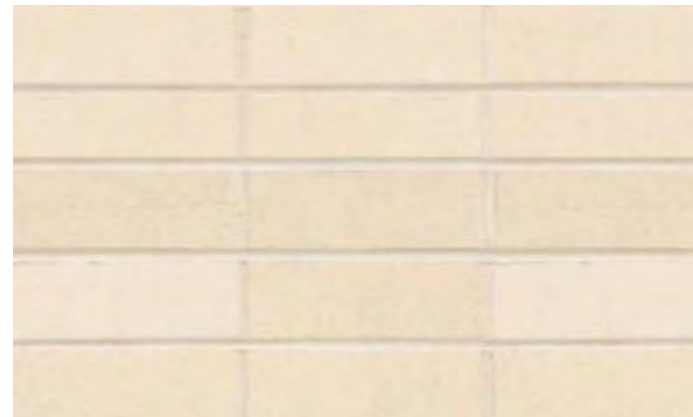
Exposed Aggregate Concrete Paving



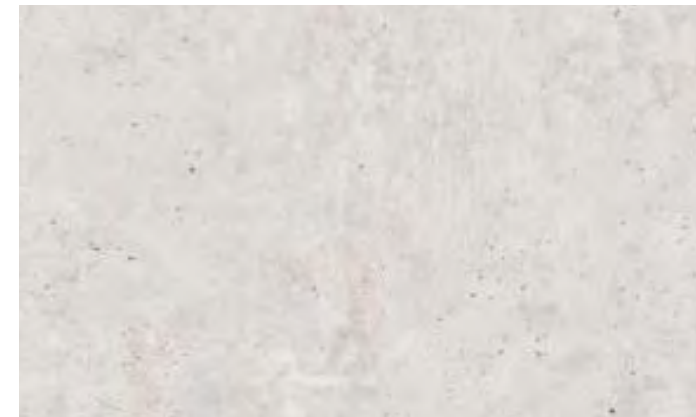
Brick Paving



Harvest Table



Chillingham White Brick Walls



Insitu Concrete Walls Grey



Circular Seating Bench



Rock Retaining Walls



Limestone Walling



Seating Walls

10.0 Softscape

Approach

The planting scheme for the Hale Science project responds to the site's topography, microclimates and proposed outdoor programmes. This includes the north (sunny) and south (shady) conditions, topographic changes to manage levels and formal and informal gathering and learning opportunities.

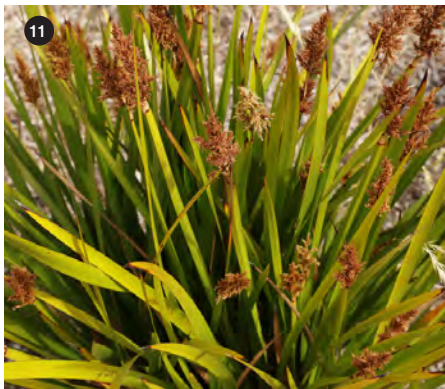
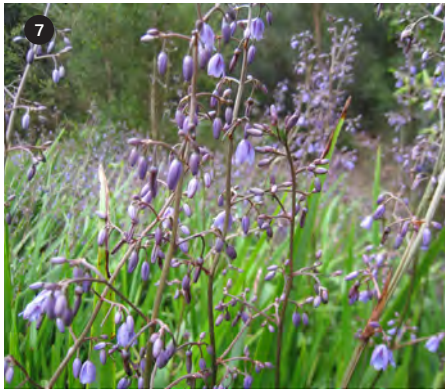
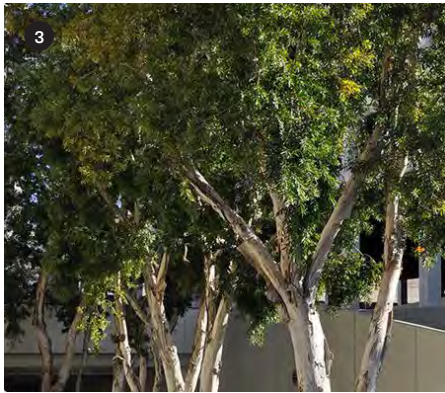
The planting design is informed by local vegetation complexes of Qindalup, Cottesloe and Karrakatta. Site appropriate non-native species have also been proposed. Planting mixes will showcase varying hues of greens, with a range of flowering times providing seasonal highlights of colour throughout the year.

Thematics associated with the new science facility, its interface with the formal Sport Quad to the north and the informal Bush Quad to the south will also create distinct landscape characters as students move through the project.

The proposed terraced lawn area will provide areas for students to use during breaks, support outdoor learning and enable students to also spectate. Perimeter planting to be robust and low maintenance to withstand student's movements and activities. Proposed tree plantings to managed solar access and provide seasonal colour.

The Hale Science planting is intended to:

- Use landscape elegantly to respond to site's microclimates and topographic requirements.
- Complement the Hale Science building's architecture.
- Be robust and functional in a school setting (Sports and Bush Quad and the Science Building).
- Enhance ecological diversity.
- Improve outdoor comfort. Manage and optimise solar access as well as providing shade to amenity areas.
- Plant species that are suitable to the site conditions, aspect and topographic condition.
- Have low watering, and maintenance requirements.



Indicative Tree species list:

Pot Size: As shown below

Planing density: As shown on plans

<i>Elaeocarpus Prima Donna</i> (2)	200Ltr
<i>Melaleuca sp.</i> (3)	500Ltr
<i>Pistacia chinensis</i> (4)	500Ltr
<i>Tipuana tipu</i> (1)	500Ltr
<i>Eucalyptus gomphocephala</i>	500Ltr
<i>Eucalyptus marginata</i>	500Ltr

Indicative Planting Palette

Pot Size: 140mm

Planing density: 4 per m2

<i>Acacia lasiocarpa prostrate</i> (12)
<i>Banksia blenchifolia</i> (10)
<i>Chorizema cordatum</i> (14)
<i>Correa backhouseana var.coriacea</i> (9)
<i>Cycas revoluta</i> (6)
<i>Darwinia citrodora 'Sea Spray'</i> (15)
<i>Dianella revoluta</i> (7)
<i>Grevillea obtusifolia 'Gingin Gem'</i> (8)
<i>Lepidosperma gladiatum</i> (11)
<i>Lomandra 'Lime Tufts'</i> (13)
<i>Rhaphiolepis hybrid Oriental Pearl</i> (5)
<i>Zamia furfuracea</i> (16)
<i>Casuarina glauca 'Cousin It'</i> (17)

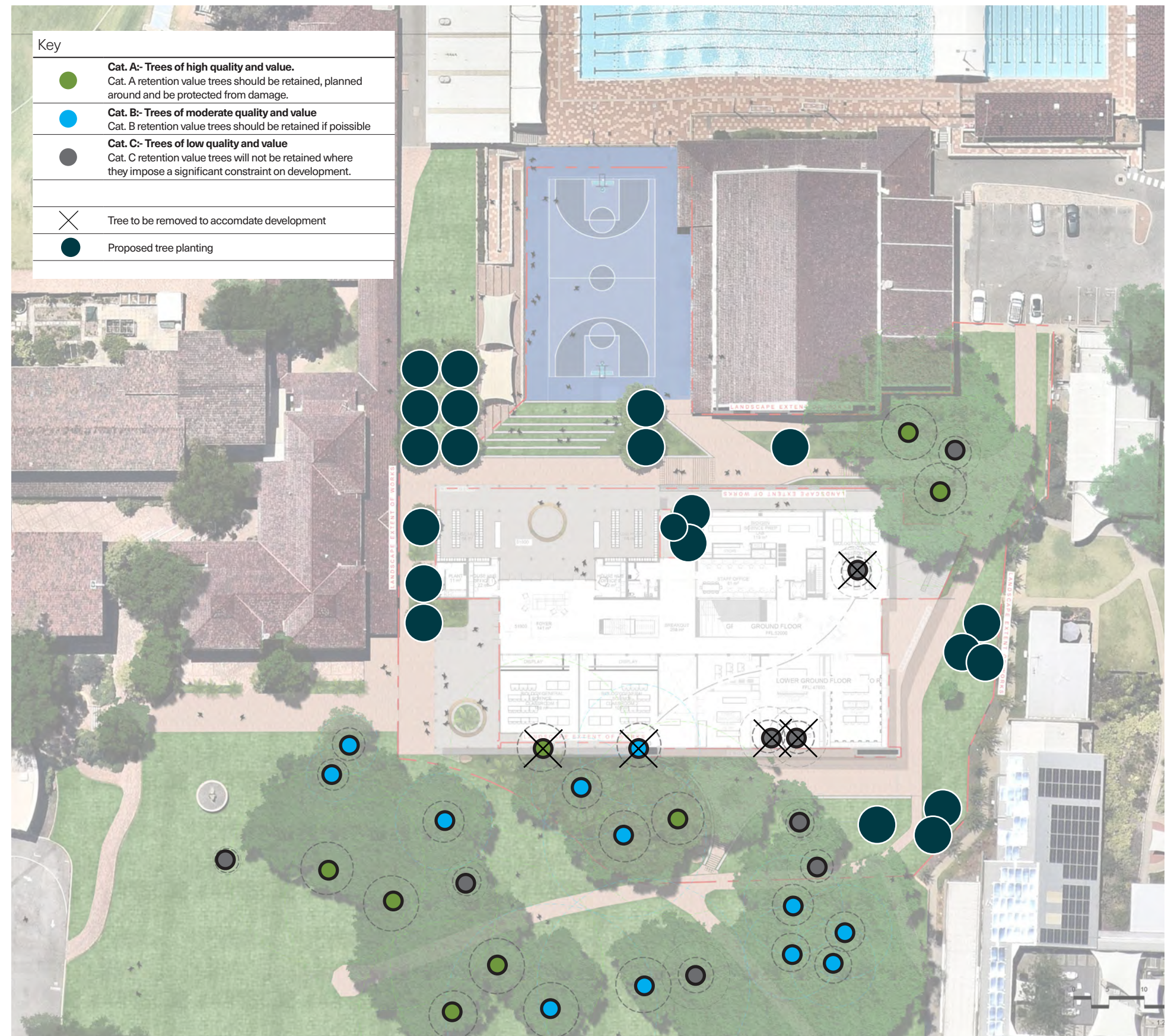
10. Softscape

Existing Tree Survey

Civica undertook an Arboricultural Impact Assessment (AIA) report encompassing approximately twenty-five (25) trees located within the vicinity of the proposed development works. The survey identified trees worthy of retention and preservation and those that would require removal to facilitate the proposed development. In addition the survey highlighted any potential conflicts between proposed works and those trees worthy of retention and preservation. The subject trees were assessed in relation to their current arboricultural traits and future viability within the landscape.

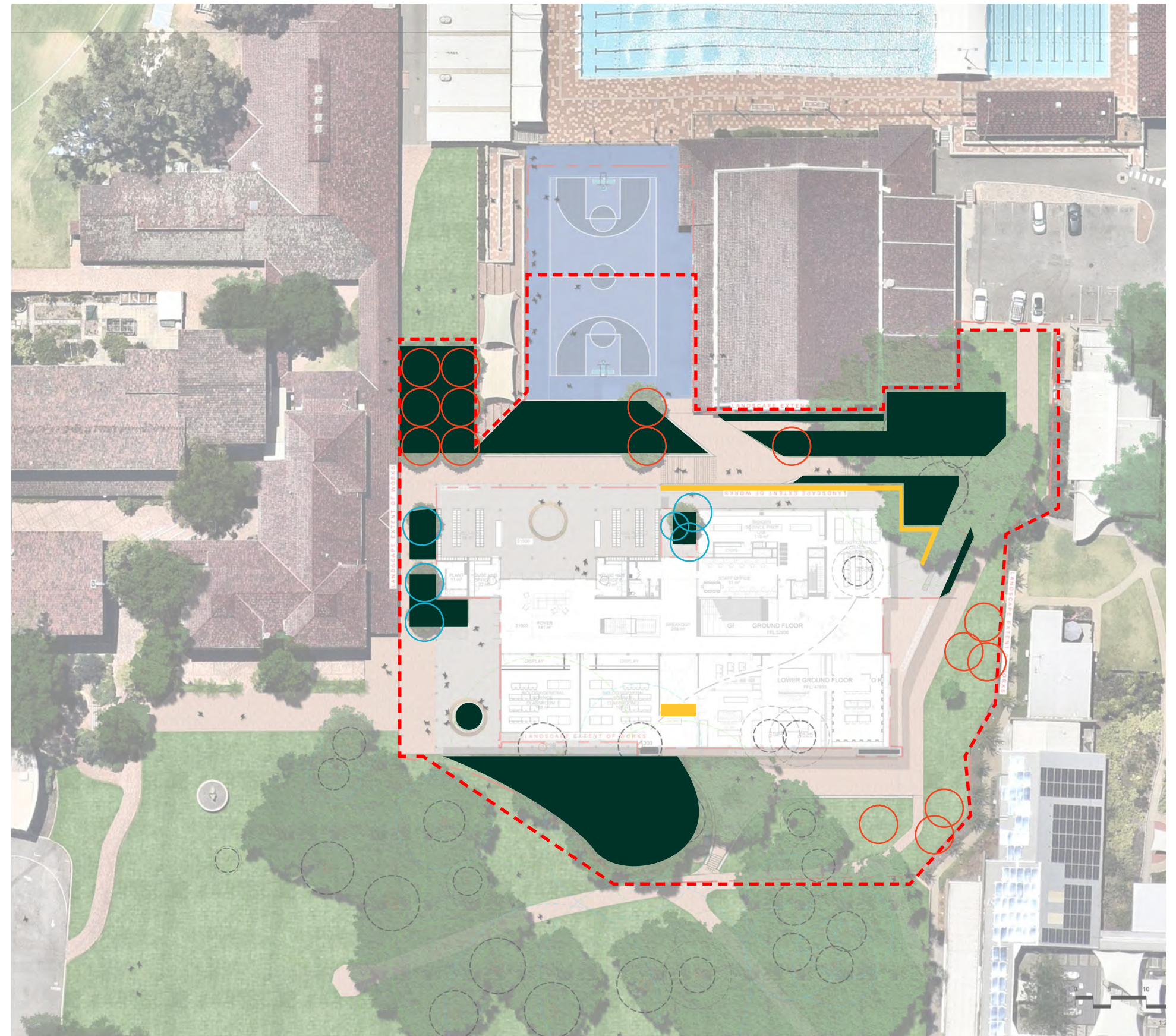
The majority of the existing trees are made up of Jarrah, Tuarts and Melaleuca and Gum trees. The project requires the removal of two tuarts and the bottle brushes to accommodate the footprint of the building. A replacement strategy has been included across the project that include new tree planting to the north and south of the development for a total of 21 proposed trees.

- Refer to Arborist report for assessment of existing trees.
- Protected trees to be retained in accordance with AS 4970-2009 Protection of Trees on Development Sites.
- Proposed trees to be locally native and/or appropriate exotic species. Trees to managed solar access, provide attractive seasonal colour, be of a suitable size at maturity and contribute to greater site ecology. Refer indicative tree species list.



The landscape design consists of deep soil zones and planting on structure (As defined in DesignWA) to create a landscape approach which is respectful of the surrounding context and architectural form.

Deep Soil Provided in Development: 851m2



	Deep Soil Planting
	Planting On Structure
	Site Area
	Proposed Tree - Small: <200Ltr
	Proposed Tree - Large: 500Ltr min.

10. Softscape

Canopy Calculations

As per the DesignWA objectives the project seeks to improve tree canopy coverage of the site. Trees are included within the development to:

- Provide shade to amenity areas
- Reduced temperatures of external areas through evapotranspiration
- Mitigation wind within the development
- Noise Mitigation & Habitat Creation

The table below summaries the extent of landscaping provided across the various levels of the building.

Tree Size	Small Trees 4-6m	Large Trees >9m	Total Canopy (m2)
Lower Ground Floor	0	15	1,208
Ground Floor	6		
Level 1	0	0	0
TOTAL	254	954	1,208

Legend

Site Area

Proposed Tree - Small: <200Ltr

Proposed Tree - Large: 500Ltr



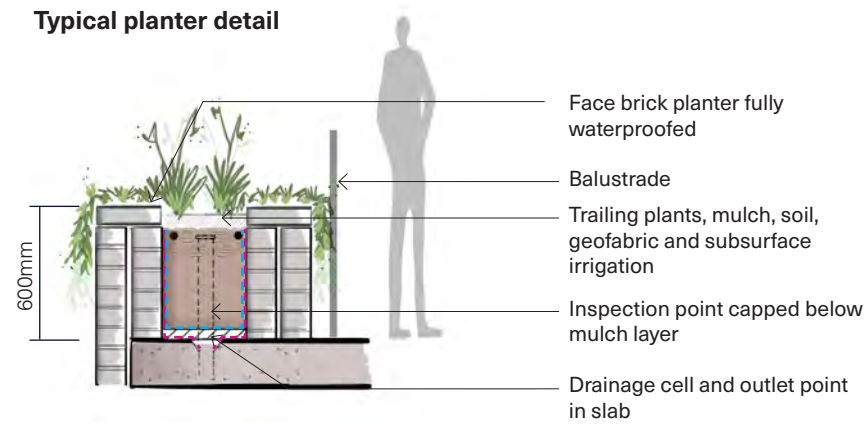
10. Softscape

Planting on Structure

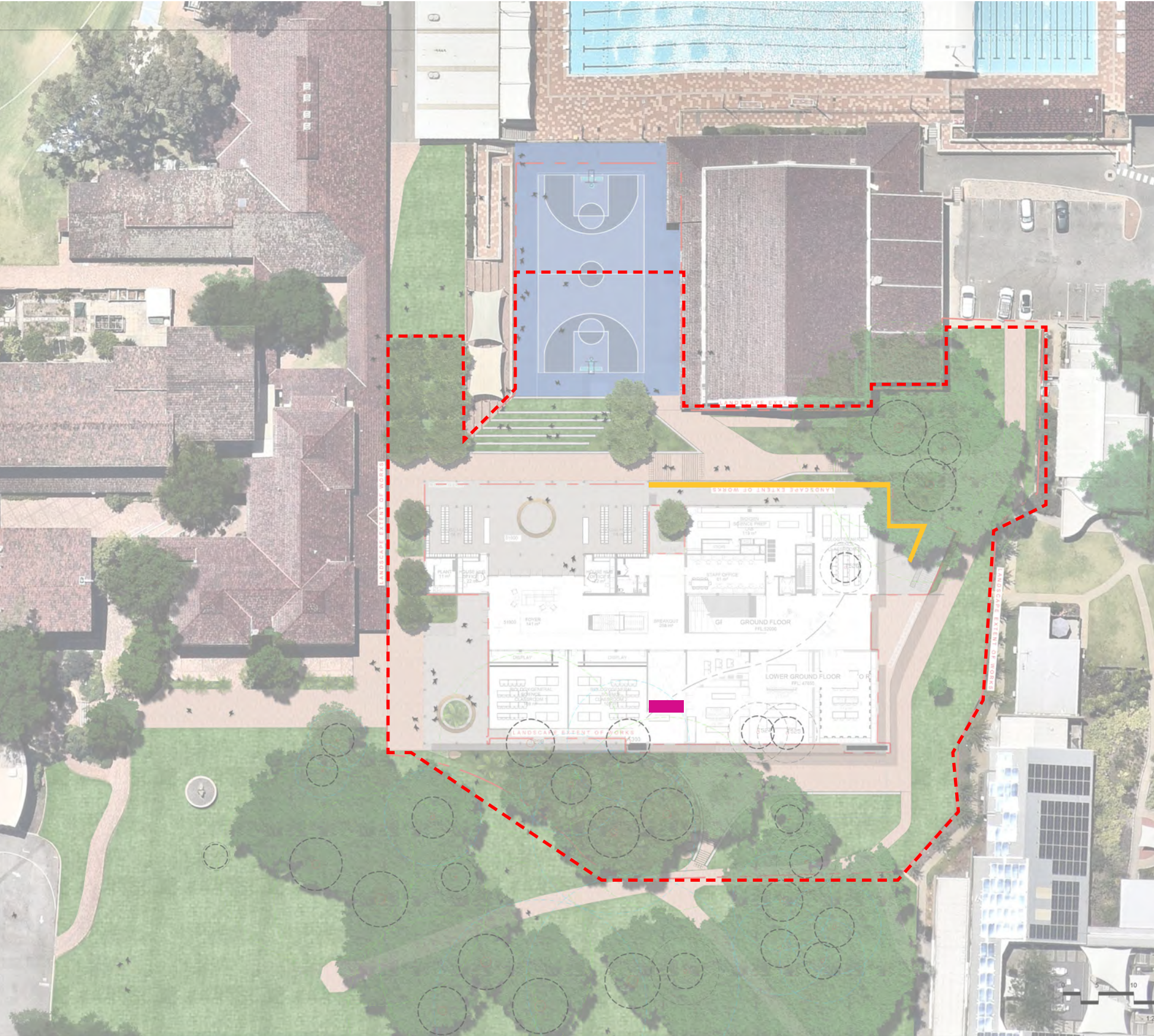
The landscape design consists of containerised planting over structure in two locations. A balustrade garden planter on the upper ground level and one planter on the level one external terrace.

These planters will feature plant species with a spreading habit resulting in a cascading effect over the walls. This will help softening the northern wall and minimise its visual impact.

Typical planter detail



- Legend
- Planting On Structure: Upper Ground Level - 600mm soil depth
 - Planting On Structure: Level 1 External Terrace - 600mm soil depth
 - Site Area



11.0 Perspectives

The following renders have been provided courtesy of Kerry Hill Architects



11.0 Perspectives



11.0 Perspectives



11.0 Perspectives



11.0 Perspectives



11.0 Perspectives



12.0 Site Plan



Appendix

Appendix 1: Landscape Drawings

Appendix 2: Arboricultural Impact Assessment

Hale School Science Building Arboricultural Impact Assessment, 21.02.2024, Nick Arnold, Civic

HALE SCHOOL SCIENCE BUILDING

LANDSCAPE WORKS

Sheet List Table	
Sheet Number	Sheet Title
LA-000	COVER SHEET
LA-050	TREE RETENTION AND DEMOLITION
LA-101	GENERAL ARRANGEMENT
LA-401	GRADING, DRAINAGE & LEVELS
LA-701	SECTIONS



WARNING



These drawings shall be read in conjunction with all relevant information (not limited to legends, schedules, specifications). These drawings shall be read in conjunction with any Engineers, Architects or other consultant information. (not limited to drawings, legends, schedules, specifications)

NOTES

Check all dimensions and site conditions prior to any commencement of work, the purchasing and ordering of any materials, fitting, plant services, or equipment and the fabrication of any components.

Do not scale drawings. refer to figured dimensions only. Any discrepancies shall immediately be referred to the landscape architect for classification.

All drawings may not be reproduced or distributed without prior permission from the landscape architect.

Services shown on this drawing are approximate only. The exact Location is to be determined on site by contractor, prior to commencement of work.

REV

AMENDMENTS

DATE

CHECKED

AUTH.

A	DEVELOPMENT APPLICATION	14.04.24	RG	TG
B	DEVELOPMENT APPLICATION	30.4.24	RG	TG

CONSULTANTS

ASPECT Studios

ASPECT Studios Pty Ltd
Level 9, 197 St Georges Terrace
Perth WA 6000
Australia
www.aspect-studios.com
perth@aspect-studios.com

Perth

CLIENT

HALE SCHOOL
160 HALE ROAD
WEMBLEY DOWNS 6019

PROJECT

HALE SCHOOL
SCIENCE BUILDING

STATUS

DEV. APPLICATION

DRAWING

COVER SHEET

DRAWN

CHECKED

SCALE @ A1

SCALE @ A3

RG

RG

NTS

PLOT DATE

PROJECT NUMBER

CLIENT REF

30/04/2024

PER23030

DRAW

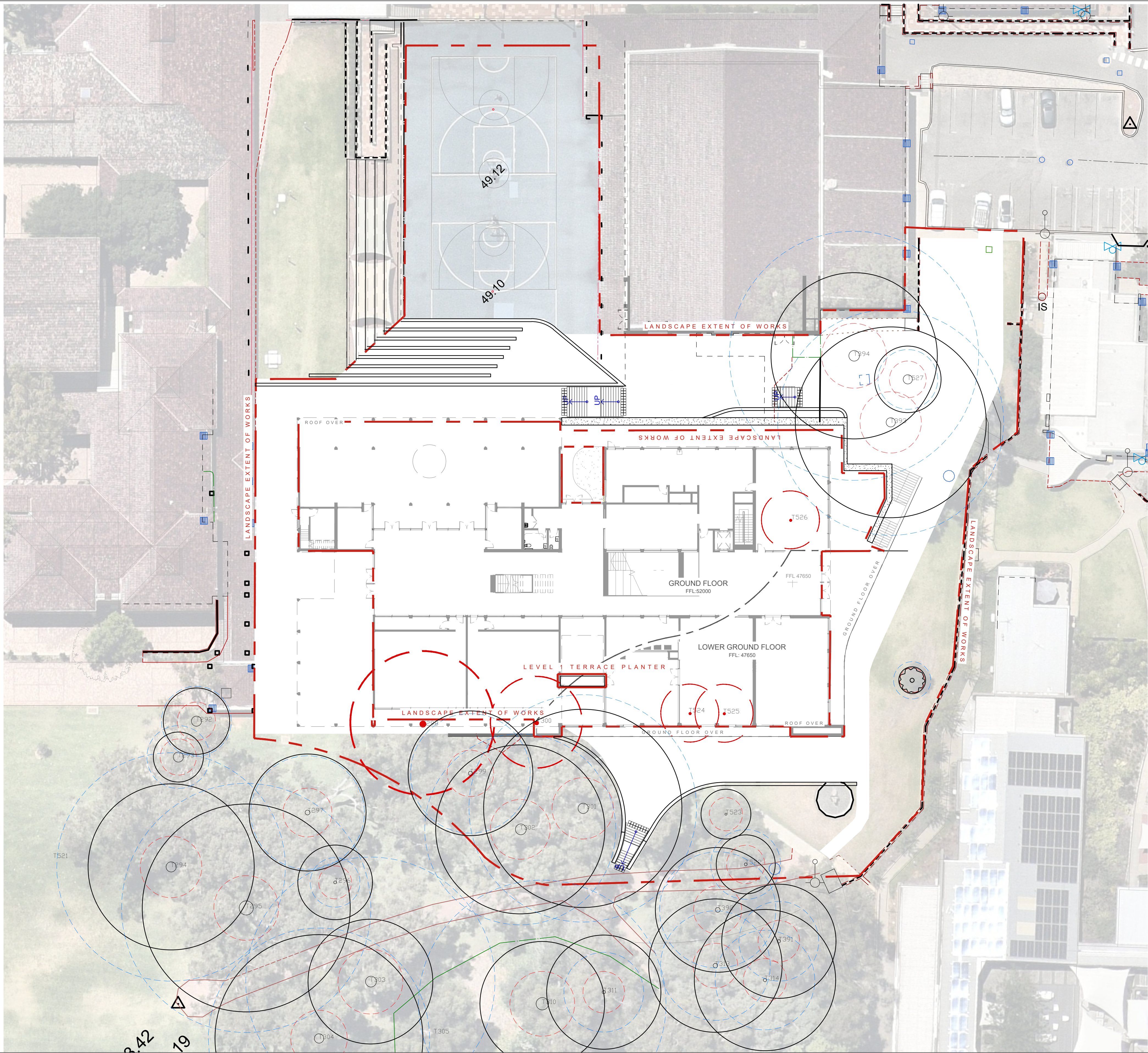
REVISION

LA-000

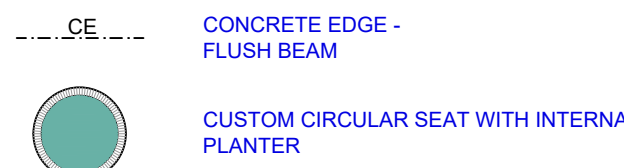
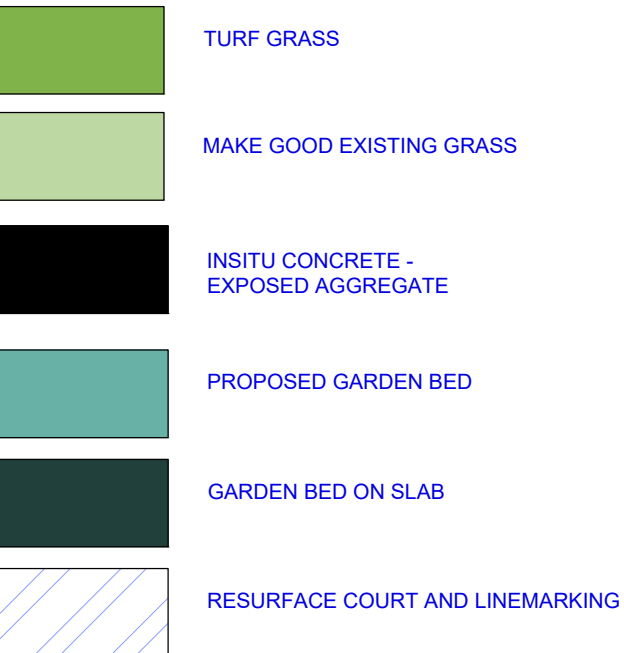
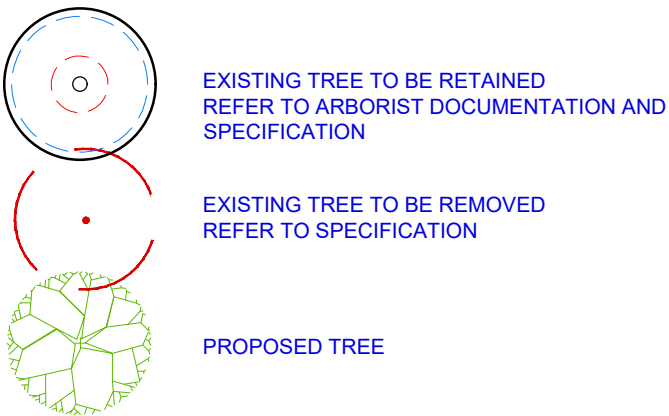
B

PAPER SIZE: A3
FILE: P:\per230301_hale school science building\05_production\01_phase 01_schematic design\01_CADD\03_sheets\LA-000 COVER SHEET.dwg
PRINTED: 4/30/2024 1:23:52 PM

PAPER SIZE: A3
FILE: P:\per230301_hale school science building\05_production\01_phase 01 - schematic design\01_CAD\03_sheets\LA-050_TREE RETENTION AND DEMOLITION.dwg
PRINTED: 4/30/2024 1:25:21 PM



LEGEND



EXISTING SPOT LEVEL

PROPOSED SPOT LEVEL

EXISTING CONTOUR

PROPOSED CONTOUR

FALL IN DIRECTION OF ARROW AS SHOWN

WARNING



These drawings shall be read in conjunction with all relevant information (not limited to legends, schedules, specifications). These drawings shall be read in conjunction with any Engineers, Architects or other consultant information. (not limited to drawings, legends, schedules, specifications)

NOTES

Check all dimensions and site conditions prior to any commencement of work, the purchasing and ordering of any materials, fitting, plant services, or equipment and the fabrication of any components.

Do not scale drawings. refer to figured dimensions only. Any discrepancies shall immediately be referred to the landscape architect for clarification.

All drawings may not be reproduced or distributed without prior permission from the landscape architect.

Services shown on this drawing are approximate only. The exact Location is to be determined on site by contractor, prior to commencement of work.

REV	AMENDMENTS	DATE	CHECKED	AUTH.	CONSULTANTS
A	SCHEMATIC DESIGN	27.03.24	RG	TG	
---	DEVELOPMENT APPLICATION	17.4.24	RG	RG	

ASPECT Studios

ASPECT Studios Pty Ltd
Level 9, 197 St Georges Terrace
Perth WA 6000
Australia

www.aspect-studios.com
perth@aspect-studios.com

Perth

CLIENT
HALE SCHOOL
160 HALE ROAD
WEMBLEY DOWNS 6019

PROJECT
HALE SCHOOL
SCIENCE BUILDING

STATUS
DEV. APPLICATION

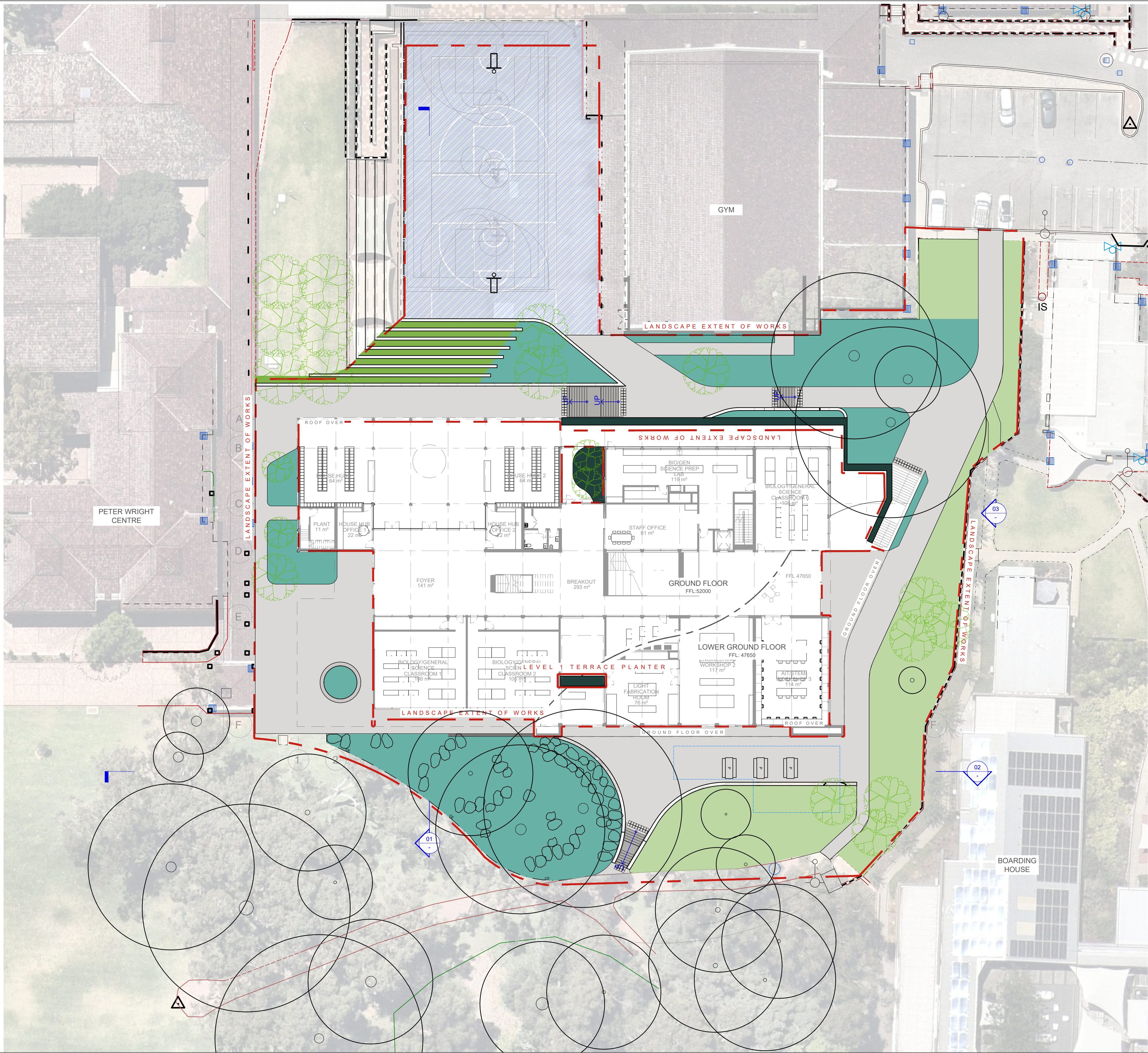
DRAWING
TREE RETENTION AND DEMOLITION

DRAWN: RG CHECKED: RG SCALE @ A1: 1:250 SCALE @ A3: 1:250

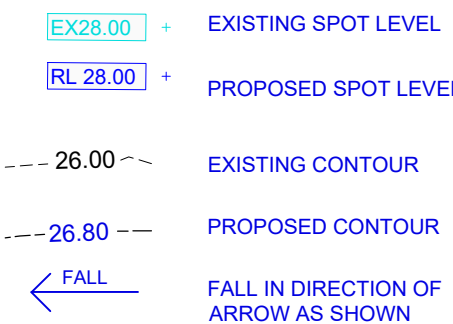
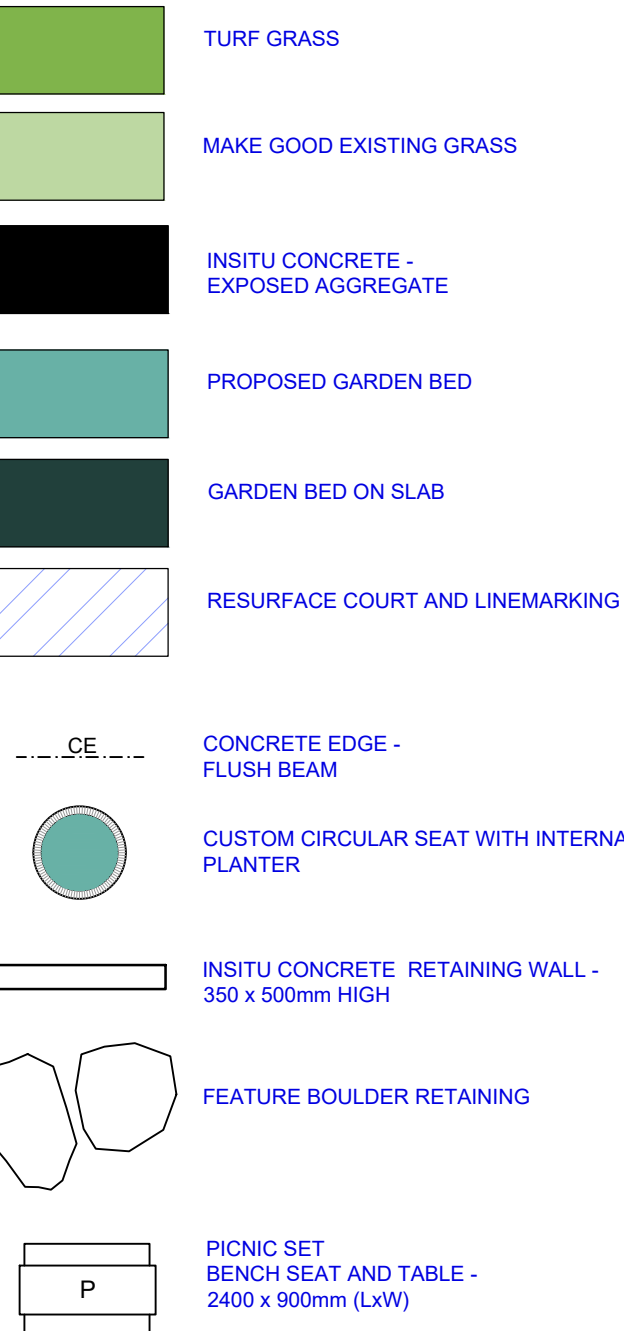
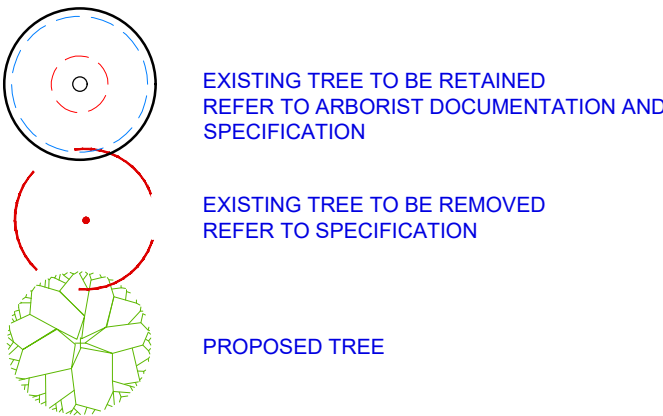
PLOT DATE: 30/04/2024 PROJECT NUMBER: PER23030 CLIENT REF: ---

DRAW: LA-050 REVISION: B

PAPER SIZE: A3
FILE: P:\per230301_hale school science building\05_production\01_phase 01 - schematic design\01_CAD\03_sheets\LA-101_GENERAL ARRANGEMENT.dwg
PRINTED: 4/30/2024 1:20:36 PM



LEGEND



These drawings shall be read in conjunction with all relevant information (not limited to legends, schedules, specifications). These drawings shall be read in conjunction with any Engineers, Architects or other consultant information. (not limited to drawings, legends, schedules, specifications)

NOTES

Check all dimensions and site conditions prior to any commencement of work, the purchasing and ordering of any materials, fitting, plant services, or equipment and the fabrication of any components.

Do not scale drawings. refer to figured dimensions only. Any discrepancies shall immediately be referred to the landscape architect for classification.

All drawings may not be reproduced or distributed without prior permission from the landscape architect.

Services shown on this drawing are approximate only. The exact Location is to be determined on site by contractor, prior to commencement of work.

REV	AMENDMENTS	DATE	CHECKED	AUTH.	CONSULTANTS
A	SCHEMATIC DESIGN	26.03.24	RG	TG	
B	DEVELOPMENT APPLICATION	17.04.24	RG	RG	

ASPECT Studios

ASPECT Studios Pty Ltd
Level 9, 197 St Georges Terrace
Perth WA 6000
Australia
www.aspect-studios.com
perth@aspect-studios.com

Perth

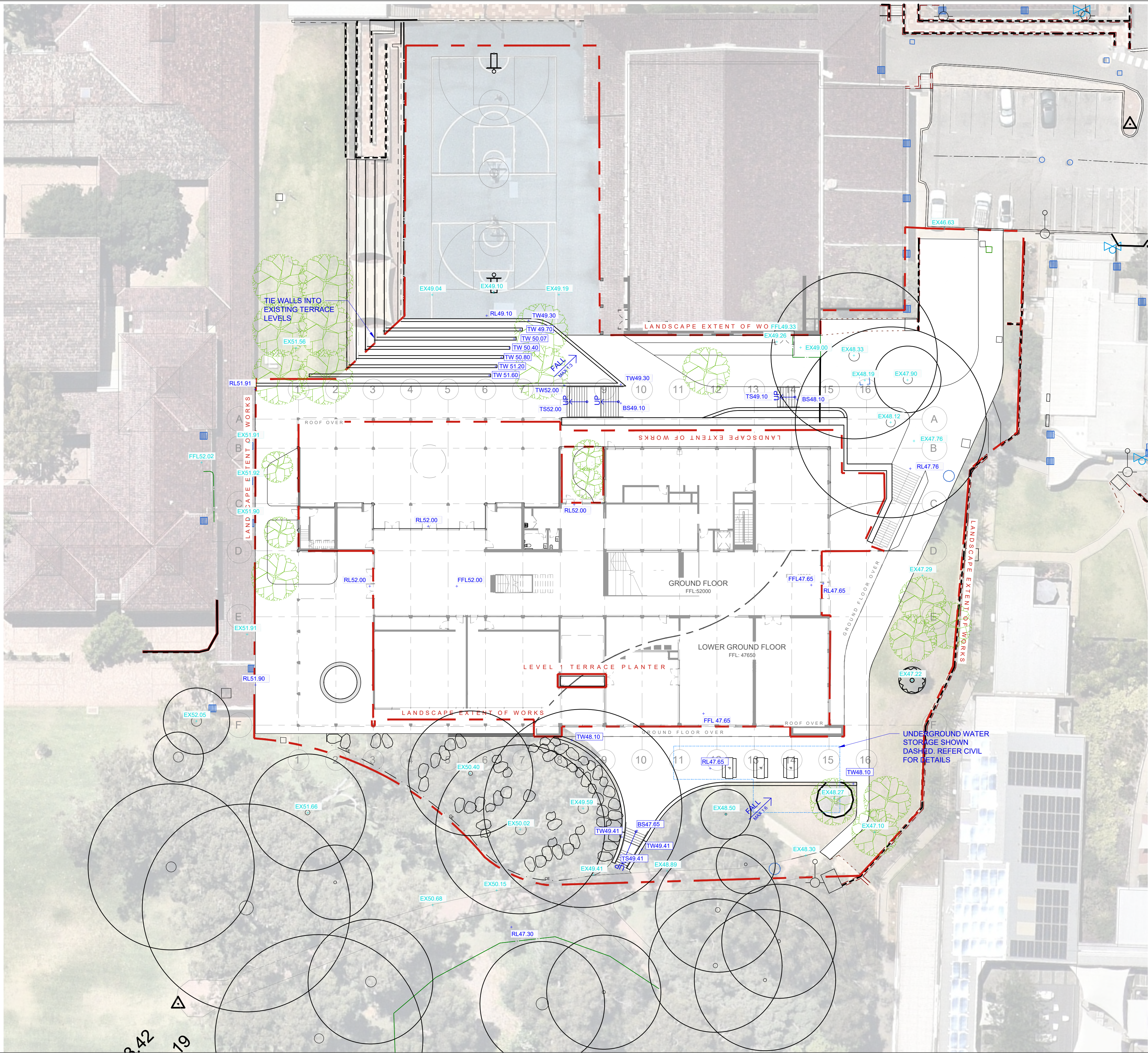
CLIENT
HALE SCHOOL
160 HALE ROAD
WEMBLEY DOWNS 6019

PROJECT
HALE SCHOOL
SCIENCE BUILDING

STATUS
DEV. APPLICATION

DRAWING
GENERAL ARRANGEMENT

DRAWN	CHECKED	SCALE @ A1	SCALE @ A3
RG	RG	1:250	
PLOT DATE	PROJECT NUMBER	CLIENT REF	
30/04/2024	PER23030		
DRAW	REVISION		
LA-101	B		



LEGEND

- EXISTING TREE TO BE RETAINED
REFER TO ARBORIST DOCUMENTATION AND SPECIFICATION
- EXISTING TREE TO BE REMOVED
REFER TO SPECIFICATION
- PROPOSED TREE

- TURF GRASS
- MAKE GOOD EXISTING GRASS
- INSITU CONCRETE - EXPOSED AGGREGATE
- PROPOSED GARDEN BED
- GARDEN BED ON SLAB
- RESURFACE COURT AND LINEMARKING
- CONCRETE EDGE - FLUSH BEAM
- CUSTOM CIRCULAR SEAT WITH INTERNAL PLANTER
- INSITU CONCRETE RETAINING WALL - 350 x 500mm HIGH
- FEATURE BOULDER RETAINING
- PICNIC SET BENCH SEAT AND TABLE - 2400 x 900mm (LxW)

- EXISTING SPOT LEVEL
- PROPOSED SPOT LEVEL
- EXISTING CONTOUR
- PROPOSED CONTOUR
- FALL IN DIRECTION OF ARROW AS SHOWN

WARNING

These drawings shall be read in conjunction with all relevant information (not limited to legends, schedules, specifications). These drawings shall be read in conjunction with any Engineers, Architects or other consultant information. (not limited to drawings, legends, schedules, specifications)

NOTES

Check all dimensions and site conditions prior to any commencement of work, the purchasing and ordering of any materials, fitting, plant services, or equipment and the fabrication of any components.

Do not scale drawings. refer to figured dimensions only. Any discrepancies shall immediately be referred to the landscape architect for classification.

All drawings may not be reproduced or distributed without prior permission from the landscape architect.

Services shown on this drawing are approximate only. The exact Location is to be determined on site by contractor, prior to commencement of work.

REV	AMENDMENTS	DATE	CHECKED	AUTH.	CONSULTANTS
A	SCHEMATIC DESIGN	17.04.24	RG	TG	

ASPECT Studios

ASPECT Studios Pty Ltd
Level 9, 197 St Georges Terrace
Perth WA 6000
Australia
www.aspect-studios.com
perth@aspect-studios.com

Perth

CLIENT

HALE SCHOOL
160 HALE ROAD
WEMBLEY DOWNS 6019

PROJECT

HALE SCHOOL
SCIENCE BUILDING

DRAWING

GRADING, DRAINAGE & LEVELS

DRAWN	CHECKED	SCALE @ A1	SCALE @ A3
RG	RG	1:250	

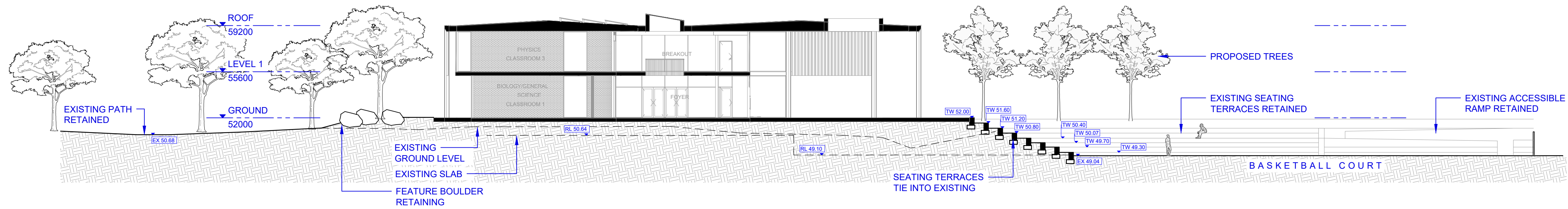
PLOT DATE	PROJECT NUMBER	CLIENT REF
30/04/2024	PER23030	

DRAW	REVISION
LA-401	A

STATUS

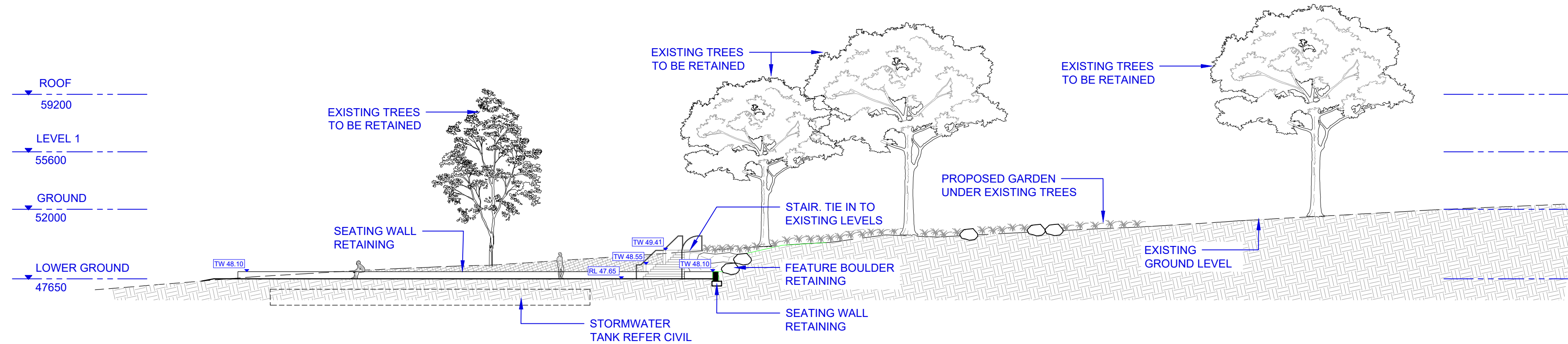
DEV. APPLICATION

1



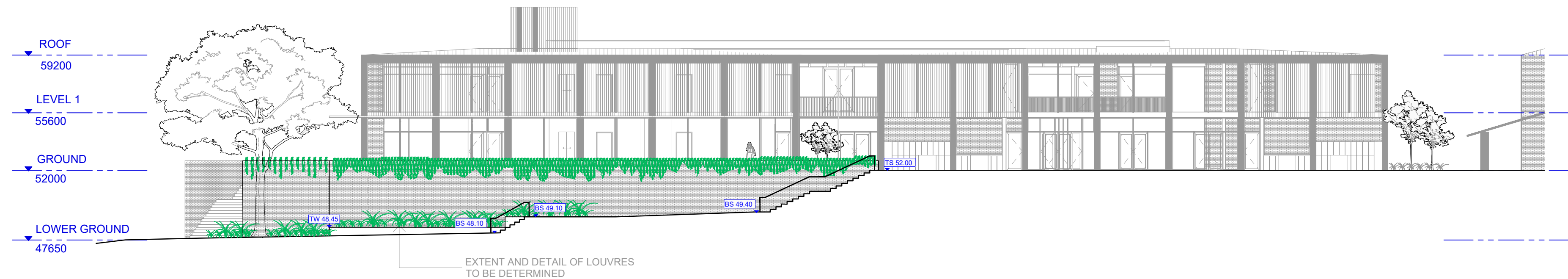
01 NORTH SOUTH

SECTION
SCALE 1:200



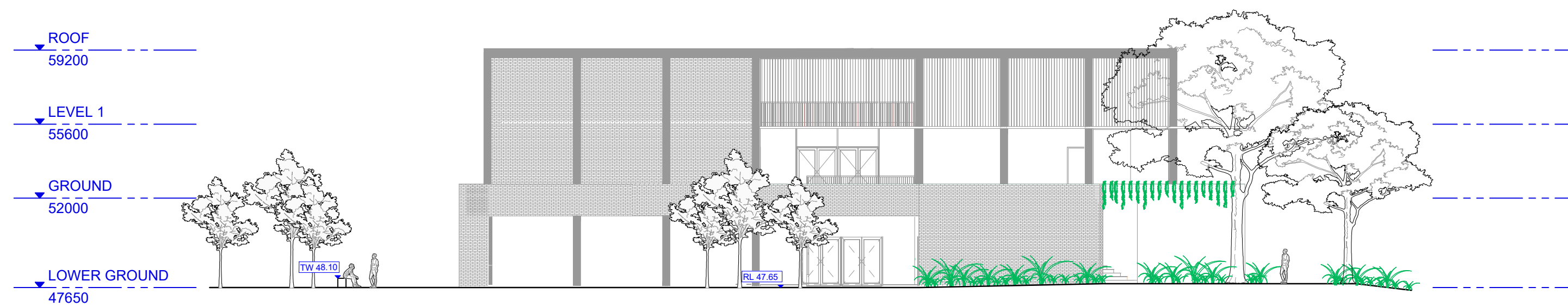
02 EAST WEST

SECTION
SCALE 1:200



03 NORTH ELEVATION

ELEVATION
SCALE 1:200



04 EAST ELEVATION

SECTION
SCALE 1:200

WARNING



These drawings shall be read in conjunction with all relevant information (not limited to legends, schedules, specifications). These drawings shall be read in conjunction with any Engineers, Architects or other consultant information. (not limited to drawings, legends, schedules, specifications)

NOTES

Check all dimensions and site conditions prior to any commencement of work, the purchasing and ordering of any materials, fitting, plant services, or equipment and the fabrication of any components.

Do not scale drawings. refer to figured dimensions only. Any discrepancies shall immediately be referred to the landscape architect for clarification.

All drawings may not be reproduced or distributed without prior permission from the landscape architect.

Services shown on this drawing are approximate only. The exact Location is to be determined on site by contractor, prior to commencement of work.

REV	AMENDMENTS	DATE	CHECKED	AUTH.
A	SCHEMATIC DESIGN	27.03.24	RG	TG
B	DEVELOPMENT APPLICATION	17.4.24	RG	RG

CONSULTANTS

ASPECT Studios

ASPECT Studios Pty Ltd
Level 9, 197 St Georges Terrace
Perth WA 6000
Australia
www.aspect-studios.com
perth@aspect-studios.com

Perth

CLIENT

HALE SCHOOL
160 HALE ROAD
WEMBLEY DOWNS 6019

PROJECT

HALE SCHOOL
SCIENCE BUILDING

STATUS

DEV. APPLICATION

DRAWING

SECTIONS

DRAWN	CHECKED	SCALE @ A1	SCALE @ A3
RG	RG	AS SHOWN	
PLOT DATE	PROJECT NUMBER	CLIENT REF	
30/04/2024	PER23030		
DRAW	REVISION		
LA-701	B		

**Total Project Management
Hale School
160 Hale Road, Wembley Downs WA
Arboricultural Impact Assessment**

Assessment and Report prepared by:

Nick Arnold

Dip. Arb., BSC Biology, MSC Soil Management, NZQF (equiv. AQF) Level 5

21 February 2024

Job number:

05109

1 Introduction

- 1.1.1 Civica ArborSafe was engaged by Total Project Management on behalf of Hale School (the Client) to complete an Arboricultural Impact Assessment (report) on twenty-nine (29) trees located within or adjacent to Hale School at 160 Hale Road, Wembley Downs WA.
- 1.1.2 This report has been requested as part of a Development Application (DA) that involves the demolition of existing buildings and the construction of a new science (teaching) building within a similar location.
- 1.1.3 This report intends to provide information on site trees and how they may be impacted upon by the proposed development. Report findings and recommendations provided are based upon guidance provided within Australian Standard AS 4970–2009: *Protection of Trees on Development Sites*.
- 1.1.4 Observations and recommendations provided within this report are based upon information provided by the Client and an arborist site visit.

2 Scope

- 2.1.1 Carry out a visual examination of nominated trees located within the vicinity of the proposed development.
- 2.1.2 Inspect the nominated trees and their growing environment in the context of the proposed development.
- 2.1.3 Provide an objective appraisal of the subject trees in relation to their species, estimated age, health, structural condition and viability within the landscape.
- 2.1.4 Based on the findings of this investigation, provide independent recommendations on the retention value of the trees.
- 2.1.5 Nominate subject trees that can be retained or require removal to facilitate this development.
- 2.1.6 Identify and reduce potential conflicts between subject trees and site development by providing accurate information on the area required for tree retention and methods/techniques suitable for tree protection during construction.
- 2.1.7 Provide information on restricted activities within the area nominated for tree protection, as well as suitable construction methods to be adopted during construction.

3 Methodology

3.1 Data Collection

- 3.1.1 Nick Arnold of Civica ArborSafe carried out a site inspection of the subject trees on 13 February 2024.
- 3.1.2 Trees that are the subject of this report were identified during discussions with the Client, reviewing relevant/supplied development documentation and reviewing the description of a significant 'Tree' as identified within the City of Stirling *Trees and Development Guidelines (LPS No.3 amendment 9 and LPP 6.11)* (City of Stirling, 2017).
- 3.1.3 Pursuant with the consent authorities' guidelines, all site trees which are a woody plant, at least four metres tall that meet one of the following criteria have been included within this report. Small trees/shrubs within the site have been omitted from the report based on their species, current size and/or potential future size and contribution to local amenity:
- *For a single trunk species, a trunk circumference of at least 500mm at a height of one (1.0) metre above ground level; or*
 - *For a multi trunk species, a trunk circumference of at least 250mm of two or more stems, at a height of one (1.0) metre above ground level*
- 3.1.4 The subject trees were inspected from the ground using the initial component of Visual Tree Assessment (VTA) (Mattheck & Breloar, 1994). No foliage or soil samples were taken and no aerial, underground or internal investigations were undertaken.
- 3.1.5 Tree height and crown width were estimated and have been provided to the nearest whole metre. Trunk diameter at breast height (DBH) and trunk diameter at the root crown (DRB) were measured with a diameter tape and provided to the nearest centimetre.
- 3.1.6 Data collected on site was analysed by Nick Arnold, collated into report format, and relevant recommendations were formulated.
- 3.1.7 All photographs were taken at the time of the site inspections by the author and have not been altered for brightness or contrast, nor have they been cropped.

3.2 Tree Protection Zones

- 3.2.1 The Tree Protection Zone (TPZ) and Structural Root Zone (SRZ) methods have been derived from the Australian Standard AS 4970–2009: *Protection of Trees on Development Sites*.
- 3.2.2 The TPZ is defined as a specified area above and below ground and at a given distance measured radially away from the centre of the tree's trunk and which is set aside for the protection of its roots and crown. It is the area required to provide for the viability and stability of a tree to be retained where it is potentially subject to damage by development. The radius of the TPZ is calculated by multiplying its DBH by 12. TPZ radius = DBH × 12. (Note "Breast Height" is nominally measured as 1.4m from ground level).
- 3.2.3 The SRZ is the area around the base of a tree required for the tree's stability in the ground. The woody root growth and soil cohesion in this area are necessary to hold the tree upright. The SRZ is nominally circular with the trunk at its centre and is expressed by its radius in metres. SRZ radius = $(D \times 50)^{0.42 \times 0.64}$.
- 3.2.4 Retention values are determined based upon the British Standard BS 5837–2012: *Trees in Relation to Design, Demolition and Construction*. This standard categorises tree retention value based upon assessment of the tree's quality (health and structure), and life expectancy.
- 3.2.5 Other criteria such as a tree's physical dimensions, age class, location and its amenity, heritage and environmental significance are also considered. A breakdown of attributes required for each category can be obtained from Appendix B – Explanation of Tree Assessment Terms.

4 Observations

4.1 Site Details

- 4.1.1 The site was located within the City of Stirling (CoS) Local Government Area (LGA).



Figure 1. Approximate location of subject site. CoS Intramaps, February 2024.

4.2 Site Assessment Data

- 4.2.1 Refer to Appendix E – *Tree Assessment Data* section of this report for data relating to specific/subject trees.

4.3 Tree / Site Images



Figure 2. Site trees. Author, February 2024.



Figure 3. Site trees. Author, February 2024.



Figure 4. Site trees. Author, February 2024.



Figure 5. Site trees. Author, February 2024.

4.4 Proposed Construction

4.4.1 Plans of the existing site and of the proposed development were provided to Civica ArborSafe in February 2024 and included:

- 103147DE-001E (Survey)
- PER23030_SK-002 Extent of Works
- SKAR_018 Hale Science KHA Plans_1-250
- A0050, A1001 & A1010 Floor Plans

4.5 Outline of Site Trees

4.5.1 Twenty-nine trees were inspected and are the subject of this report. Complete attributes for each tree can be found in Appendix E of this report.

4.5.2 The subject trees formed part of the existing ArborPlan Tree Management System for the entire Hale School site and as such have been tagged, positioned on aerial imagery and visually assessed annually since 2022.

4.5.3 The subject trees have been numbered in line with the existing ArborPlan tree numbering system. Trees can be identified on site using white tree tags which are typically located at approximately 2.0m from ground level on the trunk.

4.5.4 As the subject trees form part of a previous survey undertaken for the entire site, they are numbered non-sequentially between Tree 292 and Tree 527.

4.6 Botanical Status

4.6.1 All of the subject trees were identified as being Australian in origin, with the majority considered native to the state of Western Australia.

4.6.2 Several of the subject trees were identified as semi-mature/mature examples of *Eucalyptus gomphocephala* (Tuart). The Tuart is considered one of Perth's most biologically valuable trees, of noted importance to many species of invertebrates and is the largest tree on the Swan Coastal Plain.

4.6.3 Trees 524-527 (Bottlebrush) were considered landscape plantings, replaceable within 10-15 years.

5 Discussion

5.1 TPZ Encroachment

5.1.1 **Major encroachment.** As per the Australian Standard AS 4970–2009: Protection of Trees on Development Sites, a major encroachment into the TPZ of any tree is considered to occur when it is beyond 10% of the total TPZ area.

5.1.2 **Minor encroachment.** A minor encroachment is determined as being less than 10% of the total TPZ area. Trees with minor encroachment may be retained with specific, generic or no protection requirements throughout the construction stage.

5.1.3 **No encroachment.** Trees with no encroachment may be retained with specific, generic or no protection requirements throughout the construction stage.

- 5.1.4 For the purposes of this report, trees to be removed or retained have been identified as those:
- Requiring removal due to major encroachment into their TPZ
 - Retainable and requiring specific protection requirements throughout construction (i.e. generic requirements plus arborist supervision and careful construction methods within their TPZ)
 - Retainable and requiring generic tree protection measures only (i.e. protective fencing and restriction of activities within the TPZ).

5.2 Root Sensitive Design Measures

- 5.2.1 Where proposed encroachments into TPZs are unavoidable, consideration should be given to root sensitive design measures which eliminate/minimise the need for contiguous excavation and root severance e.g. pier and beam, cantilevered or suspended sections, permeable surfaces and works conducted above the existing soil grade(s).
- 5.2.2 The assumption of allowable encroachment and minimal long-term health or structural impacts to trees relies on a combination of the following being used:
- root sensitive construction methods being adhered to within the TPZ
 - minimal excavation within the TPZ to limit root severance (i.e. construction placed outside the TPZ where possible)
 - fill rather than excavation utilised to affect level changes where possible (i.e. to minimise root severance and allow the tree's root system time to adjust)
 - no construction occurring within the SRZ
 - compensatory area being available around the unimpacted aspects of trees
 - the enhancement of the existing TPZ area (i.e. mulched, soil conditioning and irrigation when required).

5.3 Canopy Cover

- 5.3.1 Canopy cover estimates, both current and projected, could be used as an additional tool to help understand the impacts of any proposed tree removal and demonstrate the future impacts of mitigation planting.

5.4 Additional Excavation/Trenching within TPZs

- 5.4.1 In the event additional excavation is required within the TPZs of retained trees identified within this report, or any other site trees, arborist involvement may be required to ensure works are undertaken in accordance with the Australian Standard AS 4970-2009: *Protection of Trees on Development Sites*.

6 Recommendations

6.1 Tree Removal

- 6.1.1 Based upon the plans supplied, five trees would require removal to facilitate the proposed development. This would include three Bottlebrush trees located within the development footprint and/or proposed site access corridor and two Tuart trees within/heavily impacted by the proposed (building) footprint.
- 6.1.2 Each of the trees recommended for removal were expected to experience TPZ encroachments of greater than 30-40% by area based upon supplied plans.

6.2 Tree Retention – Specific Controls

- 6.2.1 Trees 393 and 394 were recommended for retention and require specific as well as generic protection measures during construction to ensure that they remain viable following the completion of works.
- 6.2.2 The supplied plans indicate that both trees may experience major TPZ encroachments, therefore specific control measures will be required. A proposed site accessway will likely impact the TPZs of both trees and will therefore need to be installed/maintained in a root sensitive manner.
- 6.2.3 In the first instance, the final design footprint should limit theoretical TPZ encroachments for Trees 393 and 394 to less than 30% by area.
- 6.2.4 Where theoretical TPZ encroachments of greater than 30% are shown by design, exploratory root investigations along proposed dig lines/ground and trunk protection should be undertaken/installed in advance of works.
- 6.2.5 Calculations made using the Arborist Network Root Loss (ANRL) Calculator (CC-BY-NC-ND 4.0 - 2023) should be used to indicate the percentage of total expected root mass required to facilitate the proposed plans.
- 6.2.6 Where this percentage severance of total expected root mass equates to a value greater than the 1/3 threshold proposed by the ANRL calculator, tree removal and/or plant health/further design mitigation may be required.
- 6.2.7 Excavation(s) within theoretical TPZs that represent an encroachment of greater than 30% are to be carried out under arborist supervision only. No excavation(s) should occur within the SRZs of trees to be retained.
- 6.2.8 Where required these works should be undertaken using techniques that are sensitive to tree roots to avoid unnecessary damage. Such techniques include:
- Excavation using a high-pressure water jet and vacuum truck
 - Excavation using an Air Spade with vacuum truck
 - Excavation by hand.
- 6.2.9 Roots discovered are to be treated with care and minor roots (<40mm diameter) pruned with sharp, sterile handsaw or secateurs. All significant roots (>40mm diameter) are to be recorded, photographed and reported to the project arborist.
- 6.2.10 The permeable TPZ areas of Trees 393 and 394 should be mulched to a depth of 75-100mm using seasoned tree mulch.

6.3 Site Access – Trunk and Ground Protection

- 6.3.1 Where practicable the proposed site accessway is to be located to the east of trees 393, 394 and 527.
- 6.3.2 Where construction access into the TPZ of retained trees cannot be avoided, the root zone of each tree must be protected using either steel plates or rumble board strapped over mulch/aggregate until such a time as permanent above ground surfacing (cellular confinement system or similar) is to be installed. The installation of a protected accessway must minimise the impacts of vehicular traffic compacting soil and damaging exposed root mass.
- 6.3.3 In addition, the trunks and lower limbs (located within the access corridor) of Trees 393 and 394 must be protected as per the guidance notes supplied within Appendix D (Page A9 – Trunk and Ground Protection) of this report.

6.4 Hard Landscaping Works/Retaining

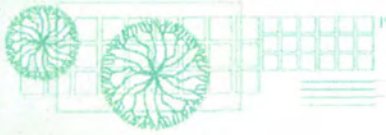
- 6.4.1 Supplied plans indicate that the TPZs of Trees 393 and 394 may additionally be impacted upon by the installation of paved walkways, stairs and areas of retaining.
- 6.4.2 Any proposed surfacing within the TPZs of trees designated for retention is to be installed above the existing grade and be of a permeable nature to allow the passage of air and moisture. If the surfacing is to be load bearing, then it is suggested that a geogrid/web or similar is incorporated to ensure the rooting area below does not become compacted.
- 6.4.3 Contiguous excavation (e.g. for the foundations of block retaining walls) within TPZs of Trees 393 and 394 should be avoided unless root sensitive exploratory excavations (conducted in advance of works) indicate an absence of significant root mass (as determined by the ANRL calculator). Preference should be given to post and rail/pier and beam and/or suspended sections/lintels which favour non-contiguous spot excavation(s).

6.5 Pruning

- 6.5.1 All pruning/tree removal is recommended to be completed in accordance with the Australian Standard AS 4373–2007: *Pruning of Amenity Trees* (Standards Australia, 2007) and undertaken by a suitably qualified arborist (minimum AQF 3 arborist).
- 6.5.2 Reduction pruning should focus on the removal of smaller diameter branches where feasible and remove no greater than 10% of the total crown. Branches no greater than 50mm diameter are to be removed unless specifically approved by the project arborist.

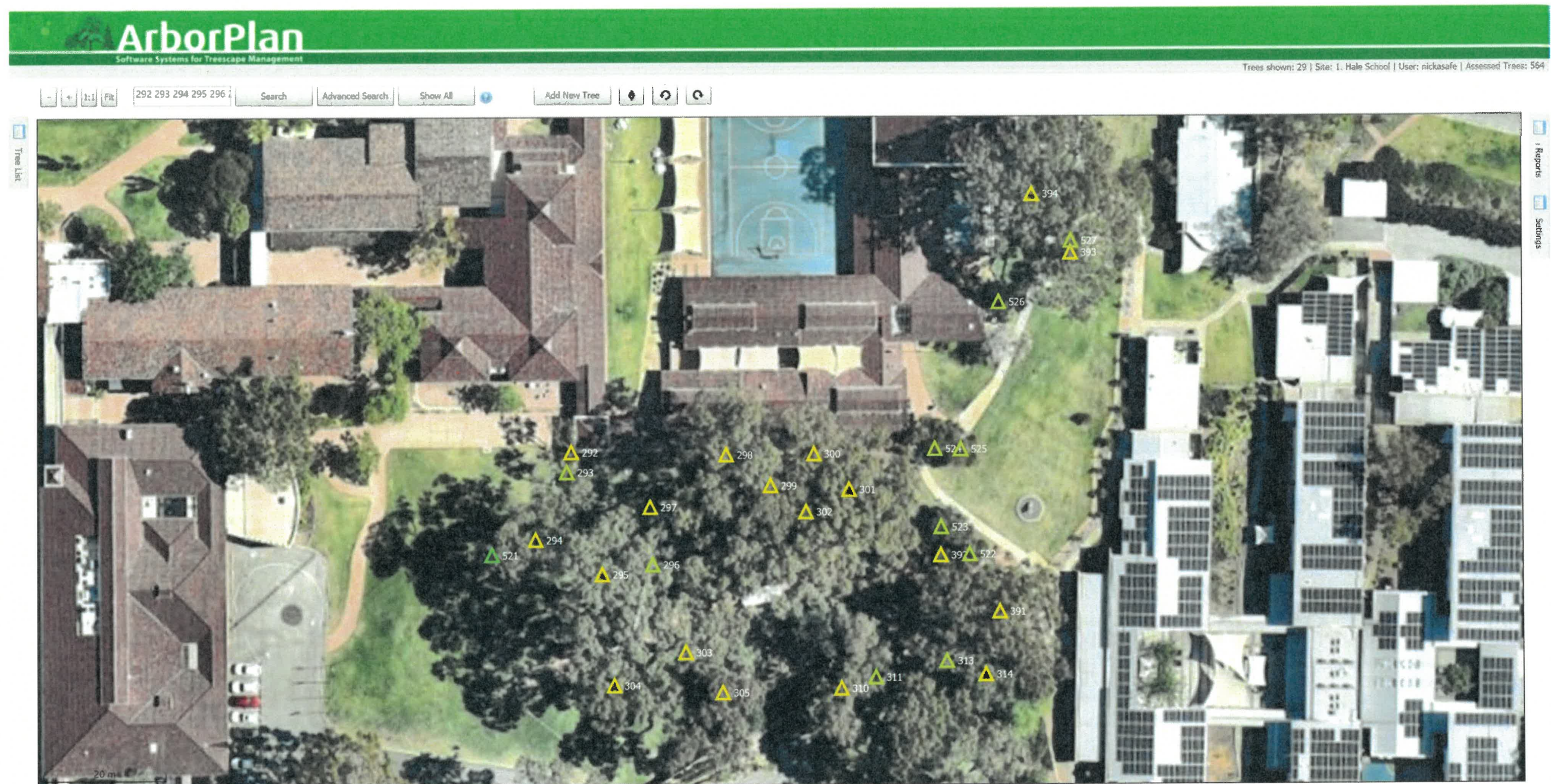
7 References

- City of Stirling, 2017. *Trees and Development; Local Planning Scheme No. 3, Amendment No. 9 and Local Planning Policy 6.11*. [Online]
Available at: <https://www.stirling.wa.gov.au/your-city/documents-and-publications/planning-and-building/develop-my-property/6-11-trees-and-development-guidelines>
[Accessed February 2024].
- Mattheck, C. & Breloar, H., 1994. *Body Language of Trees: A Handbook for Failure Analysis*. University of Michigan: Stationary Office.
- Standards Australia, 2007. *AS 4373–2007 Pruning of Amenity Trees*, GPO Box 476 Sydney NSW 2001: Standards Australia.
- Standards Australia, 2009. *AS4970–2009: Protection of Trees on Development Sites*, Sydney: Standards Australia.
- The British Standards Institution, 2012. *BS 5837–2012: Trees in Relation to Design, Demolition and Construction*, London: BSI Standards Limited.



Site Map







Appendices



Appendix A. Arboricultural Reporting Assumptions and Limiting Conditions

1. Any legal description provided to the consultant is assumed to be correct. Any titles and ownership of any property are assumed to be good. No responsibility is assumed for matters legal in character.
2. It is assumed that any property/project is not in violation of any applicable codes, ordinances, statutes or other government regulations.
3. Care has been taken to obtain all information from reliable sources. All data has been verified in so far as possible, however, the consultant can neither guarantee nor be responsible for the accuracy of the information provided by others.
4. The consultant shall not be required to give testimony or to attend court by reason of this report unless subsequent contractual arrangements are made, including payment of an additional fee for such services.
5. Loss or alteration of any part of this report invalidates the entire report.
6. Possession of this report or a copy thereof does not imply right of publication or use for any purpose by anyone but the person to whom it is addressed, without the prior written consent of the consultant.
7. Neither all nor any part of the contents of this report, nor any copy thereof, shall be used for any purpose by anyone but the person to whom it is addressed, without the written consent of the consultant. Nor shall it be conveyed by anyone, including the Client, to the public through advertising, public relations, news, sales or other media, without the written consent of the consultant.
8. This report and any values expressed herein represent the opinion of the consultant and the consultant's fee is in no way contingent upon the reporting of a specified value, a stipulated result, the occurrence of a subsequent event, nor upon any finding to be reported.
9. Sketches, diagrams, graphs and photographs in this report, being intended as visual aids, are not necessarily to scale and should not be construed as engineering or architectural reports or surveys unless expressed otherwise.
10. Information contained in this report covers only those items that were examined and reflect the condition of those items at the time of inspection.
11. Inspection is limited to visual examination of accessible components without dissection, excavation or probing. There is no warranty or guarantee expressed or implied that the problems or deficiencies of the plants or property in question may not arise in the future.

Appendix B. Explanation of Tree Assessment Terms

Tree number: Refers to the individual identification number assigned within the ArborSafe software to each assessed tree on the site and the number which appears of the tree's tag.

Tree location: Refers to the easting and northing coordinates assigned to the location of the tree as obtained from the geo-referenced aerial image within the ArborSafe software.

Tree species: Provides the botanic name (genus, species, sub-species, variety and cultivar where applicable) in accordance with the International Code of Botanical Nomenclature (ICBN), and the accepted common name.

Trees in group: The number of trees encompassing a collective assessment of more than one tree. Typically grouped trees have similar attributes that can be encompassed within one data record.

Height: The estimated range in metres attributed to the tree from its base to the highest point of the canopy. Where required height will be estimated to the nearest metre.

Diameter at Breast Height (DBH): Refers to the tree's estimated trunk diameter measured 1.4m from ground level for a single trunked tree. These estimates increase in 50mm increments. Where required DBH will be measured to give an accurate measurement for single trunked trees, trees with multiple trunks, significant root buttressing, bifurcating close to ground level or trunk defects and will be measured as per the Australian Standard AS 4970–2009: *Protection of Trees on Development Sites*.

Tree Protection Zone (TPZ): A specified area above and below ground and at a given distance measured radially away from the centre of the tree's trunk and which is set aside for the protection of its roots and crown. It is the area required to provide for the viability and stability of a tree to be retained where it is potentially subject to damage by development. The radius of the TPZ is calculated by multiplying its DBH by 12. $TPZ\ radius = DBH \times 12$. (Note "Breast Height" is nominally measured as 1.4m from ground level). TPZ is a theoretical calculation and can be influenced by existing physical constraints such as buildings, drainage channels, retaining walls, etc. (Standards Australia, 2009).

Structural Root Zone (SRZ): The area close to the base of a tree required for the tree's anchorage and stability in the ground. The woody root growth and soil cohesion in this area are necessary to hold the tree upright. The SRZ is nominally circular with the trunk at its centre and is expressed by its radius in metres. $SRZ\ radius = (D \times 50)^{0.42 \times 0.64}$ (Standards Australia, 2009).

Canopy spread: The estimated range in metres attributed to the spread of the tree's canopy on its widest axis. Where required crown spread will be estimated to the nearest metre.

Origin: Refers to the origin of the species and its type.

Category	Description
Indigenous	Occurs naturally in the local area and is native to a given region or ecosystem.
State Native	Occurs naturally within State but is not indigenous.
Australian Native	Occurs naturally within Australia and its territories but is not a State native or indigenous.
Exotic Evergreen	Occurs naturally outside of Australia and its territories and typically retains its leaves throughout the year.
Exotic Deciduous	Occurs naturally outside of Australia and its territories and typically loses its leaves at least once a year.

Health: Refers to the health and vigour of the tree.

Category	Description
Excellent	Canopy full with even foliage density throughout, leaves are entire and are of an excellent size and colour for the species with no visible pathogen damage. Excellent growth indicators, e.g. seasonal extension growth. Exceptional specimen.
Good	Canopy full with minor variations in foliage density throughout, leaves are entire and are of good size and colour for the species with minimal or no visible pathogen damage. Good growth indicators, none or minimal deadwood.
Fair	Canopy with moderate variations in foliage density throughout, leaves not entire with reduced size and/or atypical in colour, moderate pathogen damage. Reduced growth indicators, visible amounts of deadwood, may contain epicormic growth.
Poor	Canopy density significantly reduced throughout, leaves are not entire, are significantly reduced in size and/or are discoloured, significant pathogen damage. Significant amounts of deadwood and/or epicormic growth, noticeable dieback of branch tips, possibly extensive.
Dead	No live plant material observed throughout the canopy, bark may be visibly delaminating from the trunk and/or branches.

Age: Refers to the life cycle of the tree.

Category	Description
Young	Newly planted small tree not fully established may be capable of being transplanted or easily replaced.
Juvenile	Tree is small in terms of its potential physical size and has not reached its full reproductive ability.
Semi-mature	Tree in active growth phase of life cycle and has not yet attained an expected maximum physical size for its species and/or its location.
Mature	Tree has reached an expected maximum physical size for the species and/or location and is showing a reduction in the rate of seasonal extension growth.
Senescent	Tree is approaching the end of its life cycle and is exhibiting a reduction in vigour often evidenced by natural deterioration in health and structure.

Structure: Refers to the structure of the tree from roots to crown.

Category	Description
Good	Sound branch attachments with no visible structural defects, e.g. included bark or acute angled unions. No visible wounds to the trunk and/or root plate. No fungal pathogens present.
Fair	Minor structural defects present, e.g. apical leaders sharing common union(s). Minor damage to structural roots. Small wounds present where decay could begin. No fungal pathogens present.
Poor	Moderate structural defects present, including bifurcations with included bark with union failure likely within 0–5 years. Wounding evident with cavities and/or decay present. Damage to structural roots.
Hazardous	Significant structural defects with failure imminent (3–6 months). Defects may include active splits and/or partial branch or root plate failures. Tree requires immediate arboricultural works to alleviate the associated risk.

Useful Life Expectancy (ULE): Useful life expectancy refers to an expected period of time the tree can be retained within the landscape before its amenity value declines to a point where it may detract from the appearance of the landscape and/or presents a greater risk and/or more hazards to people and/or property. ULE values consider tree species, current age, health, structure and location. ULE values are based on the tree at the time of assessment and do not consider future changes within the tree's location and environment which may influence the ULE value.

Category
0 Years
<5 Years
5–10 Years
10–15 Years
15–25 Years
25–50 Years
>50 Years

Defects: Visual observations made of the presenting defects of the tree and its growing environment that are, or have the capacity to impact upon, the health, structural condition and/or the useful life expectancy of the tree. Defects may include adverse physical traits or conditions, signs of structural weaknesses, plant disease and/or pest damage, tree impacts to assets or soil related issues.

Tree Significance: Includes environmental, social or historical reasons why the tree is significant to the site. The tree may also be rare under cultivation or have a rare or localised natural distribution.

Arborist Actions: A list of arboricultural and/or plant health care works that are aimed at maintaining or improving the tree's health, structural condition or form. Actions may also directly or indirectly reduce the risk potential of the tree such as via the removal of a particular branch or the moving of infrastructure from under its canopy.

Appendix C. Tree Retention Values

Based upon a modified version of the British Standard BS 5837–2012: *Trees in relation to design, demolition and construction – recommendations*.

Category and definition	Criteria (including sub-categories where appropriate)		
Category U			
Trees in such a condition that they cannot realistically be retained as viable trees in the context of the current land use for longer than 5 years.	• Trees that have a severe structural defect that are not remediable such that their failure is expected within 12 months. • Trees that will become unviable after removal of other Category U trees (e.g. where for whatever reason the loss of companion shelter cannot be mitigated by pruning). • Trees that are dead or are showing signs of significant, immediate and irreversible overall decline. • Trees infected with pathogens of significance to the health and or safety of other trees nearby • Low quality trees suppressing adjacent trees of better quality. • Noxious weeds or species categorised as weeds within the local area. Note: Category U trees can have existing or potential conservation value* which might make it desirable to preserve.		
	1. Arboricultural Qualities	2. Landscape qualities	3. Cultural and environmental values
Category A			
Trees of High Quality with an estimated remaining life expectancy of at least 25 years and of dimensions and prominence that it cannot be readily replaced in <20 years.	Trees that are particularly good examples of their species, especially if rare or unusual (in the wild or under cultivation); or those that are important components of groups or avenues.	Trees or groups of significant visual importance as arboricultural and/or landscape features. (e.g. feature and landmark trees).	Trees, groups or plant communities of significant conservation, historical, commemorative or other value (e.g. remnant trees, aboriginal scar trees, critically endangered plant communities, trees listed specifically within a Heritage statement of significance).
Category B			
Trees of Moderate Quality with an estimated remaining life expectancy of 15–25 years and of dimensions and prominence that cannot be readily replaced within 10 years.	Trees that might be included within Category A but are downgraded because of diminished condition such that they are unlikely to be suitable for retention beyond 25 years.	Trees that are visible from surrounding properties and/or the street but make little visual contribution to the wider locality.	Trees with conservation or other cultural value (trees within conservation areas or landscapes described within a statement of significance, locally indigenous species).
Category C			
Trees of Low Quality with an estimated remaining life expectancy of 5–15 years, or young trees that are easily replaceable.	Trees of very limited value or such impaired condition that they do not qualify in higher categories.	Trees offering low or only temporary/transient landscape benefits.	Trees with no material conservation or other cultural value.

* Where trees would otherwise be categorised as U, B or C but have significant identifiable conservation, heritage or landscape value even though only for the short term, they may be upgraded, although they might be suitable for retention only.

Tree Quality

		Health**			
		Excellent/ Good	Fair	Poor	Dead
Structure	Good	A	B	C	U
	Fair	B	B	C	U
	Poor	C	C	U	U
	Hazard *	U	U	U	U

* Structural hazard that cannot be remediated through mitigation works to enable safe retention.

** Trees of short term reduced health that can be remediated via basic, low cost plant health care works (e.g. mulching, irrigation etc.) may be designated in a higher health rating to ensure correct retention value nomination.

Category A	Typically trees in this category are of high quality with an estimated remaining life expectancy of at least 25 years and of dimensions and prominence that it cannot be readily replaced in <20 years. The tree may make significant amenity contributions to the landscape and may make high environmental contributions. In some cases, trees within this category may not meet the above criteria, however possess significant heritage or ecological value. Trees of this retention value warrant design consideration and amendment to ensure their viable retention.
Category B	Typically trees in this category are of moderate quality with an estimated remaining life expectancy of 15–25 years and prominence of size dimensions that cannot be readily replaced within 10 years. They may make moderate amenity contributions to the landscape and make low/moderate environmental contributions. Trees with this retention value warrant lesser design consideration in an attempt to allow for their retention.
Category C	Trees in this category are of low quality with an estimated remaining life expectancy of 5–15 years, or young trees that are easily replaceable, may have poor health and/or structure, are easily replaceable, or are of undesirable species and do not warrant design consideration.
Category U	Trees in this category are found to be in such a condition that they cannot realistically be retained as viable trees in the context of the current land use for longer than five years. These trees may be dead and/or of a species recognised as a weed that resulted in them being unretainable.

Appendix D. Tree Protection Measures

All trees to be retained require protection during the construction stage. Tree protection measures include a range of:

- Activities restricted within the TPZ
- Protective fencing
- Trunk and ground protection
- Tree protection signage
- Involvement from the project arborist
- Project milestones
- Compliance reporting

Activities Prohibited within the TPZ

- Machine excavation including trenching
- Storage
- Preparation of chemicals, including cement products
- Parking of vehicles and plant
- Refuelling
- Dumping of waste
- Wash down and cleaning of equipment
- Placement of fill
- Lighting of fires
- Soil level changes
- Temporary or permanent installation of utilities and signs
- Physical damage to the tree

Protective Fencing Specification

Protective fencing is to be installed as far as practicable from the trunk of any retained trees. Fencing should be erected as per the image below before any machinery or materials are brought to site and before commencement of works (including demolition).

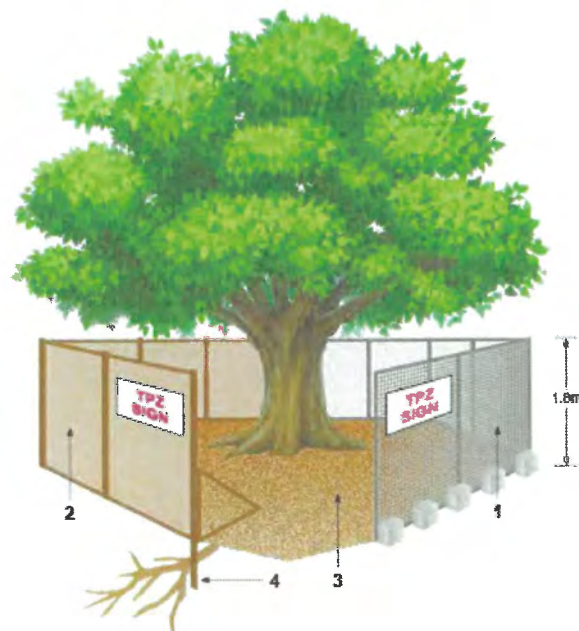
In some areas of the site (i.e. protection of trees on neighbouring properties) existing boundary fencing may be used as an alternative to protective fencing.

Once erected, protective fencing must not be removed or altered without approval from the project arborist. The TPZ fencing should be secured to restrict access.

TPZ fencing is to be a minimum of 1.8m high and mesh or wire between posts must be highly visible – an example is shown in Appendix Figure 1. Fence posts and supports should have a diameter greater than 20mm and should ideally be freestanding, otherwise be located clear of the roots. See image below.

Tree protection fencing must remain intact throughout all proposed construction works and must only be dismantled after their conclusion. The temporary dismantling of tree protection fencing must only be done with the authorisation of a consulting arborist and/or the responsible authority.

The subject trees themselves must also not be used as a billboard to support advertising material. Affixing nails or screws into the trunks of trees to display signs of any type is not a recommended practice in the successful retention of trees.



Legend:

1. Chain wire mesh panels with shade cloth attached (if required), held in place with concrete feet
2. Alternative plywood or wooden paling fence panels. This fencing material also prevents building materials or soil entering the TPZ
3. Mulch installation across surface of TPZ (at discretion of the project arborist). No excavation, construction activity, grade changes, surface treatment or storage materials of any kind are permitted within the TPZ
4. Bracing is permissible within the TPZ. Installation of supports should avoid damaging roots.

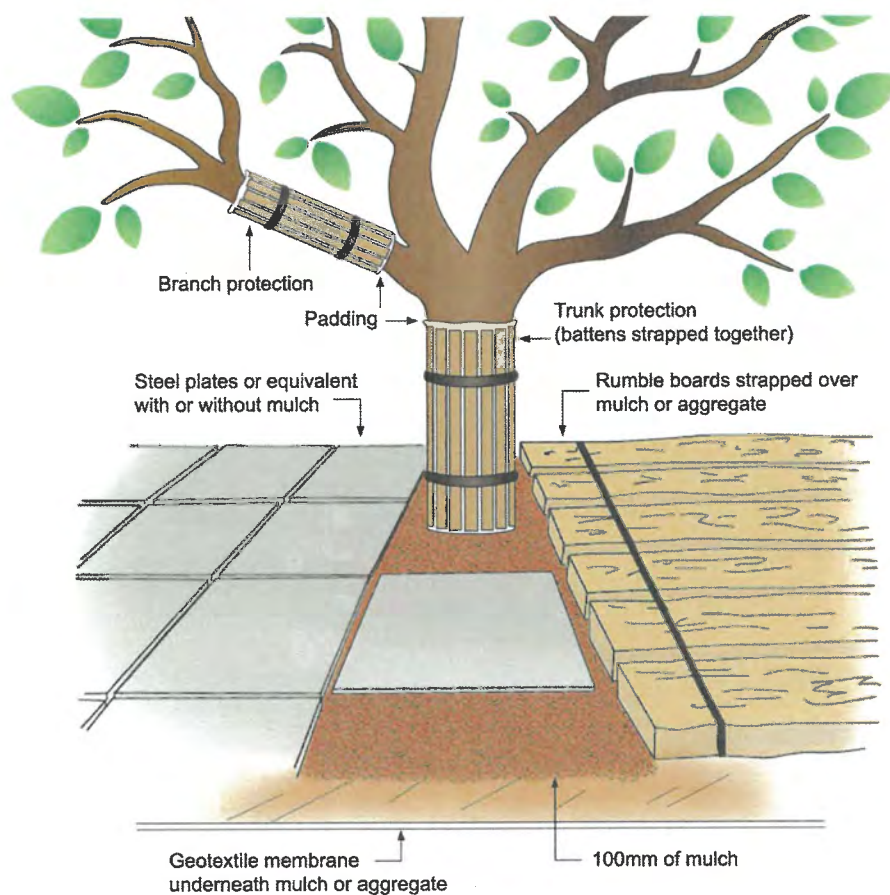
Appendix Figure 1. Depicts standard fencing techniques. (AS 4970–2009).

Trunk and Ground Protection

Given that proposed works are often within the TPZs of retained trees, standard protective fencing may not always be a viable method of protection. In these areas trunk protection and ground protection should be installed prior to the commencement of works and remain in place until after construction works have been completed.

Where construction access into the TPZ of retained trees cannot be avoided, the root zone of each tree must be protected using either steel plates or rumble board strapped over mulch/aggregate until such a time as permanent above ground surfacing (cellular confinement system or similar) is to be installed.

Trunk and ground protection should be undertaken in line with the Australian Standard AS 4790–2009: *Protection of Trees on Development Sites* as per the image below:



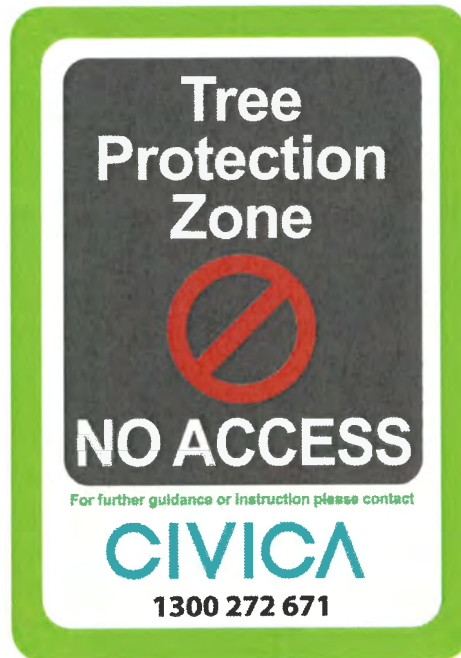
Notes:

1. For trunk and branch protection use boards and padding that will prevent damage to bark. Boards are to be strapped to trees, not nailed or screwed.
2. Rumble boards should be of a suitable thickness to prevent soil compaction and root damage.

Appendix Figure 2. Depicts trunk and ground protection techniques. (AS 4970–2009).

Tree Protection Signs

Signs identifying the TPZ should be placed at 10m intervals around the edge of the TPZ and should be visible from within the development site. An example is shown below in Appendix Figure 3.



Appendix Figure 3. Depicts standard fencing techniques. (AS 4970–2009).

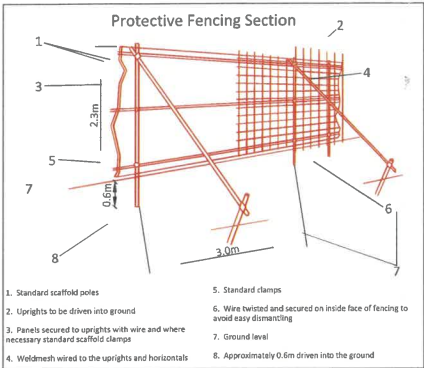
Appendix E. Tree Assessment Data

Tree no.	Botanical Name	Common Name	% TPZ Encr.	DBH Total (cm)	DRC (cm)	Radial TPZ (m)	TPZ area (m2)	Radial SRZ (m)	Tree Height (m)	Canopy (m)	Health	Structure	Age	TLE (Yrs.)	Defects	Significance	Action (in respect of development)	Arborist comments	Tree Quality Score	Tree Retention value subcategory	Recommendation
292	<i>Eucalyptus marginata</i>	Jarra	0	35	43	4.2	55.42	2.3	5-10	5-10	Fair	Fair	Semi-Mature	10-15	Co-dominant stems; Decay; Mechanical damage; Suppressed; Wound(s);	Amenity value/shade; Rare or localised distribution;		10-01-2024 : sitasafe : Tree assessed. 25-01-2023 : sitasafe : Tree assessed. 18-01-2022 : Nick Arnold : Suppressed habit, historic pruning of central leader. Signs of weed eater/mowing damage at base.	B		Retain tree with generic protection requirements (i.e. protective fencing and restriction of activities within the TPZ).
293	<i>Eucalyptus marginata</i>	Jarra	0	32	37	3.8	46.32	2.2	5-10	5-10	Fair	Fair	Semi-Mature	15-25	Co-dominant stems; Mechanical damage; Suppressed; Wound(s);	Amenity value/shade; Rare or localised distribution;		10-01-2024 : sitasafe : Tree assessed. 25-01-2023 : sitasafe : Tree assessed. 18-01-2022 : Nick Arnold : Signs of weed eater/mowing damage at base.	B		Retain tree with generic protection requirements (i.e. protective fencing and restriction of activities within the TPZ).
294	<i>Eucalyptus gomphocephala</i>	Tuart	0	115	127	13.8	598.28	3.7	15-20	15-20	Fair	Fair	Mature	25-50	Bird browsing damage; Co-dominant stems; Deadwood/stubs < 30mm; Decay; Mechanical damage; Previous failure(s); Suppressed; Wound(s);	Attractive landscape feature; Amenity value/shade; Significant due to age/size; Wound(s);		10-01-2024 : sitasafe : Tree assessed. Crown displays uniform vitality. No cracks or splits visible in major unions. Minor tip dieback. 24-01-2023 : Nick Arnold : Tree assessed. No documented failures within previous inspection period. 18-01-2022 : Nick Arnold : Front of house lawn area, evidence of regular maintenance.	A		Retain tree with generic protection requirements (i.e. protective fencing and restriction of activities within the TPZ).
295	<i>Eucalyptus gomphocephala</i>	Tuart	0	148	150	15.0	706.86	3.9	20-30	15-20	Fair	Fair	Mature	25-50	Bird browsing damage; Cavity(s); Co-dominant stems; Deadwood/stubs < 30mm; Disease pathogens; Exposed root(s); Wound(s);	Attractive landscape feature; Amenity value/shade; Significant due to age/size; Dominant landscape feature; Significant habitat - nests/hollows;		10-01-2024 : sitasafe : Tree assessed. Presence of extensive witch's broom throughout the crown. Crown displays uniform vitality. No cracks or splits visible in major unions. 24-01-2023 : Nick Arnold : Tree assessed. Evidence that selective pruning works have previously/recently been undertaken. Cavity formation at ~6-7m with several stick nests in upper crown. 19-01-2022 : Nick Arnold : A tree of significant size and stature located within formal lawn area, evidence of witch's broom. Several areas of active bird browsing/wounding within lower limb/trunk unions of dominant northern stem at ~6-8m. Terminally reduce elongated/prominent/wounded limbs (to include those with areas of browsed/degraded unions) by ~10-20% back to suitable growth points and reshape.	A		Retain tree with generic protection requirements (i.e. protective fencing and restriction of activities within the TPZ).
296	<i>Eucalyptus cladocalyx</i>	Sugar Gum	0	25	30	3.0	28.27	2.0	5-10	5-10	Good	Fair	Juvenile	25-50	Co-dominant stems; Deadwood/stubs < 30mm; Mechanical damage; Wound(s);	Attractive landscape feature; Amenity value/shade;		10-01-2024 : sitasafe : Tree assessed. 24-01-2023 : Nick Arnold : Tree assessed. 19-01-2022 : Nick Arnold : Open lawn area.	C		Retain tree with generic protection requirements (i.e. protective fencing and restriction of activities within the TPZ).
297	<i>Eucalyptus camaldulensis</i>	River Red Gum	0	57	72	6.8	146.98	2.9	15-20	10-15	Fair	Fair	Semi-Mature	25-50	Deadwood/stubs < 30mm; Mechanical damage; Suppressed;	Attractive landscape feature; Amenity value/shade;		10-01-2024 : sitasafe : Tree assessed. 24-01-2023 : Nick Arnold : Tree assessed. 19-01-2022 : Nick Arnold : Tree displays a somewhat spreading/open growth habit.	B		Retain tree with generic protection requirements (i.e. protective fencing and restriction of activities within the TPZ).
298	<i>Eucalyptus gomphocephala</i>	Tuart	30+	107	108	12.8	517.94	3.4	20-30	10-15	Fair	Fair	Mature	25-50	Co-dominant stems; Disease pathogens; Excessive end weight;	Attractive landscape feature; Amenity value/shade;	End weight reduction;	10-01-2024 : sitasafe : Tree assessed. 24-01-2023 : Nick Arnold : Terminally (end) reduce/suppress elongated/prominent limbs in northern crown growing over roofline by ~10-20% back to suitable growth points and reshape to reduce probability of failure. Difficult access.	A		Remove - tree located within proposed development footprint or has major encroachment into its TPZ.
299	<i>Eucalyptus gomphocephala</i>	Tuart	2	60	70	7.2	162.86	2.8	15-20	10-15	Good	Good	Semi-Mature	25-50	Co-dominant stems;	Attractive landscape feature; Amenity value/shade;		10-01-2024 : sitasafe : Tree assessed. 24-01-2023 : Nick Arnold : Tree assessed. 19-01-2022 : Nick Arnold : Towards middle of stand.	B		Retain tree with generic protection requirements (i.e. protective fencing and restriction of activities within the TPZ).
300	<i>Eucalyptus gomphocephala</i>	Tuart	30+	72	85	8.6	234.52	3.1	15-20	5-10	Fair	Fair	Semi-Mature	25-50	Deadwood/stubs < 30mm;	Attractive landscape feature; Amenity value/shade; Significant due to age/size;		10-01-2024 : sitasafe : Tree assessed. 24-01-2023 : Nick Arnold : Tree assessed. 19-01-2022 : Nick Arnold : Formerly Tree 79? 19-01-2022 : Nick Arnold : Edge of stand over classrooms.	B		Remove - tree located within proposed development footprint or has major encroachment into its TPZ.
301	<i>Eucalyptus gomphocephala</i>	Tuart	8	114	129	13.7	587.93	3.7	20-30	15-20	Good	Fair	Mature	25-50	Bird browsing damage; Cavity(s); Co-dominant stems; Excessive end weight; Previous failure(s); Wound(s);	Attractive landscape feature; Amenity value/shade; Significant due to age/size; Significant habitat - nests/hollows; Active nesting by fauna;	End weight reduction;	10-01-2024 : sitasafe : Tree assessed. Crown displays uniform vitality. No cracks or splits visible in major unions. Minor sporadic tip dieback. 24-01-2023 : Nick Arnold : Tree assessed. 19-01-2022 : Nick Arnold : Terminally (end) reduce elongated/prominent limbs in lower northern crown overhanging roof line by ~10-20% back to suitable growth points and reshape to reduce probability of failure. Recent limb failure ~10-15cm dia. from this location at ~8m.	A		Retain tree with generic protection requirements (i.e. protective fencing and restriction of activities within the TPZ).
302	<i>Eucalyptus gomphocephala</i>	Tuart	0	86	123	11.5	416.92	3.6	15-20	10-15	Good	Fair	Mature	25-50	Co-dominant stems; Deadwood/stubs < 30mm; Epicormic growth; Exposed root(s); Mechanical damage to root(s); Suppressed;	Attractive landscape feature; Amenity value/shade; Significant due to age/size;		10-01-2024 : sitasafe : Tree assessed. 24-01-2023 : Nick Arnold : Tree assessed. 19-01-2022 : Nick Arnold : Growth habit somewhat suppressed.	B		Retain tree with generic protection requirements (i.e. protective fencing and restriction of activities within the TPZ).
303	<i>Eucalyptus gomphocephala</i>	Tuart	0	140	150	15.0	706.86	3.9	20-30	10-15	Good	Fair	Mature	15-25	Borers/termites; Cavity(s); Decay; Epicormic growth; Exposed root(s); Mechanical damage to root(s); Suppressed; Wound(s);	Attractive landscape feature; Amenity value/shade; Significant due to age/size; Significant habitat - nests/hollows;	End weight reduction;	10-01-2024 : sitasafe : Tree assessed. Testing with sounding mallet (base-2m) indicates hollow section behind wound with good density wound wood columns surrounding cavity. Sounding indicates good density wood in intact trunk. Previous comments still apply. 24-01-2023 : Nick Arnold : Tree assessed. Evidence that selective pruning works have previously/recently been undertaken. Further terminal (tree height/limb length) reduction pruning of ~10% still recommended to reduce loading on lower trunk/stem defects. 19-01-2022 : Nick Arnold : Several compounding defects extending up through lower/middle trunk with suppressed growth habit. Terminally (end) reduce entire crown by ~10-20% height/length and reshape back to suitable branch unions, to reduce probability of failure.	A		Retain tree with generic protection requirements (i.e. protective fencing and restriction of activities within the TPZ).
304	<i>Eucalyptus gomphocephala</i>	Tuart	0	111	109	13.3	559.40	3.4	20-30	15-20	Fair	Fair	Mature	25-50	Co-dominant stems; Deadwood/stubs < 30mm;	Attractive landscape feature; Amenity value/shade; Significant due to age/size;		10-01-2024 : sitasafe : Tree assessed. 24-01-2023 : Nick Arnold : Tree assessed. No documented failures within previous inspection period. 19-01-2022 : Nick Arnold : Evidence that selective pruning works have previously been undertaken.	A		Retain tree with generic protection requirements (i.e. protective fencing and restriction of activities within the TPZ).
305	<i>Eucalyptus gomphocephala</i>	Tuart	0	147	150	15.0	706.86	3.9	10-15	10-15	Good	Poor	Mature	10-15	Cavity(s); Decay; Epicormic growth; Fungal fruiting body(s); Parasitic plant/mistletoe; Previous failure(s); Wound(s);	Attractive landscape feature; Amenity value/shade; Significant habitat - nests/hollows;	Weed control;	10-01-2024 : sitasafe : Tree assessed. Vigorous regrowth indicates good health. Fungal fruiting body on western trunk at ~7m. 24-01-2023 : Nick Arnold : Tree assessed. Evidence that selective habitat pruning works have previously/recently been undertaken. Remove pest trees including pepper tree, olive and common fig at base. 19-01-2022 : Nick Arnold : Visual indicators that decay/cavity extends up through lower trunk with anecdotal evidence from grounds team of significant previous limb failure. Remove tree crown retaining a habitat stump/stale limb stubs to a height of ~10-12m, retaining significant cavities and hollows. Add habitat cut-outs/nesting boxes to increase habitat value. Remove/manage regrowth annually or as required. Pruning works may need to be deferred where nesting sites in upper crown appear active. Undertake works in conjunction with Tree 303. Sever vines/creeper at ground level.	B		Retain tree with generic protection requirements (i.e. protective fencing and restriction of activities within the TPZ).
310	<i>Eucalyptus gomphocephala</i>	Tuart	0	150	150	15.0	706.86	3.9	20-30	10-15	Fair	Fair	Mature	15-25	Deadwood/stubs > 100mm; Decay; Epicormic growth; Parasitic plant/mistletoe; Previous failure(s); Wound(s);	Attractive landscape feature; Amenity value/shade; Significant due to age/size;	Habitat prune; Other action; Weed control;	13-02-2024 : Nick Arnold : Located within headmaster's garden. 10-01-2024 : sitasafe : Tree assessed. Health and structure appear unchanged. Previous comments still apply. Lower trunk and unions remain obscured by ivy. 25-01-2023 : sitasafe : Tree assessed. No evidence of further limb failure. Inspection of trunk and lower unions obscured. Previous comments still apply. 19-01-2022 : Nick Arnold : Remove tree crown/lateral limbs retaining a habitat stump of ~10-12m, add habitat cut-outs/nesting boxes to increase habitat value. Remove regrowth annually or as required. Sever vines/creeper at ground level. Anecdotal evidence from grounds team of significant previous limb failure. Inspection partially obscured by ivy.	B		Retain tree with generic protection requirements (i.e. protective fencing and restriction of activities within the TPZ).
311	<i>Brachychiton populneus</i>	Kurrajong	0	40	50	4.8	72.38	2.5	5-10	5-10	Fair	Fair	Semi-Mature	5-10	Parasitic plant/mistletoe; Suppressed;	Amenity value/shade;	Weed control;	10-01-2024 : sitasafe : Tree assessed. Trunk obscured by ivy. 25-01-2023 : sitasafe : Tree assessed. 19-01-2022 : Nick Arnold : Becoming swamped by ivy, sever vine at ground level.	C		Retain tree with generic protection requirements (i.e. protective fencing and restriction of activities within the TPZ).
313	<i>Melaleuca lanceolata</i>	Moonah	0	65	60	6.6	136.85	2.7	10-15	10-15	Good	Fair	Mature	10-15	Co-dominant stems; Deadwood/stubs < 30mm; Included bark;	Attractive landscape feature; Amenity value/shade;		10-01-2024 : sitasafe : Tree assessed. 25-01-2023 : sitasafe : Tree assessed. 19-01-2022 : Nick Arnold : Tree is somewhat sheltered and largely overhangs bush/garden area. No cracks or splits observed in major unions at time of assessment.	B		Retain tree with generic protection requirements (i.e. protective fencing and restriction of activities within the TPZ).
314	<i>Melaleuca lanceolata</i>	Moonah	0	50	55	6.0	113.10	2.6	10-15	10-15	Good	Fair	Mature	10-15	Co-dominant stems; Deadwood/stubs < 30mm; Suppressed; Wound(s);	Attractive landscape feature; Amenity value/shade;		10-01-2024 : sitasafe : Tree assessed. 25-01-2023 : sitasafe : Tree assessed. 19-01-2022 : Nick Arnold : No cracks or splits observed in major unions at time of assessment.	B		Retain tree with generic protection requirements (i.e. protective fencing and restriction of activities within the TPZ).
391	<i>Eucalyptus grandis</i>	Flooded Gum	0	55	70	6.6	136.85	2.8	20-30	10-15	Good	Fair	Semi-Mature	25-50	Deadwood/stubs > 60mm; Epicormic growth; Previous failure(s);	Attractive landscape feature; Amenity value/shade;		10-01-2024 : sitasafe : Tree assessed. Deadwood over garden bed. 24-01-2023 : Nick Arnold : Tree assessed. Evidence that selective pruning works have previously/recently been undertaken. 20-01-2022 : Nick Arnold : Evidence of previous limb failure(s). Terminally (end) reduce elongated/prominent limbs overhanging lower pathways by ~20-30% back to suitable growth points and reshape to reduce probability of failure. Selective pruning of rubbing/crossing limbs to improve structure.	B		Retain tree with generic protection requirements (i.e. protective fencing and restriction of activities within the TPZ).
392	<i>Eucalyptus grandis</i>	Flooded Gum	0	68	74	7.0	152.18	2.9	20-30	10-15	Good	Fair	Semi-Mature	25-50		Attractive landscape feature; Amenity value/shade;		10-01-2024 : sitasafe : Tree assessed. 24-01-2023 : Nick Arnold : Tree assessed. Evidence that selective pruning works have previously/recently been undertaken. 20-01-2022 : Nick Arnold : Terminally (end) reduce elongated/prominent limbs throughout crown by ~20-30% back to suitable growth points and reshape to reduce probability of failure.	B		Retain tree with generic protection requirements (i.e. protective fencing and restriction of activities within the TPZ).
393	<i>Eucalyptus gomphocephala</i>	Tuart	51	114	134	13.7	587.93	3.7	20-30	15-20	Good	Fair	Mature	25-50	Bird browsing damage; Co-dominant stems; Deadwood/stubs < 30mm; Epicormic growth; Previous failure(s); Wound(s);	Significant due to age/size; Attractive landscape feature; Amenity value/shade;		10-01-2024 : sitasafe : Tree assessed. 24-01-2023 : Nick Arnold : Tree assessed. Evidence that selective pruning works have previously/recently been undertaken. 21-01-2022 : Nick Arnold : Evidence that selective pruning works have previously been undertaken. Bird browsing in middle crown/central leader. Terminally (end) reduce eastern lateral limb with bird browsed/damaged trunk union by ~10-20% back to suitable growth points and reshape to reduce probability of failure. Pocket of deadwood in upper central crown.	A		Retain tree with specific protection requirements (i.e. Generic measures plus supervision of works within the TPZ and/or use of root sensitive construction techniques).

Tree no.	Botanical Name	Common Name	% TPZ Encl.	DBH Total (cm)	DRC (cm)	Radial TPZ (m)	TPZ area (m2)	Radial SRZ (m)	Tree Height (m)	Canopy (m)	Health	Structure	Age	TLE (Yrs.)	Defects	Significance	Action (in respect of development)	Arborist comments	Tree Quality Score	Tree Retention value subcategory	Recommendation
394	<i>Eucalyptus gomphocephala</i>	Tuart	25	128	150	15.0	706.86	3.9	20-30	15-20	Good	Fair	Mature	25-50	Bird browsing damage; Cavity(s); Co-dominant stems; Deadwood/stubs > 60mm; Previous failure(s); Wound(s);	Amenity value/shade; Attractive landscape feature; Significant due to age/size;	Remove selective deadwood/stubs;	10-01-2024 : altaasafe : Tree assessed. Remove deadwood in upper SW crown over lawn. 24-01-2023 : Nick Arnold : Tree assessed. Evidence that selective pruning works have previously/recently been undertaken. 21-01-2022 : Nick Arnold : A tree of significant size and stature that has been regularly maintained. Debris build up along roofline, regular/scheduled gutter clearing required. Nothing short of full habitat reduction pruning of both Tree 394 and Tree 393 would eliminate this issue. Asset team to upload evidence of any significant/historic failure events.	A		Retain tree with specific protection requirements (i.e. Generic measures plus supervision of works within the TPZ and/or use of root sensitive construction techniques).
521	<i>Eucalyptus gomphocephala</i>	Tuart	0	15	20	2.0	12.57	1.7	5-10	<5	Good	Fair	Young	>50	Suppressed;	Commemorative tree; New Planting;	Mulching;	13-02-2024 : Nick Arnold : Tree added. Donated by Yr 12 leaving group 2021.	C		Retain tree with generic protection requirements (i.e. protective fencing and restriction of activities within the TPZ).
522	<i>Callistemon 'Kings Park Special'</i>	Kings Park Special Bottlebrush	0	35	40	4.2	55.42	2.3	5-10	5-10	Good	Fair	Semi-Mature	10-15	Co-dominant stems; Crossing/rubbing branches; Damaging infrastructure; Epicormic growth;	Amenity value/shade;		13-02-2024 : Nick Arnold : Tree added. Minor paving displacement.	C		Retain tree with generic protection requirements (i.e. protective fencing and restriction of activities within the TPZ).
523	<i>Callistemon 'Kings Park Special'</i>	Kings Park Special Bottlebrush	0	25	30	3.0	28.27	2.0	5-10	5-10	Good	Fair	Semi-Mature	10-15	Co-dominant stems; Crossing/rubbing branches; Epicormic growth; Previous failure(s);	Amenity value/shade;		13-02-2024 : Nick Arnold : Tree added.	C		Retain tree with generic protection requirements (i.e. protective fencing and restriction of activities within the TPZ).
524	<i>Callistemon 'Kings Park Special'</i>	Kings Park Special Bottlebrush	30+	35	40	4.2	55.42	2.3	5-10	5-10	Good	Fair	Mature	10-15	Co-dominant stems; Included bark; Previous failure(s); Wound(s);	Amenity value/shade;	Uplift for pedestrian access;	13-02-2024 : Nick Arnold : Tree added. Evidence of previous limb failure(s).	C		Remove - tree located within proposed development footprint or has major encroachment into its TPZ.
525	<i>Callistemon 'Kings Park Special'</i>	Kings Park Special Bottlebrush	30+	35	40	4.2	55.42	2.3	5-10	5-10	Fair	Fair	Mature	10-15	Co-dominant stems; Previous failure(s); Wound(s);	Amenity value/shade;	Uplift for pedestrian access;	13-02-2024 : Nick Arnold : Tree added.	C		Remove - tree located within proposed development footprint or has major encroachment into its TPZ.
526	<i>Callistemon 'Kings Park Special'</i>	Kings Park Special Bottlebrush	30+	30	35	3.6	40.72	2.1	5-10	5-10	Good	Fair	Semi-Mature	10-15	Co-dominant stems; Epicormic growth;	Amenity value/shade;		13-02-2024 : Nick Arnold : Tree added.	C		Remove - tree located within proposed development footprint or has major encroachment into its TPZ.
527	<i>Callistemon 'Kings Park Special'</i>	Kings Park Special Bottlebrush	0	30	40	3.6	40.72	2.3	5-10	5-10	Good	Fair	Semi-Mature	10-15	Co-dominant stems; Epicormic growth; Included bark;	Amenity value/shade;		13-02-2024 : Nick Arnold : Tree added.	C		Retain tree with generic protection requirements (i.e. protective fencing and restriction of activities within the TPZ).



Appendix F. Tree Protection Plan



Protective Fencing

To be erected prior to the commencement of all works on site, and retained in place throughout construction. To comprise either 2.4m wooden site hoarding, or a 2.1m high scaffolding framework, with uprights at maximum 3.5m spacings, every other one braced to the ground with 45 degree struts; supporting standard anti-climb 'Heras' welded mesh fence panels secured with anti-lift devices to concrete or plastic bases pinned to the ground by scaffold uprights sunk to a minimum depth of 500mm; individual panels fixed to each other with at least 2 clamps and to scaffolding with heavy-duty cable ties. "TREE PROTECTION ZONE - KEEP OUT" or similar notices to be attached to every fifth panel.

SINGLE STOREY
BRICK BUILDING

SINGLE STOREY
BRICK BUILDING

BASKETBALL COURT

SINGLE STOREY
BRICK BUILDING

BRICK BUILDING

GRASS

GRASS

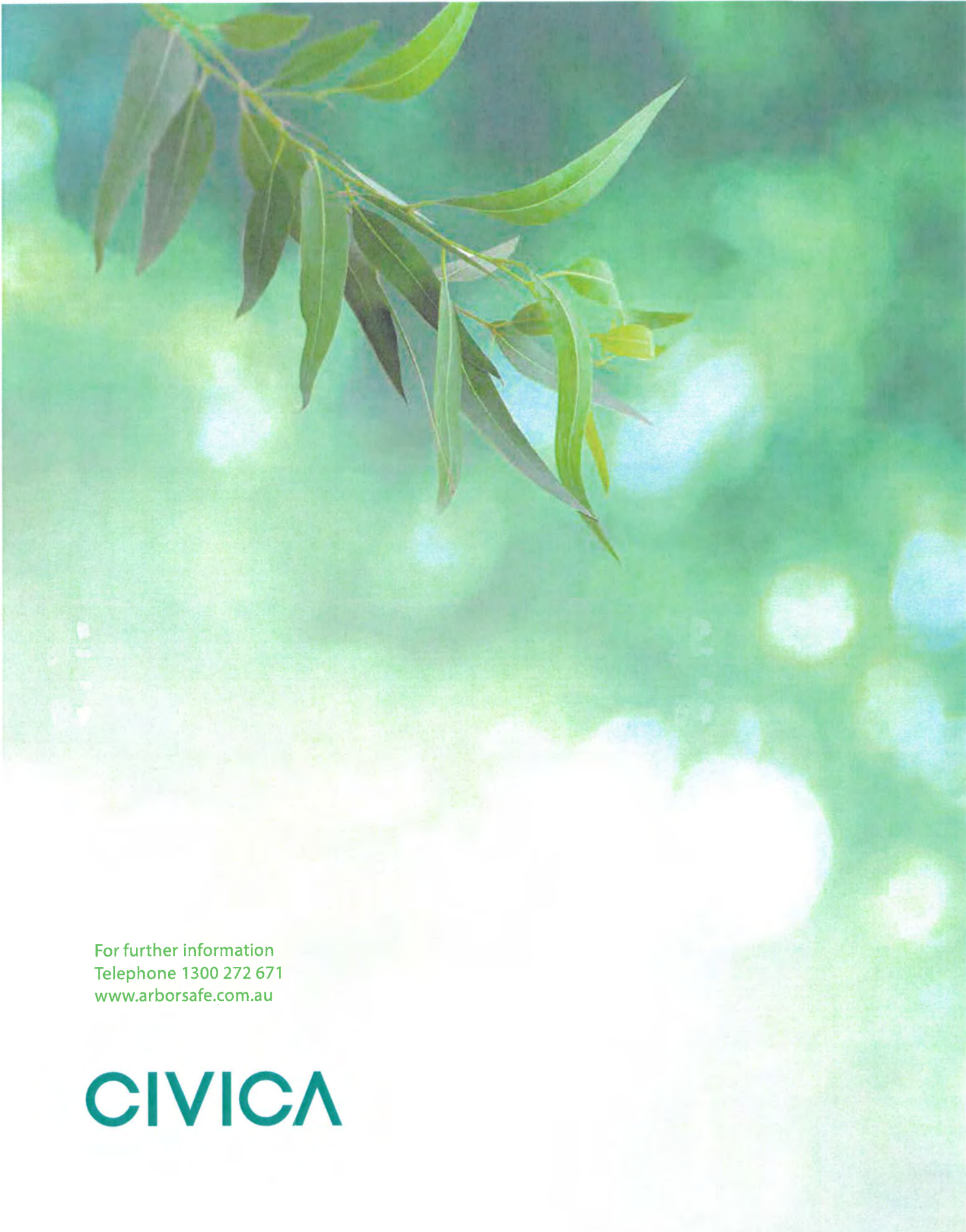
9050
NAIL BRICK PAVING
RL: 52.95m

Trees 393 & 394
Where practicable, the proposed
site access way is to be located
to the east of Trees 393 & 394
with suitable ground/trunk and
general TPZ protection measures
installed in advance of demolition
works.

Excavations should be limited as
per the guidance notes supplied in
the site's tree report (AIA).

Indicative location of
tree protection fencing
(blue line) to be
installed as per
guidance notes supplied
in site AIA (tree)
report.

LEGEND			
Tree trunk & number:	 Tree 1	Cat. A TPZ:	
Trees with specific controls	 Tree 1	Cat. B TPZ:	
Trees away from devt.:		Cat. C TPZ:	
Proposed building footprint:		Tree to be removed for devt:	
TPZ Fencing		SRZ (Structural Root Zone)	
 Tree Retention Value			
Trees have been categorised to allow an accurate account of which should and should not be a constraint. Tree categories are determined according to their health condition, quality and value. Cat. U:- Trees to be removed irrespective of devt. Cat. A:- Trees of high quality and value Cat. B:- Trees of moderate quality and value Cat. C:- Trees of low quality and value Cat. A retention value trees should be retained, planned around and be protected from damage. Cat. B retention value trees should be retained if possible. Cat. C retention value trees will not be retained where they impose a significant constraint on development. Cat. U retention value trees are unretainable for the foreseeable future and typically recommended for removal irrespective of site development.			
Tree Protection Zones (TPZs)			
A model is used to assist in the prediction of the likely impact of development on retained trees. This model is based on the Diameter of Trunk at Breast Height (DBH) for an individual specimen. TPZ = DBH x 12 (DBH measured at 1.5m on trunk) It is recommended that an area around each retained tree should be protected from disturbance "in order to avoid (unacceptable) damage to the roots or rooting environment" (as a result of root severance or damage, or compaction or pollution of the soil). These Tree Protection Zones (TPZs) have been calculated for all retained trees and are shown as areas bordered in green, blue or grey according to tree category. These zones are normally portrayed as a circle of a fixed radius from the centre of the trunk. The Structural Root Zone (SRZ) is the area required for tree stability. A larger area is required to maintain a viable tree. The SRZ only needs to be calculated when major encroachment into a TPZ is proposed. There are many factors that affect the size of the SRZ (e.g. tree height, crown area, soil type, soil moisture). The SRZ may also be influenced by natural or built structures, such as rocks and footings. An indicative SRZ radius can be determined from the trunk diameter measured immediately above the root buttress using the following formula: SRZ radius = (D x 50)^{0.42} x 0.64 Root investigation may provide more information on the extent of these roots.			
Permissible Encroachment in TPZs			
As per the Australian Standard AS4970-2009 <i>Protection of Trees on Development Sites</i> a major encroachment into the TPZ of any tree is considered to occur when it is beyond 10% of the total TPZ area. A minor encroachment is determined as being less than 10% of the total TPZ area. If the proposed encroachment is minor and is outside the SRZ, detailed root investigations should not be required. The area lost to this encroachment should be compensated for elsewhere and contiguous with the TPZ. If the proposed encroachment is major or inside the SRZ, the project arborist must demonstrate that the tree(s) would remain viable. The area lost to this encroachment should also be compensated for elsewhere and contiguous with the TPZ. This may require root investigation by non-destructive methods and consideration of relevant factors.			
PROJECT:	Arboricultural Impact Assessment Hale_Science		
CLIENT:	TPM/Hale		
DRAWING:	Tree Protection Plan		
DRAWING NO.:	006897_01	Rev. 2	16.02.24
BASED ON:	Site Plan: 103147DE-001E Source: Survey		
SCALE:	Do not scale		
DRAWN BY:	NA		
			



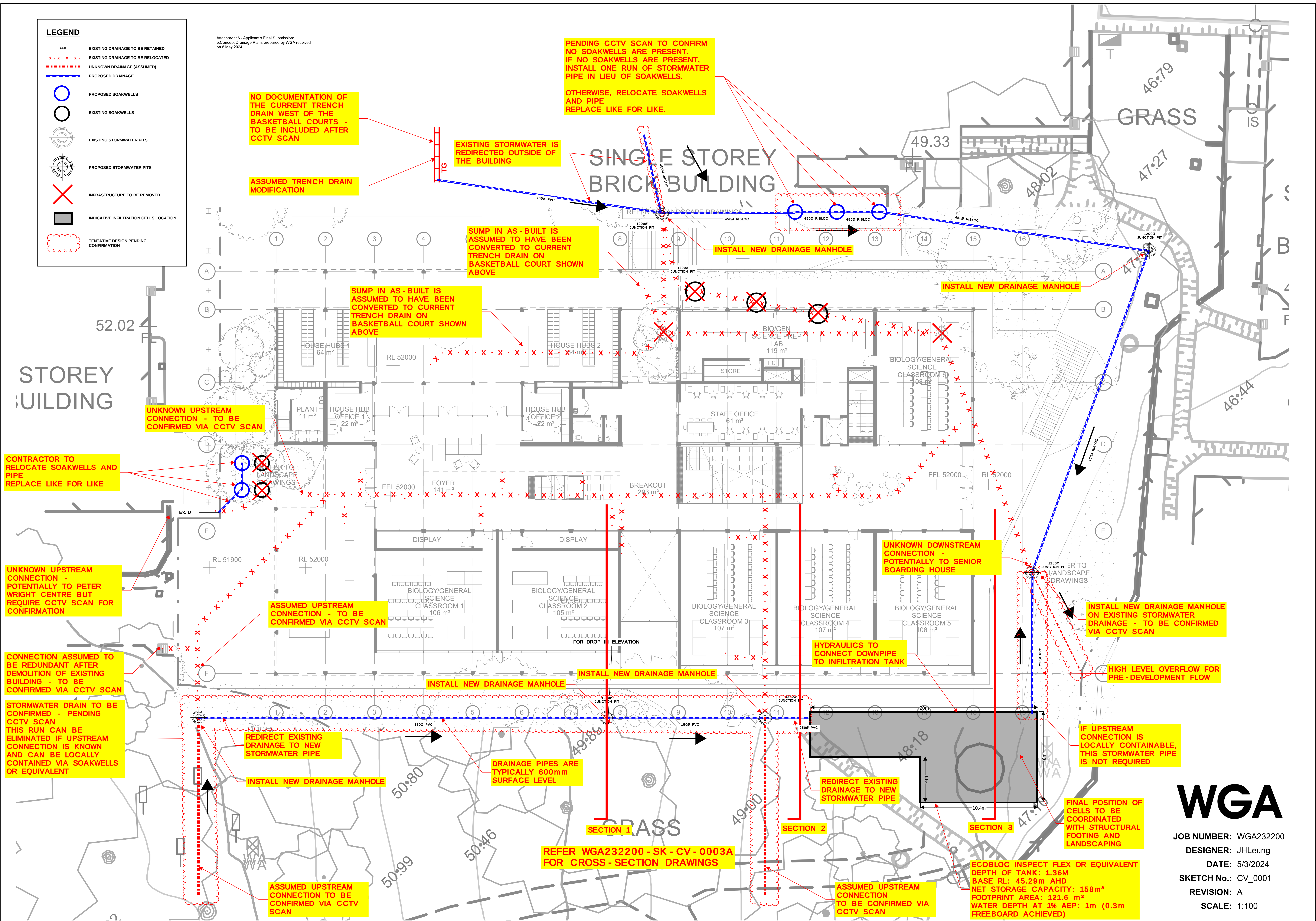
For further information
Telephone 1300 272 671
www.arborsafe.com.au

CIVICA

LEGEND

- EXISTING DRAINAGE TO BE RETAINED
- EXISTING DRAINAGE TO BE RELOCATED
- UNKNOWN DRAINAGE (ASSUMED)
- PROPOSED DRAINAGE
- PROPOSED SOAKWELLS
- EXISTING SOAKWELLS
- EXISTING STORMWATER PITS
- PROPOSED STORMWATER PITS
- INFRASTRUCTURE TO BE REMOVED
- INDICATIVE INFILTRATION CELLS LOCATION
- TENTATIVE DESIGN PENDING CONFIRMATION

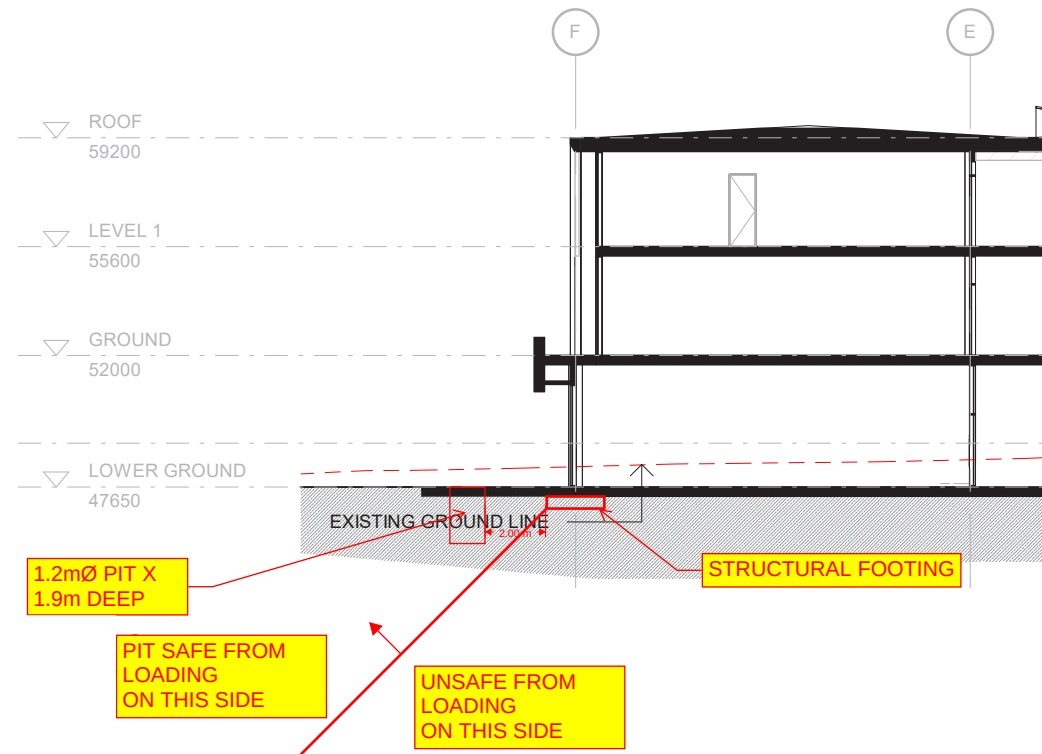
Attachment 6 - Applicant's Final Submission
a Concept Drainage Plans prepared by WGA received on 6 May 2024



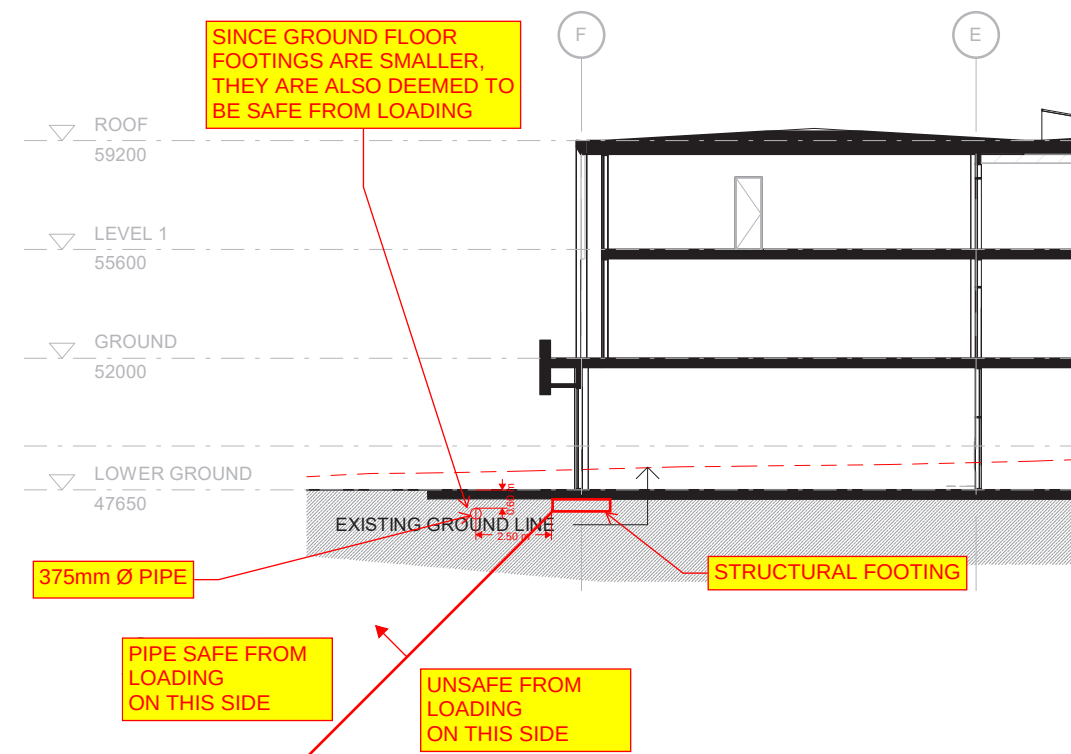
WGA

JOB NUMBER: WGA232200
DESIGNER: JHLeung
DATE: 5/3/2024
SKETCH No.: CV_0001
REVISION: A
SCALE: 1:100

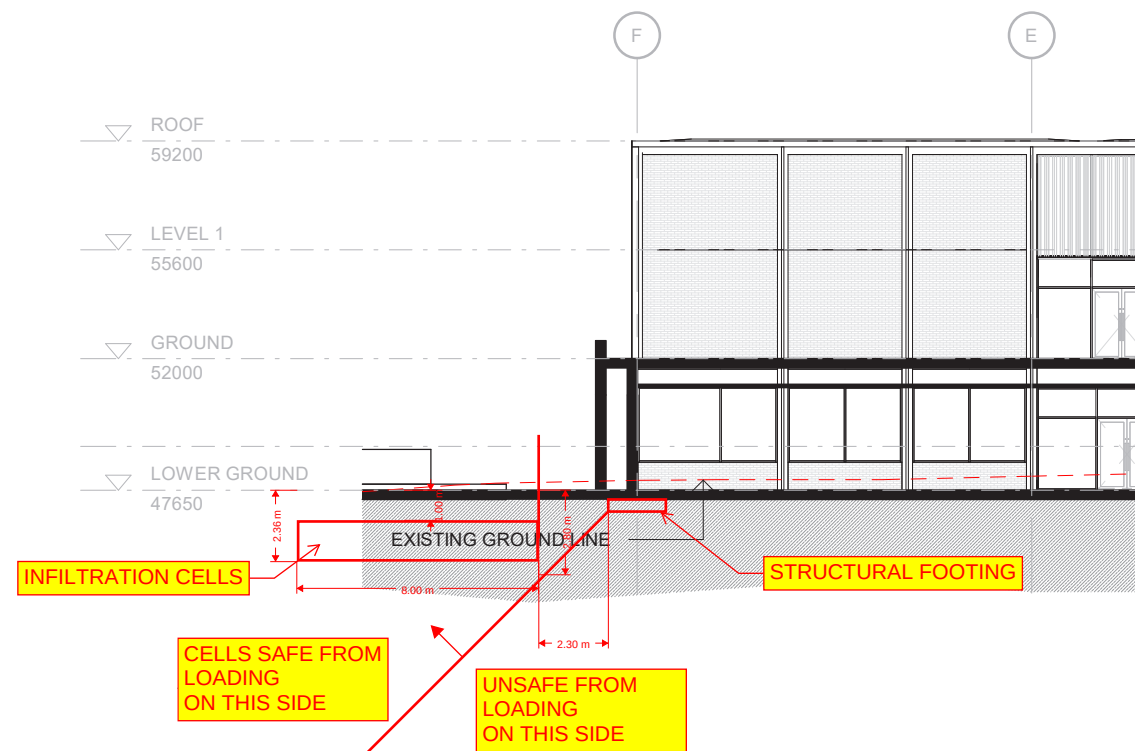
ECOBLOC INSPECT FLEX OR EQUIVALENT
DEPTH OF TANK: 1.36M
BASE RL: 45.29m AHD
NET STORAGE CAPACITY: 158m³
FOOTPRINT AREA: 121.6 m²
WATER DEPTH AT 1% AEP: 1m (0.3m FREEBOARD ACHIEVED)



SECTION 1



SECTION 2



SECTION 3

WGA

JOB NUMBER: WGA232200

DESIGNER: JHLeung

DATE: 5/3/2024

SKETCH No.: CV_0003

REVISION: A

SCALE: 1:250



Full Circle
Design Services

Unit 303 26 Charles St
South Perth WA 6151

PO Box 5636
St Georges Terrace
WA 6831

Ph: +61 (0) 412 475 819
E: graham.agar@fcds.com.au
www.fullcircledesign.com.au
ACN: 163 742 890

Sustainability Strategy

Project:	Hale School Science Facility
Service:	Sustainable Design
Subject:	ESD Strategy
Revision:	A
Date:	17 th April 2024
Author:	Graham Agar

Sustainability Summary

Hale School has an enduring commitment to delivering outstanding educational outcomes for students and the community. As part of the new Science facility, the design is committed to delivering best practice design, with performance benchmarked against leading national tools.

By benchmarking against recognised and national tools, the school and the design team maintain confidence that the building has an appropriate design solution and will perform to deliver best practice outcomes.

Key Strategy Themes

Design features have been selected which:

- Improve educational outcomes
- Minimise carbon footprint
- Optimise occupant health and amenity
- Assist with ongoing management and operations

Key Features

Feature	Theme	Educational Outcomes	Carbon Footprint	Health and Amenity	Management and Operations
Best Practice O+Ms					X
30kW Solar Array		X	X		
Fossil Fuel Free Heating and Hot Water			X	X	
Acoustic Performance Verification		X		X	
Independent Performance Review			X	X	X
Mixed Mode Air Conditioning		X	X	X	
High Efficiency Services			X	X	
High Performance Envelope			X	X	

Proposed Performance Targets

Category	Target	Design Team Response
General Sustainability	Best Practice Design	The project is targeting a self-assessment using Green Star Buildings Benchmarks, aiming for a Best Practice outcome.
	Operational Performance	Monitor and tune building performance in operation – targeting <30 kWhrs per m ² – 5 Star NABERS.
Energy Consumption	10% Façade Improvement over BCA 2022	This will require shading, insulation and glazing performance in excess of minimum standard.
	15% Overall Improvement over BCA 2022	• Energy efficient services (lighting and mechanical in particular) to be provided. • Reverse cycle heat pump (gas boost) for domestic hot water.
	Renewable Energy	Design currently includes for 30kW Peak Generation array as part of project delivery.
Water Consumption	Low Flow Tapware	Ensure all taps, showers, WC's and urinals provided are within 1 star of the best available WELS rating.
	Waterwise Irrigation	Utilise drought tolerant and native planting where possible. Utilise rain / moisture sensing and sub-soil drip irrigation for all planted areas.
Waste Targets	75%+ Recycling in operation	Design to facilitate capture of recyclable goods and use of comingled recycling. Minimum three waste streams to be collected.
	>90% Recycling in construction	Use of high efficiency resource recovery facility to sort waste in construction.
Durability	>10 Years for Common Area Finishes	Internal finishes shall target >10 year life spans, with minimal repair and maintenance rather than regular replacement. Target certified products for floor and wall finishes.
Indoor Environment Quality	Mixed Mode Operation	Key spaces to be able to function in air conditioned or naturally ventilated modes.

Attachment 6 - Applicant's Final Submission:
g.Acoustic Assessment prepared by Gabriels Hearne
Darrel received on 6 May 2024

21st March 2024

HALE SCHOOL
C/- TOTAL PROJECT MANAGEMENT
Level 6, 1008 Hay St
PERTH WA 6000

Attention: Mr Bradley Melvin

**HALE SCHOOL
NEW SCIENCE BUILDING
ACOUSTIC CONSIDERATIONS (DEVELOPMENT APPLICATION STAGE)**

Dear Bradley,

There are no planning requirements in relation to acoustics for this project. As per Figure 1, the proposed site for the Science building is not located within a trigger zone for State Planning Policy 5.4 'Road and Rail Noise'.

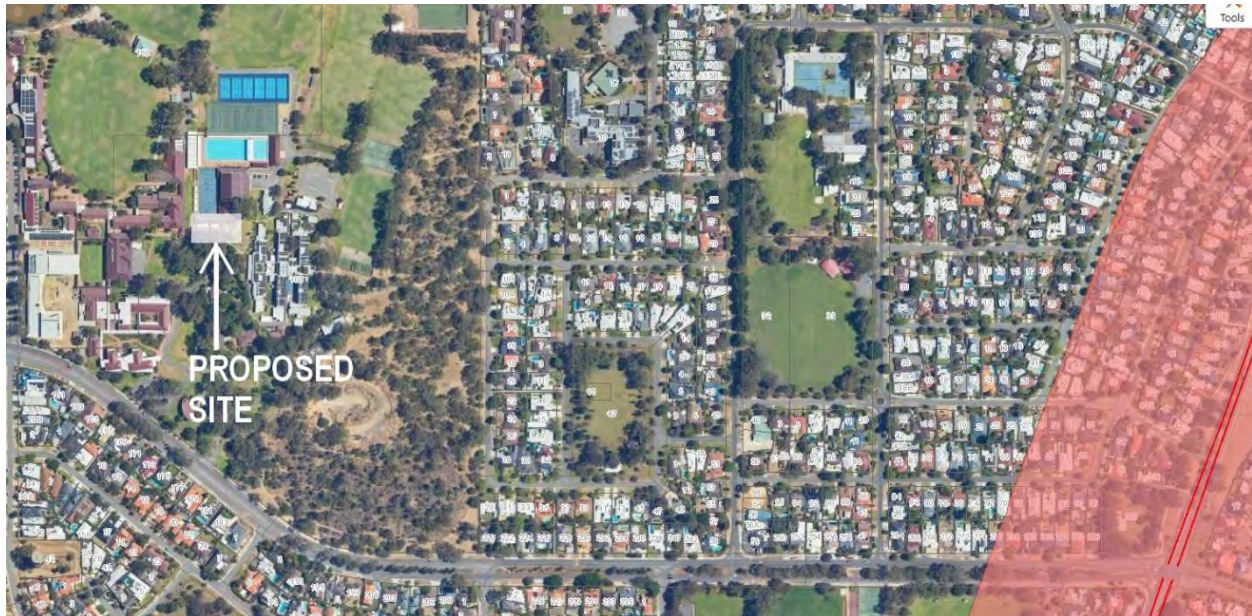


Figure 1

The only mandatory acoustic requirement applicable to the project is compliance with the Environmental Protection (Noise) Regulations 1997. These regulations govern the allowable noise transmission to the surrounding noise sensitive premises (ie residences). Compliance with these regulations is not a planning consideration, given that compliance is required under law, as per the Environmental Protection Act 1986. Nonetheless, this document provides a preliminary review of compliance with the Environmental Protection (Noise) Regulations 1997, in order to satisfy the City of Stirling officers.

1. SITE CONTEXT

The proposed Science building will be located in the centre of the school campus, as illustrated in Figure 2. The nearest residences are approximately 240 metres away, on the west side of Unwin Avenue and the south side of Hale Road. There are also residences slightly further away on the eastern side of the school campus.



Figure 2 – Proximity of the development to residences

2. NOISE LEVEL CRITERIA

In Western Australia, the noise transmission from one premises to another shall comply with the Environmental Protection (Noise) Regulations 1997. These regulations establish the 'Assigned Levels' which are not to be exceeded at the nearest noise sensitive premises.

2.1 Assigned levels for the nearest residences on Unwin Avenue and Lefroy St

The 'Assigned Levels' in Table 1 are applicable to the residences on Unwin Avenue and Lefroy St. The 'Assigned Levels' are based on an *Influencing Factor* of 2 dB, due to:

- A major road being located within 450 m distance of the residences (Hale Road has over 16,000 vehicles per day).

Please note that the 'Assigned Levels' for any residences located within 100 metres of Hale Road would be 4 dB higher than those stated in Table 1, given that the *Influencing Factor* would be 6 dB, due to a major road being within the 100 metre circle.

Part of premises receiving noise	Time of day	Assigned Level (dB)		
		L _{A10}	L _{A1}	L _{A max}
Noise Sensitive Premises: highly sensitive area (eg within 15 metres of a house)	7 am to 7 pm Monday to Saturday	47	57	67
	9 am to 7 pm Sunday and public holidays	42	52	67
	7 pm to 10 pm all days	42	52	57
	10 pm to 7 am Monday to Saturday and 10 pm to 9 am on Sundays and public holidays	37	47	57

Table 1- Assigned Levels for the residences on Unwin Ave and Lefroy St)

The statistical parameters in Table 1 are defined below:

L_{Amax} - the noise level which is not to be exceeded at any time.

L_{A1} - the noise level which is not to be exceeded for more than 1% of the time (eg for more than 144 seconds over a 4 hour period).

L_{A10} - the noise level which is not to be exceed for more than 10% of the time (eg for more than 24 minutes over a 4 hour period).

2.2 Noise character

Regulation 7 requires that the noise emission must be 'free' of annoying characteristics, namely tonality (eg whining, droning), modulation (like a siren), and impulsiveness (eg thumping). Where noise emissions do exhibit the above noise characteristics, an adjustment is made to the measured/calculated noise level:

<i>Tonality</i>	5 dB is added to the measured level
<i>Modulation</i>	5 dB is added to the measured level
<i>Impulsiveness</i>	10 dB is added to the measured level
<i>Amplified music</i>	10 dB is added to the measured level

The above adjustments only apply where the 'noise character' is audible and measurable at both the noise source and noise receiver.

3. NOISE EMISSIONS FROM THE MECHANICAL SERVICES

At this early stage of the project it is not possible to assess the noise emissions from the mechanical plant given that mechanical equipment selections have not been made. However, we do not envisage any significant issues with comply within the 'Assigned Levels', given the nearest residences is over 100 metres away.

The buildings air-conditioning equipment (approximately 10 condensing units) will be located in a Lower Ground plant area, with façade ventilation louvres. Within the Schematic Design Acoustic Report it has been recommended that the ductwork from the condenser fans to the façade louvres are internally insulated to provide a degree of attenuation. The intent of this advice is to control noise transmission to the surrounding school buildings to below 55 dB(A). However, it is likely that the noise transmission to the residences much further away will be completely inaudible (ie well below the 'Assigned Levels').

There will be 8 exhaust fans located on the roof, which will be used for the purpose of exhausting fumes, which is typical in science facility. Our preliminary noise emission calculations indicate that the combined Sound Power Level of these fans must not exceed 97 dB(A) in order to comply with the relevant 'Assigned Levels', including the +5 dB penalty for 'tonality'. This is an achievable design target, given the precedence of other similar facilities at Wesley College and Penrhos College which are closer to residences than this project.

The proposed mechanical plant will be assessed prior to the lodgement for the Building Permit, in order to ensure that the selected equipment is compliant with the Environmental Protection (Noise) Regulations 1997.

4. ASSESSMENT OF NOISE BREAK-OUT FROM THE WORKSHOP SPACES

There are two engineering workshops and a Light Fabrication Room on the Lower Ground Floor, which are times may experience high noise levels due to use of power tools, hammering, etc.

We have undertaken an assessment of environmental noise break-out, based on the following factors:

- The assessment has been based on internal noise levels of 85 dB(A) within the workshop spaces, which is based on noise level measurements conducted within other secondary school workshops.
- It is assumed that the external glazing of these workshop spaces will have a minimum sound reduction of R_w 33 (combined glass and frame performance), which has been recommended to control noise break-out to the other school buildings on the site.
- The assessment has been based on the external doors of the workshops being in an 'open' position, which would be the worst-case-scenario.
- Please note that the assessment has ignored the potential screening effect provided by the existing school buildings located between the workshops and the residences, therefore the assessment can be considered to be conservative

The assessment has taken into account the attenuation over distance, air absorption, etc in accordance with ISO 9613-2:1996 'Acoustics – Attenuation of sound during propagation outdoors'. The assessments were undertaken utilising octave-band data, within the frequency range of 63 Hz to 8 kHz. The assessment was based on the following meteorological conditions:

- Temperature: 20°C
- Humidity: 50%
- Wind speed: 4 m/s
- Wind direction: Towards the residences

4.1 Predicted noise level at the nearest residences

The predicted noise level at the nearest residences is L_{10} 39 dB(A), inclusive of the +5 dB penalty for 'tonality'. This is compliant with the relevant 'Assigned Levels' (the workshops will not be used at night after 10 pm). When the external doors of the workshop are closed, the calculated noise level at the nearest residence is L_{10} <20 dB(A).

Regards,

Benjamin Farrell

Director M.A.A.S.

GABRIELS HEARE FARRELL PTY LTD

Member Firm – Association of Australasian Acoustical Consultants

27 February 2024
Job Number: 214118
Our Reference: 01L

Chief Executive Officer
City of Stirling
PO Box 1533
Osborne Park WA 6916

Griffiths Architects



Dear Sir/Madam,

HERITAGE IMPACT ASSESSMENT OF WORKS-HALE SCIENCE BUILDING, WEMBLEY

Hale School Memorial Hall is proposed for the Register of Heritage Places. The proposal is in the consultation stages and has yet to be considered by the Heritage Council with comments.

However, it would seem likely that the registration will proceed.

It is proposed to demolish existing building fabric and construct a new two story science building.

Project Outline

The project is located some distance from the proposed registered heritage place and there are intervening buildings between the sites.

The Memorial Hall is visually disconnected from the science building site.

The proposed registered area or curtilage is located immediately around the fabric of the hall.

Issue

The City of Stirling planning officers were seeking clarification as to whether a heritage impact statement (HIS) would be required as part of the application for the new science building.

DPLH position

Our was that a HIS would not be required, given the circumstances and sought clarification from DPLH on 17 February 2024.

On 22 February 2024, Liza Mathews, Senior Development Officer, Heritage and Property Services, Department of Planning, Lands and Heritage replied that 'Given the distance between the Memorial Hall and the new science block I feel a HIS is unnecessary.'

Comment

The science block was correctly referred to DPLH as it is nearby the Memorial Hall. The Heritage Council is likely to provide not statutory comment on the science block to the effect that they have no concerns, following on from the logic of the correspondence to date.

Please be in touch if you require further assistance.

Yours sincerely,

A handwritten signature in blue ink, appearing to read 'Philip Griffiths', with a long horizontal flourish extending to the right.

PHILIP GRIFFITHS LFRAIA RIBA M.ICOMOS

ABWA Reg.No. 1071

for Griffiths Architects

From: Philip Griffiths <philip.griffiths@griffithsarchitects.com.au>
Sent: Thursday, February 22, 2024 2:52 PM
To: Liza Mathews <Liza.Mathews@dplh.wa.gov.au>
Cc: Edward Neville <ed@totalpm.com.au>
Subject: Re: 24118-HALE SCHOOL SCIENCE BUILDING

Thank you Liza,

I thought that would be the case and appreciate your confirmation.

Regards,
Philip Griffiths LFRAIA RIBA M.ICOMOS
Architect ABWA Reg. No. 1071.

Griffiths Architects 

Suite 1, 315 Rokeby Road, Subiaco, Western Australia, 6008
T: 08 9381 1666 philip.griffiths@griffithsarchitects.com.au

This email and any attachments may be confidential and also privileged. If you are not the intended recipient please notify the sender and delete all copies of this transmission immediately, along with any attachments. You should not copy it or use it for any purpose, nor disclose its contents to any other person.

From: Liza Mathews <Liza.Mathews@dplh.wa.gov.au>
Date: Thursday, 22 February 2024 at 2:39 pm
To: Philip Griffiths <philip.griffiths@griffithsarchitects.com.au>
Subject: FW: 24118-HALE SCHOOL SCIENCE BUILDING

OFFICIAL

Hi Phil

I hope you are well!

Thanks for sending your query through. Given the distance between the Memorial Hall and the new science block I feel a HIS is unnecessary.

I also have the prelim advice referral for the Science Block in my folder so I will get that to you soon.

Kind regards

Liza Mathews

Senior Heritage Officer | Heritage and Property Services

Department of Planning, Lands and Heritage

140 William Street, Perth WA 6000

wa.gov.au/dplh | 6551 9068



The Department is responsible for planning and managing land and heritage for all Western Australians – now and into the future

The Department acknowledges the Aboriginal people of Western Australia as the traditional custodians of this land, and we pay our respects to their Elders, past and present.

Disclaimer: this email and any attachments are confidential and may be legally privileged. If you are not the intended recipient, any use, disclosure, distribution or copying of this material is strictly prohibited. If you have received this email in error, please notify the sender immediately by replying to this email, then delete both emails from your system.

From: Sheree Morrison <Sheree.Morrison@dplh.wa.gov.au>

Sent: Thursday, 22 February 2024 1:13 PM

To: Liza Mathews <Liza.Mathews@dplh.wa.gov.au>

Subject: FW: 24118-HALE SCHOOL SCIENCE BUILDING

OFFICIAL

Hi Liza,

Can you please advise Phillip if a HIS is necessary?

Thank you

Sheree

Sheree Morrison

Assistant Manager, Historic Heritage Conservation, | Heritage and Property Services

Department of Planning, Lands and Heritage

140 William Street, Perth WA 6000

wa.gov.au/dplh | 6552 4019 | 0459 767 882 | Tuesday - Friday



The Department acknowledges the Aboriginal people of Western Australia as the traditional custodians of this land, and we pay our respects to their Elders, past and present.

Disclaimer: this email and any attachments are confidential and may be legally privileged. If you are not the intended recipient, any use, disclosure, distribution or copying of this material is strictly prohibited. If you have received this email in error, please notify the sender immediately by replying to this email, then delete both emails from your system.

From: Philip Griffiths <philip.griffiths@griffithsarchitects.com.au>

Sent: Saturday, February 17, 2024 12:17 PM

To: Sheree Morrison <Sheree.Morrison@dplh.wa.gov.au>

Subject: 24118-HALE SCHOOL SCIENCE BUILDING

Hello Sheree,

Hale School is doing a new science block. I attached maps showing the context.

The Memorial Hall is on its way through to registration and the City of Stirling a not sure whether or not an HIS is required. Given the remoteness of the Science Block, I would have thought an HIS was unnecessary.

I trust you would agree.

Regards,
Philip Griffiths LFRAIA RIBA M.ICOMOS
Architect ABWA Reg. No. 1071.

Griffiths Architects



Suite 1, 315 Rokeby Road, Subiaco, Western Australia, 6008

T: 08 9381 1666 philip.griffiths@griffithsarchitects.com.au

This email and any attachments may be confidential and also privileged. If you are not the intended recipient please notify the sender and delete all copies of this transmission immediately, along with any attachments. You should not copy it or use it for any purpose, nor disclose its contents to any other person.

This email and any attachments to it are also subject to copyright and any unauthorised reproduction, adaptation or transmission is prohibited.

There is no warranty that this email is error or virus free.

This notice should not be removed.

Disclaimer/Limits of Liability

This document, including attachments if any, is private and confidential. If you are not the intended recipient, please advise immediately by return email and delete the document without using or disclosing the contents in any way. The views expressed in this e-mail are those of the author and do not necessarily represent those of Total

Project Management (WA) Pty Ltd unless this is clearly indicated. Total Project Management (WA) Pty Ltd is not liable for any loss, damages, claims arising from the use of this transmission. The recipient shall ascertain its accuracy and suitability for their purposes. Although computer virus scanning software is used, the recipient shall be responsible for their own virus protection.

"The information transmitted is intended for the person or entity to which it is addressed and may contain confidential and/or privileged material.

Any review, retransmission, dissemination, copying or other use of, or taking any action in reliance upon, this information by persons or entities other than the intended recipient is prohibited.

If you have received this in error, please contact the sender and delete the material from your system.

The City of Stirling is not responsible for any changes made to the material other than those made by the City of Stirling or for the effect of the changes on the material's meaning."

HALE SCHOOL







TREE VISIBLE FROM MEM HALL



VIEW TO NEW SCIENCE LOCATION FROM MEM HALL BALCONY



Bushfire Technical Note

Our Reference:	190745		
Client Details:	Contact: Jelena Glusac	Business: TPM	
Bushfire Consultant:	Kathy Nastov (BPAD Level 3 No. 27794)		
Appraisal Method:	Desktop / Remote	Date:	9 February 2024

PROPOSED DEVELOPMENT/USE

Description:	Determination of bushfire compliance requirements for Hale School upgrades		
Site Location:	Hale School – Science Upgrades	Lot Size: 24.9135ha	
Is a planning application, that addresses the conditions established by State Planning Policy 3.7, required in addition to a building application?			No

ASSESSMENT SUMMARY STATEMENTS

Bushfire Prone Vegetation: Greater than 100m from the development site.

Bushfire Attack Levels: Not applicable – the development site is not within a bushfire prone area.

ADVICE / RECOMMENDATIONS

Building

The requirement to undertake a BAL assessment is referenced under the NCC. The NCC requires Class 1,2, 3 or associated 10a buildings that are located within a designated bushfire prone area to meet the requirements of the Australian Standard AS 3959. The development site for the proposed Hale Science building does not fall within a bushfire prone area, therefore no assessment for a BAL is required in accordance with AS3959.

Planning

State Planning Policy 3.7 (SPP 3.7) applies to all development with a designated bushfire prone area. The Guidelines for Planning in Bushfire Prone Area v1.4 state that the Guidelines apply to development applications in designated bushfire prone areas and that for development applications where only part of the lot is designated as bushfire prone and the proposed development footprint is wholly outside of the designated area, the development application will not need to address SPP 3.7 or the Guidelines.

Recommendations/Requirements

The proposed development for Hale Science is not within a bushfire prone area and therefore the requirements to comply with AS3959 or SPP 3.7 and the associated Guidelines do not apply. Refer to snip from the Map of Bushfire Prone Areas below.



Design Review Report – Item 1

Local government:	City of Stirling	
Item no.:	Item 1 – PDA24/0010 – Hale School, 160 Hale Road, Wembley Downs Pre Development Application – Science Building	
Acting Chairperson:	Philip Gresley	
Panel members:	Stephen Carrick Tony Blackwell Simon Venturi	
Local government officers:	Dean Williams Shaun Wheatland Simone Palmer	Coordinator Planning Senior Strategic Planning Officer DRP Support Officer
Observers	Peter Prendergast	Service Lead Planning
Date:	14 March 2024	Time: 2pm
Venue:	City of Stirling – Challenger Room	

Proponent/s

Abbey Goodall	Planning Solutions (<i>Applicant</i>)
Tayne Evershed	Planning Solutions
Sean McGivern	Kerry Hill Architects
Kathryn Chang	Kerry Hill Architects
Edward Neville	Total Project Management
Jelena Glusac	Total Project Management
Tom Griffiths	Aspect Studios
Dave McLean	Hale School (Head of Operations & Business)
Owners	The Governors of Hale School

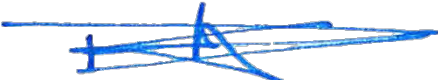
Observer/s

Briefings

Development assessment overview	Shaun Wheatland	Senior Strategic Planning Officer
Technical issues	Shaun Wheatland	Senior Strategic Planning Officer

Design Review

Proposed development	Item 1 – PDA24/0010 – Hale School, 160 Hale Road, Wembley Downs Pre Development Application – Science Building
Property address	Hale School, 160 Hale Road, Wembley Downs
Background	
Proposal	

Applicant or applicant's representative address to the design review panel	Sean McGivern Tom Griffiths Abbey Goodall	Kerry Hill Architects Aspect Studios Planning Solutions
Key issues / recommendations	This is the first review of the proposal and the applicant is thanked for engaging early with the Panel. The Panel was pleased with Hale School's commitment to conducting a design competition, the benefits of which are clear in the presented scheme. Comment was made by the Panel that building is functional, elegant, contains clean lines and is a generally good quality design outcome. However, the Panel expressed concern around missing information in relation to the exploration and integration of context and character and seeks additional information. The Panel believes the landscape plan should be more developed generally and should include levels, show the interaction with the levels and interface around the edges of the development, and provide additional clarity generally. Landscape considerations should include justifying removal of existing trees and the strategy for their replacement on campus. The panel encourages the School to be aspirational with relation to sustainability and to make strong commitments to a project that will be a facility that develops our future leaders. There were other minor but important comments made about the design. The Panel looks forward to seeing how the design develops. Refer to attached Design Quality Evaluation Report.	
Chairperson signature		

Design quality evaluation Item 1 – PDA24/0010 – Hale School, 160 Hale Road, Wembley Downs – Pre Development Application – Science Building DRP Meeting – Thursday 14 March 2024		
	S	<i>Design Principle satisfied</i>
	P	<i>Design Principle pending further attention</i>
	N	<i>Design Principle not satisfied</i>
Principle 1 Context and character		<i>Good design responds to and enhances the distinctive characteristics of a local area, contributing to a sense of place.</i>
	P	1a. The Panel was pleased with Hale School's commitment to conducting a design competition, the benefits of which are clear in the presented scheme. 1b. The Panel commented that the building is elegant, contains clean lines, and is generally a high-quality design outcome 1c. The Panel expressed concern around missing information in relation to the exploration and integration of context and character. The Panel would like to see more analysis and information including; • additional information about the architectural qualities of the existing campus vernacular and how the project is responding to the existing character. • floor plans and entrances of adjoining buildings and the campus around it. • extended section drawings to the east, west and south. • additional information about adjacent heritage buildings and their impact on the proposal. • how Hale School blue might be used, as a highlight only, and in good balance with the overall intent of the design. • how the project celebrates science, and its key use as a STEM centre. 1d. The Panel mentioned it would be beneficial to see Hale Schools beliefs about Noongar culture and the elements relating to the six seasons further demonstrated.
Principle 2 Landscape quality		<i>Good design recognises that together landscape and buildings operate as an integrated and sustainable system, within a broader ecological context.</i>
	P	2a. The Panel believes the landscape plan should be more developed generally and should include levels and provide additional clarity generally. 2b. Justification should be provided to the Panel around the reason why the existing trees can't be retained and what measures are being taken to preserve the trees that are to remain. 2c. The Panel would like an explanation around the impacts of removing existing trees and understand what strategy is being implemented to replace this tree canopy loss, on campus. 2d. It was noted by the Panel the building interface with the landscape are difficult to decipher and requested clarification. 2e. It was recommended photographic imagery of the view through the grove of trees would be beneficial to provide a real image of what this will be like. 2f. Comment was made by the Panel planting of robust and native plants is a good outcome. 2g. It was mentioned by the Panel there could be an opportunity to look at strategies to soften the interface of the large retaining wall on the eastern side.
Principle 3 Built form and scale		<i>Good design ensures that the massing and height of development is appropriate to its setting and successfully negotiates between existing built form and the intended future character of the local area.</i>
	S	3a. This design principle was supported by the Panel. 3b. The formal insertion into the existing campus is a well-considered response which

		is a seen as an excellent outcome.
Principle 4 Functionality and build quality		<i>Good design meets the needs of users efficiently and effectively, balancing functional requirements to perform well and deliver optimum benefit over the full life-cycle.</i>
	P	4a. The Panel expressed concern around the toilets on the ground floor and questioned if these are sufficient for the number of students. 4b. Comment was made by the Panel it would be beneficial to be provided with an accessibility plan and it should be demonstrated how this is being met. 4c. The Panel commented the internal planning is generally well arranged. 4d. It was mentioned by the Panel (and confirmed by the proponent) that Austral Chillingham bricks, which are appealing visually, can be difficult to lay without damaging the soft faces.
Principle 5 Sustainability		<i>Good design optimises the sustainability of the built environment, delivering positive environmental, social and economic outcomes.</i>
	P	5a. The Panel commented that this project is a compelling opportunity for Hale School to be highly aspirational and demonstrate to our future leaders the importance of sustainability in our built environment. It is suggested that the school make a strong and clear commitment to sustainability in the design and delivery (and operations) of this facility. The Panel strongly encouraged the Applicant push to achieve a 5-star green star accreditation. 5b. There is opportunity to introduce biophilic design opportunities to openly demonstrate sustainable scientific, technological, and engineering (STEM) principles that might be otherwise embedded or hidden into the design. The panel believes there are also opportunities to integrate curriculum and the student use of the building into the sustainability outcomes. 5c. It was commented by the Panel that the proposed shading devices are supported and a good outcome.
Principle 6 Amenity		<i>Good design optimises internal and external amenity for occupants, visitors and neighbours providing environments that are comfortable, productive and healthy.</i>
	S	6a. Comment was made by the Panel the quality of the amenity provided for students and staff is of a high level. 6b. This design principle is supported by the Panel. 6c. The Panel commented the north facing pavilion is a pleasant space.
Principle 7 Legibility		<i>Good design results in buildings and places that are legible, with clear connections and easily identifiable elements to help people find their way around.</i>
	S	7a. This design principle is supported by the Panel. 7b. Comment was made by the Panel the legibility of the development is working well.
Principle 8 Safety		<i>Good design optimises safety and security, minimising the risk of personal harm and supporting safe behaviour and use.</i>
	S	8a. This design principle is supported by the Panel.
Principle 9 Community		<i>Good design responds to local community needs as well as the wider social context, providing environments that support a diverse range of people and facilitate social interaction.</i>
	P	9a. It was mentioned by the Panel the Applicant should be cautious with the quantity of the Hale School blue colour being included in the final design. 9b. It was noted by the Panel there should be “public” art included in the proposal which might celebrate Hale School and Science. It was recommended that the

		Architects be included by the school in any “public” art selection or procurement process to enable the highest quality outcome.
Principle 10 Aesthetics		<i>Good design is the product of a skilled, judicious design process that results in attractive and inviting buildings and places that engage the senses.</i>
	S	10a. The Panel is pleased with the quality of the project’s appearance and believes it will be a beautiful insertion into the campus. 10b. The Panel encouraged the design team to maintain focus on delivering a high quality outcome through detailed design including consideration of how banners, way finding devices, fire extinguishers, and building services will impact the final aesthetics of the building. It was suggested these should not reduce the clean and simple look of the design. 10c. The Panel looks forward to seeing how the sophistication of the ceilings develop moving forward.

S	<i>Design Principle satisfied</i>		
P	<i>Design Principle pending further attention</i>		
N	<i>Design Principle not satisfied</i>		
	DR1 14/3/243	DR2	DR3
Principle 1 - Context and character	P		
Principle 2 - Landscape quality	P		
Principle 3 - Built form and scale	S		
Principle 4 - Functionality and build quality	P		
Principle 5 - Sustainability	P		
Principle 6 - Amenity	S		
Principle 7 - Legibility	S		
Principle 8 - Safety	S		
Principle 9 - Community	P		
Principle 10 - Aesthetics	S		

DR1 – DRP Recommendations DRP Meeting – 14/3/2024	DR1 – Applicant Response DRP Meeting – 14/3/2024	DR2 - DRP Recommendations DRP Meeting –	DR2 – Applicant Response DRP Meeting –
1c. The Panel expressed concern around missing information in relation to the exploration and integration of context and character. The Panel would like to see more analysis and information including; • additional information about the architectural qualities of the existing campus vernacular and how the project is responding to the existing character. • floor plans and entrances of adjoining buildings and the campus around it. • extended section drawings to the east, west and south. • additional information about adjacent heritage buildings and their impact on the proposal. • how Hale School blue might be used, as a highlight only, and in good balance with the overall intent of the design. • how the project celebrates science, and its key use as a STEM centre. 1d. The Panel mentioned it would be beneficial to see Hale Schools beliefs about Noongar culture and the elements relating to the six seasons further demonstrated.			)
2a. The Panel believes the landscape plan should be more developed generally and should include levels and provide additional clarity generally. 2b. Justification should be provided to the Panel around the reason why			

the existing trees can't be retained and what measures are being taken to preserve the trees that are to remain. 2c. The Panel would like an explanation around the impacts of removing existing trees and understand what strategy is being implemented to replace this tree canopy loss, on campus. 2d. It was noted by the Panel the building interface with the landscape are difficult to decipher and requested clarification. 2e. It was recommended photographic imagery of the view through the grove of trees would be beneficial to provide a real image of what this will be like. 2g. It was mentioned by the Panel there could be an opportunity to look at strategies to soften the interface of the large retaining wall on the eastern side.			
4b. Comment was made by the Panel it would be beneficial to be provided with an accessibility plan and it should be demonstrated how this is being met.			
5a. The Panel commented that this project is a compelling opportunity for Hale School to be highly aspirational and demonstrate to our future leaders the importance of sustainability in our built environment. It is suggested that the school make a strong and clear commitment to sustainability in the design and delivery (and operations) of this facility. The Panel strongly encouraged the Applicant push to achieve a 5-star green star accreditation.			

5b.	There is opportunity to introduce biophilic design opportunities to openly demonstrate sustainable scientific, technological, and engineering (STEM) principles that might be otherwise embedded or hidden into the design. The panel believes there are also opportunities to integrate curriculum and the student use of the building into the sustainability outcomes.			
9a.	It was mentioned by the Panel the Applicant should be cautious with the quantity of the Hale School blue colour being included in the final design.			
9b.	It was noted by the Panel there should be “public” art included in the proposal which might celebrate Hale School and Science. It was recommended that the Architects be included by the school in any “public” art selection or procurement process to enable the highest quality outcome.			
10b.	The Panel encouraged the design team to maintain focus on delivering a high quality outcome through detailed design including consideration of how banners, way finding devices, fire extinguishers, and building services will impact the final aesthetics of the building. It was suggested these should not reduce the clean and simple look of the design.			

From: "Liza Mathews" <Liza.Mathews@dplh.wa.gov.au>
Sent: Mon, 8 Jul 2024 13:17:46 +0800
To: "Planning" <Planning@stirling.wa.gov.au>
Subject: DA24/0610 Development Application Referral - Hale School - 160 Hale Road
Wembley Downs

OFFICIAL

Dear Shaun

Thank you for your referral to the Heritage Council under the provisions of Section 73 of the *Heritage Act 2018*.

We have considered the proposal's impact on the identified cultural heritage significance of *Hale School* Memorial Hall and advise that it will have no impact and is supported.

We would appreciate a copy of your determination within 10 days after making a decision, as required under r.42(3) of the *Heritage Regulations 2019*.

Kind regards

Liza Mathews

Senior Heritage Officer | Heritage and Property Services

Department of Planning, Lands and Heritage

140 William Street, Perth WA 6000

wa.gov.au/dplh | 6551 9068

OFFICIAL

b.Comments received from Department of
Planning, Lands and Heritage, Strategy and
Engagement dated 18 June 2024.



Department of **Planning,
Lands and Heritage**

City of Stirling
25 Cedric Street
STIRLING WA 6021

Your ref: DA24/0610

Our ref: DP/11/02191

Enquiries: Peter Adams (6551 7979)

18 June 2024

Attention: Shaun Wheatland

Dear Shaun,

Re: Lot 50 (160) Hale Road, Wembley Downs

Further to your correspondence 13 June 2024, the following comments are provided. This proposal seeks approval for an addition of a new educational building at an existing school campus.

Land Requirements

The subject site abuts Hale Road, which is reserved an Other Regional Road (ORR) in the Metropolitan Region Scheme (MRS) and Category 2 per Plan Number 694/6. The site is not affected by the ORR reservation (see below MRS extract).

Access

No changes are proposed to existing access arrangements as the development will utilise the existing traffic and parking infrastructure, with no change to student numbers. This is in accordance with the Commission's Regional Roads (Vehicular Access) Policy D.C. 5.1, which seeks to minimise the number of new crossovers onto regional roads.

Recommendation

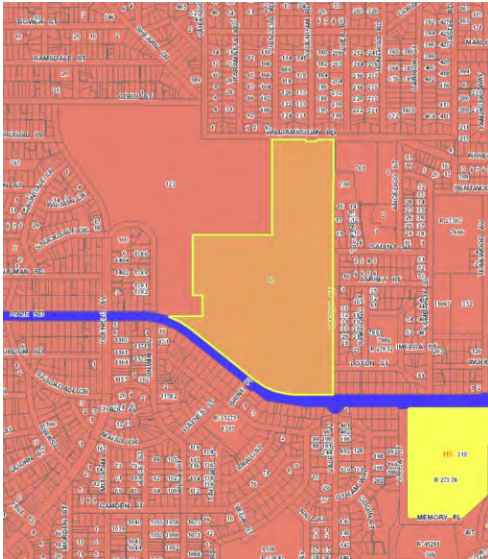
The Department of Planning, Lands and Heritage has no objection to the proposal on ORR planning grounds.

Thank you for your correspondence. Should you have any queries regarding this matter, please contact me on 6551 7979 or via email at peter.adams@dplh.wa.gov.au.

Regards,

Simon Luscombe
Principal Planning Officer
Strategy and Engagement

OFFICIAL



MRS

Attachment 9 – Applicants Response to Public Consultation

Public Submission	Applicant Response
Do not have a problem with the going ahead of building a three storey establishment building.	Support for the proposal is noted.
I have no objection but am concerned about the current parking arrangements. I am a resident of Stockdale Cres, and parking for pick ups after school park can extend down Stockdale Cres, affecting traffic flow. Can extra parking arrangements be made for parents on Hale School property for the increase in school student numbers.	'No objection' to the proposal is noted. This application does not propose any new vehicle access or alterations to the existing parking and access arrangements on the site.
This application will not allow the creation of any vehicle access, traffic entry or additional gates / access to Hale school from Lefroy street or any other neighbouring street? - If this application is accepted there is no subsequent opportunity following acceptance of this application whereby there could be an application for additional vehicle access and or parking without us being notified and given the chance to object to it. My son attends Hale School and whilst I support the development of the facilities, I do not support further traffic entrances at the school particularly given that we already encounter significant parking congestion, illegally parked vehicles, traffic and speeding cars from Holy Rosary, Woodlands Primary and Regis Aged Care. Can you please confirm NO VEHICLE OR PEDESTRIAN ACCESS to Hale School from Lefroy street is being sought under this or any other application associated with these works. I have misplaced the hard copy letter that was mailed to us, so can you please re-send to me the information regarding the meetings that will be held on this matter which we may choose to attend? Thank you.	Support for the proposed facilities is noted. We confirm that this application does not propose any new vehicle or pedestrian access points from the street. There will be no changes or alterations to the existing access or parking arrangements.



PART D – OTHER BUSINESS

1. State Administrative Tribunal Applications and Supreme Court Appeals

The DAP notes the status of the following State Administrative Tribunal Applications and Supreme Court Appeals:

Current SAT Applications				
File No. & SAT DR No.	LG Name	Property Location	Application Description	Date Lodged
DAP/22/02317 DR81/2023	City of Vincent	41-43 and 45 Angove Street, North Perth	Proposed Service Station	31/05/2023
DAP/23/02480 DR184/2023	City of Vincent	Lot 3 (37-43) Stuart Street, Perth	Proposed Unlisted Use (Community Purpose) & Alterations & Additions	12/12/2
DAP/22/02259 DR166/2023	City of Subiaco	No. 424-428 (Lot 2) & No. 440 (Lots 4, 5 & 6) Hay Street, Subiaco	Demolition Of Existing Commercial Buildings And Construction Of Single And Two Storey Commercial Building	11/01/2024

2. General Business

3. Meeting Closure

In accordance with Section 7.3 of the DAP Standing Orders 2024 a DAP member must not publicly comment on any action or determination of a DAP.