

Final Business Case Evaluation Summary

Armidale Secondary School Consolidation



September 2020

About this report

The purpose of this document is to summarise the Final Business Case for the Armidale Secondary School Consolidation (the Project).

The Project has been developed to meet the immediate and future secondary educational needs of Armidale. These needs are based on future predicted population growth - more specifically, a significant increase in primary and secondary students, with one of the two government schools in Armidale, Duval High School, already near capacity.

In addition, current facilities at both schools are well into the later stages of their asset life, and not designed for the delivery of a future-focused pedagogy in line with NSW Government educational priorities.

The Project will redevelop the existing Armidale High School site, increasing the number of learning spaces with the ability to accommodate up to 1,580 students. In line with the NSW Government policy, and more specifically, the Department of Education (DoE) Education Planning principles, the Project will deliver high quality, future-focused and innovative solutions that will support improved learning outcomes for its students.

The Business Case for the Armidale Secondary School Consolidation was prepared by Schools Infrastructure NSW (SINSW) for the DoE and was approved by Government in November 2018. This Business Case Summary has been prepared by Infrastructure NSW, the Government's independent infrastructure advisory agency.

Strategic context

Armidale is expected to see an increase in student enrolment demand across the two government secondary schools in the area, Armidale High School and Duval High School, over the medium term to 2031. Without the investment in permanent new facilities, the Armidale area would otherwise need to accommodate this increase in enrolments through the use of demountable classrooms across the two existing sites.

With the exception of the “Den” gymnasium built at Armidale High School, neither school has received significant investment in the last 40 years. The school assets are well into the later stages of their asset life and current facilities are not equipped to deliver the future focused pedagogy to secondary school students within Armidale.

The project is aligned with NSW Government strategies, policies and objectives that aim to deliver improvements in high school education and include the following:

Premier’s Priorities and Objectives 2017

The Project aligns with the following NSW Premier’s Priorities:

- Priority 4: Improving education results – Increase the proportion of NSW students in the top two (National Assessment Program – Literacy and Numeracy) NAPLAN bands by eight per cent by 2019.

The State Infrastructure Strategy 2012 - 2031

The State Infrastructure Strategy provides the NSW Government with advice on the infrastructure needs of the state over the next 20 years. The strategy identifies factors behind the increase in the demand for schools across the state, including:

- The student aged population is forecasted to grow by nearly one percent per annum over the next 20 years;
- The introduction of smaller class sizes over the past 10 years; and
- The increase of the minimum school leaving age from 15 to 17.

The strategy outlines actions recommended for education facilities in order to cope with the increase in demand:

- Manage demand through catchment boundaries, which are reviewed to direct students to schools with capacity;
- Target provision of 90 percent of new school places on existing school sites;
- New classroom design for technology-driven learning;
- Increase shared community use of school assets, including repurposing appropriate assets; and
- Upgrade and build new educational facilities in accordance with projected demand.

The NSW Government Education Policy

The NSW Government education policies ensure that education obligations as defined in the NSW Education Act 1990, (the Act), are met.

Section 4 of the Act defines four principles which legislate certain education outcomes:

1. Every child has the right to receive an education;
2. The education of a child is primarily the responsibility of the child’s parents;

3. It is the duty of the State to ensure that every child receives an education of the highest quality; and
4. The principal responsibility of the State in the education of children is the provision of public education.

Department of Education Strategic Plan 2018 – 2022

The DoE has a Strategic Plan setting out the Department's blueprint for the next five years¹. The Strategic Plan outlines the Department's ambition to be Australia's best education system and one of the finest in the world, seeking to prepare young people to lead rewarding and productive lives.

The Project will be undertaken in a manner that is consistent with the Strategic Plan, and delivers on performance measures such as:

- Increased proportion of students reporting a sense of belonging, expectations for success and advocacy at school;
- Increased proportion of all students (and proportion of Aboriginal students) in the top two NAPLAN bands for reading and numeracy;
- Increased proportion of students with a High School Certificate (HSC), Year 12 Certificate or Australian Qualifications Framework (AQF) certificate II and above;
- Increased proportion of schools that self-assess as excelling on elements of the School Excellence Framework; and
- School facilities able to accommodate a variety of teaching and learning practices.

¹ <https://education.nsw.gov.au/about-us/strategies-and-reports/our-strategic-plan/strategic-plan>

Project need

Secondary school student numbers in Armidale are expected to increase by a third by 2031

Secondary school student enrolments within the Armidale area are expected to increase from 1,197 (presently) to 1,580 by 2031. These projections are based on the estimated growth in both population across the New England region's two major centres, Armidale and Tamworth. Population growth will initially drive an increase in primary school enrolments, which has a flow-on effect of increasing demand for secondary school education.

The existing schools do not cater for predicted future student enrolments or future-focused learning

Armidale High School was initially opened in 1921. Additional buildings were constructed over a number of decades, namely: 1939, early 1960s, 1970 and 1980. Subsequently, the 'Den' gymnasium was a joint initiative funded by the community and built on the Armidale High School site. Duval High School was opened in the 1970s and has not had any major construction updates since.

Both schools have therefore evolved significantly into their asset lifecycle, and along with an increased maintenance burden, they are not able to support DoE's future-focused learning objectives.

Project objectives and design

The key Project objective is to deliver a high quality, future-focused, innovative, state of the art solution

The overarching Project objective is to meet both the current and future school and community needs, by delivering a high quality, future-focused, innovative, state of the art solution. Furthermore, the Project must ensure that it complies with the DoE's design requirements². In order to achieve this, the following list of project objectives were developed:

- A redeveloped, high quality, flexible, innovative, future-focused school that meets the current and future needs of the school and its students;
- Retain, adapt and repurpose Building B at Armidale High School (a heritage listed item);
- Provide modern laboratories for science and design and technology;
- Deliver multipurpose movement and dance spaces;
- Maximise and develop relationships and links between people, disciplines and resources whilst inviting community participation and engagement;
- Provide for a specialist learning area and associated special program rooms;
- Develop hard and soft landscaping as well as new and upgraded sporting fields and courts;
- Achieve low maintenance outcomes;
- Be environmentally sustainable and provide a healthy environment for learning;
- Complete the redevelopment of Armidale High School to allow for the school commencement Day 1, Term 1, 2021; and
- Create opportunities for community engagement and integration by providing access for the community in the finished development.

The design response considered the Educational Planning Principles

The design is based on a set of educational principles developed specifically for the Project.

Educational Principles:

As part of the development of the Functional Design Brief for the Project, the architect considered the following design principles:

- Communicate through architecture – initiate culture of nurturing and continual learning;
- Navigate by architecture – a built environment which helps shape attitudes of respect and consideration;
- Learning and student wellbeing – a need for a variety of learning styles to appeal to multiple intelligences;
- Heritage connection – acknowledgement of social, indigenous, natural and physical heritages;
- Challenge and risk – well-designed learning environments to offer safe opportunities for experimentation and challenge;

² As detailed in the Educational Facilities Standards and Guidelines (EFSG).

- Environmental control and connection – principles of ecological sustainability in the design of a school for the future;
- School and community connection – environments outside of the classroom to provide opportunities for extended learning and to engage with the surrounding community;
- Natural connection (landscape) – outdoor learning environments to create opportunities for children to explore and interact with their peers and the world around them;
- Ease of adaption – addresses ability for multi-modal spaces to become efficient and personal environments;
- Instant connection (technology) – spatial organisation for educational buildings to remain relevant and cater for evolving pedagogy and technology;
- Layered groupings – deliberately non-prescriptive environments presenting students opportunities to personalise the learning space;
- Sharing spaces – discussion between students is central to building beneficial relationships between students; and
- Express your DNA (culture and identity) – learning extending beyond the traditional classroom by placing greater emphasis on alternative learning environments.

These design principles were integrated into the option development phase to ensure the Project met the educational planning principles and objectives.

Options identification and assessment

The business case considered two alternative Project options and compared them to a base case

The DoE identified two project options in addition to the base case, to facilitate the increase and improvement of secondary school services in the Armidale area:

- **Base Case** – No capital intervention to either secondary school. Any future growth in teaching spaces at either Armidale High School or Duval High School would be met through the installation of additional demountables at each school respectively.
- **Project Option 1** – Amalgamation of Armidale High School and Duval High School at the current Armidale High School site. This option is a major redevelopment project that will be constructed based on 9-stream Educational Facilities Standards and Guidelines (EFSG) requirements with a total of 79 classrooms, accommodating 1580 students.
- **Project Option 2** – Individual upgrade of both Armidale High School and Duval High School. The individual upgrade of both schools will aim to address capacity constraints and current operational issues in order to provide for the delivery of flexible, future focused learning experience for government secondary students in Armidale.

A staged methodology assessed the preferred Project option

In order to make an assessment of the identified project options, a process incorporated the following stages of assessment:

- **Identification of the problem area:** The first stage involved the identification of the collective of schools likely to undergo an increase in student numbers within the next 15 years. Projects developed by DoE confirmed that the New England region is expected to see residential and urban growth, particularly in both Armidale and Tamworth, hence resulting in an increase in both primary and secondary school-aged children.
- **DoE internal review and option development:** Internal consultation within DoE and SINSW, including the planning team, involved a review of the potential development options within the area. This review included an examination of both demand management and supply-side options.
- **Preferred option selection:** The final stage involved the selection of a preferred option through both an options development and options assessment process. A cost benefit analysis (CBA) was undertaken to assess the relative merits and net benefits of each project option. Ultimately, the preferred option is the one which provides the most beneficial solution in meeting future educational infrastructure requirements for education in the Armidale area.

Project Definition

Project Option 1 – Amalgamation of Armidale High School and Duval High School at the current Armidale High School site

Project Option 1 (Figure 1) involves the amalgamation of Armidale High School and Duval High School at the current Armidale High School site, through a major redevelopment project. The redeveloped Armidale High School would be constructed based on 9-stream core facility entitlements as outlined in the EFSG together with additional General Learning Spaces and site specific learning areas, providing a total of 79 teaching spaces and accommodating 1580 students.

This includes provision for a specialist learning area and associated special program rooms to be determined in association with occupancy schedule and policy requirements. Project Option 1 provides a 'tailored 9-stream' allocation (normal threshold of 1530 students) rather than providing for a full 12-stream school upgrade which provides for up to 2040 students. This is the key advantage of being a single amalgamated school. It also removes oversupply to individual school upgrades which would be necessitated (discussed further in Project Option 2). Consequently, Project Option 1 removes oversupply of facilities relative to the likely student population.

This option proposes to demolish all existing buildings with the exception of B Block (Heritage item) and O Block (the 'Den' gymnasium), which are to be retained for adaptive or remodelled reuse, and new buildings constructed. The master plan for this option also allows for potential future shared initiatives by way of a performing arts facility (PAF).

The construction of the PAF is not part of this business case. During the construction period Duval High School would accommodate both the Duval High School and Armidale High School students through installation of additional temporary demountable buildings and ancillary works. Once the construction works at the Armidale High School are complete, all combined Armidale and Duval students will be relocated to the redeveloped Armidale High School facility.

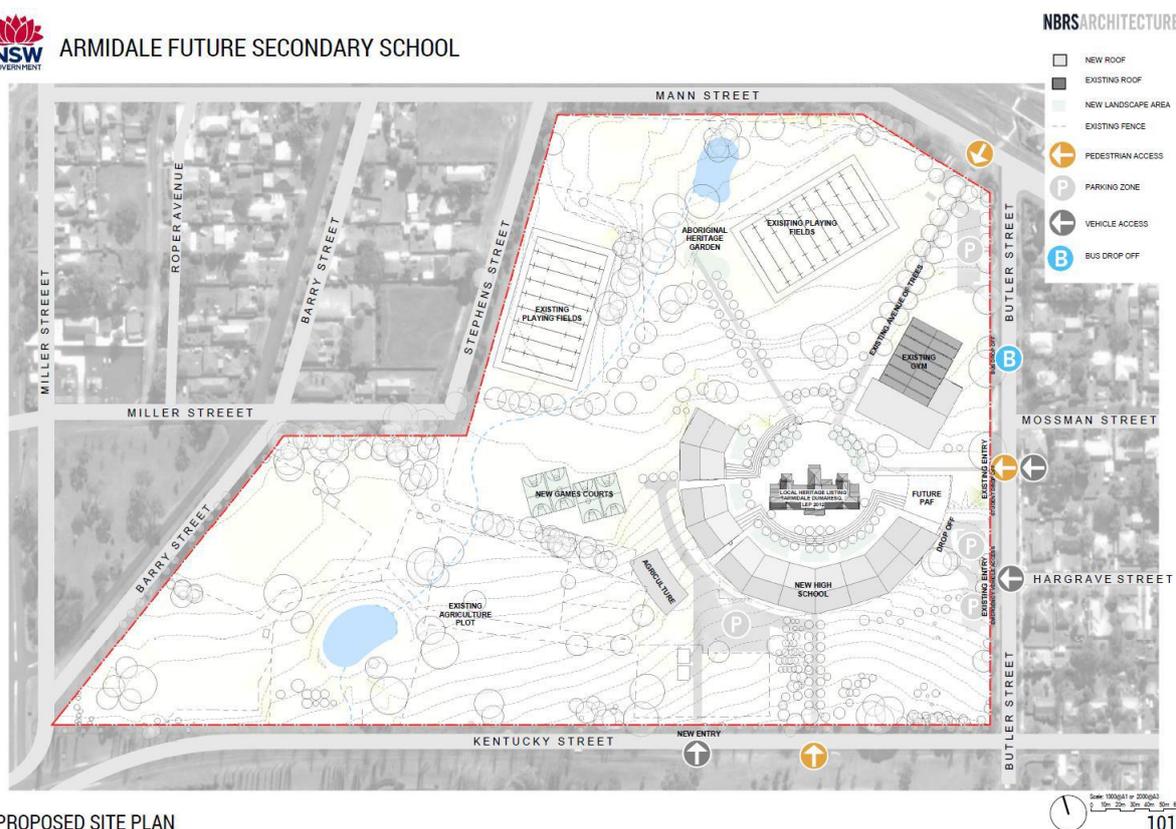


Figure 1 – Project Option 1

Project Option 2 – Individual upgrade of Armidale High School and Duval High School

Project Option 2 involves the individual upgrade (renovation and new development) of both the Armidale High School and Duval High School through two distinct projects. The individual upgrade of both schools would aim to address capacity constraints and current operational issues in order to provide for the delivery of flexible, future-focused learning experience for government secondary students in Armidale. In accordance with DoE’s EFSG, the core facilities for each school would need to be increased to provide the accommodation requirements as follows:

- Armidale High School increased from a 5-stream school to a 6-stream school (1020 student capacity); and
- Duval High School increased from a 4-stream to a 5-stream school (850 student capacity).

A consequence of the stream upgrades at both schools is an inherent oversupply of core facilities when considering both sites. The upper bound limit of a 5-stream and 6-stream school will in total cater for 1870 students, which exceeds the projected enrolments for 2031.

Given the age of both schools, this project option will involve significant upgrades to bring all existing buildings in line with current building codes, other codes and accessibility requirements. The refurbishment at both schools will aim to improve building and facility efficiencies in an effort to match the operational performance of more modern educational facilities across the state.

In particular, this option seeks to provide a flexible and future-focused learning experience for students in both schools through upgrades to the layouts of current teaching spaces and the addition of modern laboratories, technology and a specialist learning area. Extensions / new buildings would be built to provide additional accommodation needs.

Economic evaluation

A cost benefit analysis was undertaken as part of the Final Business Case. This economic evaluation included an analysis of the economic, social and environmental impacts of the Project.

Stakeholder benefits

The NSW Treasury Cost Benefit Analysis Framework for School Investment (the CBA Framework) outlines three broad categories of benefits for school infrastructure projects. They are grouped under the sections of: Private benefits, Government benefits and Social benefits and are listed below in Table 1.

Table 1: Overview of benefits to key stakeholders.

Stakeholder Benefit	Benefits
Private	Improved learning outcomes – future focused classrooms
	Improved learning outcomes – improved building maintenance
	Improved learning outcomes – improved spatial density
	Reduced transport time
	Avoided private school costs
	Improved learning outcomes – outdoor spaces benefit
Government	Energy efficiency
	Residual asset value
	Disposal of additional land or assets
	Improved teacher productivity
	Avoided facility costs (or benefits from leasing out facilities)
Social	Improved societal outcomes
	Health benefits from improved outdoor spaces

Capital and operating costs

The initial project capital cost incorporates the construction costs of the redevelopment or upgrade, in addition to the estimated principal and contingency cost components. The capital cost for the base case and alternative project options assumed that capital costs are incurred from the 2018 to 2022 financial years and that any incremental operating costs occur annually. Three investment options were considered and included:

- A base case/do minimum option
- Project Option 1 – Amalgamation of Armidale High School and Duval High School at the current Armidale High School site
- Project Option 2 – Individual upgrade of Armidale High School and Duval High School.

The ongoing costs incurred across the lifecycle of an educational facility are referred to as the operating costs of the facility. These costs are typically incurred annually and will be lower in magnitude for the project options, compared to the base case, due to the improved facilities and reduction in the number of demountable classrooms (which typically have a much higher operational cost). Utilities and electrical costs are less for Project Options 1 and 2 in comparison to the Base Case due to expected use of improved, energy efficient technology.

The outcomes of the analysis

The Business Case estimates that Project Option 1 attains a Net Present Value (NPV) of \$1.87 million and a Benefit Cost Ratio (BCR) of 1.02. Project Option 2 realised fewer benefits and therefore had a lower NPV at -\$68.4 million and a BCR of 0.44.

Preferred Option

In order to support future growth within the Armidale area and address current asset issues, the preferred project option is Project Option 1 - Amalgamation of Armidale High School and Duval High School at the Armidale High School site.

Project Option 1 was considered to be most advantageous as it enables future-focused learning through the construction of a 9-stream modern education facility – which is an optimal design approach to meeting future predicted student capacity vs. overspending of capital for a level of infrastructure not necessarily required.

The Project will use capital funds to plan, modify and amalgamate the two schools through upgrades to school assets and core facilities and will provide temporary accommodation during the transition period. This will enable the schools to meet project objectives and deliver future-focused learning with more flexible learning spaces and a focus on innovative uses of technology and space, along with catering for the predicted future student enrolment demand.

Deliverability

Procurement Strategy

The procurement strategy adopted for this project is a Design, Novate, Design and Construct (DNDC) contract. This type of contract has been chosen as the preferred delivery model as it will minimise both the timeframe and cost risks associated with the Project to DoE.

The DNDC model may attract a higher contract sum up front relative to other procurement approaches, but the reduced risk of design related variations and program efficiencies mean that this contract model is likely to create a better budget, time and quality outcome in the long term, and better cost certainty for DoE.

Implementation Strategy

SINSW will deliver the project for the DoE and utilise standard major capital works delivery program methodologies and procedures.

Risk Management Framework and Strategy

Delivery risks are managed by SINSW using a risk management framework which sets out general risk management, management accountabilities and approach to systematically manage risk. This approach is in line with current requirements under the NSW Treasury Guidelines.

The Infrastructure NSW view

Consistent with the NSW Government's Infrastructure Investor Assurance Framework, Infrastructure NSW routinely assesses business cases and provides advice to Government on the efficacy of their findings. A Review, conducted by a panel of independent reviewers, was undertaken for this Final Business Case.

It is clear that existing facilities were suffering from a lack of maintenance, not conducive to future focussed learning, not Disability Discrimination Act (DDA) compliant and in many respects, may not have been compliant with the Building Code of Australia (BCA).

The facility conditions and the need to provide high quality educational outcomes prompted the investment in the Project.

The Final Business Case demonstrated strategic merit, and the cost benefit (CBA) analysis identified a positive Benefit Cost Ratio (BCR) of 1.02 for the preferred Option 1 - Amalgamation of Armidale High School and Duval High School at the current Armidale High School site.