

INFRASTRUCTURE PIPELINE REPORT

DECEMBER 2017





Somerset Dam (Image courtesy of Seqwater)

Hardcopy
ISBN: 978-0-9946207-6-7

Online
ISBN: 978-0-9946207-7-4

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OUR MANDATE

Building Queensland was established as an independent statutory body on 3 December 2015 under the *Building Queensland Act 2015*.

Governed by an eight-member Board, the majority from the private sector, Building Queensland provides independent expert advice to Queensland Government agencies, government-owned corporations and nominated statutory authorities to enable better infrastructure decisions.

Building Queensland's core functions are to:

- » provide strategic advice on infrastructure matters
- » assist with the early stage development of proposals
- » assist with business case development for proposals with a capital value of \$50–\$100 million
- » lead the development of rigorous business cases, including cost benefit analyses, for proposals over \$100 million
- » develop and publish an infrastructure pipeline of priority proposals.

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FOREWORD

Excellent progress has been made over the past two years to improve the development of infrastructure proposals across the Queensland Government. Since its establishment in December 2015, Building Queensland has provided advice on the development of over 55 infrastructure proposals, helping to support the government’s infrastructure decision-making through robust and evidence-based analysis.

In providing advice, Building Queensland has consulted closely with Queensland Government departments, government-owned corporations and statutory authorities. Application of our Business Case Development Framework is enabling government

to better understand infrastructure needs and opportunities, and provide the best solutions. Our framework and processes are providing necessary tools for well-informed decision-making. Our collaborative approach in partnering with agencies across government is fostering a better understanding of current and foreseeable infrastructure requirements. Subsequently, the government is well placed to select the right proposals for further investigation and development.

The infrastructure priorities in this report address clear needs and opportunities across Queensland. We are abundantly aware of the importance of economic and broader social, environmental and community considerations in assessing infrastructure proposals. Our approach to business case development applies rigorous analysis to measure economic benefits and costs of proposed projects, as well as consideration of broader social and environmental impacts that may be difficult to monetise.

The pipeline provides transparency of key government proposals under development, helping industry stay informed about likely future project commitments. The real worth of the pipeline lies in its acceptance by Queensland Government, giving industry and the community confidence that government’s infrastructure decisions are supported by robust analysis and advice.

The Queensland Government has already committed to eight projects identified in previous Infrastructure Pipeline Reports, including new rail and signalling projects, new information communications technology to support Queensland’s healthcare services, upgrades to dams and ports, and improvements to major roads. With six detailed business cases complete in the current pipeline, the outlook is positive for further development of infrastructure priorities that add to the productive capacity of the economy and support Queensland’s quality of life.



Alan Millhouse
Chair, Building Queensland



Damian Gould
Chief Executive Officer,
Building Queensland



PART 1: THE PRIORITIES

THE INFRASTRUCTURE PIPELINE

The Infrastructure Pipeline Report is Building Queensland's independent assessment of unfunded infrastructure proposals under development by Queensland Government agencies, including departments, government-owned corporations and nominated statutory authorities.

SUPPORTING INFRASTRUCTURE DECISION-MAKING

The purpose of the Infrastructure Pipeline Report is to inform the Queensland Government's decisions regarding infrastructure.

Our Infrastructure Pipeline Report has evolved to provide greater clarity of the status of completed detailed business cases.

In this pipeline, completed detailed business cases are presented in three sub-categories. Two of these capture proposals that are ready for government consideration—by the Queensland Government and, where applicable, by the Australian Government. For completed detailed business cases where Australian Government funding will be sought, the Queensland Government has referred these proposals to Infrastructure Australia for assessment.

The remaining sub-category reflects proposals that have been referred to the Queensland Government for consideration of further actions outlined in the detailed business case. This category captures proposals where Building Queensland has recommended short-term options such as corridor preservation, as well as better

use of or improvements to existing infrastructure. The government's consideration of recommendations set out in these detailed business cases could mean the full infrastructure solution is not implemented until low cost options have been explored to meet the service need or demand and other triggers are satisfied.

Building Queensland considers a broad range of infrastructure proposals in identifying unfunded priorities for the pipeline. Where Building Queensland leads the development of detailed business cases identified in the pipeline, advice and recommendations are provided for consideration by government including:

- » potential funding and delivery
- » policy or further strategic analysis that should be conducted to maximise the effectiveness of an investment in terms of social, environmental and economic impacts

Proposals in the pipeline are:

- » unfunded—proposals with a partial or full funding commitment for procurement or delivery are excluded
- » estimated to have a minimum capital value of \$50 million
- » state government infrastructure proposals.





- » confirmation or further investigation of demand required from proposed infrastructure users to provide appropriate certainty to underpin the case for investment
- » timing of when the investment is needed in line with forecast demand
- » opportunity for funding contributions from other levels of government, including referral to Infrastructure Australia where Australian Government funding will be sought.

When the Queensland Government considers an infrastructure proposal, Queenslanders can be assured that the decision is supported by robust analysis and

advice to either fund a project for delivery, or explore other alternatives to address the identified service need.

INFRASTRUCTURE PIPELINES

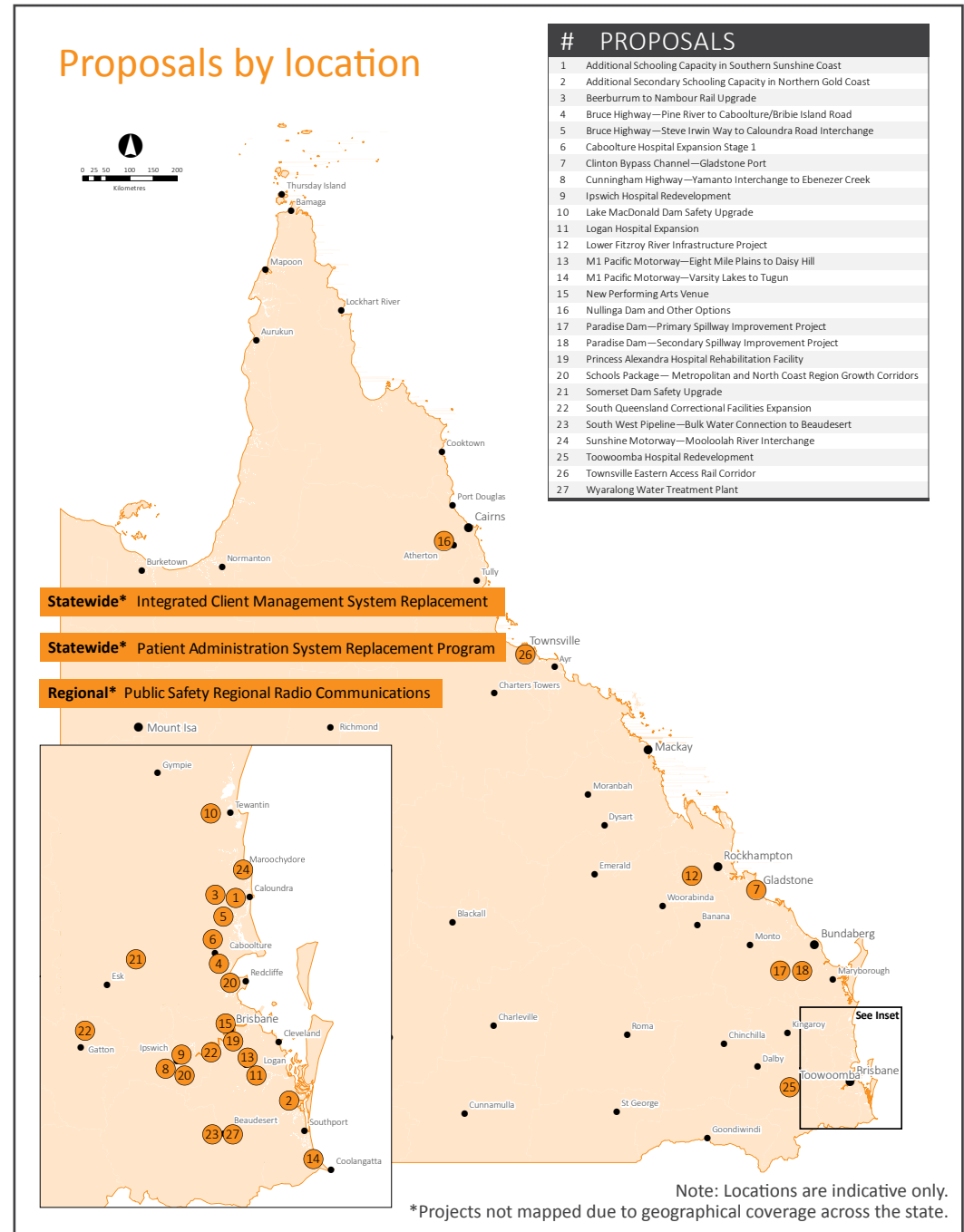
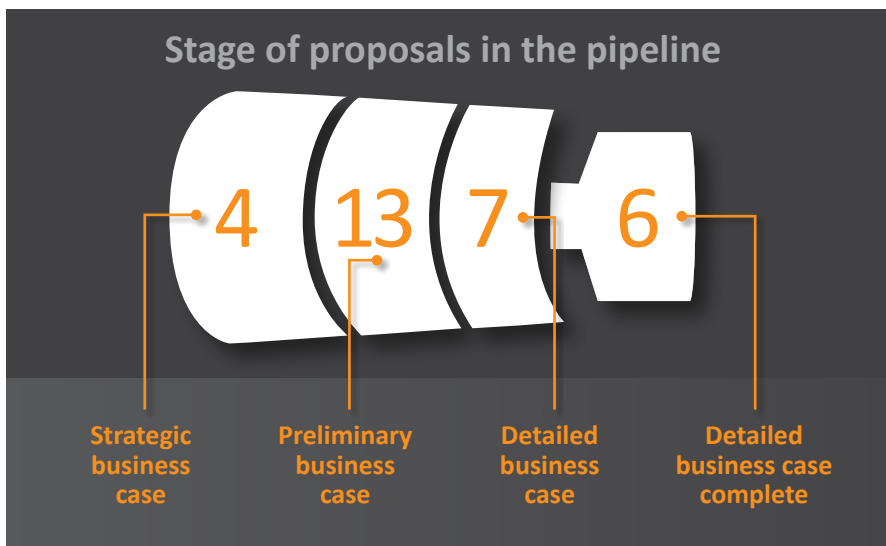
There are many pipelines across government and industry that provide a picture of infrastructure investment or major construction opportunities. Building Queensland's pipeline provides government with advice on the status of infrastructure priorities where there is no current funding commitment for procurement or delivery. Figure 1 highlights the key features of the various infrastructure pipelines.

The State Infrastructure Plan Part B now reflects the proposals recommended by Building Queensland—acknowledgement that Building Queensland's advice is being carefully considered. Our pipeline independently targets high-value unfunded priorities in the planning stages, comparing projects across different sectors. The State Infrastructure Plan provides a wider view of projects in the planning, investment and delivery phases—some of which are projects in regional Queensland that do not meet Building Queensland's legislative \$50 million threshold.

Figure 1. Overview of infrastructure pipelines

	Building Queensland: Infrastructure Pipeline Report	Queensland Government: State Infrastructure Plan Part B	Queensland Major Contractors Association, Construction Skills Queensland and the Infrastructure Association of Queensland: Major Projects Pipeline	Infrastructure Partnerships Australia: Australia & New Zealand Infrastructure Pipeline	Infrastructure Australia: Infrastructure Priority List	Government: National Infrastructure Construction Schedule
Overview	Provides government with advice to inform infrastructure decision-making	Provides industry and the community with confidence on the future direction of infrastructure provision statewide	Provides industry with guidance for strategic planning, policy positioning and opportunity identification	Provides investors and contractors with likely and confirmed infrastructure	Provides government with advice to inform investment decision-making	Australian Government pipeline providing a committed forward work program for investors and constructors
Coverage	State government proposals only	State government projects only	Public and private Queensland projects	All public Australian and New Zealand projects	Nationally significant projects Australia-wide; government and non-government	Public projects Australia-wide
Funding	Unfunded for procurement and delivery	Funded and unfunded	Funded and unfunded	Funded and unfunded	Unfunded; some funded but not yet under construction	Funded
Threshold	Estimated capital cost >\$50m	No minimum	Estimated capital cost >\$50m	Construction projects >\$300m Greenfield and brownfield investments >\$100m	Nationally significant, typically over \$100m	Estimated capital cost >\$50m for larger states and >\$20m for smaller states and territories
Frequency	Updated every 6 months	Updated annually	Updated every 6 months	Rolling	Rolling	Quarterly

SUMMARY OF PRIORITY PROPOSALS



DECEMBER 2017 PIPELINE OF PRIORITY PROPOSALS



*Infrastructure Australia provides assessment advice to the Australian Government on infrastructure projects where Australian Government funding will be sought.

WHAT'S CHANGED

In the six months from June 2017, over a third of the proposals have progressed and further proposals have entered the pipeline in the early stages of development. Thirty infrastructure proposals have been identified in this pipeline.

The pipeline is maturing with the spread of proposals becoming more balanced across the different stages of proposal development. Detailed business cases have been completed for five proposals in the past six months, raising the total number of proposals in this pipeline with completed business cases to six. Of these, two proposals have been referred by the Queensland Government to Infrastructure Australia for consideration. The other proposals are either ready for Queensland Government consideration or require further action based on the outcomes of the detailed business case.

Agencies are recognising the value of early engagement with Building Queensland and this is reflected in the increasing number of early stage proposals in the

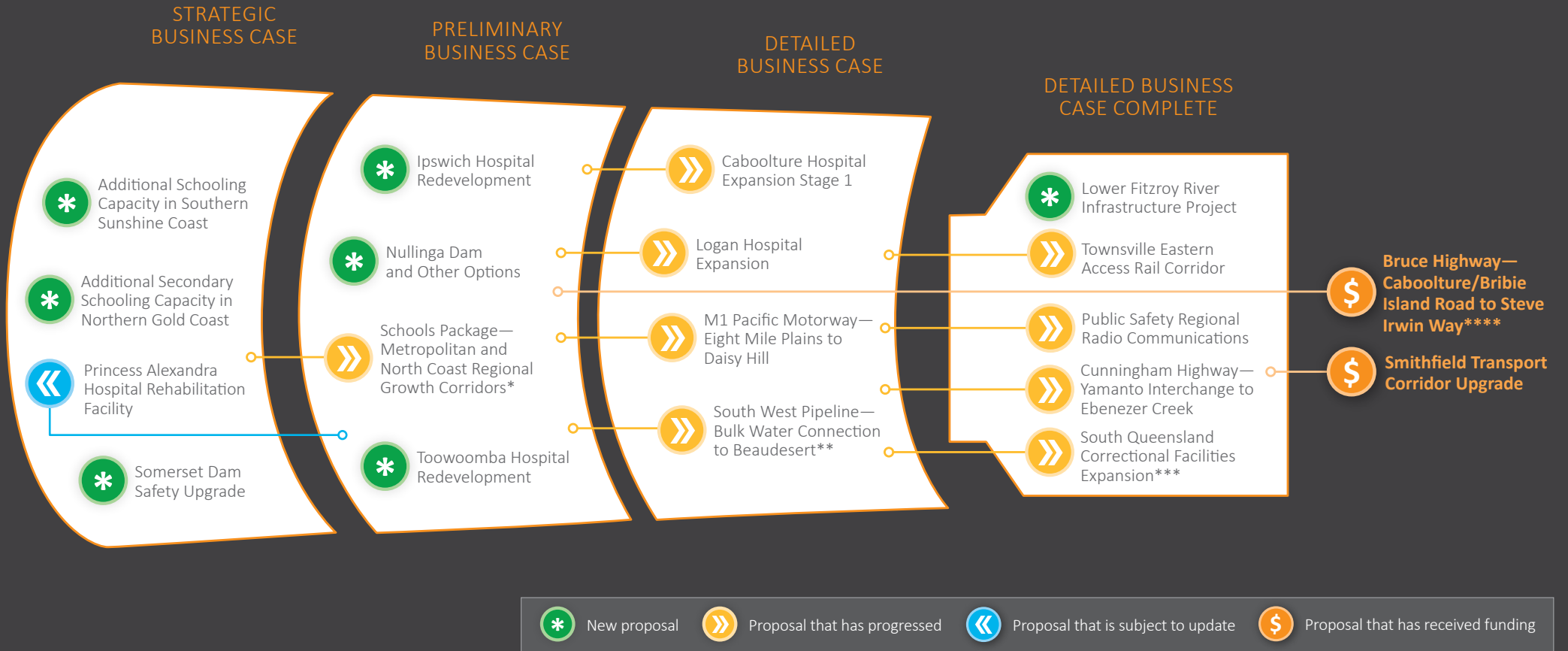
pipeline. The focus of the early stage is on exploring service needs—not solutions. We do this working in partnership with agencies, developing the evidence required to make a well-informed decision about how the government should proceed.

For example, Building Queensland has worked with the Department of Education and Training to ensure a thorough options analysis is conducted to address future enrolment needs in the existing school network. This includes considering reform options, better use of existing infrastructure, the expansion of facilities at existing schools, as well as new build solutions.

Key changes in the pipeline since June 2017 are reflected in Figure 2.



Figure 2. Key changes in the pipeline since June 2017



*Incorporates the former North Lakes Mango Hill Secondary School proposal with additional primary and secondary schooling capacity in Ripley Valley.

**The former Beaudesert Water Supply proposal has been split into the South West Pipeline—Bulk Water Connection to Beaudesert and Wyaralong Water Treatment Plant.

***Combines the former Arthur Gorrie Correctional Centre and Southern Queensland Correctional Precinct (Gatton) proposals.

****The Bruce Highway—Pine River to Caloundra Road Interchange Upgrade proposal previously listed in the pipeline has been split into three packages. The Caboolture/Bribie Island Road to Steve Irwin Way package has been funded under the Bruce Highway Upgrade Program. The two other packages (Pine River to Caboolture/Bribie Island Road and Steve Irwin Way to Caloundra Road Interchange) remain in the pipeline.



Burdekin Falls Dam (Image courtesy of SunWater)

WHAT'S MOVED

The Smithfield Transport Corridor Upgrade proposal has now been funded and has progressed out of the pipeline. The Bruce Highway—Pine River to Caloundra Road Interchange Upgrade proposal that was included in the June 2017 Infrastructure Pipeline Report has split into three packages. Of these three packages, the Caboolture/Bribie Island Road to Steve Irwin Way component has been accelerated with funding commitments from the Queensland and Australian governments. The funding commitments are subject to completion of the detailed business case being led by Building Queensland in partnership with the Department of Transport and Main Roads. This package is now reflected as being funded and therefore has transitioned out of the pipeline. The remaining two sections of the Pine River to Caloundra Road Interchange Upgrade proposal are now listed separately in the pipeline and are being further developed.

A number of detailed business cases have been completed since the June 2017 Infrastructure

Pipeline Report—many of which were developed by Building Queensland.

The Cunningham Highway—Yamanto Interchange to Ebenezer Creek Detailed Business Case is now complete and has been referred to Infrastructure Australia for assessment prior to Australian Government funding consideration, along with the Beerburrum to Nambour Rail Upgrade proposal.

The Public Safety Regional Radio Communications project has been recommended for Queensland Government consideration, along with the South Queensland Correctional Facilities Expansion. The South Queensland Correctional Facilities Expansion combines the Arthur Gorrie Correctional Centre Detailed Business Case—developed by Building Queensland—with the Southern Queensland Correctional Precinct (Gatton) proposal. The amalgamation of the proposals reflects the interdependencies between the two, and the opportunity for a system-wide approach to addressing existing capacity issues across the south Queensland corrections network.

The Townsville Eastern Access Rail Corridor Detailed Business Case has been completed by Building Queensland and is ready for Queensland Government consideration of further actions.

Detailed business cases have commenced for expansions of the Logan and Caboolture hospitals and the M1 Pacific Motorway—Eight Mile Plains to Daisy Hill, all being led by Building Queensland. Similarly, Seqwater has commenced the development of a detailed business case for the South West Pipeline—Bulk Water Connection to Beaudesert. This is the first component of the former Beaudesert Water Supply proposal (refer to case study on page 46).

The Schools Package—Metropolitan and North Coast Regional Growth Corridors combines the North Lakes Mango Hill Secondary School proposal, formerly listed in the June 2017 pipeline at the strategic business case stage, with additional primary and secondary schooling capacity in Ripley Valley. The final scope of the package will be determined as the analysis progresses.



Previous work undertaken on the Princess Alexandra Hospital Rehabilitation Facility confirmed that there were infrastructure constraints with the service provision of spinal cord and brain injury rehabilitation services at the current site. With the Cross River Rail project being delivered, the proposal has moved back to strategic business case underway stage to explore opportunities to improve precinct master planning to optimise the provision of services.

WHAT'S NEW

Three early stage proposals presenting a compelling need for investigation in the education and water sectors have entered the pipeline.

In the education sector, investigations are underway into the need for additional schooling capacity in high growth areas across South East Queensland. With an additional 1.9 million people expected in South East Queensland by 2036 and much of the residential growth

forecast to be outside of Brisbane, schooling capacity in areas like the southern Sunshine Coast and northern Gold Coast is being analysed.

Maintenance of the state's existing water infrastructure is necessary to ensure the efficient and safe operation of assets and wellbeing of the local community. The Somerset Dam Safety Upgrade is the most recent water proposal to enter the pipeline, addressing the need to meet up-to-date dam safety standards. In recognition of the significance of water infrastructure in developing regional Queensland, the Nullinga Dam and Other Options proposal (refer to case study on page 45) and Lower Fitzroy River Infrastructure Project now also appear in the pipeline.

Building Queensland has now completed the Lower Fitzroy River Infrastructure Project Detailed Business Case and this project is ready for Queensland Government consideration of further actions. As part of detailed business case development, Building

Queensland undertook a robust demand assessment that was a key factor in confirming this project be presented for consideration subject to, among other things, confirming commitments from potential users.

There is increasing pressure on Queensland hospitals to deliver services as the population increases, grows older, and patients are increasingly impacted by chronic diseases. The state is being challenged to modernise ageing facilities, and to ensure that new health infrastructure facilitates service delivery consistent with new models of care. Health proposals continue to feature in the pipeline, with the Ipswich Hospital Redevelopment and Toowoomba Hospital Redevelopment being the latest additions.



PROPOSAL SUMMARIES

The following infrastructure proposals are presented in order of their stage of development, with completed detailed business cases appearing first. Proposals are then listed alphabetically within each stage. Proposals are not presented in order of priority. The ultimate decision about the relative priority of proposals rests with the Queensland Government.

All cost estimates are indicative and rounded to the nearest \$10 million. Cost estimates are provided by responsible agencies, with the exception of figures for detailed business cases led by Building Queensland. Proposals with a cost range indicate that several options are still being considered. Proposal locations are broadly identified as South East Queensland (SEQ), regional or statewide.

In accordance with the *Building Queensland Act 2015*, Building Queensland may perform a lead or assist role as indicated in the following proposal summaries. Where a detailed business case commenced prior to Building Queensland's formal establishment, the responsible agency has continued to lead the development of the proposal to avoid delays or additional costs.

STAGE OF DEVELOPMENT

PROPOSAL NAME

SECTOR

LOCATION

PAGE

REFERRED TO
INFRASTRUCTURE AUSTRALIA

READY FOR QUEENSLAND
GOVERNMENT CONSIDERATION

FURTHER ACTIONS REQUIRED

DETAILED BUSINESS CASE

PRELIMINARY BUSINESS CASE

STRATEGIC BUSINESS CASE

Beerburrum to Nambour Rail Upgrade	 Transport—Rail	SEQ	14
Cunningham Highway—Yamanto Interchange to Ebenezer Creek	 Transport—Road	SEQ	15
Public Safety Regional Radio Communications	 Digital	Regional	16
South Queensland Correctional Facilities Expansion	 Justice and Public Safety	SEQ	17
Lower Fitzroy River Infrastructure Project	 Water	Regional	18
Townsville Eastern Access Rail Corridor	 Transport—Rail	Regional	19
Caboolture Hospital Expansion Stage 1	 Health—Built	SEQ	20
Clinton Bypass Channel—Gladstone Port	 Transport—Port	Regional	21
Lake Macdonald Dam Safety Upgrade	 Water	SEQ	22
Logan Hospital Expansion	 Health—Built	SEQ	23
M1 Pacific Motorway—Eight Mile Plains to Daisy Hill	 Transport—Road	SEQ	24
New Performing Arts Venue	 Arts, Culture and Recreation	SEQ	25
South West Pipeline—Bulk Water Connection to Beaudesert	 Water	SEQ	26
Bruce Highway—Pine River to Caboolture/Bribie Island Road	 Transport—Road	SEQ	27
Bruce Highway—Steve Irwin Way to Caloundra Road Interchange	 Transport—Road	SEQ	28
Integrated Client Management System Replacement	 Justice and Public Safety	Statewide	29
Ipswich Hospital Redevelopment	 Health—Built	SEQ	30
M1 Pacific Motorway—Varsity Lakes to Tugun	 Transport—Road	SEQ	31
Nullinga Dam and Other Options	 Water	Regional	32
Paradise Dam—Primary Spillway Improvement Project	 Water	Regional	33
Paradise Dam—Secondary Spillway Improvement Project	 Water	Regional	34
Patient Administration System Replacement Program	 Health—ICT	Statewide	35
Schools Package—Metropolitan and North Coast Regional Growth Corridors	 Education	SEQ	36
Sunshine Motorway—Mooloolah River Interchange	 Transport—Road	SEQ	37
Toowoomba Hospital Redevelopment	 Health—Built	SEQ	38
Wyaralong Water Treatment Plant	 Water	SEQ	39
Additional Schooling Capacity in Southern Sunshine Coast	 Education	SEQ	40
Additional Secondary Schooling Capacity in Northern Gold Coast	 Education	SEQ	41
Princess Alexandra Hospital Rehabilitation Facility	 Health—Built	SEQ	42
Somerset Dam Safety Upgrade	 Water	SEQ	43



BEERBURRUM TO NAMBOUR RAIL UPGRADE

RESPONSIBLE AGENCY

Department of Transport and Main Roads

PROPOSAL STAGE OF DEVELOPMENT

Detailed business case complete

PLANNED STAGE END DATE

Not applicable

ESTIMATED COST OF DELIVERY

\$780 million*

BUILDING QUEENSLAND'S ROLE

Led detailed business case**



NEED

The 39-kilometre section of North Coast line rail track between Beerburrum and Nambour carries a complex mixture of commuter, freight and long distance passenger trains on a single line track with passing loops at stations only. The infrastructure constraints on this section of the line currently include:

- » insufficient capacity to meet future freight and passenger demand due to the single-track configuration, single platforms at stations between Landsborough and Nambour, and inadequate parking facilities and passing loops
- » competition between freight and passenger services, and high track utilisation rates, which impact service reliability
- » current track configuration which allows only three peak-direction train services (plus one contra-peak) per hour.

Freight train paths that meet supply chain needs are expected to reach capacity by 2023. Without the project, freight will likely be required to switch to road-based transport beyond this time to meet supply chain requirements.

PROPOSAL

The proposal has assessed a duplication of the North Coast line between Beerburrum and Landsborough (approximately 20 kilometres in length) and a range of upgrades to the existing rail infrastructure between Landsborough and Nambour including passing loop extensions, provision of dual platforms at stations connected by lifts and pedestrian bridges, and additional car parking at some stations. The proposal also assessed the elimination of level crossings at Barrs Road near Glass House Mountains and Caloundra Street in Landsborough.

BENEFITS

The proposal is expected to deliver a more integrated transport system with increased capacity and travel time savings for freight and passenger services, and increased passenger service reliability. The project is also expected to reduce maintenance and improve overall rail whole-of-life cost.

NEXT STEPS

Referred to Infrastructure Australia for consideration.

*Nominal cost in Australian dollars, Building Queensland detailed business case 2016.

**No active role during the June to December 2017 pipeline period.

CUNNINGHAM HIGHWAY—YAMANTO INTERCHANGE TO EBENEZER CREEK

RESPONSIBLE AGENCY

Department of Transport and Main Roads

PROPOSAL STAGE OF DEVELOPMENT

Detailed business case complete*

PLANNED STAGE END DATE

Not applicable

ESTIMATED COST OF DELIVERY

\$330 million**

BUILDING QUEENSLAND'S ROLE

Not applicable***



NEED

Increases in travel demand and expected developments along parts of the Cunningham Highway are likely to create additional safety considerations and capacity constraints, particularly at the intersection with Ipswich–Rosewood Road.

PROPOSAL

The proposal investigated strategic upgrades to a 4.75-kilometre section of the Cunningham Highway between Warwick Road at Yamanto and Ebenezer Creek, to the south west of Ipswich.

The proposal examined the delivery of a highway interchange and new alignment connecting the Cunningham Highway, Centenary Motorway extension and the Western Ipswich Bypass.

BENEFITS

The project is expected to:

- » deliver travel time cost savings
- » deliver vehicle operating cost savings
- » lower accident rates
- » enhance opportunity for major economic and defence-related development earmarked for the region.

NEXT STEPS

Referred to Infrastructure Australia for consideration.

*Initial business case completed in 2012. The Department of Transport and Main Roads undertook an update of the cost estimate and economic analysis only in 2017.

**Nominal cost in Australian dollars, cost estimate update 2017.

***No active role during the June to December 2017 pipeline period.





PUBLIC SAFETY REGIONAL RADIO COMMUNICATIONS

RESPONSIBLE AGENCY

Department of Science, Information Technology and Innovation

PROPOSAL STAGE OF DEVELOPMENT

Detailed business case complete

PLANNED STAGE END DATE

Not applicable

ESTIMATED COST OF DELIVERY

\$360 million*

BUILDING QUEENSLAND'S ROLE

Led detailed business case



NEED

Outside of South East Queensland, Public Safety Agencies rely on analogue networks and equipment for communication. These networks and equipment could be improved to meet the needs of modern emergency services. The analogue networks are not encrypted, do not allow for interoperable cross-agency communication, have coverage limitations in some areas, the equipment is nearing its end-of-life, and there is a requirement to ensure compliance with the Australian Communications and Media Authority (ACMA) spectrum licensing requirements.

PROPOSAL

The detailed business case assessed a number of options to address the service need. The business case includes a compliance-only option to meet the ACMA spectrum licensing requirements and an option that would see a combination of trunked P25 digital radio communications provided in high service demand areas, together with other technologies deployed in lower service demand locations.

Components of these solutions include:

- » compliance with the ACMA spectrum licensing requirements
- » dedicated purpose-built trunk digital radio network with capacity to meet local radio traffic requirements
- » technology communication solutions in remote and less populated areas to supplement the trunk digital radio
- » improved network availability and coverage
- » duress alarms and global positioning system location data to significantly improve officer safety
- » encryption of voice and data communication to prevent unauthorised monitoring of communications.

BENEFITS

The range of benefits include:

- » ACMA compliance
- » increase public safety agency collaboration and performance
- » increase officer safety and enhance operational effectiveness
- » improve alignment to mission critical communication standards
- » improve operational resource management
- » enhance data to inform future operational and strategic plans, policies and procedures
- » provide a range of positive social impacts such as improvements in community safety and wellbeing.

NEXT STEPS

Ready for Queensland Government consideration.

SOUTH QUEENSLAND CORRECTIONAL FACILITIES EXPANSION

(FORMERLY ARTHUR GORRIE CORRECTIONAL CENTRE AND SOUTHERN QUEENSLAND CORRECTIONAL PRECINCT—GATTON)

RESPONSIBLE AGENCY	PROPOSAL STAGE OF DEVELOPMENT	PLANNED STAGE END DATE	ESTIMATED COST OF DELIVERY	BUILDING QUEENSLAND'S ROLE
Department of Justice and Attorney-General	Detailed business case complete	Not applicable	\$1.22 billion*	Led/assisted detailed business case**



NEED

All male high-security facilities in south Queensland are exceeding capacity. Between 2012 and 2017, the total number of prisoners in Queensland grew by 46 per cent and the total number of remand prisoners grew by 86 per cent. Subsequently, built capacity at the Arthur Gorrie Correctional Centre and the Southern Queensland Correctional Precinct (Gatton) has been exceeded. The need for a specific capacity increase for remandees as well as a capacity increase for the overall prison population has been identified.

PROPOSAL

The South Queensland Correctional Facilities Expansion takes a system-wide approach to managing the prisoner population and system overcrowding. As such, the proposal investigated options to relieve capacity constraints at both facilities—the Southern Queensland Correctional Precinct (Gatton) and the Arthur Gorrie Correctional Centre. Several options were explored including:

- » better use of existing infrastructure, including reviewing the roles and functions of southern Queensland correctional centres
- » ways to improve existing infrastructure to expand current capacity, including construction of new cell blocks and upgraded and expanded prisoner support services facilities
- » construction of cells at a new greenfield site.

BENEFITS

The projects are expected to:

- » enhance safety between prisoners, and prisoners and staff
- » deliver more flexibility to manage the allocation of prisoners to the most appropriate facility
- » increase access to remand-specific programs and health services to better prepare remandees for potential release following court proceedings
- » increase access to education, programs and prison employment opportunities to provide employable skills and readiness for community reintegration in order to lower rates of recidivism
- » reduce future strain on building facilities with less risk of service failures.

NEXT STEPS

Ready for Queensland Government consideration.

*Nominal cost in Australian Dollars 2017, estimate provided by agency responsible for business case.

**Led Arthur Gorrie Correctional Centre Detailed Business Case and assisted with Southern Queensland Correctional Precinct (Gatton) Detailed Business Case.



LOWER FITZROY RIVER INFRASTRUCTURE PROJECT

RESPONSIBLE AGENCY

SunWater and Gladstone Area Water Board

PROPOSAL STAGE OF DEVELOPMENT

Detailed business case complete

PLANNED STAGE END DATE

Not applicable

ESTIMATED COST OF DELIVERY

\$350 million*

BUILDING QUEENSLAND'S ROLE

Led detailed business case



NEED

The Fitzroy Basin is the largest coastal basin in Queensland, covering approximately 142,600 square kilometres and incorporating major towns and regional centres such as Rockhampton, Biloela and Emerald. The existing water supply infrastructure in the Fitzroy Basin and Gladstone region may not be able to provide sufficient water supply security to meet forecast increases in water demand due to industrial growth, urban growth and potential agricultural development. The Australian Government made a commitment in 2016 to provide \$2 million from the National Water Infrastructure Development Fund to assist with the development of a business case and \$130 million in capital funding for Rookwood Weir, subject to a number of conditions.

PROPOSAL

The proposal investigated a new bulk water source on the Fitzroy River that can be used to supplement water supplies for urban, industrial and agricultural purposes.

The components of the project include:

- » construction and operation of a new weir at Rookwood with a yield of 76,000 megalitres per annum, associated impoundment of the lower Mackenzie River and lower Dawson River
- » fish and turtle passage infrastructure at the weir
- » construction of new river crossings for areas affected by inundation
- » augmentation of existing roads for construction purposes
- » construction of new access roads to the weir site
- » other associated infrastructure works.

The proposed weir has the capacity to access the full volume of water able to be allocated under the current water plan—76,000 megalitres, of which 34,000 megalitres per annum has been set aside for urban and industrial water supplies.

BENEFITS

Subject to confirming commitments from potential users, the project presents the opportunity to enhance agricultural and industrial development, create employment opportunities and improve the availability and reliability of water.

NEXT STEPS

Further actions required.

TOWNSVILLE EASTERN ACCESS RAIL CORRIDOR

RESPONSIBLE AGENCY	PROPOSAL STAGE OF DEVELOPMENT	PLANNED STAGE END DATE	ESTIMATED COST OF DELIVERY	BUILDING QUEENSLAND'S ROLE
Department of Transport and Main Roads	Detailed business case complete	To be determined	\$390 million*	Led detailed business case



NEED

Infrastructure constraints limit the use of longer trains on the existing rail network to the Port of Townsville. These constraints are impacting freight throughput on the road and rail networks, affecting the cost and efficiency of freight movements. The rail corridor requires trains to traverse the Townsville urban area to access the Port of Townsville, creating safety issues and congestion at open level crossings, and environmental and amenity issues in residential areas. Currently, 1,000-metre trains operating in the rail corridor must be broken up before entering the port precinct, which also contributes to the inefficient movement of trains. The Australian Government has committed \$150 million to the project as part of the Townsville City Deal.

PROPOSAL

The proposal investigated options for a new freight rail link with greater capacity connecting the Mount Isa line and North Coast line, through the Townsville State Development Area to the Port of Townsville. The analysis considered the planned expansion of the Port of Townsville, including associated investment and land use planning activities. A key focus of the analysis was estimating future demand and freight capacity along the whole supply chain. The preservation and development of the rail corridor and associated investment in other parts of the supply chain have been referred to the Queensland Government for further consideration.

BENEFITS

- The project is expected to:
- » enhance regional development as well as state and national economic prosperity by effectively moving increasing volumes of freight—primarily for export
 - » contribute to eliminating supply chain constraints and bottlenecks affecting the region's ability to expand its productive capacity
 - » improve management of community amenity, safety, sustainability and congestion impacts associated with future increases in rail freight moving through the Townsville urban area.

NEXT STEPS

Further actions required.

*Nominal cost in Australian dollars 2017, Building Queensland detailed business case.





CABOOLTURE HOSPITAL EXPANSION STAGE 1

(FORMERLY CABOOLTURE HOSPITAL REDEVELOPMENT)

RESPONSIBLE AGENCY

Queensland Health, Metro North Hospital and Health Service

PROPOSAL STAGE OF DEVELOPMENT

Detailed business case underway

PLANNED STAGE END DATE

Q1 2018

ESTIMATED COST OF DELIVERY

\$240–\$260 million*

BUILDING QUEENSLAND'S ROLE

Leading detailed business case



NEED

The infrastructure at Caboolture Hospital is operating at capacity in a number of areas and the hospital is facing long Emergency Department waiting times and overcrowding. The current asset condition and functionality is not supporting the efficient and effective delivery of contemporary health services at the hospital. Forecast demand, driven by a growing and ageing population and high levels of chronic disease, is expected to place further pressure on the hospital.

PROPOSAL

The options being investigated in the proposal include a combination of new build and refurbishment of existing facilities.

BENEFITS

The project is expected to:

- » increase capacity
- » improve community health outcomes
- » reduce travel cost for patients
- » increase workforce sustainability
- » improve operating efficiencies, safety and functionality of the hospital.

NEXT STEPS

Complete detailed business case.

*A range is provided by responsible agency as a number of options are still being considered

CLINTON BYPASS CHANNEL—GLADSTONE PORT

(FORMERLY PORT OF GLADSTONE—CLINTON VESSEL INTERACTION)

RESPONSIBLE AGENCY

Gladstone Ports Corporation

PROPOSAL STAGE OF DEVELOPMENT

Detailed business case underway

PLANNED STAGE END DATE

Q1 2018

ESTIMATED COST OF DELIVERY

\$65–\$80 million*

BUILDING QUEENSLAND'S ROLE

Assisting with detailed business case**



NEED

The movement of larger vessels (draft over 14 metres) through the Clinton Channel at the Port of Gladstone is resulting in interaction of forces between the passing vessel and vessels berthed at the RG Tanna Coal Terminal. These forces impact on the safe mooring and operations at the terminal.

PROPOSAL

The options being investigated in the proposal include:

- » making better use of existing infrastructure, including controlling transit speed and utilising tugs to control vessels berthed at time of transit, and introducing a new mooring system
- » improving existing infrastructure, such as deepening the Clinton Bypass Channel and widening the Clinton Channel.

BENEFITS

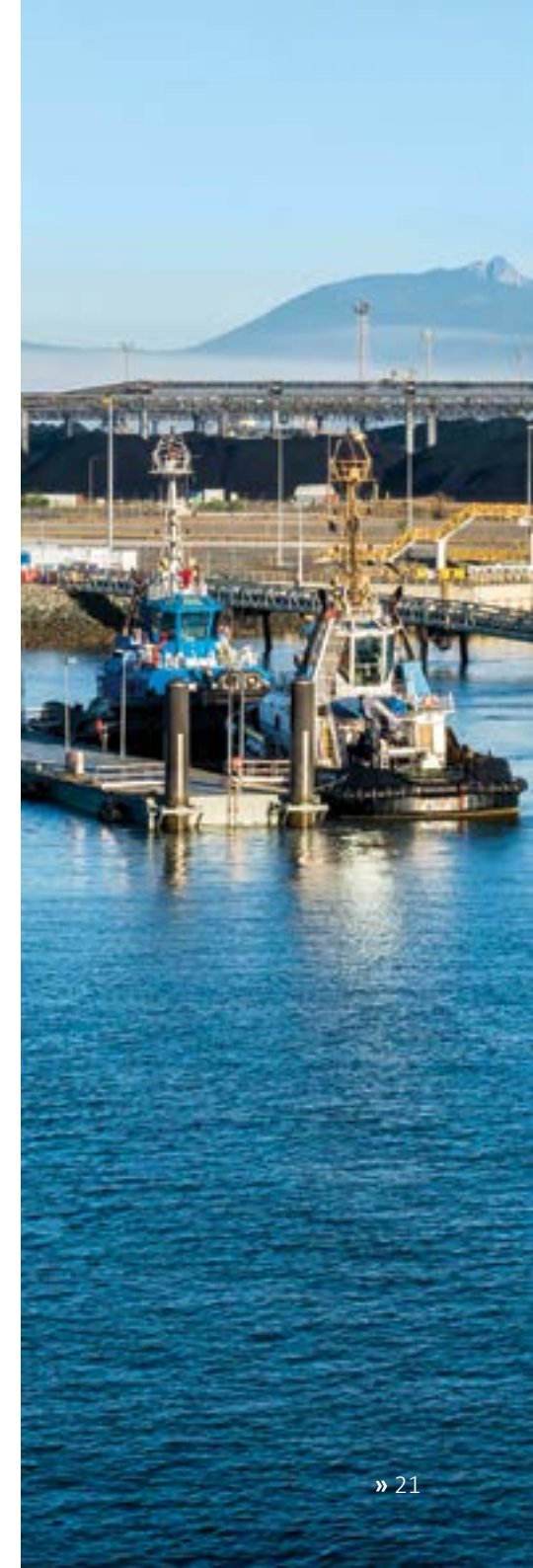
The project is expected to improve the efficiency of:

- » ship loading
- » the allocation of port infrastructure and resources
- » passage through the Clinton Channel.

It is also expected to create a safer environment as these activities will no longer be impacted by the passage of larger vessels.

NEXT STEPS

Complete detailed business case.



*A range is provided by responsible agency as a number of options are still being considered.

**No active role during the June to December 2017 pipeline period.

Image courtesy of Gladstone Ports Corporation >>



LAKE MACDONALD DAM SAFETY UPGRADE

RESPONSIBLE AGENCY

Seqwater

PROPOSAL STAGE OF DEVELOPMENT

Detailed business case underway

PLANNED STAGE END DATE

Q2 2018

ESTIMATED COST OF DELIVERY

\$90 million*

BUILDING QUEENSLAND'S ROLE

Assisting with detailed business case



NEED

Lake Macdonald Dam on Six Mile Creek on the Sunshine Coast requires an upgrade to meet modern standards and the performance requirements of the Queensland dam safety regulations into the future. The drivers for the upgrade include:

- » population growth downstream of the dam
- » advances in dam design and development of consistent methodologies for assessment of dam safety
- » the latest estimates of extreme rainfall
- » data from recent major weather events and updated modelling
- » improved understanding of earthquake probabilities and loads.

PROPOSAL

The proposal is to upgrade the existing dam to meet the requirements of the Queensland dam safety guidelines. The current project is to develop the detailed design for the preferred option and gain the necessary project approvals to enable construction of the upgrade. The proposed upgrade will reduce dam safety risks by increasing the spillway capacity and the earthquake stability of the dam, while maintaining water supply security.

Studies have considered a range of options including decommissioning of the dam, retrofit of strengthening works and new build options.

BENEFITS

The project will ensure the dam meets performance standards outlined in the Queensland dam safety regulations into the future.

NEXT STEPS

Complete detailed business case.

LOGAN HOSPITAL EXPANSION

RESPONSIBLE AGENCY

Queensland Health, Metro South Hospital and Health Service

PROPOSAL STAGE OF DEVELOPMENT

Detailed business case underway

PLANNED STAGE END DATE

Q1 2018

ESTIMATED COST OF DELIVERY

\$260–\$280 million*

BUILDING QUEENSLAND'S ROLE

Leading detailed business case



NEED

The scope and scale of Logan Hospital's services and physical infrastructure are insufficient to meet existing demand. Rapid and culturally diverse population growth coupled with an ageing population have resulted in a significant increase in demand for emergency beds. Capacity constraints have resulted in extended Emergency Department and outpatient waiting times, Emergency Department overcrowding and delays in provision of care.

PROPOSAL

The proposal is investigating options to improve existing facilities by building a new clinical services building either as a stand-alone facility or on top of existing buildings.

BENEFITS

The project is expected to:

- » increase capacity
- » increase service access at Logan Hospital and reduce burden on out-of-locality services
- » reduce reliance on Emergency Department short-stay
- » improve facilities and health care services
- » improve work conditions for staff and staff retention
- » improve education opportunities for health care professionals.

NEXT STEPS

Complete detailed business case.

*A range is provided by responsible agency as a number of options are still being considered.





M1 PACIFIC MOTORWAY—EIGHT MILE PLAINS TO DAISY HILL

RESPONSIBLE AGENCY

Department of Transport and Main Roads

PROPOSAL STAGE OF DEVELOPMENT

Detailed business case underway

PLANNED STAGE END DATE

Q2 2018

ESTIMATED COST OF DELIVERY

To be determined*

BUILDING QUEENSLAND'S ROLE

Leading detailed business case



NEED

Traffic volumes on the M1 Motorway are exceeding capacity, causing extended periods of congestion on a daily basis. Forecast increases in travel demand will further extend traffic delays, increasing travel times, decreasing reliability and risking road safety on the 9-kilometre section of the M1 between Eight Mile Plains and Daisy Hill. Busway services use this section and forecast increases in traffic congestion will further impact bus travel time reliability and customer satisfaction. The cycle network is also disconnected on this section, reducing alternatives for local traffic.

PROPOSAL

The proposal is investigating the following options:

- » eight/ten-lane option on M1 Motorway
- » eight/ten-lane option on M1 Motorway and extension of the South East Busway to Springwood, including new cycle infrastructure.

BENEFITS

The project is expected to:

- » improve motorway capacity, travel times, reliability and safety
- » optimise efficiency for freight and commercial transport
- » promote travel behaviour change and mode shifts to public and active transport.

NEXT STEPS

Complete detailed business case.

*Cost to be confirmed by detailed business case.

NEW PERFORMING ARTS VENUE

RESPONSIBLE AGENCY

Arts Queensland

PROPOSAL STAGE OF DEVELOPMENT

Detailed business case underway

PLANNED STAGE END DATE

Q4 2017

ESTIMATED COST OF DELIVERY

To be determined*

BUILDING QUEENSLAND'S ROLE

Assisting with detailed business case**



NEED

Brisbane's major performing arts venues are currently at capacity and there is increasing pressure on the largest venues to satisfy demand from touring producers and audiences.

PROPOSAL

The proposal is to deliver a 1,700-seat performing arts venue in proximity to Brisbane's existing cultural precincts.

BENEFITS

The project is expected to:

- » meet demand from the arts sector for greater access to Brisbane venues
- » increase economic activity driven by touring productions and tourists
- » showcase Queensland's home companies to wider audiences and attract talent to Queensland
- » grow the range of performing arts experiences available to Brisbane
- » strengthen Brisbane's cultural tourism offering and reinforce the state's cultural credentials.

NEXT STEPS

Complete detailed business case.

**Subject to selection of the preferred site, delivery and operating model.*

***No active role during the June to December 2017 pipeline period.*

Image courtesy of Queensland Performing Arts Centre (photographer Marc Burgin) >>





SOUTH WEST PIPELINE—BULK WATER CONNECTION TO BEAUDESERT

(FORMERLY PART OF BEAUDESERT WATER SUPPLY)

RESPONSIBLE AGENCY	PROPOSAL STAGE OF DEVELOPMENT	PLANNED STAGE END DATE	ESTIMATED COST OF DELIVERY	BUILDING QUEENSLAND'S ROLE
Seqwater	Detailed business case underway	Q2 2018	\$70 million*	Assisting with detailed business case



NEED

The projected bulk water demand from Beaudesert is expected to exceed current capacity by 2020–21 and increase significantly thereafter due to growth in the area, particularly within the Bromelton State Development Area. There is also considerable growth predicted in the adjacent Logan City Council area of South Logan (including Yarrabilba and Flagstone).

Water supply to Beaudesert is currently provided by the Beaudesert Water Treatment Plant. The plant is a stand-alone water supply that extracts raw water from the Logan River, which has variable water quality. It is not connected to the South East Queensland Water Grid and will not meet levels of service in the future.

PROPOSAL

The proposal is investigating a bulk water pipeline connection from the Southern Regional Water Pipeline to Beaudesert, connecting Beaudesert to the South East Queensland Water Grid. The pipeline will pass through the site of the future Wyaralong Water Treatment Plant.

BENEFITS

The pipeline is expected to meet the near-term water demand of Beaudesert and provide water supply security to growth areas in the Logan City Council area. In the longer term, this pipeline connection also has the strategic benefit of connecting Beaudesert and the Scenic Rim region to the South East Queensland Water Grid, increasing bulk water supply reliability.

NEXT STEPS

Complete detailed business case.

BRUCE HIGHWAY—PINE RIVER TO CABOOLTURE/BRIBIE ISLAND ROAD

(FORMERLY PART OF THE BRUCE HIGHWAY—PINE RIVER TO CALOUNDRA ROAD INTERCHANGE UPGRADE)

RESPONSIBLE AGENCY

Department of Transport and Main Roads

PROPOSAL STAGE OF DEVELOPMENT

Preliminary business case underway

PLANNED STAGE END DATE

To be determined

ESTIMATED COST OF DELIVERY

To be determined*

BUILDING QUEENSLAND'S ROLE

Assisting with preliminary business case



NEED

The existing section of the Bruce Highway from Pine River to Caboolture/Bribie Island Road lacks capacity to accommodate current morning and afternoon peak demand, resulting in congestion and an increase in motor vehicle incidents. This section of the Bruce Highway is also prone to flooding.

PROPOSAL

The proposal for the 60-kilometre section of the Bruce Highway from Pine River to Caloundra Road is being progressed as a number of packages. Flood mitigation, road safety and capacity improvements will be investigated for this section of the highway.

The Pine River to Caboolture Road Package 3 (Stage 1 and Stage 2) includes upgrades to existing infrastructure to improve flood immunity and new assets, such as building additional lanes.

BENEFITS

This package is expected to:

- » improve transport system reliability and efficiency
- » improve safety outcomes through a reduction in the number and severity of crashes on the highway
- » improve flood immunity
- » support economic growth in the Sunshine Coast and Moreton Bay regions by providing more efficient transport.

NEXT STEPS

Complete preliminary business case.

*An estimate will be provided once the proposal has been developed further.





BRUCE HIGHWAY—STEVE IRWIN WAY TO CALOUNDRA ROAD INTERCHANGE

(FORMERLY PART OF THE BRUCE HIGHWAY—PINE RIVER TO CALOUNDRA ROAD INTERCHANGE UPGRADE)

RESPONSIBLE AGENCY

Department of Transport and Main Roads

PROPOSAL STAGE OF DEVELOPMENT

Preliminary business case underway

PLANNED STAGE END DATE

Q2 2018

ESTIMATED COST OF DELIVERY

To be determined*

BUILDING QUEENSLAND'S ROLE

Assisting with preliminary business case



NEED

The existing section of the Bruce Highway from Steve Irwin Way to the Caloundra Road Interchange lacks capacity to accommodate current morning and afternoon peak demand, resulting in congestion and an increase in motor vehicle incidents.

PROPOSAL

The proposal for the 60-kilometre section of the Bruce Highway from Pine River to Caloundra Road is being progressed as a number of packages. Flood mitigation, road safety and capacity improvements will be investigated for this section of the highway.

The Steve Irwin Way to Caloundra Road Interchange Package 2 (Stage 2) includes upgrades to existing infrastructure and new assets such as building additional lanes.

BENEFITS

This package is expected to:


- » improve transport system reliability and efficiency
- » improve safety outcomes through a reduction in the number and severity of crashes on the highway
- » support economic growth in the Sunshine Coast and Moreton Bay regions by providing more efficient transport.

NEXT STEPS

Complete preliminary business case.

*An estimate will be provided once the proposal has been developed further.

INTEGRATED CLIENT MANAGEMENT SYSTEM REPLACEMENT

RESPONSIBLE AGENCY	PROPOSAL STAGE OF DEVELOPMENT	PLANNED STAGE END DATE	ESTIMATED COST OF DELIVERY	BUILDING QUEENSLAND'S ROLE	
Department of Communities, Child Safety and Disability Services	Preliminary business case underway	Q4 2017	To be determined*	Assisting with preliminary business case	
NEED	<p>Appropriate management and sharing of information at the right time is critical to the safety and wellbeing of at-risk children and young people. At the same time, confidentiality and privacy are essential requirements for information systems.</p> <p>Despite significant resources being spent on maintaining and upgrading the current Integrated Client Management System, several opportunities for improvement have been identified. The technology is reaching the end of its useful life and integration with new technology (e.g. Windows operating systems and productivity tools) is becoming increasingly complex. Furthermore, there are opportunities to enhance information sharing capacity with other government and non-government organisations.</p>				
PROPOSAL	<p>The proposal is investigating tranches of work to improve the delivery of frontline child safety and youth justice services for at-risk children and young people living in Queensland. In the current stage, solutions are being analysed with prototypes from vendors being considered.</p>				
BENEFITS	<p>The project is expected to:</p> <ul style="list-style-type: none"> » improve capacity for more integrated, informed, prioritised and targeted service delivery to meet clients' core needs » improve collaboration amongst service providers » improve outcomes for children and young people, their families and the community » improve value for money in achieving business objectives, as service providers will be able to spend more time on individualised service delivery. 				
NEXT STEPS	<p>Complete preliminary business case.</p>				

*An estimate will be provided once the proposal has been developed further.





IPSWICH HOSPITAL REDEVELOPMENT

RESPONSIBLE AGENCY

Queensland Health, West Moreton Hospital and Health Service

PROPOSAL STAGE OF DEVELOPMENT

Preliminary business case underway

PLANNED STAGE END DATE

Q4 2017

ESTIMATED COST OF DELIVERY

\$100–\$150 million*

BUILDING QUEENSLAND'S ROLE

Assisting with preliminary business case



NEED

The scope and scale of services and physical infrastructure at Ipswich Hospital are insufficient to meet the future demand of the West Moreton population. Current infrastructure constraints result in extended Emergency Department waiting times, Emergency Department overcrowding and a large number of patients travelling to other hospitals for treatment. The region also faces high rates of chronic disease and an ageing population.

PROPOSAL

The proposal is investigating options to redevelop Ipswich Hospital, repurpose existing facilities and investigate partnership opportunities to achieve increased capacity in key areas.

BENEFITS

The project is expected to:

- » increase availability and services to local residents
- » defer major hospital infrastructure investment by implementing a staged approach to the overall redevelopment
- » improve access and equity to health care services for the West Moreton community
- » increase efficiency and utilisation of existing beds.

NEXT STEPS

Complete preliminary business case.

*Cost to be determined following further scoping analysis.

M1 PACIFIC MOTORWAY—VARSITY LAKES TO TUGUN

RESPONSIBLE AGENCY

Department of Transport and Main Roads

PROPOSAL STAGE OF DEVELOPMENT

Preliminary business case underway

PLANNED STAGE END DATE

Q4 2017

ESTIMATED COST OF DELIVERY

To be determined*

BUILDING QUEENSLAND'S ROLE

Assisting with preliminary business case



NEED

Traffic volumes on the 10-kilometre section of the M1 Motorway between Varsity Lakes and Tugun are exceeding capacity during the morning, afternoon, weekend and holiday periods causing high levels of congestion on a daily basis. Forecast increases in travel demand (including freight, tourism and airport related traffic) will further extend traffic delays, increasing travel times, decreasing reliability and risking road safety.

PROPOSAL

The proposal is investigating the following options:

- » partial six-lane option on M1 Motorway
- » six-lane option on M1 Motorway.

BENEFITS

The project is expected to:

- » improve capacity, travel times, reliability and safety
- » optimise efficiency for freight, commercial and tourism transport
- » allow for future provision and integration of a heavy rail extension south from Varsity Lakes Station.

NEXT STEPS

Complete preliminary business case.

**An estimate will be provided once the proposal has been developed further.*





NULLINGA DAM AND OTHER OPTIONS

RESPONSIBLE AGENCY

Department of Energy and Water Supply

PROPOSAL STAGE OF DEVELOPMENT

Preliminary business case complete

PLANNED STAGE END DATE

Not applicable

ESTIMATED COST OF DELIVERY

\$330 million*

BUILDING QUEENSLAND'S ROLE

Led preliminary business case



NEED

The limited availability of water allocations for agricultural use in the Mareeba Dimbulah irrigation area is inhibiting the opportunity for economic development in the region.

PROPOSAL

The proposal is investigating the following options for augmented water supply:

- » augmenting/enhancing the existing water supply system
- » optimising water trading within the catchment and 'repurposing' current water allocations
- » converting water losses from existing water transport infrastructure (e.g. transfer channels) to new water allocations
- » construction of Nullinga Dam.

BENEFITS

The project is expected to increase availability of water to meet long-term supply across the region and enhance agricultural development opportunities.

NEXT STEPS

Commence detailed business case.

PARADISE DAM—PRIMARY SPILLWAY IMPROVEMENT PROJECT

RESPONSIBLE AGENCY

SunWater

PROPOSAL STAGE OF DEVELOPMENT

Preliminary business case underway

PLANNED STAGE END DATE

Q1 2018

ESTIMATED COST OF DELIVERY

\$260 million*

BUILDING QUEENSLAND'S ROLE

Assisting with preliminary business case



NEED

Paradise Dam is located approximately 80 kilometres south west of Bundaberg on the Burnett River. It is a key component of the Bundaberg Water Supply Scheme—holding up to 300,000 megalitres of water for the city of Bundaberg and farmland irrigation.

During the 2013 floods, extensive scour occurred downstream of the primary spillway. SunWater immediately repaired the scour and downstream toe of the dam, and investigated options to prevent scour occurring in future extreme weather events.

This investigation identified necessary improvements to the primary spillway. Improvement works are being proposed to maintain efficient and safe operation of the primary spillway during extreme weather events.

PROPOSAL

The proposal is investigating options to improve the safety of Paradise Dam. Improvements to the primary spillway are proposed to prevent significant scour occurring downstream of the toe of the dam in major flood events. Proposed upgrade options being investigated will include addressing energy dissipation in the primary spillway and improvement of the primary spillway apron and dissipater.

BENEFITS

Improvement works will ensure the dam continues to function as intended in line with best management practices for large dams, including guidelines from the Australian National Committee on Large Dams Incorporated (ANCOLD) and Queensland regulatory guidelines. Works are not expected to impact landholders adjacent to the dam, irrigation customers or recreational users wanting to access boat ramps, picnic areas and other dam amenities.

NEXT STEPS

Complete preliminary business case.

**Nominal cost in Australian dollars 2015, estimate provided by responsible agency.*

Image courtesy of SunWater >>





PARADISE DAM—SECONDARY SPILLWAY IMPROVEMENT PROJECT

RESPONSIBLE AGENCY

SunWater

PROPOSAL STAGE OF DEVELOPMENT

Preliminary business case underway

PLANNED STAGE END DATE

Q1 2018

ESTIMATED COST OF DELIVERY

\$160 million*

BUILDING QUEENSLAND'S ROLE

Assisting with preliminary business case



NEED

Paradise Dam is located approximately 80 kilometres south west of Bundaberg on the Burnett River. It is a key component of the Bundaberg Water Supply Scheme—holding up to 300,000 megalitres of water for the city of Bundaberg and farmland irrigation.

During the 2013 floods, extensive scour occurred downstream of the primary spillway. SunWater immediately repaired the scour and downstream toe of the dam, and investigated options to prevent scour from occurring in future extreme weather events.

This investigation identified necessary improvements to the secondary spillway. Improvement works are being proposed to maintain efficient and safe operation of the secondary spillway during extreme weather events.

PROPOSAL

The proposal is investigating options to improve the safety of Paradise Dam, including improvements to the secondary spillway to prevent significant scour in major flood events. Proposed upgrade options being investigated include constructing a concrete apron and training wall in the secondary spillway to address the potential for scour.

BENEFITS

The proposal will ensure the dam continues to function as intended in line with best management practices for large dams, including guidelines from ANCOLD and Queensland regulatory guidelines. SunWater regularly conducts dam improvement projects in line with national industry guidelines to maintain safe and efficient dam operation.

NEXT STEPS

Complete preliminary business case.

PATIENT ADMINISTRATION SYSTEM REPLACEMENT PROGRAM

RESPONSIBLE AGENCY

Queensland Health

PROPOSAL STAGE OF DEVELOPMENT

Preliminary business case underway

PLANNED STAGE END DATE

Q1 2018

ESTIMATED COST OF DELIVERY

\$190 million*

BUILDING QUEENSLAND'S ROLE

Assisting with preliminary business case**



NEED

Queensland Health uses the Hospital Based Corporate Information System (HBCIS) as its Patient Administration System (PAS) to capture and manage both admitted and non-admitted patient, clinical and administrative data. HBCIS is an old system first implemented in the early 1980s using code that is now outdated and the system will not be supported after 2023.

In addition, integration with key systems such as integrated electronic Medical Record (ieMR), AUSLAB (Pathology Systems), i-Pharmacy and the Financial Management System presents major issues and impacts on workflow and productivity.

Queensland's healthcare system is evolving to patient-centric and accountable health management. HBCIS is not designed to support these evolving models of care.

PROPOSAL

The proposal is investigating the replacement of HBCIS throughout Queensland Health's facilities with a contemporary patient administration solution. This would support contemporary models of healthcare and integrate effectively with key new capabilities provided by the ieMR, Financial System Renewal (FSR) and Laboratory Information System (LIS) programs.

BENEFITS

The project is expected to:

- » improve patient flow through the healthcare system and patient safety through more effective measures to identify and manage patients
- » enhance patient experience and patient choice
- » deliver better patient communication, reporting and analyses
- » improve efficiency of resource allocation and support more accurate costing of activity and billing
- » reduce duplicate patient records.

NEXT STEPS

Complete preliminary business case.

*Nominal cost in Australian dollars 2017, estimate provided by responsible agency.

**No active role during the June to December 2017 pipeline period.





SCHOOLS PACKAGE—METROPOLITAN AND NORTH COAST REGIONAL GROWTH CORRIDORS

RESPONSIBLE AGENCY

Department of Education and Training

PROPOSAL STAGE OF DEVELOPMENT

Preliminary business case complete

PLANNED STAGE END DATE

Not applicable

ESTIMATED COST OF DELIVERY

\$160–\$195 million*

BUILDING QUEENSLAND'S ROLE

Assisted with preliminary business case



NEED

The capacity of the existing state schools in the North Lakes/Mango Hill and Ripley Valley areas is not considered sufficient to meet future enrolment demand.

The North Lakes/Mango Hill area has experienced higher than projected population growth over the past five years—particularly in the school-age population. Rapid population growth is expected to continue due to the considerable degree of residential development in the area.

Ripley Valley is a large master-planned greenfield development that is expected to experience significant population growth. Forecast growth is expected to exceed the capacity of the existing state secondary schools by 2020 and state primary schools servicing the area by 2021.

PROPOSAL

The North Lakes/Mango Hill proposal investigated the delivery of additional state secondary schooling capacity for local students. This included options to augment existing schools and options to deliver a new school.

The Ripley Valley proposal investigated the construction of a new local state primary and secondary school in Ripley Valley to address forecast growth in the school-age population.

BENEFITS


The schools package is expected to:

- » improve student wellbeing and teacher satisfaction
- » increase local accessibility to secondary education services
- » provide a cost-effective and efficiently utilised school network
- » foster an improved sense of community and improved amenity and facilities.

NEXT STEPS

Commence detailed business case.

SUNSHINE MOTORWAY— MOOLOOLAH RIVER INTERCHANGE

RESPONSIBLE AGENCY	PROPOSAL STAGE OF DEVELOPMENT	PLANNED STAGE END DATE	ESTIMATED COST OF DELIVERY	BUILDING QUEENSLAND'S ROLE	
Department of Transport and Main Roads	Preliminary business case complete	Not applicable	\$430 million*	Not applicable**	
NEED	The existing Sunshine Motorway, Nicklin Way and Kawana Way transport infrastructure is congested and lacks capacity to accommodate forecast travel demand.				
PROPOSAL	The proposal investigated a range of roadworks in the area of the Mooloolah River Interchange of the Sunshine Motorway, including expanded lane connections, river crossings and intersection upgrades.				
BENEFITS	<p>The project is expected to:</p> <ul style="list-style-type: none"> » improve safety by reducing crashes and weaving behaviours at the Mooloolah River Interchange » increase capacity on the Sunshine Motorway between the Kawana Way interchange and the new Mooloolah River interchange » provide better connectivity between the Sunshine Coast University Hospital, Maroochydore, Kawana and Caloundra via a new Mooloolah River Crossing. 				
NEXT STEPS	Commence detailed business case.***				

*Nominal cost in Australian dollars 2015, estimate provided by responsible agency based on preliminary business case.

**No active role during the June to December 2017 pipeline period.

***The responsible agency has advised that the scope and commencement date of the detailed business case is subject to Queensland Government direction.





TOOWOOMBA HOSPITAL REDEVELOPMENT

RESPONSIBLE AGENCY

Queensland Health, Darling Downs Hospital and Health Service

PROPOSAL STAGE OF DEVELOPMENT

Preliminary business case complete

PLANNED STAGE END DATE

Not applicable

ESTIMATED COST OF DELIVERY

\$450–\$750 million*

BUILDING QUEENSLAND'S ROLE

Assisted with preliminary business case



NEED

The infrastructure at Toowoomba Hospital is operating at capacity in a number of areas and the hospital currently faces long Emergency Department waiting times and overcrowding. Forecast demand, driven by a growing and ageing population and high levels of chronic disease, is expected to place further pressure on the hospital. The current asset condition and functionality is not supporting the efficient and effective delivery of contemporary health services at the hospital.

PROPOSAL

The proposal is investigating the redevelopment of the existing hospital site at Pechey Street in a staged manner or a relocation to the Baillie Henderson Hospital site in Cranley.

BENEFITS

The project is expected to:

- » improve the efficiency of health services
- » increase service access in the region and reduce patient travel
- » reduce recruitment and staff turnover costs
- » reduce repairs and maintenance costs
- » improve emergency access target performance
- » reduce inpatient readmissions
- » improve car parking access.

NEXT STEPS

Commence detailed business case.

**Cost to be determined following further scoping analysis.*

WYARALONG WATER TREATMENT PLANT

(FORMERLY PART OF BEAUDESERT WATER SUPPLY)

RESPONSIBLE AGENCY	PROPOSAL STAGE OF DEVELOPMENT	PLANNED STAGE END DATE	ESTIMATED COST OF DELIVERY	BUILDING QUEENSLAND'S ROLE	
Seqwater	Preliminary business case underway	Q4 2018	\$50 million*	Assisting with preliminary business case	

NEED

The projected bulk water demand from Beaudesert is expected to exceed current capacity by 2020–21 and increase significantly thereafter due to significant growth in the area, particularly within the Bromelton State Development Area. There is also significant growth predicted in the adjacent Logan City Council area of South Logan (including Yarrabilba and Flagstone).

Water supply to Beaudesert is currently provided by the Beaudesert Water Treatment Plant. The plant is a stand-alone water supply that extracts raw water from the Logan River, which has variable water quality. It is not connected to the South East Queensland Water Grid.

In the short-term, supply reliability will be met by the South West Pipeline—Bulk Water Connection to Beaudesert project. Long-term demand will require an additional source of bulk water.

PROPOSAL

The project is a staged water treatment plant, located adjacent to the Cedar Grove Weir. The timing and capacity will be driven by growth triggers in the region but is expected to be 2022 at the earliest and initially 30 megalitres per day. Additional stages will increase the capacity of the plant to not less than 100 megalitres per day, with construction timeframes dependent on growth in demand.

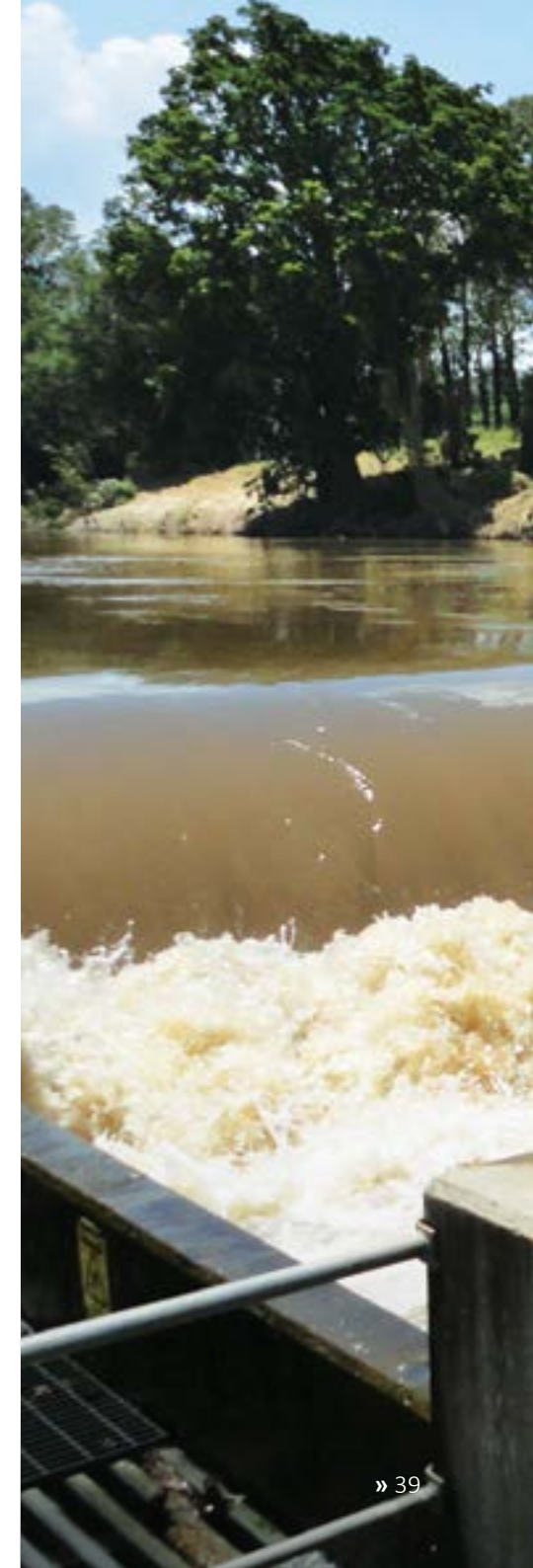
BENEFITS

The Wyaralong Water Treatment Plant will meet growing demand for potable water in Beaudesert and the South Logan area, reducing the draw from the Southern Regional Water Pipeline. Future capacity stages will meet increased local demands. The plant will draw on water supplied by the Wyaralong Dam, providing an additional source of water to the grid and increasing bulk water supply reliability in South East Queensland.

NEXT STEPS

Complete preliminary business case.

*Nominal cost in Australian dollars 2017, estimate provided by responsible agency.





ADDITIONAL SCHOOLING CAPACITY IN SOUTHERN SUNSHINE COAST

RESPONSIBLE AGENCY

Department of Education and Training

PROPOSAL STAGE OF DEVELOPMENT

Strategic business case underway

PLANNED STAGE END DATE

To be determined

ESTIMATED COST OF DELIVERY

To be determined*

BUILDING QUEENSLAND'S ROLE

Assisting with strategic business case



NEED

The southern region of the Sunshine Coast has a number of areas with significant new housing opportunities available for families of school-age children. This is placing pressure on adjacent local schools and driving a need for local education facilities in line with population growth.

Communities in the region are anticipated to have substantially larger populations over the next 30 years and a number of school sites have been identified and set aside.

PROPOSAL

Additional schooling capacity on a number of pre-identified sites is being explored.

BENEFITS

This proposal is expected to cater for the growing need for school capacity, reducing the need for students to travel further to attend existing catchment schools.

NEXT STEPS

Complete strategic business case.

ADDITIONAL SECONDARY SCHOOLING CAPACITY IN NORTHERN GOLD COAST

RESPONSIBLE AGENCY	PROPOSAL STAGE OF DEVELOPMENT	PLANNED STAGE END DATE	ESTIMATED COST OF DELIVERY	BUILDING QUEENSLAND'S ROLE
Department of Education and Training	Strategic business case underway	Q4 2017	To be determined*	Assisting with strategic business case



NEED

The northern region of the Gold Coast is one of the fastest growing areas in Australia. Located on the suburban fringe in South East Queensland, this is an area with significant new housing opportunities for families of school-age children. This is placing pressure on local schools, driving demand for local educational facilities.

PROPOSAL

The proposal is investigating additional secondary schooling capacity on a number of pre-identified sites.

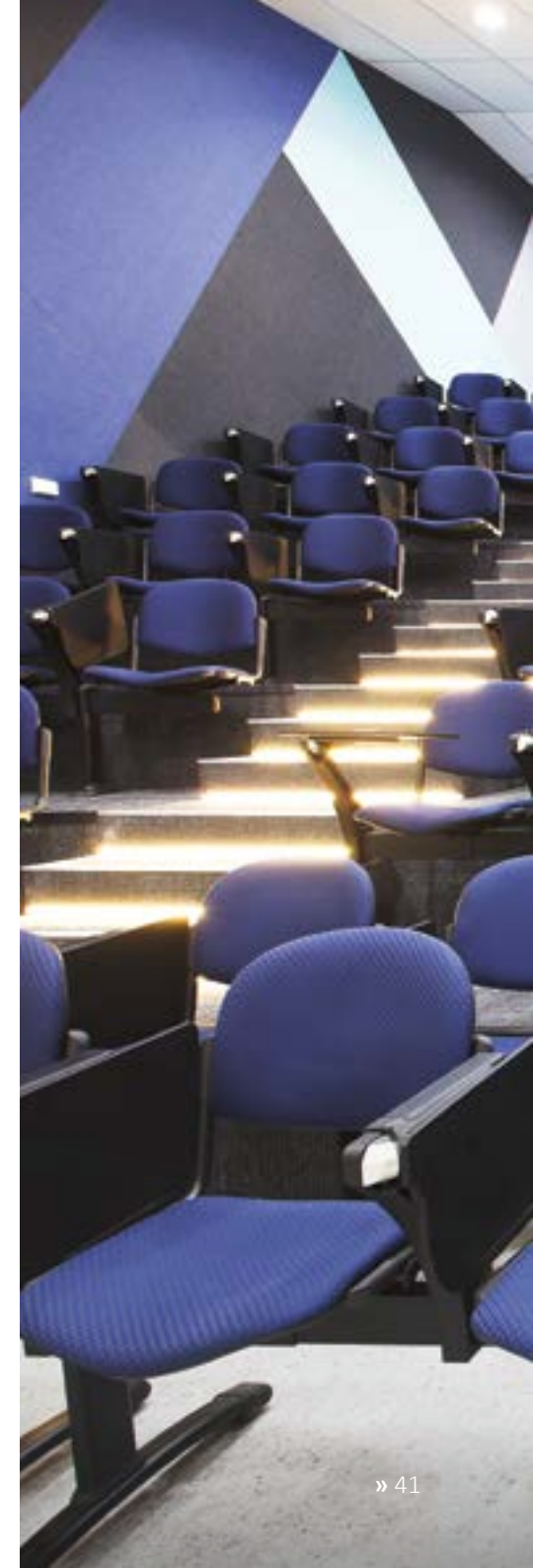
BENEFITS

The project is expected to cater for growing demand for school capacity, reducing the need for students to travel further to attend their local public school.

NEXT STEPS

Complete strategic business case.

*An estimate will be provided once the proposal has been developed further.





PRINCESS ALEXANDRA HOSPITAL REHABILITATION FACILITY

RESPONSIBLE AGENCY

Queensland Health, Metro South Hospital and Health Service

PROPOSAL STAGE OF DEVELOPMENT

Strategic business case underway

PLANNED STAGE END DATE

To be determined

ESTIMATED COST OF DELIVERY

To be determined

BUILDING QUEENSLAND'S ROLE

Assisting with strategic business case*



NEED

The need for an infrastructure upgrade has been identified to provide for statewide spinal cord and brain injury rehabilitation as well as general rehabilitation services for patients utilising the Metro South Hospital and Health Service. This includes development of health solutions that provide flexibility to respond to changing models of care and future capacity growth.

PROPOSAL

The proposal is investigating opportunities to provide spinal cord and brain injury rehabilitation services. Initial investigations have concluded that the current facilities are constrained, and replanning, taking into account the land use impacts from Cross River Rail, is required to create a fit-for-purpose environment to allow for the provision of patient-centred care.

The proposal is investigating opportunities to deliver a contemporary model of care that facilitates efficient and cost-effective service delivery.

Further development of the proposal will include precinct planning and the preparation of a project definition plan.

BENEFITS

The project is expected to:

- » provide more specialised beds and facilities for acute care within the main hospital
- » reduce in-hospital lengths of stay, hospital re-admissions and subsequent need for institutionalised care
- » reduce maintenance expenditure.

NEXT STEPS

Complete strategic business case.

SOMERSET DAM SAFETY UPGRADE

RESPONSIBLE AGENCY	PROPOSAL STAGE OF DEVELOPMENT	PLANNED STAGE END DATE	ESTIMATED COST OF DELIVERY	BUILDING QUEENSLAND'S ROLE
Seqwater	Strategic business case complete	Not applicable	To be determined*	Assisted with strategic business case



NEED

Somerset Dam, located on the Stanley River, is required to comply with the provisions of the Queensland Guidelines on Acceptable Flood Capacity for Water Dams. In order to comply with this guideline and all other dam safety standards, Somerset Dam requires an upgrade.

PROPOSAL

The proposal includes undertaking an options study to develop a short list of potential upgrade options prior to the selection of a preferred option for preliminary design. To inform the development of upgrade options, further geotechnical investigations are required for the dam foundation and its characterisation. Large-scale physical hydraulic modelling is also required to assess the hydraulic performance of both the existing dam and upgrade concept options.

Once a preferred upgrade option has been identified, preliminary design will be undertaken to develop construction cost estimates, a detailed project scope and program, and inform the business case necessary for project approval.

BENEFITS

The benefits of upgrading Somerset Dam include:

- » compliance with Queensland dam safety regulations and ANCOLD guidelines
- » reduction of societal risk of dam failure below limit of tolerability.

NEXT STEPS

Commence preliminary business case.

*An estimate will be provided once the proposal has been developed further.





Image courtesy of Plenary Schools

SECTOR OBSERVATIONS

Ensuring schools are delivered in high growth areas at the right time is a careful balancing act, particularly as land sales and housing developments are sensitive to market conditions. The Department of Education and Training is building on regional plans and local area school strategies to help identify areas where schools may be required, and carefully tracking enrolments and building approvals to ensure the planning and delivery of new schools occurs at the right pace. For schools likely to be required in the next few years, business cases are being developed where the delivery model includes creating packages of schools in a region to drive greater efficiencies. The Schools Package—Metropolitan and North Coast Regional Growth Corridors proposal listed in the preliminary business case stage in the pipeline is one of potentially several proposals from the department that bundles multiple schools in

one business case in preparation for potentially releasing a package to market.

Building Queensland is observing greater consideration of the wider system implications in the development of business cases, particularly from the justice and public safety sector. For example, individual corrections proposals are being considered as part of the wider correctional facility system in South Queensland, taking into account capacity requirements of remand and sentenced prisoners. Although complex, this analysis is important to ensure facilities are fit-for-purpose, full impacts of various options are considered and the operational expenditure informing the expected lifecycle costs are understood.

Water proposals continue to be a prominent feature in the pipeline representing the need to meet modern

standards and levels of service, and support economic development. A number of business cases in development leverage opportunities from the Australian Government’s National Water Infrastructure Development Fund. The fund helps implement the detailed planning necessary to build or augment existing water infrastructure in regional Queensland. Our involvement in business cases supported by the fund has been to investigate cost and demand for projects, including Nullinga Dam and Other Options, and the Lower Fitzroy River Infrastructure Project. Other water proposals, like the South West Pipeline—Bulk Water Connection to Beaudesert, are being driven by development and population growth (refer to case studies on pages 45 and 46).

CASE STUDY: NULLINGA DAM AND OTHER OPTIONS

In 2017, Building Queensland completed a preliminary business case for Nullinga Dam—a proposed dam on the Walsh River in the Atherton Tablelands. The preliminary business case investigated the potential for Nullinga Dam and other options to address the identified future water supply shortfall to service growing urban demand in Cairns and to stimulate irrigated agriculture in the region by supplementing existing supplies.

The potential for population increase stemming from the development of the proposed Aquis Resort was an initial driver of high water demand projections in Cairns. However, following an announcement in August 2016, the proposed Aquis Resort is expected to be a smaller tourism and real estate development, without a casino. This revision to the proposed resort changed the forecast population growth.

In undertaking the analysis, consistent with the directions set out in the State Infrastructure Plan, Building Queensland's approach was to consider non-build options as our starting position to ensure government investment is sustainable and better targeted. Hence, a range of options to provide opportunities for agricultural users while enhancing long-term water supply security were explored. These included non-asset based reform options to improve the rules and operations of the existing water supply scheme, smaller-scale investment in existing scheme infrastructure to improve efficiency of supply, and design and construction of a new bulk water storage.

Building Queensland recommended changes to bulk storage rules and operations, and improvements to existing infrastructure to produce new water allocations for irrigation use. Further investigation into the construction of Nullinga Dam should progress when a satisfactory level of certainty about demand for new water for agricultural use is met.

CASE STUDY: BEAUDESERT WATER SUPPLY

Water supply to Beaudesert is currently provided by the Beaudesert Water Treatment Plant. The plant is a stand-alone water supply that extracts raw water from the Logan River, which has variable water quality. It is not connected to the South East Queensland Water Grid and is not expected to meet levels of service into the future. The water treatment plant was refurbished in 2014 to increase its water treatment capacity to four megalitres per day.

The Beaudesert Water Supply proposal has developed further since the release of the June 2017 Infrastructure Pipeline Report. This proposal was originally listed as one project designed to address the water supply needs for the Beaudesert township and the Bromelton State Development Area. The preferred option was a pipeline connection to the water grid at Chambers Flat which would meet demand well into the future. Detailed analysis undertaken by Seqwater identified delivery and cost risks with this option. These risks were material enough to justify further consideration of options previously ruled out.

The preferred option is now an alternative pipeline route, via the site of a future Wyaralong Water Treatment Plant, in conjunction with bringing forward an initial stage of the future water treatment plant. Therefore, the water supply solution will be delivered as two separate projects.

Near-term water supply will be met through the South West Pipeline–Bulk Water Connection to Beaudesert. It will deliver a bulk water connection to Beaudesert from the existing Southern Regional Water Pipeline connection, providing additional capacity to supply the Beaudesert area. A detailed business case is being developed for this project and implementation is scheduled for 2019.

The timing of the second project, the Wyaralong Water Treatment Plant, will depend on future demand triggers driven by growth in the region. A preliminary business case is being developed; however, this project is not expected to be needed before 2022.

Collectively, the projects will provide:

- » supply to meet current and growing demand for water in Beaudesert and south Logan area
- » an additional source of water to the South East Water Grid, increasing bulk water supply reliability.







PART 2: PROGRESSING THE PRIORITIES



Since the release of our first Infrastructure Pipeline Report in June 2016, the Queensland Government's response to Building Queensland's recommendations has been positive. Projects have been removed from the infrastructure pipeline as they have received funding. To date, eight proposals recommended as priorities by Building Queensland as part of the infrastructure pipeline have received full or partial funding commitments from the state government. These projects are moving into the delivery stage (see Figure 3).

Figure 3. Pipeline proposals now funded by Queensland Government



CROSS RIVER RAIL

BUSINESS CASE
COMPLETE



PROCUREMENT
UNDERWAY



OPERATIONAL
2024

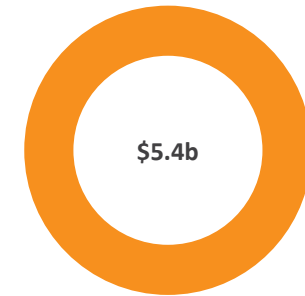


Delivery of new rail infrastructure to the inner city to release the capacity of the entire rail network, including:

- » new 10.2 kilometre rail line between Dutton Park and Bowen Hills
- » 5.9 kilometres of tunnel under the Brisbane River and the CBD
- » new, high-capacity stations at four inner-city locations
- » upgrades of Dutton Park and Exhibition stations.

KEY BENEFITS

- » Increase capacity
- » Reduce waiting times, crowding and travel times
- » Enable greater integration of bus and rail service
- » Support urban revitalisation in key inner city growth areas.



● Funded ● Unfunded



EUROPEAN TRAIN CONTROL SYSTEM (ETCS)—INNER CITY

BUSINESS CASE
COMPLETE



PROCUREMENT
UNDERWAY



OPERATIONAL
2023

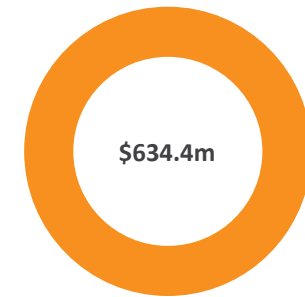


Implementation of a new signalling and control system to replace the legacy train protection system, including:

- » automatic train protection
- » replacement of line-side signals with in-cab displays
- » implementation of a new digital wireless communication network
- » implementation of a new traffic management system with automated route setting.

KEY BENEFITS

- » Increase capacity on South East Queensland rail network
- » Provide an added level of safety.



● Funded ● Unfunded



BURDEKIN FALLS DAM—SADDLE DAM & MONOLITH IMPROVEMENT PROJECT

BUSINESS CASE

TO BE COMPLETED 2018*



PROCUREMENT

2018*



OPERATIONAL

END OF 2020*



Improvement works to ensure the dam continues to meet current best practice standards, including:

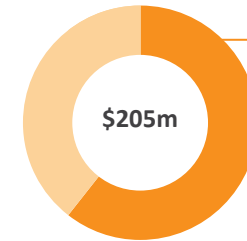
- » raising of the Left Bank and Mount Graham north and south saddle dams
- » strengthening of the main dam spillway and non-overflow monoliths by installing post-tensioned anchors
- » raising of the north abutment saddle dam.

While partial funding for project delivery has been announced, a detailed business case is currently being developed by Building Queensland, in partnership with SunWater, to ensure value for money is achieved.

KEY BENEFITS

- » Prevent overtopping of the saddle dams and enhance stability
- » Improve performance in extreme weather.

\$136m funded by state government**



**Consisting of \$100 million equity injection from Queensland Government as partial funding for the project and reinvestment of SunWater's 2016-17 dividend (estimated at \$36 million)

● Funded ● Unfunded

*Subject to further technical analysis



PACIFIC MOTORWAY—MUDGEERABA TO VARSITY LAKES

BUSINESS CASE

COMPLETE



PROCUREMENT

UNDERWAY



OPERATIONAL

EARLY 2020*



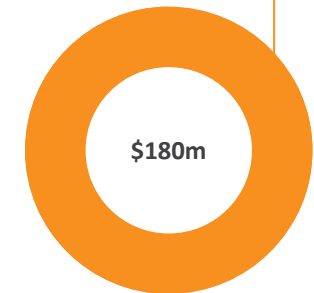
Upgrades to the Pacific Motorway to accommodate traffic volumes, including:

- » widening 5.7 kilometres of the Pacific Motorway (M1) to 3 lanes in each direction between Robina (Exit 82) and Varsity Lakes (Exit 85) and 4 lanes northbound between Robina (Exit 82) and Mudgeeraba (Exit 79)
- » lengthening of entry ramps and exit ramps at the Robina Interchange
- » reconstruction of the Mudgeeraba Creek and Mudgeeraba Creek overflow bridges on the northbound side
- » removal of the right turn movement from The Link Way off-ramp (Exit 80) to The Link Way northbound
- » enhancements to the Varsity Lakes interchange including combining the exit ramps to Stapley Drive and Reedy Creek Road and a new bridge for Stapley Drive.

KEY BENEFITS

- » Reduce the number and severity of motor vehicle incidents
- » Improve the capacity and efficiency of road freight
- » Improve travel time reliability.

\$70m funded by state government



● Funded ● Unfunded

*Subject to award of contract



LABORATORY INFORMATION SYSTEM

BUSINESS CASE
UNDERWAY



PROCUREMENT
LATE 2017/EARLY 2018*



OPERATIONAL
2020*



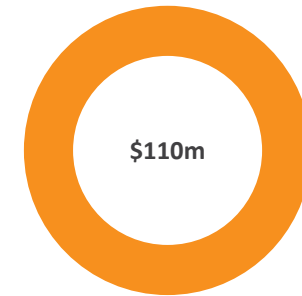
Implementation of modern, efficient and cost-effective pathology and forensic services for access by Queensland pathology services, doctors, hospitals and other medical service providers.

This new system includes:

- » modern efficient and cost-effective pathology and forensic services
- » more collaboration and cost-effective service provisions
- » better patient outcomes
- » greater innovation around 'in or near-home care'.

KEY BENEFITS

- » Make service provision more collaborative and cost effective
- » Deliver better patient outcomes
- » Deliver future innovation around 'in or near-home care'.



● Funded ● Unfunded

*Subject to internal approval processes



FINANCIAL SYSTEM RENEWAL

BUSINESS CASE
COMPLETE



PROCUREMENT
COMPLETE



OPERATIONAL
2018



Implementation of a modern financial management system. The new system will eliminate existing performance and stability issues, and enable Health and Hospital Services to effectively operate as independent statutory bodies. The new system will improve system integration, workflow, data quality, reporting capability and access to information.

KEY BENEFITS

- » Improve efficiencies, compliance and controls
- » Improve system integration, workflow, data quality, reporting capability and access to information.



● Funded ● Unfunded



PORT OF TOWNSVILLE—CHANNEL CAPACITY UPGRADE

BUSINESS CASE
COMPLETE*



PROCUREMENT
2018



OPERATIONAL
2023



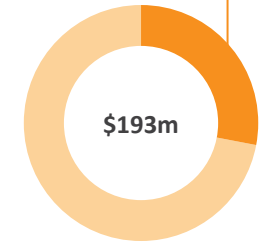
Enhancements to the shipping channels to accommodate larger ships, including:

- » widening of the Platypus Channel and the Sea Channel connection
- » construction of rock walls and revetments to form receiving ponds for the beneficial re-use of dredge material
- » establishing a quarry to supply marine-grade armour rock required for rock walls and revetments
- » installing navigational aids aligned with the new channel configuration.

KEY BENEFITS

- » Improve navigational safety of vessel movements
- » Enhance port capacity, including access of larger vessels.

\$75m funded as an equity commitment from the state government



Funded Unfunded

*Subject to final approval from shareholding Ministers



SMITHFIELD TRANSPORT CORRIDOR UPGRADE

BUSINESS CASE
COMPLETE



PROCUREMENT
UNDERWAY



OPERATIONAL
MID-2021

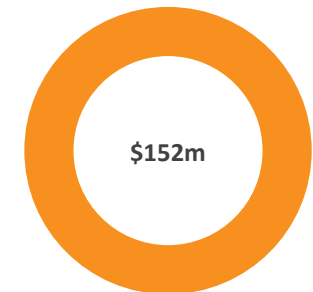


Construction of a new 3.8-kilometre road bypass between the Captain Cook Highway at Yorkeys Knob Road roundabout and McGregor Road roundabout, including:

- » upgrading of the existing Yorkeys Knob roundabout with a 4-legged signalised intersection
- » northbound left-off only exit ramp from the bypass route at Cattana Road
- » upgrading of the Cairns Western Arterial Road roundabout with a signalised double right turn from the Captain Cook Highway onto the Cairns Western Arterial Road
- » exit and entry ramp to the proposed future designated road at the northern end of the bypass route connecting to McGregor Road
- » 2-lane bi-directional overpass at McGregor Road roundabout
- » widening of the centre line treatment for improved safety
- » an off-road cycle path.

KEY BENEFITS

- » Improve travel times and reduce travel costs
- » Improve freight, high occupancy vehicles and tourism vehicle efficiency
- » Reduce number and severity of crashes.



Funded Unfunded



BUSINESS CASE DEVELOPMENT

Building Queensland's focus is on major infrastructure proposals with a minimum capital value of \$50 million. Under our Act, Building Queensland works with relevant Queensland Government departments, government-owned corporations and statutory authorities to lead the development of business cases with an estimated capital cost of delivery greater than \$100 million, and assist with those between \$50–\$100 million.

Infrastructure is tailored to cater for local demands, which in regional areas may not reach Building Queensland's \$50 million threshold. Proposals under \$50 million are considered by Queensland Government agencies or local governments, and Building Queensland's Business Case Development Framework provides a basis for conducting robust business case assessments for these projects.

The Infrastructure Pipeline Report presents one component of Building Queensland's work program. Since our establishment in December 2015, we have been involved in the development of over 55 infrastructure proposals—10 of which we have taken the lead in developing. Our involvement in developing the state's infrastructure proposals is not limited to unfunded infrastructure priorities that are considered as part of the updated Infrastructure Pipeline Reports. Building

Queensland is actively developing proposals where funding allocations have been made and subsequently these projects are not captured in the pipeline.

Although funded proposals are not in scope for inclusion in the pipeline, it is just as important that each has a robust business case. Building Queensland applies a consistent approach to the development of rigorous business cases, founded on a strong understanding of the service need to ultimately drive value for money outcomes. Current and planned business cases include major projects in regional Queensland such as the Burdekin Falls Dam—Saddle Dam & Monolith Improvement Project, Stanwell's Burdekin Falls Dam hydro-electric power station, Powerlink's Clean Energy Hub and several projects under the Bruce Highway Upgrade Program.



We are supporting a more sophisticated approach to business case development, operating with the view that business cases should be developed to confirm the best option for current and foreseeable needs. One of our greatest advantages is that we have a role at the beginning of infrastructure development—meaning we work constructively with agencies to lay a solid foundation for proposals well before the detailed business case stage. Facilitating investment logic mapping workshops, analysing service needs and developing options to meet those needs are just some of the actions we are undertaking to improve the foundations for good proposal development. This, coupled with the fact that Building Queensland is engaged in the development of major infrastructure

proposals across all sectors, means we are well placed to explore the broader context and ensure that a proposal considers how potential solutions fit within wider networks and systems. For example, in the education sector we are exploring infrastructure solutions that meet the needs of students and staff, but also considering the impacts on health, transport and land use planning.

All of Building Queensland's business cases are underpinned by our Business Case Development Framework—the goal being to drive improvements that increase the value of infrastructure to the people it serves. We do this by completing traditional cost benefit analysis as well as social impact evaluation. A traditional

benefit cost ratio (BCR) captures key metrics, such as revenue and cost. Benefits that are well understood, such as vehicle operating costs in the transport sector, have a clear methodology and are captured in a BCR. Building Queensland acknowledges that BCRs are indicators of the measured economic benefits and costs of proposed projects. Projects, however, also have broader social, environmental or economic impacts which may be difficult to monetise, so the social impact evaluation extends on the outcomes of the BCR. To address this, Building Queensland's business cases articulate other relevant quantitative and qualitative factors which are not incorporated in the standard BCR, for example social benefits.



Since December 2015, Building Queensland has been involved in more than

55 infrastructure proposals

and taken the lead in

10 of these proposals.



Queensland Public Safety Agencies (Image courtesy of Department of Science, Information Technology and Innovation)

Across government, Building Queensland is driving consideration of social impacts and capturing benefits in a systematic way. We have added social impact evaluation guidance to our Business Case Development Framework to ensure the benefits associated with social and economic infrastructure are at the forefront of decision-maker's minds. By helping agencies evaluate the benefits of projects more broadly, government is moving beyond the simple measurement of a BCR to inform the investment decision.

However, social impacts, such as avoiding serious injuries, are not as easily or consistently quantified—and may not be monetised in certain asset classes. In these scenarios, social impacts are qualitatively assessed. Building Queensland's Public Safety Regional Radio Communications Detailed Business Case considered exactly that—how much value should be placed on receiving a high-quality communications network for ambulance, police and fire and emergency services.

There are approximately 60,000 public safety officers operating in the Queensland Police Service, Queensland Ambulance Service and Queensland Fire and Emergency Services, collectively referred to as the Public Safety Agencies (PSAs). PSAs outside of South East Queensland currently rely on five separate ageing analogue networks and equipment. Operating and maintaining separate radio communication networks results in the duplication of infrastructure, the inefficient use of government resources and additional operational and maintenance costs. The Public Safety Regional Radio Communications project has the potential to deliver benefits to the wider community outside of those quantified in the economic analysis. This is likely to be in the form of improved response times, improved ability for agencies to respond in times of crisis such as natural disasters, the provision of more timely information to officers and enhanced safety for officers and the public. These benefits are real and should be considered as part of the decision-making process.

A number of Building Queensland's business cases involve the development of infrastructure in regional Queensland where the focus is on providing opportunities for regional employment, growth and development—rather than fixing an existing problem like congestion on roads. Our approach in developing proposals like these is not on building the infrastructure itself but achieving long-term sustainable regional development. For example, regional infrastructure projects may open opportunities for industry development such as agriculture—as has been the case in the development of the Lower Fitzroy River Infrastructure Project Detailed Business Case and the Nullinga Dam and Other Options Preliminary Business Case. As a large state with significant agricultural opportunities in regional areas, we need to analyse what infrastructure is needed where, and ensure infrastructure investments result in real improvements.



M1 Pacific Motorway—Eight Mile Plains to Daisy Hill





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