# **BROOKS HIGH SCHOOL**

THE REDEVELOPMENT OF BROOKS HIGH SCHOOL WITH THE INTEGRATION OF THE ROCHERLEA PRIMARY SCHOOL CAMPUS TO CREATE A SINGLE HIGH SCHOOL FACILITY

**SUBMISSION TO** 

# THE PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS



JULY 2014



DEPARTMENT OF EDUCATION ASSET PLANNING

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# I. INTRODUCTION

This report to the Parliamentary Standing Committee on Public Works supports the redevelopment of the existing Brooks High School with the integration of the former Rocherlea Primary School campus to create a single high school facility.

The school's core General Learning Areas (GLAs) are currently far below the minimum size deemed sufficient for an average class size of 25 students, resulting in cramped learning spaces. The GLAs used for the core teaching of literacy and numeracy are dislocated from the rest of the school, positioned at the bottom of the hill that slopes from north east to north west (see Figure 2).

The uneven topography of the site also raises significant issues relating to disability access (DDA). Currently, site access to the school is non-compliant in a number of areas and any significant capital investment will require accessibility to be raised to a standard compliant with the Australian Building Code. This has been a key factor in determining which of the potential redevelopment options offers the most holistic solution.

Redeveloping Brooks High School to a level sufficient for 21<sup>st</sup> century educational service delivery is considered a priority for the Department of Education (DoE) and \$7.3 million has been made available for the project as part of the 2013-14 budget process.

# 2. POLICY BACKGROUND

Building Better Schools is the Department of Education's strategic identification and analysis process that prioritises the highest areas of need for capital investments necessary to the support the Government's Student at the Centre policy.

Under the *Building Better Schools* Program, this project has been selected from a large list of projects and prioritised as a result of a process involving the department's Asset Strategy Steering Committee (ASSC), Learning Services and the department's Asset Planning officers (see Figure 1).

This project also supports the department's *Strategic Asset Management Plan* (SAMP) strategies to optimise the use of built resources to support the provision of educational programs and ensuring appropriate standards of accommodation support best practice in service delivery.

Approval has been provided by DoE's Asset Strategy Steering Committee through its prioritisation and approval process for all major infrastructure projects for all sectors of the department.



## Figure 1 – Project Initiation Process (PIP)

# 3. ABOUT BROOKS HIGH SCHOOL

Brooks High School is located in the northern suburbs of Launceston and has a 2014 enrolment of 512 students (FTE) in grades 7 to 10 supported by 85 staff (FTE).

The high school is supported by primary schools located in Mayfield, Mowbray and Invermay.

Rocherlea Primary students relocated to what is now known as the East Tamar Primary School (formerly Mayfield Primary School) at the commencement of the 2014 academic year, and Brooks High School now also occupies the ex-primary school site.

The relocation also provided for access to an existing grade block that has been developed for the Tasmanian eSchool northern campus.

## 3.1 Existing Facilities

Established in 1990, the original Brooks High School site has an enclosed area of approximately  $8,278m^2$  on a site of 14.4Ha.

Established in 2011, the ex-primary school site has an enclosed area of approximately  $1,856m^2$  on a site of 1.96Ha (exclusive of the high school site).

The combined area for the current Brooks High School site is 16.36Ha with a total combined enclosed area of 10,131m<sup>2</sup>.

The high school building facilities are mostly in original configuration and although well maintained, significant areas are no longer conducive to contemporary teaching practices or the current needs of the school.

Current facilities on both sites include:

- General Learning areas for each grade stream;
- General learning areas ex Primary school;
- Specialist Learning areas of Wood and Metal Technology, visual Art, Science and Home economics;
- Performing Arts Centre;
- MP Hall ex Primary school;
- A large Library and Administration area;
- A modern Gymnasium; and
- Quality outdoor sporting areas.

A new Science block was completed in 2010.

#### 3.2 The Site

The site is approximately 16 hectares in total area and was originally a green field with sparse natural bush and grassland. The existing schools have been developed across the site predominantly using existing contours.

Brooks High was developed on a decentralised campus model popular at that time, and whilst the design fundamentals of existing grade home blocks remain valid, the limited size and flexibility of spaces continues to limit contemporary teaching and learning. Site accessibility is non-compliant in a number of areas throughout the school and has been a high priority in the recent master planning.

The Rocherlea Primary School campus was designed to contemporary and compliant standards that will require minimal design intervention.



Figure 2 – School Site Map

#### **3.3.** Assessments / Reports

Predominant site issues identified by preliminary investigation are as follows:

- There is adequate electrical supply existing on site to service the development.
- There is no natural gas supply to the site, the closest point of supply being in Newnham.
- An existing photo voltaic cell installation on the roof of the Library will need to be relocated.
- There is no NBN or fibre optic connection to the site future access where cost effective will be provided as part of the works in the new entry.
- The main issue is that there is no tie-in of services between the main high school campus and the old primary school. Apart from a common main switchboard, the two complexes operate completely separately to each other. Tying them together to form a single entity will require replacement of security, access

control, CCTV, public address, telephone and fire detection systems as well as new infrastructure cabling between them.

#### 3.4 **Enrolment Demand**

Enrolments at Brooks High School have fluctuated from the low 500s, to the mid-600s over the past 15 years. As represented in Figure 3, enrolments at Brooks High School have declined marginally over the past few years as a result of the year 7 cohort declining in the years 2012 to 2014.

Australian Bureau of Statistics (ABS) indicates that an increase in the year 7 cohort in the Rocherlea area is likely in the coming years, with strong growth currently evident in the 0-4 age group. It is expected that an enrolment level of 500 will be maintained in the short term and will once again return to the mid-to-high 500s in the medium to long term.

Figure 3 – Brooks High School Enrolments 2010-2014 (First Term Census)							
Year level	2010	2011	2012	2013	2014		
07	135	147	132	118	104		
08	151	140	156	127	123		
09	170	150	145	153	122		
10	171	174	147	137	163		
11 to 12	14	11	-	-	-		
Total Persons	641	622	580	535	512		

#### School Curriculum and Philosophy 3.5

Brooks High School maintains a significant place in the history of Launceston. In 1948 it opened as the GV Brooks Community School and was built in park-like surrounds on the original Newnham site.

A feature of the grounds was a large blue gum tree which became a significant meeting place for students and staff and was the venue for outdoor assemblies.

In 1990 with the development of the University of Tasmanian adjacent to the grounds, Brooks High School was rebuilt on the current Rocherlea site.

Once again magnificent park-like grounds are a feature of the school with buildings spread out across the site.

Brooks continues the tradition of "community" with its strong connections with past students and families a highlight; and to the business and local communities through the ongoing focus on Positive Futures (previously known as the No Dole Programme).

The Brooks High School vision is "Inspired Learners Connected to Positive Futures". This provides the focus for all that is undertaken at Brooks High; an unrelenting focus on opening up a world of learning and life possibilities for every student so they can achieve the life to which they are entitled.

Brooks High School aims to create simply the best learning place characterized by:

- "Young people thriving in a calm, safe, equitable and peaceful environment;
- "National and international recognition for the work we do;
- "Rigorous, innovative and challenging learning programs;
- "Excellence in relationships; learning and behaviour;
- "The development of creative problem-solvers (students and staff); and
- "People who contribute to the local and global communities of which they are citizens'

Brooks High School's reason for being is learning; learning for the students of the 21st century. Every student needs to have a personal sense of direction; to be a lifelong learner who contributes to not only the local community in which they live, but to their global community. At Brooks there is a relentless focus on creating positive futures and worthwhile lives for students. The three key priority areas in the Strategic Plan are Quality Teaching and Learning, Positive Futures and 21st Century Fluencies.

A core set of values underpins the day to day operation of the school. These values were developed through a consultative process, involving, students, staff and community representatives.

#### At Brooks High School we value students who are:

Respectful, responsible, learners, focussed on a positive future for themselves, proud of their school, confident, aspirational, high achieving engaged, organised, creative, honest and who can build and maintain relationships.

#### At Brooks High School we value teachers who are:

Passionate, dedicated, experts, mentors, coaches, flexible, nurturing, adaptable, collaborative team-players, reflective, inquiring, excellent at building and maintaining relationships with students, staff and the community, IT aware and able to focus on excellence in teaching and learning.

#### At Brooks High School we value leaders who are:

Influential, inspiring, focussed, aspirational, aligned in mental models and practice, innovative, enthusiastic, clear about their moral purpose, trusting, courageous, able to build quality relationships as the basis for feedback and coaching of others, are clear about their knowledge of self, respected by others for their integrity."

The school culture that supports the Vision and Values is underpinned by three schoolwide expectations:-

- Learning
- Respect
- Responsibility

Brooks High School is full of fine young people, for whom there are high expectations and aspirations.

## Future Teaching

The following are the characteristics of teaching and learning that are important in the design and considerations of future teaching preferences for new grade blocks:

- Each block should be in effect, a small school for 150 students.
- Flexibility is the key flexibility in room size, layout and furniture are key factors in modern teaching and learning practices.
- Space for collaborative project groups, seminars, workshops and space for individual work all operating concurrently. Problem and project based learning is essential for the development of our students.
- Project space with wet areas for hands on / minds on learning.
- Presentation space, meeting and parent rooms and a large common plaza.
- Flexibility and adaptability for team teaching and/or teaching larger class groups with a common learning interest.
- Sufficient secure space for occupants' personal belongings.

# 4. **PROJECT OVERVIEW**

## 4.1 School Submission and Project Initiation

This project is a result of the *Building Better Schools* process and the 2010 grant submission put forward by Brooks High School.

The major issues identified with the current design of the school in the submission involved the design of the existing four grade blocks that are currently used predominantly for core teaching of literacy and numeracy. Each block is of similar design and, consequently, each has the same deficiencies in supporting contemporary learning.

In terms of size, each block contains five learning spaces at approximately 50 square metres in area; this is severely undersized when considering the optimum secondary school class size (~25 students) has a design baseline of 80 - 90 square metres of floor area. In terms of layout, the original design was based upon a very different model of learning reflected in smaller base areas and a larger group space and it is this configuration that places severe limitations on student outcomes.

A number of issues were identified for staff and students as a result of the cramped conditions. The issues noted included:

- Confined classrooms meaning that each student has little personal space;
- Lack of flexibility in teaching as there is not the room for small group project work or two guided reading groups for example. The lack of dedicated withdrawal spaces that can facilitate this aspect of learning compounds the problem;
- Poor acoustics in the small rooms that challenge teaching, behaviour management and consequently student engagement;
- Small rooms and lack of convenient support space challenging discreet dialogue with individual students struggling with learning pathways;
- Lack of space severely limiting ability to cater to the educational needs of a student with an impairment;
- Inadequate staff facilities by professional standards, with limited personal and resource storage space and critically, no space for collegiate professional development.

In summary, the main issues identified as affecting Brooks High School were: *cramped conditions* as a result of undersized classrooms and *disconnection* as a result of the buildings being spread over a large and sloping site.

The issues identified in the schools submission were deemed sufficient to award the Brooks Redevelopment proposal a high priority.

## 4.2 Project Working Group

Members of the Project Working Group include the following:

- Shireen Thomas, Principal, Brooks High School
- Leonie Johnston, School Business Manager
- James Price, School Assistant Principal
- Matt Donaldson, Teacher
- Tiffany Skeggs, Student representative
- Heath Clayton, Project Architect, Artas Architects
- Peter Heathcote, Project Officer, Department of Education

The Project Working Group has convened on a regular basis to assess aspects of the project brief that have been considered by internal stakeholders and other interest groups.

The process included a thorough master planning exercise to identify the best development strategy for the campus. Alternative master plans ranged from redevelopment of existing buildings in their current positions to a fundamental refocus of how the campus could operate into the future within a flexible and adaptive educational context.

The project has been supported by consultation with stakeholders at the Master Plan and Developed Design Plan stages and will continue to have the opportunity to do so throughout the tender and construction phases. So far, this has included:

- Initial drafts of plans shared through displays for all staff in conference room;
- Intensive consultation with the teaching staff of key areas impacted on by the building programme Art, MDT, GLAs etc.;
- Expression of Interest called for all staff at the school to join the Capital Works Committee;
- Fly through of the new build presented to staff, students and school association at whole school assembly and staff meetings; and
- Regular informing of parent community via newsletter articles.

## 4.3 Design Brief

The following principles were developed by the Project Working Group to guide the school design and capture the key principles, themes and ideas:

## A) Create a school and community heart

- Acknowledge and build on the existing 'centre of campus';
- Consolidate and create a school and community heart; and
- Create a central learning plaza (indoor and outdoor).

## **B)** Consolidate campus activities to reinforce the central hub

- Consolidate GLA's to reinforce the central hub;
- Improve connectivity between campus facilities working with typography to reduce time spent transitioning between facilities; and
- Consolidate the campus on to a common level.

## C) Open the campus up to the greater landscape

- Open up views to the surrounding landscape; and
- Create open spaces that connect to the greater landscape whilst framing a central student common open space.

## D) Create a clear identity and arrival sequence to the school

- Create clear 'way finding' signage / makers to the school administration;
- Rationalise path hierarchy; and
- Improve visual connectivity.

## E) Connecting with the history of the local community

The Brooks High School community has a historical association with light industry; many of the families through the entire history of Brooks High School have been employed in industries such as the Inveresk Railyards, Repco, MTM and James Nelson factories at Mowbray Heights and the ACL bearings factory at Rocherlea. Much of the land adjacent

to the current school site is used for light industry. This has influenced the focus for the exterior design. We sought a 'light industrial feel' with the use of surfaces and colours and an overall look that provided a connection with the longer term history of our community and to the geographic context of the current students' backgrounds.

# 5. **DESIGN RESPONSE**

## 5.1 Master Plan

The main focus of the Master Plan was to determine how the issues identified by the school in its submission could be best addressed, factoring in time, cost, practicality and the quality of results. Whilst refurbishing the four buildings in the southwest corner of the site would address many of the issues surrounding GLA size, the issues of lower level disconnection and access would remain. The preferred option involved demolishing these buildings and refurbishing the existing central site buildings and this option is the one being proposed in this submission.

The Master Plan creates a central social space on campus that is enclosed on three sides by existing buildings. This central landscape space is the point in which the landscape transitions between the top part of the site and the lower area.

The current library is transformed in to a Social Learning area, which acts as the school heart. In this area a student, teacher and community café is created.

Either side of this new central student learning area the redeveloped of two existing buildings occur; transforming into new learning spaces. All three buildings are transparent back into the highly landscaped central social area.

This central area forms the active heart of the campus and spills down to the lower areas, which are a mix of active and passive areas. A curved accessible path to the lower level connects the new learning plazas, the social areas and the old primary school.

By locating the new learning plaza on the upper tier the master plan proposes the demolition of the existing general learning areas on the lower tier. The lower tier has been designed to have a beautiful park like feel, with grove trees and areas for seating and study and plenty of open space for running and playing.

The consultant has determined that refurbishing the existing southwest buildings would be problematic and non-cost efficient, with the estimated cost of these works being similar to those involved in the preferred option outlined above.

#### 5.2 **Proposed Scope of Works**

The Master Plan will provide additional and flexible class facilities to contemporary standards and open up cramped and unsuitable learning areas. This includes:

- a) Minimise the distance between blocks;
- b) Provide a significant and strong connect between the two original campuses;
- c) Provide a student community zone incorporating the cafeteria, lounge and informal socialising areas;
- d) Integrate all services and systems across the wider campus (fire alarms, PA, IT, security);
- e) Investigate services supply infrastructure to and from the project area and upgrade to current compliance building services including fire, water, security, energy, electrical, mechanical, switchboards, fire panels and meters (refer Site Issues Report below);
- f) Meet current disability access standards across the wider campus; and
- g) Renew the existing learning areas including the provision of additional and flexible class facilities to improve learning outcomes and address the need for space and optimising utilisation of facilities at the school, including:
  - General Learning Areas (GLA's) with a floor area of 75 90 m2;
  - various shaped learning areas enabling a variety of configurations of loose furniture for a range of activities and group sizes;
  - interconnection between some general learning areas to enable multiple class groups to learn and participate in activities together;
  - withdrawal/breakout spaces for small group work;
  - provision of wet area/workshop spaces that can be utilised for practical activities associated with the general learning areas, particularly for Year 7 and 8, but which can moderate demand on the specialised learning areas such as science and ICT rooms, and in some cases home economics facilities within the school:
  - incorporation of ICT within all spaces, due to increased size of general learning areas and improved provision of ICT infrastructure (wired and wireless data and communications), which can reduce demand for individual ICT rooms within the school:
  - provision of current ICT technology for teaching and learning within these spaces, such as data projectors, Smart Boards, laptops, hand-held devices, etc;
  - provision of electronic message boards throughout all areas;
  - improved shared staff accommodation to enable staff work, planning, meetings and accommodation of resources; and
  - appropriate storage for teaching and learning resources, materials and • equipment.

The scope of works on a building-by-building basis is highlighted in the attached drawings (see Appendix I) and is outlined in the table below;

## **BUILDING I- EXISTING ADMINISTRATION BUILDING.**

PROPOSAL - ADMINISTRATION AND SOCIAL HUB BUILDING.

- External building fabric preserved with the majority of internal fabric maintained.
- Minor internal wall changes to allow for a refurbished reception/waiting area and proposed staff room.
- Internal refurbishment to existing spaces to accommodate a student lounge, conference room, principal's office, and compliant disabled WC.

#### **BUILDING 2 - EXISTING LIBRARY**

PROPOSAL - SOCIAL HUB

- External building fabric is preserved with the addition of new openings for functional access and connection to outdoors social space.
- Majority of the internal walls have been demolished to accommodate a proposed café, resources store, student lounge, cafe breakout and informal learning area and new amenities.

#### **BUILDING 4 – EXISTING HOME ECONOMICS**

PROPOSAL – LEARNING PLAZA

- Major section of the external and internal building fabric is preserved to maintain existing home economics kitchens and passageway.
- Proposed building works for learning plaza accommodates: social and informal learning area, GLA x 5, project room, outdoor learning area, senior staff room, staff room (8 workstations), resource room, store room, student amenities, and home economics staff room (2 workstations).

## **BUILDING 5 – EXISTING ARTS BUILDING**

ARTS BUILDING RELOCATED TO BUILDING 11, MDT PROPOSAL – LEARNING PLAZA

- The existing building is of an inadequate size and design for the proposed learning plaza. The fabric of the building does not make adaptation practically or economically feasible and therefore, part demolition of the existing structure is proposed.
- Existing foundations and slab is preserved.
- Proposed building works for learning plaza accommodates: social and informal learning area, GLA x 5, project room, outdoor learning area, senior staff room, staff room (8 workstations), resource room, and student amenities.

## BUILDING 6-10 - EXISTING GLAs

PROPOSAL – DEMOLITION

- The existing buildings 6-10 accommodating the school's GLAs are proposed for demolition. The buildings are located at the base of the hill that slopes from northeast to southwest, meaning that blocks 6-10 are disconnected from the rest of the site.
- The estimated costs of refurbishing these buildings to an adequate standard are similar to the costs involved in demolishing these buildings and refurbishing the existing buildings at the central site to provide for new GLAs.
- Given the preference for re-connecting the school and avoiding the disability

access issues that would arise from refurbishing the existing buildings 6-10, demolition of these buildings is proposed.

## **BUILDING II – EXISTING MDT BUILDING**

PROPOSAL - MDT AND ARTS BUILDING

- External building fabric preserved.
- Majority of internal fabric preserved.
- Minor internal wall changes to allow for a refurbished staff room.
- Internal refurbishment to existing spaces to accommodate: existing foyer, arts studio, GLA and existing store.

## **BUILDING 17 - EXISTING ROCHERLEA PRIMARY SCHOOL ADMIN**

PROPOSAL – ADMIN AND LEARNING SPACES

- External building fabric is preserved.
- Internal fabric preserved. •
- Minor internal refurbishment to existing spaces to accommodate an open office. •

#### BUILDING 19-EXISTING ROCHERLEA PRIMARY SCHOOL MULTI PURPOSE HALL

PROPOSAL – MULTI-PURPOSE HALL

- External building fabric is preserved.
- Internal fabric preserved.
- Minor internal refurbishment to existing spaces to accommodate: resource room, meeting room and reading nook.

## 5.3 Key Design Themes

#### A) **Design Intent/Theory**

#### Theoretically:

The Architectural aim is to move beyond buildings as isolated objects with an internal focus and to spaces that become part of the greater environment, an architectural field to allow opportunities for inclusive and collaborative interactions from indoor, inbetween and outdoor spaces and thus to enhance the connectivity between people, place and program.



Subject/field focused architecture

## Symbolically:

The Unification of the buildings across the immediate site into an inclusive whole is realised through a 'Symbiotic Ribbon', symbiosis deriving from the ancient Greek mean of "together" and "living", a mutualistic relationship of organisms. The symbiotic ribbon is contextually referenced from the school motif of the gum leaf and metaphorically transformed into geometric plains that flows across the architectural field (site and buildings) in an organic manner, creating a mutualistic relationship, each building living together as an integrated whole. The Symbiotic Ribbon de-formalises the rigidity and hierarchical nature of the individual buildings to create a sense of inclusivity and liveliness.



Functionally:

The Symbiotic Ribbon aims to provide amenity in the form of protection from the elements (rain, sun and wind), a locating landmark features to assist people to navigate the campus without overt signage, and to frame boundary and edges of in between spaces to create a sense of enclosure.



## B) Arrival Avenue

The entry experience has been adjusted to better direct people to Administration area. A new entry path cut through the old play area makes the entry more obvious and prevents students and visitors walking through the car park (which currently occurs) The new arrival path will be tree lined in association with new way finding and signage creates an new sense of entrance to the school.

## C) Learning Plazas

The Learning Plazas supports a range of teaching and learning models, including year gathering, student presentations, informal student work areas, wet areas, focus areas, quiet spaces for collaboration, one-on-one learning and specialist areas, etc. The learning area extends to the outside through doors and bi-folding windows thus allowing for individual or small group activity both inside and outside.

Each General Learning Area supports collaborative learning and team teaching opportunities. Learning can expand into a large breakout space or smaller focus areas.

The Learning Plaza is a visually rich environment which is able to connect to IT devices.

## D) Social Learning Hub

The social learning hub is a café, resource area and gathering space. It is a place for students, teachers, school visitors and the greater community. It is an area where life long learning is expressed in a social context.

## E) External Social Areas

Social play engages and teaches young students to interact, socialise, co-operate and develop meaningful relationships and experiences. The social hub space is a central landscaped area large enough to provide multiple year group gatherings as well as enable students to interact during break periods.

#### 5.4 Sustainability

The Master Plan commits to sustainable solutions in the most cost effective manner.

Built environments are critically linked to our enjoyment, health, comfort and life experiences. Contemporary architectural design requires the creation of environments that can provide natural ventilation, natural light, thermal advantages, comfort and spatial quality.

This approach to design ensures that the school will have sustainable design principles that will:-

- Take maximum advantage of passive design principles such as solar access, natural ventilation and existing landscaping;
- Reduce the impact on the site and local eco-systems;
- Use elements such as windows, massing and external shading to increase energy efficiency;
- Plan internal spaces into zones that require similar heating and cooling requirements;
- Select and use materials that have lower environmental impact and beneficial life cycle costing;
- Provide quality lighting, energy efficient appliances/equipment and energy management systems; and
- Ensure our buildings are appropriately insulated.

The key sustainability features included in the design are the following;

## A) Passive Design

Sustainable built form and passive design can contribute to reducing peak energy demands on active systems and maximising occupant comfort.

Passive design has been considered in this proposal in the following ways:-

• High performance building fabric to reduce the demand on mechanical systems;

- Landscaping to maximize solar penetration in winter;
- Effective thermal mass, glazing and insulation to stabilize internal temperatures; and.
- Suitable provision of natural lighting and operable windows for natural • ventilation.

#### B) **Energy Reduction**

The objectives of this project with regard to energy use are to reduce both greenhouse gas emissions and operational cost. This can be achieved by:-

- Efficient air conditioning units with a high coefficient of performance; •
- Timer switches and sub-metering; •
- Renewable energy on site, such as photovoltaic panels;
- Solar hot water system;
- High efficiency T5 lamps or LED lighting;
- Occupancy sensors to common spaces for lighting;
- Zoned lighting, which can significantly reduce energy use in a daytime occupied building with sufficient glazing; and
- A well-sealed building envelope, to reduce infiltration and the overall HVAC • loads.

#### Water Re-use C)

The development aims to reduce the total operating potable water use and the load on public infrastructure in the following ways:-

- Rainwater harvesting for toilets and landscaping;
- Efficient fixtures and fittings; •
- Low water-use landscaping; and
- HVAC plant that does not contain heat rejected water or uses rainwater.

#### D) **Material Procurement**

Locally sourced, sustainably grown materials which are low in embodied energy or have a high recycled content will contribute to lowering carbon emissions. They can include recycled, or Forestry Certified timber, recycled steel and concrete with fly ash.

There is also potential to re-use some of the materials sourced from the existing buildings on site.

#### Materials Re-use and Construction Waste E)

A commitment to maintaining an environmental focus throughout the design and construction phases of the building will be demonstrated through:-

- Engaging a builder with valid environmental management credentials such as ISO 14001 accreditation; and
- Diverting waste generated on site from landfill, where possible, through the use of a resource recovery company.

#### Indoor Environment - air quality F)

Consideration is given to occupants' well-being with the use of products, fittings and furniture which are low in Volatile Organic Compounds.

Natural ventilation strategies will also provide a comfortable working environment for students and staff and improve productivity.

## G) Infrastructure to support cycling and walking

Encouraging the use of non-motorised vehicles and public transport can be achieved through pedestrian and cyclist facilities such as secure bicycle storage and showers.

## H) Encouraging a sustainable workplace

Visual display of environmental initiatives can improve awareness amongst staff and students encourage sustainable behavior.

Initiatives can include:-

- Training and general awareness of the building operations and processes to minimise energy use;
- Recycling and waste management facilities;
- Composting facilities and worm farms to educate students; and
- Interactive building monitoring systems.

#### 5.5 Construction and Building Performance

The fabric of the building and all associated energy related systems are required to comply with Section J of the Building Code of Australia (BCA) and will be provided in accordance with the prescriptive requirements. The building will be constructed to meet all 'Deem to Satisfy' provisions of the BCA.

## A) Building Services and Structure

#### Power Supply

The existing power supply infrastructure will be reused including the substation and two site main switchboards. Alterations to electricity metering will achieve a single monitoring point for the combined sites.

All distribution boards to be provided with residual current device protection. This will be retrofitted to existing switchboards and will be integral with new switchboards.

#### Lighting

The majority of lighting will consist of T5 fluorescent, compact fluorescent or LED technology. The latter will only to be used where potential glare will not be an issue or where maintenance access is limited. Key lighting features in the design include:-

- Internal lighting to be controlled via local override off switches, motion detectors and the security system for overall master control;
- Feature luminaires to be incorporated for highlighting architectural and landscape elements;
- External lights to provide general and security lighting around the building controlled via photoelectric cell and motion sensors. This lighting will provide minimum light levels for CCTV security cameras;
- Car park lights controlled via photoelectric cell and the security system; and

• Emergency and exit lighting upgraded to the self-monitoring type where building works are being undertaken and there is no reuse potential in existing lighting that is approaching the end of its economic life.

## Fire Detection System

Each campus has incompatible Fire Indicator Panels (FIP) monitoring the protection provided by smoke and thermal detectors.

It is proposed that the Primary School building FIP be modified to a responder unit to allow the whole campus to be monitored at the main FIP in the Administration building only.

The system will be adapted to service new building stock and will feature the following to match existing:-

- A smoke detection system serving offices and general learning areas etc.;
- Heat detectors protecting rooms which might be subject to spurious alarms if smoke detectors are installed such as cleaner's rooms or toilet areas;
- The system will remain connected to Tasmanian Fire Service monitoring facilities;
- Interconnection of mechanical services equipment such as mechanical plant shutdown with the fire indicator panel for shut down or control during fire emergencies; and
- A building occupant warning system throughout the campus in the form of localised sounders and visual warning devices that will operate simultaneously.

## **B)** Mechanical Services

#### General

There are two types of building refurbishment within this project and the differences will influence the services that can be considered for each scenario.

# HIGH IMPACT REDEVELOPMENT (E.G. BUILDING 4 - HOME ECONOMICS OR BUILDING 5)

These buildings will undergo substantial redevelopment and can include such features as large communal volumes which may facilitate natural ventilation with passive heating and cooling.

Window shading, window types, building envelope etc. will be important factors in determining treatment.

#### LOW IMPACT REDEVELOPMENT (E.G. BUILDING I – ADMIN; BUILDING I I – MDT/ART)

These buildings will not undergo as substantial modification to building envelope. The scope for passive heating and cooling is reduced.

Ventilation

All occupied spaces should have the capability of achieving natural ventilation in accordance with the BCA / Australian Standards which demands openings equivalent to 5% of the space floor area.

Where this is not possible, additional ducted ventilation will be provided and it is recommended that these include air-to-air heat exchange.

In the large volume buildings, openable low level windows coupled with high openings can act to form a thermal chimney and assist in ventilating the spaces.

In process areas such as Kitchens and MDT workshops, equipment will be exhausted and filtered where necessary.

Toilet areas where not naturally ventilated will be mechanically ventilated.

#### Heating

There are a number of existing reverse-cycle air conditioning units in buildings to be demolished that are in good condition and will provide heating (and cooling) with an appropriate level of efficiency.

In high ceiling, large volume areas the option of hydronic floor heating is being examined. Using reverse cycle methods to heat reticulated water to heat the floor slab will provide efficient heating without necessarily heating the entire volume. Floor heating from low level will overcome heated air distribution problems.

Electric radiant ceiling heaters are used in more transient areas, for example, staff room, PE/Music office, canteen, etc. where heating is only required at specific times throughout the day or areas that are subject to doors being left open for access. These will be controlled by thermostat and a timer switch that will deactivate heating after a preset run time and/or when the site security system is armed.

Some rooms where there are no suitable reverse cycle heaters or where the spaces are more confined will be better suited to radiant ceiling heating panels.

## Cooling

Cooling will be limited to Conference and Meeting areas, areas with processes that create heat, or server and communications rooms.

Areas such as offices or classrooms where passive measures are not capable of maintaining reasonable temperatures can be provided with limited cooling to higher set points thereby minimising energy usage. Cooling should not necessarily be included in all classroom areas.

The large volume communal areas will benefit partially by natural thermal stratification but this can be enhanced by cooling makeup air. As the air will be rejected the amount of input must be minimised. Systems utilising indirect evaporative cooling are able to cool without refrigerated plant; not to the same levels but with far less energy usage.

#### Control

Control systems will be localised, relevant and simple to use. Controls will not be able to be set inadvertently in such a way that will lead to excessive energy consumption or unwarranted usage.

There will be a degree of automation but not to the exclusion of reasonable local input. Where required, the metering and reporting of energy, water and fuels throughout the site will be incorporated into a central control or communications component.

#### Security

The existing standalone security system will be maintained for intruder detection purposes and will also be utilized to turn off lighting and heating when system is armed. The main security panel is located in the Administration building. The system will also be interlinked to the Primary School building to create one central system for the entire campus.

Selected external doors will be provided with access control equipment to operate either an electric strike or magnetic lock. Doors fitted with electric locking mechanisms from a nominated emergency exit are to be connected to the fire indicator panel in a fail safe manner. Internal doors that are locked will be released via a push button. The existing access control in the Primary School building will be altered to match that in use in the main campus to create one central system for access privileges and programming purposes.

Existing closed circuit television (CCTV) monitoring of outdoor areas and spaces will be adapted and extended to suit the new layouts. The Primary School building will have its installation altered so that recording of cameras is undertaken centrally.

External monitoring will be continued.

## Communications / ICT

Communication systems will include a wireless system for laptops and hard-wired data system for staff and teacher usage. Systems will be installed to the requirements of the latest DoE ITS cabling standards.

Each building will have a consolidated communications rack that is tied to other racks on campus using fibre optic cable and will include linking in the Primary School building.

The existing telephone system will be maintained and extended to the new building construction.

#### Public Address

The Primary School buildings are serviced by a system of speakers connected to the FIP for fire alarm annunciation and a single microphone input at the Administration counter.

The High School has a separate system of speakers zoned on each building and externally. It has evacuation signalling, music playback and microphone input. The Primary School buildings are to be fitted with a new system of speakers that will be

connected to the central system to allow site-wide consistency, especially for evacuation calls.

#### Reuse Potential of Existing Equipment

The buildings proposed to be demolished have several items of equipment that may be considered for reuse including:-

- Smoke detectors, sounders and junction panels;
- Short throw projectors and smart boards;
- Security panels, arming stations and motion detectors;
- IT racks, wireless access points, telephone handsets;
- Air conditioning units; and
- CCTV cameras.

## C) Hydraulic Services

Water

The responsible authority for domestic water supply is TasWater.

Asset plans indicate a large diameter DN 100 domestic water ring main circulating within the site with individual buildings supplied by a 25D pipe. It is proposed to retain this service for the new redeveloped buildings.

All water connections and lines are to be installed in accordance with local council, water authority and AS 3500 Plumbing Code requirements.

#### Fire Protection Supply

The responsible authority for fire services water is TasWater.

Asset plans indicate a large diameter DN 100 water main running along the entire perimeter of the site along the service road with fire plugs at approximately 80m spacing. A pressure and flow test has been undertaken.

All water connections and lines are to be installed in accordance with local council, water authority and AS 3500 Plumbing Code requirements.

Sewer

The responsible authority for sewer drainage is TasWater.

There is an existing DN150 sewer main running along the southern side of the site running in a south eastern direction and it is intended to connect to this line for the redeveloped buildings

Further investigation is required to establish the capacity of the outgoing sewer line. It is envisaged that the sewer main from the development area will run with the natural slope of the land at its existing fall.

It is envisaged that no additional units will be added to the system hence the existing infrastructure can be retained.

All sewer works are to be carried out in accordance with local council standards and AS3500 Plumbing Code.

#### Stormwater

The responsible authority for stormwater drainage is the Launceston City Council.

Site analysis confirms the existence of an underground stormwater drainage system that runs to the south eastern boundary via a 450 diameter reinforced concrete pipe.

The development will add approximately 1124m<sup>2</sup> of impervious area to the site and add an additional 1947m2 of pervious area.

Advice recommends the following stormwater drainage network:

- Retain the existing DN150 stormwater lines that are currently serving buildings 6, 7, 8 and 9;
- Retain and redirect the existing DN150 stormwater lines that currently serve buildings 4 and 5; and
- Direct new overland flow paths and landscaped areas to new stormwater pits for discharge through the existing underground stormwater infrastructure.

For environmental containment of gross pollutant an inline ecosol gross pollutant trap will be located at the last pit in the stormwater line before it enters the existing DN 450 RC stormwater line.

All stormwater works are to be carried out in accordance with local council standards and AS3500 Plumbing Code.

#### Structural Design

Proposed is the construction of a hybrid structure consisting of concrete, steel and timber materials. Concrete will be used for footings and slab as it is cost effective material, durable and provides thermal mass to maximise heat gain.

The superstructure will be constructed from a main structural steelwork frame to achieve the architect's design intent, clear spans and speedy construction. Timber infill framing will be implemented for smaller framing component which is effective for builders to work with.

Element	Systems
Footings	Concrete Strip footings and pad footings
Columns	Steel and/or Reinforced Concrete
Walls	Precast concrete
Floors	Concrete slab on grade or suspended slabs
Roof	Steel framed or timber trusses
Retaining walls	Precast concrete retaining walls

The building will be constructed using the following structural systems:

#### D) Materials and Elements

The exterior design has been influenced by a "light industrial feel" requested by the school, with the use of surfaces and colours and an overall look that provides a connection with the longer term history of the school community and to the demographics of the current students' backgrounds.

Materials to be used include:-

- CL01 Designer panel system, Diversaclad interlocking panels, expressed joint 10mm, horizontal, finish Colorbond wallaby.
- CL02 designer panel system, Diversaclad interlocking panels, expressed joint 10mm, horizontal, finish Colorbond wallaby.
- CL03 Designer panel system, standing steam, finish Colorbond monument. •
- CL04 Vitrabond, composite aluminium panel, finish various.
- CL05 Architectural wood, concept click, pacific teak, Cutek cd50 finish.
- CL06 Ecodeck decking 137x23x5400mm, finish dark brown.
- CL07 island block and paving, block work 190x390x190mm, stack bond, core filled, painted finish black.
- CL08 existing blockwork, painted finish (sprayed) windspray.

#### E) Landscape Design

The design approach at Brooks High School was to provide continuity to the landscape in terms of connectivity of spaces and aesthetic treatment. One of the aims was to break down some of the symmetry and formality set up from past planning to give the school a softer more organic feel, one more conducive to relaxing with the potential to take learning outdoors.

The path network has been designed to allow comfortable, direct routes to the various parts of the campus providing areas for active and passive activity along the way.

Through patterns in the pavement, the entry experience and promenade picks up on the sculptural ribbon design. The entry path has also been adjusted to better direct people



to the entrance, which combined with a signage/way finding strategy will help to improve navigation throughout the school.

Supporting the indoor/outdoor nature of the architecture there are outdoor decks, courtyards and teaching spaces throughout. The central area becomes the active heart of the campus spilling down to the lower areas, which are a mix of active and passive areas. A curved ramp allowing a 1:20 gradient to the lower level will enclose a series of grass terraces retained with seating walls as well as the addition of trees for shade.

The lower level has been designed to have a beautiful park like feel, with groves of trees and areas for seating/studying and plenty of open space for running and playing. A potential play area wraps around some of these spaces with a mix of climbing structures and pieces of equipment designed for older children to provide a challenging play experience, as well as swings for informal chatting.

Colour will be incorporated into the landscape through the use of feature trees with showy autumn tones and blossoms, under planted with hardy groundcovers and shrubs to create a lushness while minimising water usage and maintenance. The choice of more exotic planting serves as a point of difference to a surrounding native landscape.

## F) Arts for Public Buildings Scheme – Artwork Proposal

An important initiative of the Arts @ Work program is the development of regional artists. Accordingly, this project will offer potential for local artists to participate and develop their skills base as a worthy contribution to the Tasmanian Collection.

This project will provide an opportunity for the art component to be appreciated by the wider community as they visit and use the school campus.

# 6. FUNDING & PROJECT MANAGEMENT

## 6.1 Project Budget

This project was initially announced at a funding level of \$9.3 million.

Subsequent to that announcement, the existing buildings of the Rocherlea Primary School became vacant and were added to the project footprint which led to a reassessment of the original redevelopment for Brooks High School. This resulted in a reduction of the original cost estimate budget by \$2 million.

As a result, \$2,000,000 of the existing budget was allocated to the refurbishing of the former Rocherlea Primary School for the accommodation of Brooks High School students.

The current budget stands at \$7.3 million.

Proposed Funding Sources		
Source of Funds	Amount (\$'000)	
Capital Investment Program	7,300	
Total Source of Funds	7,300	

## 6.2 Project Costs

Cost Estimates			
Description	Amount (\$'000)		
Demolition of existing buildings, infrastructure	162		
Building Works	3,530		
Site and Civil works	200		
Services and Systems (mechanical, electrical, fire, ITC etc.)	١,298		
Landscaping (provisional sum)	400		
Contingencies	410		
Project Design / Management	450		
Furniture and Equipment	500		
Authority Permits Fees and Charges	45		
Artworks (Art in Public Buildings Scheme)	80		
Post occupancy commissioning works	225		
Total	7,300		

## 6.3 **Project Timelines**

The current timetable for this project comprises the following key milestones and timeframes:

Milestone	Date	
Consultant appointed	November 2013	
Preliminary Site Master Planning	December 2013	
Full Site Master Planning	December 2013	
Schematic Design	January 2104	
Design and Documentation	February 2104 - ongoing	
Submission for Development Approval	February 2014	
Submission to the PSCPW	August 2014	
Tender Advertising (Anticipated)	September 2014	
Tender Closing (Anticipated)	October 2014	
Builder Appointed (Anticipated)	November 2014	
Construction commences (Anticipated)	November 2014	
Practical Completion – staged (Anticipated)	November 2015	
Defects Liability Period ends (Anticipated)	November 2016	

The program will include sufficient time for staff to occupy and commission the facility.

This timeframe will also allow sufficient time to carry out detailed defects liability inspection and management before students attend the site.

It is envisaged that the project will be fully complete by the end of 2015.

## 6.4 Works Completed to Date

## A) Risk Management Plan

Any influences to the project timeline or budget evident at tender, will be managed within the current project allocation.

## **B)** Authority Permits

A Local Govt. Development Permit has been obtained and there no identified issues in relation to bushfire, heritage or archaeological aspects.

## C) Anticipated Project Benefits

The redevelopment is directed at achieving:-

- Provision of an extended curriculum and social support programs expected of a modern school;
- A flexible facility that will provide significant flexibility to accommodate future directions in teaching and learning;
- A learning environment that reflects the pedagogy of a 21st century learning place; knowledge building, collaboration, ICT, real-world problem solving;
- A high quality learning environment that aligns with the school's vision of ensuring every student is an inspired learner, connected to a positive future;

- A high quality learning environment that motivates young people to engage; and
- A learning place that provides for and supports community participation.

# 7. APPENDIX I – BROOKS HIGH SCHOOL CONCEPT PLANS/ELEVATIONS





Brooks High School: Submission to The Parliamentary Standing Committee on Public Works



BUILDING 1 EXISTING ADMINISTRATION BUILDING. PROPOSAL - ADMINISTRATION AND SOCIAL HUB BUILDING. • EXTERNAL BUILDING FABRIC PRESERVED WITH THE MAJORITY

EXTERNAL BUILDING FABRIC PRESERVED WITH THE MAIORTH OF INTERNAL WALL CHANGES TO ALLOW FOR A REPURSIBLE RECEPTION-WARDER TO ALLOW FOR A REPURSIBLE RECEPTION-WARDER AND PROPOSED STAFF ROOM. INTERNAL REFURBISHMENT TO EXISTING SPACES TO ACCOMMODATE A STUDENT LOUNGE CONFERENCE ROOM, REINCIPE OFFICE, AND COMPLIANT DISABLE DWC.

#### BUILDING 11 LEGEND

R E V I S I O N IssueDate Description

EXISTING WALLS

NEW WALLS

PRELIMINARY

131089

A1401/P2

ARCHITEC

# BROOKS HIGH SCHOOL - BUILDING 1 - ADMIN

DEPARTMENT OF EDUCATION



#### SCOPE OF WORKS

BUILDING 2 EXISTING LIBRARY PROPOSAL - SOCIAL HUB • EXTERNAL BUILDING FABRIC IS PRESERVED WITH THE ADDITION OF NEW OPENINGS FOR FUNCTIONAL ACCESS AND CONNECTION TO OUTDOORS SOCIAL SPACE • MAJORITY OF THE INTERNAL WALLS HAVE BEEN DEMOLISHED TO ACCOMMODATE A PROPOSED CANTEEN, RESOURCES STORE STUDENT LOUNGE, CARE BREAKOUT AND INFORMAL LEARNING AREA AND NEW AMENITIES.

#### BUILDING 11 LEGEND

EXISTING WALLS

NEW WALLS

# BROOKS HIGH SCHOOL - BUILDING 2 - EX. LIBRARY

DEPARTMENT OF EDUCATION





#### SCOPE OF WORKS

- BUILDING 4 EASTING HOME ECONOMICS PROPOSAL: LEARNING PLAZA MARCH STRENKER STRENKLAND INTERNAL BUILDING FABRICIS PRESERVED TO AMAINTAIN EASTING HOME ECONOMICS ATTCHENS AND PASSAGEWAY PROPOSED BUILDING WORKS FOR LEARNING FAZA ACCOMMODATES: SOCILLAND INFORMAL LEARNING AREA. GLAY S, PROJECT ROOM, OUTDOOR LEARNING AREA, SENICO STOCK, STORE ROOM, STUDENT AMENITES, AND HOME ECONOMICS TAFE ROOM, OUTDOOR LEARNING AREA, SENICO STOCK, STORE ROOM, STUDENT AMENITES, AND HOME
- ECONOMICS STAFF ROOM (2 WORKSTATIONS).

#### **BUILDING 11 LEGEND**

#### EXISTING WALLS

NEW WALLS

# BROOKS HIGH SCHOOL - BUILDING 4 - EX.HOME EC

DEPARTMENT OF EDUCATION







## Brooks High School: Submission to The Parliamentary Standing Committee on Public Works

35



A1417/A2

ARCHITECTS

R I V I S I O N

APPROVAL

131089 9407 SEE A10



BROOKS HIGH SCHOOL - BUILDING 17 - EX. RPS ADMIN

DEPARTMENT OF EDUCATION

CONCEPT PLAN - BUILDING

# CONCEPT PLAN - BUILDING

# BROOKS HIGH SCHOOL - BUILDING 19 - EX. RPS MPH

BUILDING 19-CONCEPT PLAN

1

DEPARTMENT OF EDUCATION

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#### SCOPE OF WORKS

BUILDING 19 EXISTING ROCHERLEA PRIMARY SCHOOL MULTI PURPOSE HALL PROPOSA. - MILITI PURPOSE HALL - EXTERNAL BUILDING FARIC IS PRESERVED. - INTERNAL FARIC PRESERVED. - MINOR INTERNAL ERLURISHMENT TO EXISTING SPACES TO ACCOMMODATE RESOURCE ROOM, MEETING ROOM AND READING NOOK.

#### BUILDING 11 LEGEND

EXISTING WALLS

NEW WALLS

R.E.V.I.S.I.O.N. Recollector

APPROVAL

131089

A1419/A2

ARCHITECTS





BUILDING 4 - ELEVATION 2 ----

CELING H

VRL+89.55

BUILDING 4 - ELEVATION 4 SCALE 1.100 0mm 1000 2000 1000 4000 5000

DEPARTMENT OF EDUCATION

BROOKS



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0 0

HIGH SCHOOL - BUILDING 4 - EX.HOME EC

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CL01 - DESIGNER PANEL SYSTEM, DIVERSACLAD INTERLOCKING PANELS, EXPRESSED JOINT 10mm HORIZONTAL, FINISH COLORBOND WALLABY. CL02 - DESIGNER PANEL SYSTEM, DIVERSACLAD INTERLOCKING PANELS, EXPRESSED JOINT 10mm

HORIZONTAL, FINISH COLORBOND WALLABY CL03 - DESIGNER PANEL SYSTEM, STANDING STEAM, FINISH COLORBOND MONUMENT.

CL04 - VITRABOND, COMPOSITE ALUMINIUM PANEL FINISH VARIOUS.

CL05 - ARCHITECTURAL WOOD, CONCEPT CLICK, PACIFIC TEAK, CUTEK CD50 FINISH

CL06 - ECODECK DECKING 137x23x5400mm, FINISH DARK BROWN.

CL07 - ISLAND BLOCK AND PAVING, BLOCK WORK 190x390x190mm, STACK BOND, CORE FILLED, PAINTED FINISH BLACK.

CL08 - EXISTING BLOCKWORK, PAINTED FINISH (SPRAYED), Windspray



#### SCOPE OF WORKS

BUILDING 4 EXISTING HOME ECONOMICS PROPOSAL - LEARNING PLAZA • MAJOR PORTION OF EXTERNAL AND

MADOR PORTION OF EXTERNAL AND INTERNAL BUILDING FABRIC IS PRESERVED TO MAINTAIN EXISTING HOME ECONOMICS KITCHENS AND PASSAGEWAY
 PROPOSED BUILDING WORKS FOR

PROPOSED BUILDING WORKS FOR LEARNING PLAZA ACCOMMODATES: SOCIAL AND INFORMAL LEARNING AREA, GLA X, S. PROJECT ROOM. OUTDOOR LEARNING AREA, SENICR STAFF ROOM. STAFF ROOM (8 WORKSTATIONS), RESOURCE ROOM. STORE ROOM. STUDENT AMENTIES. AND HOME ECONOMICS STAFF ROOM (2 WORKSTATIONS).

#### BUILDING 11 LEGEND

#### \_ EXISTING WALLS

NEW WALLS

R E V I S I O N Intelligibility Description PRELIMINARY A2104/P2 ARCHITECTS 131089

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# CL01 - DESIGNER PANEL SYSTEM, DIVERSACLAD INTERLOCKING PANELS, EXPRESSED JOINT 10mm HORIZONTAL, FINISH COLORBOND WALLABY.

CL02 - DESIGNER PANEL SYSTEM, DIVERSACLAD INTERLOCKING PANELS, EXPRESSED JOINT 10mm HORIZONTAL, FINISH COLORBOND WALLABY. CL03 - DESIGNER PANEL SYSTEM, STANDING STEAM FINISH COLORBOND MONUMENT.

CL04 - IBOND OR VITRABOND, COMPOSITE ALUMINIUM PANEL, FINISH VARIOUS.

CL05 - ARCHITECTURAL WOOD, CONCEPT CLICK, PACIFIC TEAK, CUTEK CD50 FINISH

CL06 - ECODECK DECKING 137x23x5400mm, FINISH DARK BROWN.

CL07 - ISLAND BLOCK AND PAVING, BLOCK WORK 190x390x190mm, STACK BOND, CORE FILLED, PAINTED FINISH BLACK.

CL08 - EXISTING BLOCKWORK, PAINTED FINISH (SPRAYED), Windspray



#### SCOPE OF WORKS

BUILDING 5 EXISTING ARTS BUILDING ARTS BUILDING RELOCATED TO BUILDING 11, MTD. PROPOSAL - LEARNING PLAZA PROPOSAL - LEARNING PLAZA
 MAJORITY OF THE BUILDING IS DEMOLISHED TO ACCOMMODATE NEW LEARNING PLAZA.
 EXISTING FOUNDATIONS AND SLAB IS

- EXISTING FOUNDATIONS AND SLAD I PRESERVED
  PROPOSED BUILDING WORKS FOR LEARNING PLAZA ACCOMMODATES: SOCIAL AND INFORMAL LEARNING AREA, GLA X 5, PROJECT ROOM, OUTDOOR LEARNING AREA, SENIOR OUTDOOR LEARNING AREA, SENIOR STAFF ROOM, STAFF ROOM (8 WORKSTATIONS), RESOURCE ROOM, AND STUDENT AMENITIES.

- BUILDING CONCEPT PLAN



# 8. APPENDIX II – BROOKS HIGH SCHOOL PROPOSED PERSPECTIVES



PERSPECTIVE 01 - LANDSCAPE PEDESTRIAN PATH INTO SCHOOL, BUILDING 5 LEFT, BUILDING 1 RIGHT



PERSPECTIVE 02 - EASTERN PERSPECTIVE OF BUILDING 5 - LANDSCAPED FORECOURT



PERSPECTIVE 03 - SOUTH EASTERN PERSPECTIVE OF BUILDING 5, OUTDOOR LEARNING AREA/DECK WITH VIEWS OUT OVER LAUNCESTON CBD



PERSPECTIVE 04 - SOUTH WESTERN PERSPECTIVE OF BUILDING 5 LEARNING PLAZA - LANDSCAPED STAIRS LEADING TO BUILDING 5 ENTRY, SCHOOL CENTRALISED AREA AND BUILDING 2 SOICAL HUB.



PERSPECTIVE 05 - NORTH WESTERN PERSPECTIVE OF BUILDING 5 LEARNING PLAZA AND CENTRALISED LANDSCAPE AREA



PERSPECTIVE 06 - SOUTHERN PERSPECTIVE OF BUILDING 2 SOCIAL HUB



PERSPECTIVE 07 - NORTH EASTERN PERSPECTIVE OF BUILDING 4 LEARNING PLAZA



PERSPECTIVE 08 - SOUTH EASTERN PERSPECTIVE OF BUILDING 4 LEARNING PLAZA



PERSPECTIVE 09 - SOUTH WESTERN PERSPECTIVE OF BUILDING 4 LEARNING PLAZA DECK AREA OVER LOOKING TAMAR RIVER

BROOKS HIGH SCHOOL REDEVELOPMENT