



BUSINESS CASE DEVELOPMENT FRAMEWORK

DETAILED BUSINESS CASE

TEMPLATE AND GUIDE

APRIL 2016 | RELEASE 1

BUILDING QUEENSLAND BUSINESS CASE DEVELOPMENT FRAMEWORK

This document forms part of the Building Queensland Business Case Development Framework, as follows:

GUIDANCE MATERIAL	SUPPLEMENTARY GUIDANCE MATERIAL
Strategic Business Case	Cost Benefit Analysis
Preliminary Business Case	Social Impact Evaluation
■ Detailed Business Case	

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1. INTRODUCTION

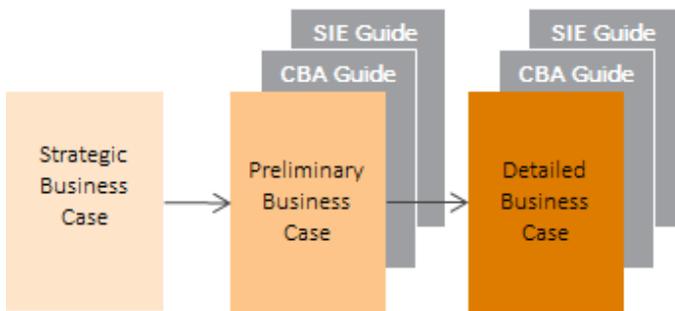
Building Queensland has been established under the *Building Queensland Act 2015* to provide independent expert advice to the Queensland Government about infrastructure. The preparation of business cases for infrastructure proposals over \$100 million (or the equivalent net present value of financial commitments by the state) will be led by Building Queensland. Building Queensland will also assist in the preparation of business cases with an estimated capital cost of \$50 million to \$100 million.

Building Queensland’s Business Case Development Framework (BCDF) addresses the requirements of the *Building Queensland Act 2015* and enhances the way in which infrastructure proposals are assessed in Queensland. The BCDF includes the following documents:

- Strategic Business Case (SBC)
- Preliminary Business Case (PBC)
- Detailed Business Case (DBC).

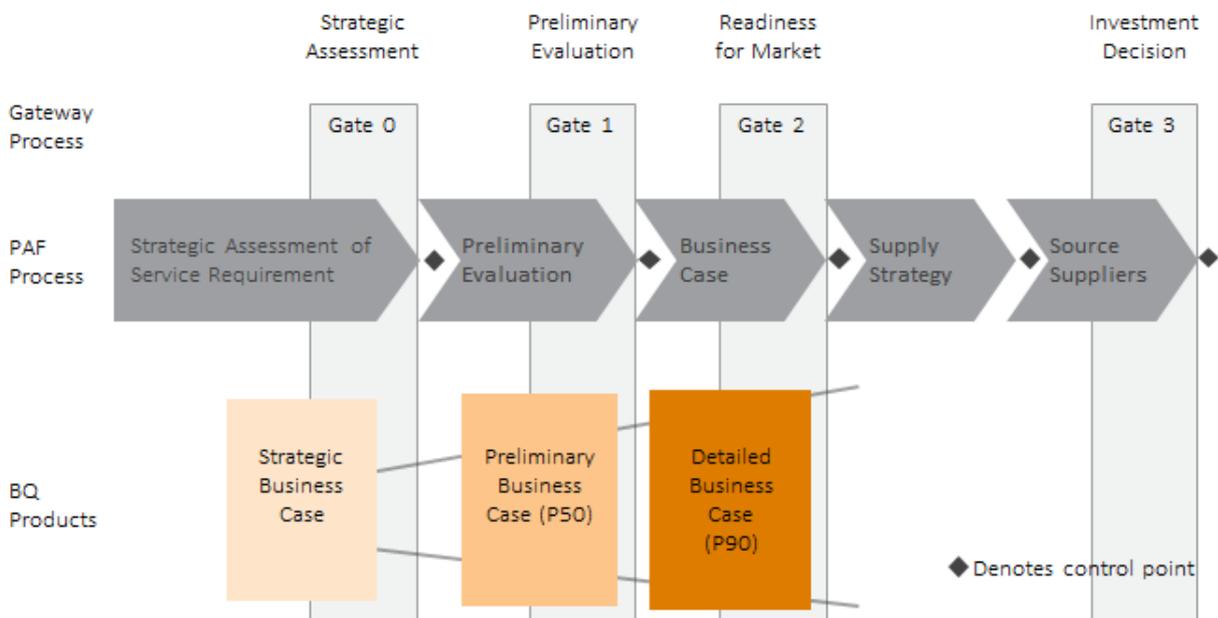
The BCDF is also supported by the Cost Benefit Analysis (CBA) Guide and Social Impact Evaluation (SIE) Guide. The relationship between the BCDF documents is illustrated in Figure 1.

Figure 1: Interaction between the BCDF Documents



The foundation for the BCDF is the Queensland Government’s Project Assessment Framework (PAF). The BCDF supplements the PAF by providing guidance on how to undertake an assessment using industry best practice. The alignment between the BCDF and the PAF is illustrated in Figure 2.

Figure 2: Alignment of the BQ Process with the PAF





The DBC aims to help agencies choose the best means to satisfy a specified service need or problem. It also supports government resource allocation decisions or agency internal funding decisions. The governing principle for developing the DBC is to provide maximum transparency to all stakeholders. This is achieved by including all relevant factors and issues to support decision-making and demonstrate an agency's capacity to implement the project and realise the intended service delivery benefits.

When compared with the PBC, the DBC requires the case for investment to be revisited, updated and expanded. A greater level of analysis and detail is required in the DBC to demonstrate value for money and to consider whether the agency has the capability and capacity to implement all the components of the project. The DBC is a comprehensive document with full and complete descriptions of all elements.

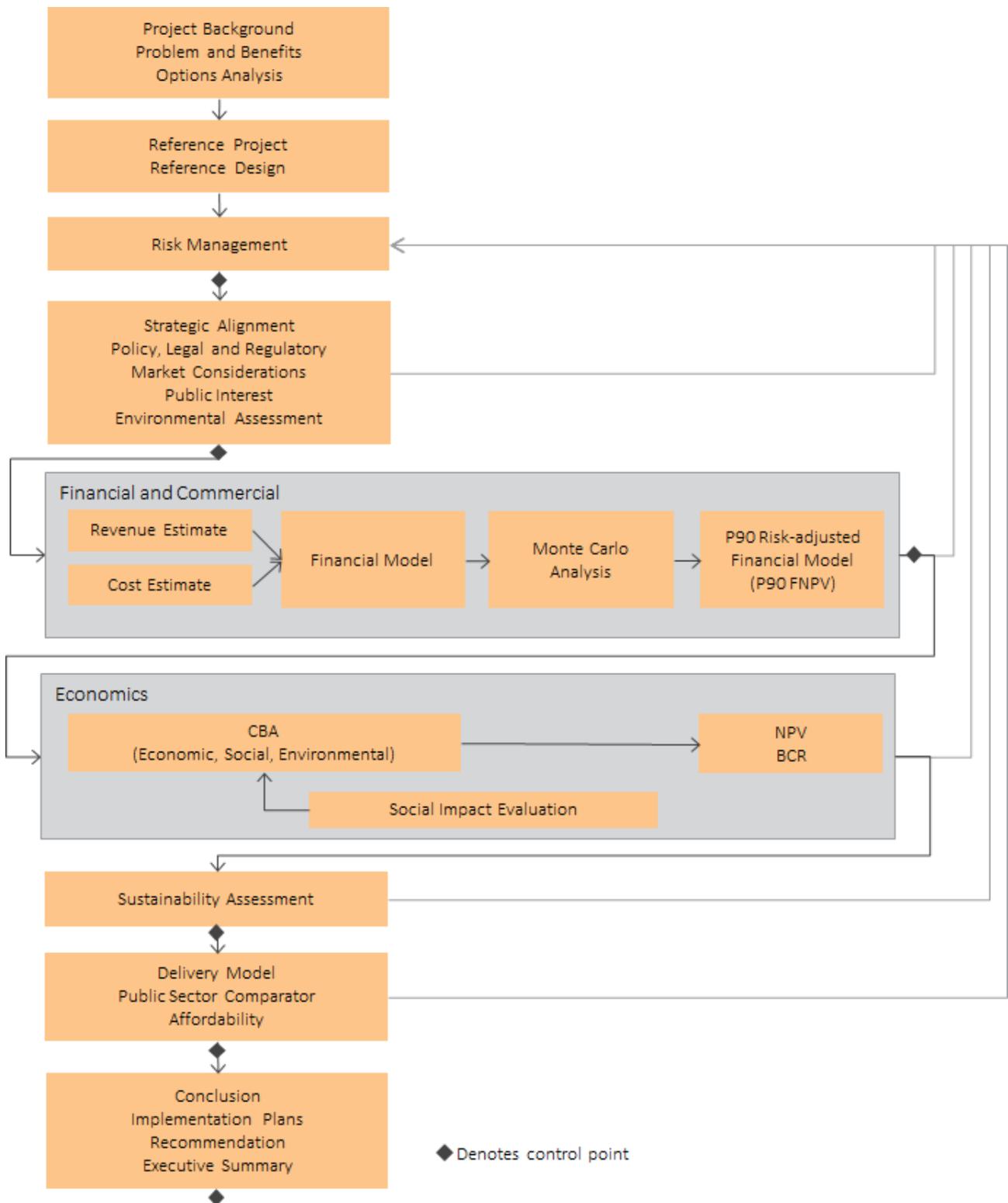
1.1. Purpose of this Document

This guide follows a suggested format for a DBC and provides details of the work required to successfully complete a DBC within the Building Queensland BCDF. The DBC builds on the work from the PBC focusing on the Reference Project and providing comprehensive assessments at a P90 level. Sections within the DBC link to others as illustrated in Figure 3.

Where the PBC recommended delivery of the project as a Public Private Partnership (PPP), the business case must be prepared according to the National PPP Guidelines and Queensland PPP supporting guidelines. In this circumstance, the DBC Template and Guidance may still provide a useful basis for the development of the business case, as a similar structure would apply.



Figure 3: Development of the Detailed Business Case





2. EXECUTIVE SUMMARY

An executive summary provides an overview of the detailed analysis undertaken and the key recommendations. It should be a summary of all material aspects of the DBC and the recommendations. At a minimum this will include:

- summary of service need/problem statement and the outcome/s sought
- summary of the scope of the Reference Project
- summary of all detailed assessments and analysis (i.e. strategic, risk, cost, economic, environmental, social, sustainability, funding, financial, delivery and affordability)
- recommendations for decision-makers.

3. GOVERNANCE

This section outlines the governance arrangements for the project.

3.1. Project Owner

Outline the project owner including a project team structure. Also outline roles within the team structure.

3.2. Steering Committee

Outline the Project Steering Committee Terms of Reference and membership.

3.3. Building Queensland

Outline the role of Building Queensland and the Building Queensland Board. Refer to the Building Queensland 'Engaging with Building Queensland' documents for further guidance on collaborative governance arrangements.

4. PROJECT BACKGROUND

This section captures the project's history by providing an outline of:

- when the problem (or opportunity) was first identified
- when a project was selected for consideration
- the location of the project
- the scope and depth of all previous investigations and studies
- a summary of prior decisions.

Include relevant maps and supporting graphics.

4.1. Outcomes of the Preliminary Business Case

Summarise the findings from the PBC and any other relevant planning and feasibility studies. Important past milestones should be highlighted. Also provide a high level summary of any context or information that has altered since the PBC was completed.



5. PROBLEM AND BENEFITS

The purpose of this section is to clearly identify and articulate the problem (or opportunity) to be addressed within the scope of the DBC and the benefits that will be realised if a strategic intervention (business change or investment) is implemented. This section should be sufficiently robust to convey to decision-makers the level of detail and planning undertaken to support the identification of the Reference Project.

5.1. Approach

The analysis included in this section should have been completed as part of the preparation of the PBC and SBC. If a PBC was completed using the Building Queensland PBC template and guide, it is recommended that this work be reviewed and updated (particularly if a significant period of time has elapsed since the PBC was prepared). The results of this review and update should be included in this section.

If a PBC was not prepared using the Building Queensland template and guide, it is recommended that the analysis required by the PBC be undertaken and the results presented in this section. Any relevant planning work or feasibility studies that have previously been undertaken should be used as an input into this analysis.

6. OPTIONS ANALYSIS

This section summarises the outcomes from the PBC:

- a summary of the shortlisting process to identify the potential options to address the identified service need or problem
- a detailed analysis of the shortlisted options describing their impacts (both positive and negative) and each option's likelihood to respond to the problem and achieve the benefits sought
- details of additional options or comment about discarded options previously considered arising from the review.

This is a critical section of the DBC as it provides transparency and confidence that the recommended option (Reference Project) will deliver the benefits sought.

6.1. Revisit Options

To revisit the options in this section:

- describe the long list of options considered in the PBC
- describe the approach followed in the PBC to filter and shortlist project options (i.e. to identify the options most likely to deliver the outcomes sought that represented best value for money, at that point in time)
- consider whether shortlisted project options identified in the PBC need to be deleted, modified or added to
- report any changes to the shortlisted project options and the justification for the change
- where there are changes to the shortlisted options, or where there has been a lag or delay between project phases, repeat the multi-criteria assessment that was performed in the PBC to select a Reference Project
- present the results of the re-assessment of shortlisted project options.

It is recommended that the key metrics that formed the output of the PBC be restated here (example in Table 1). Any changes since the PBC should be clearly identified and explained.



Table 1: Example Option Assessment Summary

OPTION ASSESSMENT	OPTION 1	OPTION 2	OPTION 3
Strategic Appraisal			
Alignment to objectives (state, community, agency, project including the State Infrastructure Plan (SIP))	Low	Medium	Medium
Established project need/benefits sought	Low	Low	Medium
Option aligns with SIP priorities (Reform, Better Use, Improve Existing, New)	Medium	Low	High
Economic and Financial Appraisal			
Benefit Cost Ratio (BCR)	n/a	1.1	1.2
Net Present Value (NPV)	n/a	\$60M	\$100M
Social and Environmental Appraisal			
Social Impacts	Negative (Medium)	Negative (Medium)	Positive (Low)
Environmental Impacts	Negative (Low)	Negative (Low)	Negative (Low)
Deliverability Appraisal			
Risk	Medium	High	Medium
Financial NPV (FNPV) – P50	n/a	\$70M	\$120M
Potential for VfM from PPP delivery	n/a	n/a	Low
Ranking	4	3	1

6.2. Recommended Option (Reference Project)

The recommendation should be presented and clearly state why the Queensland Government will deliver the greatest benefit to the community by focusing its investment on an option. The rationale for the recommendation is based on the analysis undertaken during the PBC and updated in the DBC.

Further analysis is not required here, only the reason why an option is preferable over the others. It is important to be as descriptive as possible so that an informed decision can be made.

7. REFERENCE PROJECT

This section provides clear details of:

- what the Reference Project will accomplish (i.e. objective/s)
- what the project will and will not include (i.e. scope)
- the expected results (i.e. outcomes)
- the key parties (i.e. stakeholders).

The description should also provide an explanation of how the Reference Project will address the problems or opportunities identified in Section 5. The impacts of the preferred option and criteria for success (Sections 24.3 and 24.4 of the PBC) should also be summarised and included here.

7.1. Objectives, Outcomes and Benefits

Include a summary of the project objectives, outcomes and expected benefits.



7.2. Scope

Include a summary of the project including key technical features (e.g. design, geotech), functionality, operations and services.

7.3. Construction

Include an outline of the proposed project program (including critical path, early work, commissioning and overall project duration).

7.4. Implications of Not Proceeding

Include a description of the key impacts if the project does not proceed, including impacts on stakeholders.

8. RISK MANAGEMENT

Risk is an inherent part of any project. The purpose of this section is to establish the risk environment for the project including the criteria for undertaking risk assessments. This provides the framework for the identification and assessment of project and ongoing risks that might create, enhance, prevent, degrade, accelerate or delay the achievement of the objectives and outcomes associated with the Reference Project.

Risk assessments are undertaken across all aspects of the project in the development of the DBC including:

- Project governance and background (Sections 3, 4, 5, 6, and 7)
- Context (Sections 10 to 14)
- Financial, commercial, social impact, economic and sustainability analyses (Sections 16, 18, 19 and 20)
- Deliverability analysis, public sector comparator and affordability analysis (Sections 22 to 24).

The PAF requires a risk assessment to be conducted and a project risk register to be developed. Refer to the organisation's risk management policy and the Australian Standard (AS NZS ISO 31000: 2009 Risk Management—principles and guidelines) for guidance on conducting a risk assessment. The PAF and National Public Private Partnerships (PPP) policy (if applicable) also provide guidance on risk assessments.

Quantitative risk assessment is a mandatory part of the development of the DBC to enable risk to be quantified and applied to costed items to support the Financial and Commercial Analysis (Section 16). Risk assessment will also identify and, where possible, quantify risks associated with the Reference Project.

Quantitative risk assessments are used to:

- adjust cost and revenue estimates
- adjust wider economic benefits and costs
- inform the risk management strategy for project implementation.

Risk assessment will also include a risk allocation to the party (public or private) best placed to manage the risk (Section 8.5.1).



8.1. Risk Approach

Describe the approach used for the risk assessment. The process for risk assessment should involve:

1. Establish the Risk Criteria (Section 8.2)—defining the terms for likelihood and consequence and their timeframes, risk tolerance and how the level of risk is to be determined.
2. Identification (Section 8.3)—identifying and documenting risks to which the project could be exposed, ensuring a wide range of risks are considered (e.g. political risks and compliance with legislation).
3. Analysis (Section 8.4)—conducting assessments of the materiality of the risks and the likelihood and consequences of the risks occurring with involvement of stakeholders.
4. Evaluation (Section 8.5)—comparing the level of risk found during the analysis process with risk criteria established in step 1.
5. Treatment (Section 8.6)—developing risk management strategies and contingency planning approaches to mitigate the risks.

Throughout the development of the DBC it will be necessary to regularly revisit Sections 8.3 to 8.6 and update the risk register to ensure up-to-date information is available for other assessments e.g. quantified risks identified in the assessment of financial costs and revenues (Section 16.2) will have implications for project cash flows.

8.2. Risk Criteria

If not previously established, the risk criteria should be established for the project. They should reflect the context and scope of the project and the risk appetite as a result, the categorisation of likelihood and consequences may vary from project to project. Any project risk criteria should be consistent with the organisation's risk management policy. Typical risk assessment ratings are outlined in Table 2.

Table 2: Example Risk Likelihood Ratings

RISK LIKELIHOOD RATING		
Level	Descriptor	Description
5	Almost Certain	Occurs in most circumstances or the issue is expected to occur very frequently (e.g. at least once in every 3 months).
4	Likely	Likely to occur or the event is expected to occur regularly (e.g. at least once in every 12 months).
3	Possible	Might occur or the event is expected to occur occasionally (e.g. at least once in every 1 to 5 years).
2	Unlikely	Could occur but unlikely or is expected less frequently (e.g. at least once in every 5 to 25 years).
1	Rare	Occurs only in exceptional circumstances or is expected to occur infrequently (e.g. once in 25+ years).

In assessing likelihood, a probability distribution must be defined to allow for Monte Carlo analysis required in Section 16.5.

Definitions for ratings of consequence may also vary between projects and organisations. Criteria should reflect the organisation's values, objectives and resources and may be imposed by, or derived from, legal, regulatory and other requirements. An example of consequence ratings is provided in Table 3.



Table 3: Example Risk Consequences Ratings

RISK CONSEQUENCE RATING							
Level	Descriptor	Financial	Strategic	Environment	Delivery	Social	Safety
5	Severe	>\$Z	Fails to align with strategic context	Long-term (5–10yrs) environmental harm	Delay in delivery >12months	Irreversible changes to social characteristics or values	1 or more fatalities
4	Major	\$Y to \$Z	Some elements conflict with strategic context	Significant environmental harm (1–5yrs) and costly restoration	Delay in delivery 6–12 months	Long term recoverable changes to social characteristics or values	Extensive serious or permanent injuries or disabilities
3	Moderate	\$X to \$Y	Some elements do not align to strategic context	Significant release of pollutants with mid-term recovery (<1yr)	Delay in delivery 3–6 months	Medium term recoverable changes to social characteristics or values	Individual major injury requiring hospital attendance
2	Minor	\$W to \$X	Minor misalignment to strategic context	Limited impact which is fully recoverable	Delay in delivery 1–2 months	Short term recoverable changes to social characteristics or values	Minor injury—medical treatment
1	Insignificant	< \$W	Aligned to strategic context	Minor transient environmental harm	Delay in delivery <1month	Local small scale impact of social characteristics or values	Minor injury—first aid treatment

Other categories may include reputation, compliance, resources, performance, demand, service interruption etc.

The risk matrix is then developed with consideration of the established risk appetite and scope of the project. An example is provided in Table 4.

The risk criteria and matrix should be approved by the Project Steering Committee prior to risk assessments being undertaken.

Table 4: Example Risk Matrix

		RISK MATRIX				
		Consequence				
		Insignificant	Minor	Moderate	Major	Severe
Likelihood	Almost certain	Medium				High
	Likely					
	Possible					
	Unlikely					
	Rare	Low				



8.3. Risk Identification

As noted in Section 8, risk assessment is undertaken across a broad range of activities in the development of the DBC. Risk identification involves determining what, why, where, when and how events could prevent, degrade, delay or enhance the project outcome. Risks include (but are not limited to) the risk types shown in Table 5. These risks include:

- Project risk—all risks associated with the design, procurement, construction, and commissioning of the asset.
- Ongoing risks—all operating risks associated with the operation of the asset from commissioning to maintenance to end of life.

A range of techniques may be used to identify risks. These techniques (e.g. structured review meetings, risk interviews and risk workshops) can be applied to any project. However, for significant projects or projects considered to be high risk, risk identification with stakeholder and subject matter experts through a workshop should be undertaken. This will help capture all risks identified during the development of the DBC.

Table 5: Example Risk Categories

IDENTIFYING RISK	
Project Risk	Ongoing Risks
<ul style="list-style-type: none"> ▪ price risk—the price and or quantity of inputs required ▪ schedule/program risk ▪ contractual and legal risk ▪ health and safety risk ▪ political risk ▪ environmental risk ▪ approval risk ▪ community and stakeholder risk ▪ design and other technical risk ▪ legislative and regulatory risk ▪ project finance risk—funds not available ▪ market risk—insufficient skilled suppliers. 	<ul style="list-style-type: none"> ▪ technology and obsolescence risk ▪ demand risk ▪ commissioning risk ▪ operating risks including maintenance ▪ legislative change ▪ health and safety risk ▪ approval risks ▪ performance and availability risk ▪ community and stakeholder risk ▪ political risk.

8.4. Risk Analysis

Once identified, risks are analysed. Risk analysis involves developing an understanding of the risk; causes and sources of risk, their positive and negative consequences, and the likelihood that those consequences will occur. Risks are analysed and rated according to the criteria established in Section 8.2 and documented in the risk register. Effective risk analysis will also include consideration of potential interdependencies between key risks.

Risk analysis techniques range from assessments based on experience with similar projects to computer based simulations. The approach adopted for a particular risk will depend on the significance and complexity of the shortlisted option and the relative impact of the risk. At the DBC stage, risk analysis will typically involve a detailed assessment that is reviewed and confirmed through a risk workshop.



8.4.1. Quantitative Risk Assessment

Describe the process used to identify and quantify the risks.

Quantification of risk involves assessing the likelihood of the risk occurring and the associated financial consequences. The likelihood and consequence of risks will vary according to the delivery models considered (Section 22). Quantification comprises the product of:

- the likelihood (probability) of costs, revenues and benefits being different from the expected values
- the consequences (i.e. the difference between the actual and expected values).

8.4.2. Qualitative Risk Assessment

Qualitative risk assessment involves determining, for each identified risk:

- the triggers of risk; their impacts; the likelihood of those impacts occurring
- the consequences of the risk.

The combination of the likelihood of risks occurring and their consequences determines the materiality of the risk, and hence the level of risk analysis undertaken, including the need for mitigating strategies¹.

8.4.3. Calculate the Risk Rating

The risk rating is the combination of the likelihood of the risk occurring and the size of the consequence of the risk event. The risk rating can either be 'low', 'medium', or 'high'. The risk rating affects how the risk will be treated as well as any requirement for reporting or escalation.

Details of risks should be included in a risk register. An example risk register is provided in Table 6.

The risk register will also include other details such as the date the risk was identified, who identified the risk, due dates for implementing mitigation strategies, the residual risk rating, and who is responsible for the mitigation.

8.5. Evaluate the Risk

The purpose of risk evaluation is to assist in making decisions, based on the outcomes of risk analysis, about which risks need treatment and the priority for treatment implementation. Risk evaluation involves comparing the level of risk found during the analysis process with risk criteria (Section 8.2). Based on this comparison, the need for treatment can be considered.

¹ Project Assessment Framework (2015)



Table 6: Example Risk Register

RISK REGISTER							
Risk Category	Risk Description	Trigger	Impact	Likelihood	Consequence of risk	Risk Rating	Mitigation Strategy
	There is a risk that caused by resulting in ..				
Delivery	There is a risk that construction is delayed	caused by extended periods of rain	resulting in an extended construction period which may impact on ...	Likely	Major	High	Ensure that the project schedule includes sufficient float to account for potential weather delay
Demand	There is a risk that local growth strategies may change under the newly elected local council	caused by new local councillors having a stronger preference for urban containment	resulting in lower traffic volumes and toll revenue	Possible	Moderate	Medium	Agency to keep in close and regular contact with council

Etc.

8.5.1. Risk Allocation

Consideration of whether the public or private sector is responsible for, and who is best able to manage, the risk is critical. Traditional or PPP delivery should also be considered during both the qualitative and quantitative risk workshops. This is an important step in the risk analysis as it determines how the quantified risk values are applied to develop the risk adjusted project cost.

Where a PPP is proposed and a value for money assessment is to be undertaken, the risk allocation analysis is used to determine which risks will be retained by the state or transferred to the private sector under a PPP arrangement. A percentage allocation is assigned to the public and private sector for each risk and is included in the risk register. This allocation is revisited and refined through the risk analysis process.

An assessment of whether the public or private sector is best placed to manage these risks is also required by the National PPP policy and the Queensland supporting PPP guidelines. Allocation of risk should be summarised in a table that clearly identifies the risks retained by government or transferred to the private sector (Table 7).

Benchmarking of the risk allocation should be undertaken against other precedent and similar projects (if available) to determine if the proposed risk allocation is broadly consistent. Benchmarking assists in providing further confidence to decision-makers that costs are realistic and not overly impacted by bias.



Table 7: Template Risk Allocation Summary

RISK ALLOCATION		
Item	Total Risk (nominal \$ million)	Total Risk as % of Raw Capex (%)
P90 Construction Risk		
Retained		
Transferred		
Total		
P90 Operation Risk		
Retained		
Transferred		
Total		

8.5.2. Risk Reviews

To support successful project outcomes, an independent peer review of the risk assessment should be undertaken for the Reference Project to evaluate the soundness and appropriateness of the approach and results.

A summary should include a declaration of interest or conflict of interests of the independent peer reviewer and findings in particular areas including, but not limited to, adequacy of documentation, methodology, assumptions, and results.

8.6. Risk Treatment

Risk treatment involves selecting one or more strategies for modifying risks, and implementing those strategies. Once implemented, treatments provide or modify the controls. Selecting the most appropriate risk treatment involves balancing the costs and efforts of implementation against the benefits derived, with regard to legal, regulatory, and other requirements such as social responsibility and the protection of the natural environment. Any costs involved in the treatment of risk should be reflected in the financial cash flow estimates.



9. CONTROL POINT 1

Control Point 1 has now been reached. Before progressing with the DBC, complete the following checklist. If an item has not been completed an explanation should be included in the checklist.

CONTROL POINT 1				
#	Have the following tasks been completed?	Section	Yes	No
1	Review the Preliminary Business Case (PBC) and/or other previous bodies of work.	s4		
2	Identify the problem (or opportunity) and benefits sought.	s5		
3	Review and reconfirm the options analysis and selection of the preferred option undertaken in the PBC.	s6		
4	Define the Reference Project and determine its objectives, scope, outcomes and expected benefits.	s7		
5	Assess risks associated with Sections 3, 4, 5, 6 and 7.	s8		
#	Have the following outputs been produced?	Section	Yes	No
1	A summary of the project's history including: <ul style="list-style-type: none"> ▪ when the problem (or opportunity) was first identified ▪ when a 'project' was selected for consideration ▪ the scope and depth of all previous investigations/studies ▪ prior decisions ▪ relevant location maps and supporting graphics ▪ the outcomes of the PBC and/or other bodies of work ▪ any context or information altered since the PBC was prepared. 	s4		
2	A clear description of the problem (or opportunity) and benefits sought (including noting any changes since the PBC).	s5		
3	A project options summary including: <ul style="list-style-type: none"> ▪ summary of the options long list and shortlisting process from the PBC ▪ documentation and explanation of any additional options considered and/or discarded previously considered options ▪ the results of the re-assessment of shortlisted project options ▪ a description of the outcomes expected from shortlisted options, including the likelihood of achieving the outcomes. 	s6		
4	A recommended Reference Project for further analysis accompanied by a: <ul style="list-style-type: none"> ▪ summary of project objectives, outcomes and expected benefit ▪ summary of stakeholders ▪ description of the project scope ▪ proposed project program outline ▪ description of the implications of not proceeding. 	s7		
5	Documented risk criteria and risk matrix (approved)	s8.2		
6	Established risk register with risk assessment included for Sections 3, 4, 5, 6 and 7.	s8.4		



10. STRATEGIC CONSIDERATIONS

This section documents any relevant strategic considerations including strategic alignment to government programs and strategies and any agency or government policy considerations which may impact the Reference Project.

10.1. Strategic Alignment

In this section document how the Reference Project will fit with, or contribute to, the strategic objectives of the agency, government and relevant national objectives and programs (where appropriate). The description of the strategic alignment should include how the project will align (or not align) and its potential contribution to that strategy, program or plan. Consideration should also be made of the fiscal environment and industry context.

10.2. Policy Issues

The approach to assessing policy consideration impacts includes:

- describing the impact, if any, of the Reference Project on existing policies and standards (or vice versa) within government, agencies and relevant stakeholder environments
- describing any limitations imposed by the policies and standards and the known effect on the Reference Project, such as any impact to Reference Project benefits.

The identified impacts and limitations should be further characterised as either an advantage or a disadvantage. Any additional costs incurred to address specific policy or standard requirements should be shown in the DBC costing summary (Section 16).

11. LEGAL AND REGULATORY CONSIDERATIONS

This section identifies the legal and regulatory considerations and the potential impact of these considerations on the Reference Project.

11.1. Legislative Issues

Identify any specific requirements or legislative issues (both existing and foreshadowed) relevant to the Reference Project or its ongoing operation that may prevent, impede or have a significant impact. This may include items such as state and federal government agreements, and planning, approvals, environmental, native title or cultural heritage considerations. The impacts of such issues should be reflected in the environmental assessment, social impact evaluation, the risk assessment and, if required, in the project cost estimates.

Where new legislation is proposed, a Regulatory Impact Statement (RIS) is required and should be included as an appendix of the DBC.

11.2. Regulatory Issues

Identify any regulatory considerations that may prevent, impede or have a significant impact on the Reference Project. Issues may include consideration of guidelines and existing or anticipated directives issued by a Regulator (e.g. Guidelines on Acceptable Flood Capacity for Dams issued by the Chief Executive of the Department of Energy and Water Supply in relation to dam safety). Other considerations may include matters that influence competition or jurisdictional responsibilities.



The impacts of such issues should be reflected in the environmental assessment, social impact evaluation, the risk assessment and, if required, in the project cost estimates.

11.3. Approvals

Identify any approval processes which may impact the Reference Project, noting any timing considerations or potential impediments to approvals.

An approval matrix (Table 8) should be included to provide a summary of the permits, approvals or licenses that may be triggered during the project along with a description, timing and the responsible authority for each.

Table 8: Example Approvals Matrix

APPROVALS MATRIX				
Approval	Type	Description	Timing	Responsible Authority
Approval 1	Permit			
Approval 2	License			
Approval ...				

As legislation and policy requirements will be revised after completion of the DBC, determining the actual suite of approvals permits and licences will require further revision of the approvals matrix as the project progresses through later delivery stages.

The impacts of such issues should be reflected in the social impact evaluation, the environmental assessment, the risk assessment and, if required, in the project cost estimates.

11.4. Other Legal Matters

Identify any other legal matters which may influence the Reference Project, for example:

- standing agreements and existing contracts that may require renegotiation or payment of compensation or restrict actions of the government or agency (e.g. competitive dealings)
- agreements or contracts in the process of being finalised or renegotiated
- contractual disputes
- claims by third parties including native title and cultural heritage
- court decisions that may impact the legislative powers of government
- legal or contractual issues associated with the proposed delivery model recommended.

The impacts of such issues should be reflected in the environmental assessment, the social impact evaluation, the risk assessment and, if required, in the project cost estimates.



12. MARKET CONSIDERATIONS

This section describes the key market considerations and assumptions relating to the Reference Project. It supports decision-making and developing a procurement strategy as well as identifying opportunities and risks related to the procurement.

As the level of private sector involvement varies considerably between projects, information should be sought from the private sector concerning the Reference Project. Information may include:

- market information regarding the bid depth, market risk appetite, availability of contractors and any other major projects in the pipeline
- potential delivery models and issues concerning the project from an industry perspective
- project feasibility, appetite/attractiveness, risk sharing, bankability and demands on industry at the likely time of going to market
- feedback on matters such as project scope and specification using the shortlisted options, and any opportunities for design and construction innovation.

Subject to the type of project, market sounding may need to take place prior to design of the Reference Project. Information provided by the market should be critically evaluated, in particular where there is different and inconsistent market feedback and responses.

Where the Reference Project is highly sensitive to assumptions about the attractiveness and likely involvement of the private sector and the terms on which that involvement might occur, those assumptions need to be validated through market sounding. Market sounding can also be used to gain feedback on ways of presenting the project to the market to increase its attractiveness and to reduce obstacles to involvement.

Market sounding during the development of the DBC will build upon and provide more detail than work undertaken during the development of the PBC as well as identifying if any changes in the market since the PBC was completed could impact the Reference Project.

12.1. Market Sounding Objectives

Document the objectives of undertaking market sounding for the Reference Project.

12.2. Market Sounding Approach

Document the market sounding approach including the rationale for the approach adopted, details on which companies or industry bodies are to be approached and why, along with key areas where market feedback is being sought.

For the DBC this may involve more detailed desktop market sounding of trends and issues including formal requests for information. In some cases this will involve conducting formal market sounding processes using a structured engagement with industry. As market sounding should focus on the private sector as a whole rather than on any individual company, in a structured engagement careful consideration is required regarding which companies and industry groups will be approached.

Planning and structuring the engagement is important to minimise risks of providing information to companies which may give them an unfair advantage during any future procurement processes. A clear probity protocol is also required to assist in managing such risks. Probity protocols should not prevent discussions with the market, but they should ensure that care is exercised so that no company has, or is perceived to have, received information that provides them with an unfair advantage in a subsequent procurement process.



12.3. Market Feedback (if required)

Where a structured formal engagement process is undertaken, document the market feedback received in relation to all matters raised and canvassed. Feedback typically includes items such as:

- feedback on options and risk allocation
- market preference on size and staging (work packages).

12.4. Assessment of Market Capability

Provide a summary of the market capability and interest as it relates to the Reference Project, delivery or financing options.

Key information from this section should be used to inform the financial and risk assessment sections of the DBC.

13. PUBLIC INTEREST CONSIDERATIONS

This section assesses whether the project is in the public interest, to ensure that, on balance, it provides equitable outcomes for all stakeholders. This typically includes an assessment of:

- impacts on stakeholders of the project or activity
- public access and equity
- consumer rights
- security
- privacy.

This section must identify any deficiencies, the planned approach to address these deficiencies and any alternative options.

13.1. Impact on Stakeholders

Describe the impact on stakeholders including affected individuals and communities. This will typically include a list of stakeholders and the area of interest/impact and any engagement actions required.

Areas of interest may include:

- property impacts
- environmental concerns
- access changes.

These issues may be identified during a community consultation process, an environmental assessment or social impact evaluation.



13.2. Community Consultation and ‘Social Licence’

Impacted stakeholders and the broader community should be provided with an opportunity to provide input through a community consultation process. This process involves confirming the impacts on stakeholders (previously identified) and understanding any new concerns that may not have been considered previously. The consultation process should seek to understand whether the project would be likely to receive a ‘social licence to operate’ from the community, and, if not, consider whether it is worthwhile to progress.

This section should describe the:

- community engagement approach
- community consultation activities undertaken—information sessions, surveys, working groups etc.
- social licence (disapproval, tolerance, endorsement or advocacy from the community)
- overall engagement outcomes
- any next steps or further consultation required.

13.3. Public Access and Equity

Identify any potential areas of public access and equity to ensure that any disadvantaged groups can also realise the expected benefits. This will typically include a list of disadvantaged groups who will use the infrastructure and how they will be using it.

If applicable, include the identification of any areas of potential inequity of access caused by the proposed location or pricing of services and any related social and economic impacts. These issues may be identified during a community consultation process, an environmental assessment, social impact evaluation or the financial analysis.

13.4. Consumer Rights

Identify any potential consumer rights impacts. In particular, outline where the Reference Project does or does not provide sufficient safeguards, particularly for those to whom government has a high duty of care.

This is considered beyond any legal obligation given government’s broad responsibility to the community and service recipients. These issues may be identified during a community consultation process, an environmental assessment or social impact evaluation.

13.5. Security

Identify any potential security and community safety issues. Particular areas to consider are corruption, crime, public health risk, quality and security of supply. Security of supply is a particular concern when the market is immature. These issues may be identified during a community consultation process, an environmental assessment or social impact evaluation.

13.6. Privacy

Identify any potential privacy issues for the Reference Project to provide assurance that user’s rights to privacy are protected. Government obligations, whether in relevant legislation or government policy, should also be highlighted. Where available, provide an outline of how security was managed in previous projects. These issues may be identified during a community consultation process, an environmental assessment or social impact evaluation.



14. ENVIRONMENTAL ASSESSMENT

This section details the assessment of environmental impacts arising from the Reference Project ensuring they are clearly identified and accounted for in the decision-making process.

In the PBC, the environmental impacts of all options were identified and described. This assessment revisits and updates the work undertaken in the PBC, taking into account any relevant new information obtained since the completion of the PBC.

14.1. Approach

The approach to the environmental assessment should include:

- identifying and reviewing information from relevant previous studies
- identifying all potential environmental issues and impacts
- assessing how environmental issues may impact on the project options.

14.2. Identification of Environmental Impacts

For each shortlisted option, identify and categorise the relevant environmental considerations and impacts. Table 9 outlines potential environmental considerations. Detailed analysis is undertaken during the development of the DBC to expand the information on the Reference Project and identify any issues that may impact project viability.



Table 9: Identification of Environmental Impacts

ASPECT	CONSIDERATIONS
Legislation and Permit Requirements	<ul style="list-style-type: none"> identify and consider the impact of any legislative obligations and approvals required perform high level cost and time calculations for each requirement.
Planning and Land Use	<ul style="list-style-type: none"> review current land uses consider potential changes to land use during construction and operational phases of the project (where appropriate) describe the degree of alignment to relevant plans and how the project contributes to (or fails to contribute to) any environmental schemes.
Property Impacts	<ul style="list-style-type: none"> identify and describe any impacts to public and private property.
Topography, Geology, and Soils	<ul style="list-style-type: none"> consider sediment and erosion control management identify relevant matters in Environmental Management Register and Contaminated Land Register.
Water Quality: consider both surface water and ground water	<ul style="list-style-type: none"> provide information on any existing management strategies as well as proposed infrastructure describe strategies to manage existing or potential water quality issues.
Hydrology	<ul style="list-style-type: none"> undertake high level hydrological and hydraulic investigation, analysis and assessment of any infrastructure options to assist in refining the design and provide input for the detailed planning and costing.
Flora and Fauna	<ul style="list-style-type: none"> describe important flora and fauna (including aquatic flora and fauna if relevant) identify strategies for habitat management consider habitat connectivity consider weed management implications consider remnant vegetation management implications consider storm water management implications.
Climate and Air Quality	<ul style="list-style-type: none"> potential impacts of climate and seasonal variations on design and project delivery potential impacts and strategies for managing air quality issues during project delivery.
Climate Change and Emissions	<ul style="list-style-type: none"> Consider and describe how the project will mitigate climate change by contributing to a reduction in global carbon emissions.
Noise and Vibration	<ul style="list-style-type: none"> potential impacts and strategies for managing noise and vibration issues during project delivery potential impacts and strategies for managing noise and vibration issues (where appropriate) post project delivery.
Landscape and Visual Amenity	<ul style="list-style-type: none"> describe any impact of the project on visual amenity identify strategies to respond to issues relating to visual amenity and landscape impacts during and post-delivery.
Cultural Heritage	<ul style="list-style-type: none"> a statement of places with known or potential historical significance strategies for managing any potential impact on cultural heritage.
Waste Management	<ul style="list-style-type: none"> consider waste management during project delivery and operation.



14.3. Detailed Environmental Assessment

Community expectations and/or government policy, regulation or legislation may require some of the identified environmental impacts of a shortlisted project to be avoided, mitigated or offset. The costs associated with undertaking any avoidance, mitigation or offsetting should be included in the financial analysis and economic analysis.

Any remaining (or residual) environmental impacts must then be assessed. These residual environmental impacts can be divided into three assessment categories:

- environmental impacts that can be quantified and monetised—include in CBA
- environmental impacts that can be quantified and not monetised—include in SIE
- environmental impacts that cannot be quantified or monetised—include in SIE.

Table 10 illustrates the relationship between the environmental impacts and the approach taken.

Table 10: The Relationship Between Environmental Impacts and Approach

RELATIONSHIP BETWEEN ENVIRONMENTAL IMPACTS AND APPROACH			
	Quantified	Monetised	Approach
Environmental Impacts	✓	✓	CBA
	✓		SIE
			SIE



15. CONTROL POINT 2

Control Point 2 has now been reached. Before progressing with the DBC, complete the following checklist.

CONTROL POINT 2				
#	Have the following tasks been completed?	Section	Yes	No
1	Consideration of the strategic alignment to government programs and initiatives and whether any government policies, legislation and regulation exist that may impact on the project (or vice versa).	s10, s11		
2	Market considerations.	s12		
3	Consideration of the impacts of project options on stakeholders.	s13.1		
4	Consideration of the impacts of project options on the public interest (public access, equity, consumer rights, security, privacy).	s13		
5	Consultation with community and impacted stakeholders.	s13.2		
6	Complete a detailed environmental assessment.	s14		
#	Have the following outputs been produced?	Section	Yes	No
1	Documentation of the alignment of the project with relevant agency, government or national strategic objectives.	s10		
2	Documentation of the impacts of policies, standards, legislation and regulation on project options (or vice versa).	s10, s11		
3	A summary of market sounding activities and outcomes including: <ul style="list-style-type: none"> ▪ the objectives of any market sounding undertaken ▪ the market sounding approach used and its rationale ▪ the feedback received from structured formal engagement ▪ the market capability identified (as it relates to project and delivery options). 	s12		
4	A summary of the community and stakeholder consultation process and outcomes.	s13.2		
5	Outcomes of an environmental assessment, including: <ul style="list-style-type: none"> ▪ A summary table of all identified environmental issues and impacts. ▪ Documentation of all sources used for the assessment (such as information from relevant previous studies) and assumptions made. ▪ Description of any mitigation, avoidance or offsetting activity proposed to be undertaken (including costs of these activities). ▪ A summary table of the results of the assessment of residual environmental impacts. 	s14.2 s14.2 s14.3 s14.3		
6	Risk register has been updated to include risk assessments for Sections 10 to 14.	s8.4		



16. FINANCIAL AND COMMERCIAL ANALYSIS

The purpose of this section is to outline the financial implications and budgetary impacts. This is achieved by reviewing the pattern of related cash flows for the Reference Project. A financial analysis incorporating an analysis of cash flows should be carried out for the Reference Project regardless of scale, as an understanding and quantification of financial flows is critical to investment decision-making.

Financial analysis has a different purpose to the economic analysis; the financial analysis is focused on the financial costs (the net financial impact to government including cash flow implications) from an internal financing perspective. The economic analysis (Section 19) will be focused on the overall economic welfare of the community.

16.1. Approach

To conduct a financial analysis for the Reference Project:

1. Identify all of the revenues and costs (i.e. capital and operating costs).
2. Generate a summary table of the revenues and costs in real Net Present Value (NPV) terms, together with any necessary commentary concerning specific associated issues. Calculate a financial NPV (FNPV).
3. Consider budgetary impacts, as well as potential government (local, state and federal) funding sources.
4. Identify and assess the project and ongoing risks that might create, enhance, prevent, degrade, accelerate or delay the achievement of the objectives and outcomes associated with the Reference Project.
5. Risk-adjust all revenues and costs.

16.2. Financial Net Present Value

16.2.1. Approach

The unadjusted FNPV is the output of a financial model that projects the cash flow profile (i.e. revenues and costs) generated from a Reference Project over its lifetime. The financial model must include all revenues generated by the project, capital costs, operating costs and residual values (in the last year of the project). By calculating the net cash flow balances in each year and discounting these at an appropriate rate, an unadjusted FNPV is produced for the Reference Project.

The unadjusted FNPV represents the net financial impact to government in present dollars from an internal financing perspective. The FNPV calculated here is an unadjusted FNPV, as it does not take into account the risk profiles of the cash flows (completed in Section 16.5).

Outline the approach undertaken to calculate an unadjusted FNPV including:

- assumptions and limitations
- key data sources and inputs
- methodology used in the analysis.

16.2.2. Capital Costs

Identify all capital costs in this section. They can be broken down into specific stages for key milestones of the project, or stages or packages if required. Include all costs relating to the design, construction and implementation of the Reference Project.

Costs should be based on the most accurate data available and should be as realistic as possible. All capital costs should be summarised (Table 11).



Table 11: Capital Costs Summary Template

CAPITAL COST TABLE			
Initial Capital Costs	Real (\$ million, \$Year)	Nominal (\$ million)	NPV (\$ million)
Design			
Build			
Implement			
TOTAL			

Similarly design, build and implementation capital costs should be summarised in a table (examples in Tables 12 to 14).

Table 12: Design Capital Costs Summary Template

DESIGN CAPITAL COSTS TABLE			
Design Costs	Real (\$ million, \$Year)	Nominal (\$ million)	NPV (\$ million)
TOTAL			

Table 13: Build Capital Costs Summary Template

BUILD CAPITAL COSTS TABLE			
Build Costs	Real (\$ million, \$Year)	Nominal (\$ million)	NPV (\$ million)
TOTAL			

Table 14: Implementation Capital Costs Summary Template

IMPLEMENTATION CAPITAL COSTS TABLE			
Implementation Costs	Real (\$ million, \$Year)	Nominal (\$ million)	NPV (\$ million)
TOTAL			

16.2.3. Initial One-off Operating Costs

Identify any one-off costs relating to the start-up of the service. Examples include training costs, change management costs, relocation costs etc.



Table 15: One-off Operating Costs Summary Template

ONE-OFF OPERATING COSTS TABLE			
Initial One-off Operating Costs	Real (\$ million, \$Year)	Nominal (\$ million)	NPV (\$ million)
Training			
Change Management			
Relocation			
TOTAL			

16.2.4. Ongoing Costs (Whole-Of-Life)

Identify the whole-of-life costs for the asset in service. These costs determine the total cost over the life of the capital asset which underpin capital asset proposals. It is important that time is taken to ensure that all relevant costs are considered.

Table 16: Ongoing Costs Summary Template

ONGOING (WHOLE-OF-LIFE) COSTS TABLE			
Ongoing Whole-of-Life Costs	Real (\$ million, \$Year)	Nominal (\$ million)	NPV (\$ million)
Operations			
Maintenance			
TOTAL			

Detail the estimated costs (excluding maintenance) of operating or leasing the capital asset. Examples include utilities, labour, rental costs, interest paid, taxes, contract costs, and other overhead costs.

Table 17: Operations Costs Summary Template

OPERATIONS COSTS TABLE			
Operations Costs	Real (\$ million, \$Year)	Nominal (\$ million)	NPV (\$ million)
Utilities			
Labour			
Rental			
TOTAL			

Detail the estimated costs incurred in maintaining the capital asset over its useful life to the standard required to perform the function or service. This is not to be confused with renewal or refurbishment (Table 19). Examples include performance management, consumables, repairs and associated labour costs.



Table 18: Maintenance Costs Summary Template

MAINTENANCE COSTS			
Maintenance costs	Real (\$ million, \$Year)	Nominal (\$ million)	NPV (\$ million)
Performance Management			
Consumables			
Repairs			
TOTAL			

Document any renewal and refurbishment costs. During the life of an asset a major renewal or refurbishment of the asset may be necessary to maintain the level of service required. This may even involve an improvement or modernisation of the asset to extend its useful life.

It should be noted that this will be different to an upgrade to the asset which will typically mean an increase in the level of service delivered (Table 13).

Table 19: Renewal and Refurbishment Costs Summary Template

RENEWAL AND REFURBISHMENT COSTS TABLE			
Ongoing whole-of-life costs	Real (\$ million, \$Year)	Nominal (\$ million)	NPV (\$ million)
Structural Repairs			
Major Plant Replacement			
Internal Installations			
TOTAL			

Document any upgrades to the asset and describe the nature of the upgrade. For example, this may include renewal activities or increases in capacity in line with expected growth.

Table 20: Upgrade Costs Summary Template

UPGRADE COSTS TABLE			
Ongoing costs	Real (\$ million, \$Year)	Nominal (\$ million)	NPV (\$ million)
Operations			
Maintenance			
Renewals and Refurbishment			
TOTAL			

Consideration should be given to any potential costs associated with selling or safe disposal of the capital asset at the end of its useful life. This may include remediation costs and any due diligence (if required).



Table 21: Disposals Costs Summary Template

DISPOSAL COSTS TABLE			
Disposal costs	Real (\$ million, \$Year)	Nominal (\$ million)	NPV (\$ million)
Remediation			
Due Diligence			
TOTAL			

16.2.5. Residual Values

Document any residual values of the infrastructure (and any other assets) at the conclusion of the period of analysis in real NPV terms. The depreciation approach adopted in calculating residual value should be outlined.

Table 22: Residual Values Summary Template

RESIDUAL VALUES TABLE	
Residual value	NPV (\$ million)
Infrastructure	
Other Assets	
TOTAL	

16.2.6. Revenues

The financial analysis should also include estimates of any potential cash inflows to the government. These inflows include third party funding sources such as revenues from user charges (e.g. public transport fares or tolls) or revenues from value capture mechanisms.

A value capture and user charging assessment must be undertaken. Queensland Treasury, Building Queensland, and the Department of Infrastructure, Local Government and Planning must be consulted before undertaking the assessment.

If the Reference Project includes cash inflows, the basis of derivation (e.g. benchmarks) and major underlying assumptions should be clearly documented.

Table 23: Revenues Summary Template

REVENUES TABLE	
Revenues	
Operating Revenue	
Other Revenue	
TOTAL	



16.2.7. Analysis Summary

Provide a summary table of the whole-of-life capital and operating costs and revenue in real NPV terms. Include any necessary commentary concerning specific associated issues. Ensure reporting of:

- real FNPV outputs
- cash flow impacts for each year over the project horizon
- an assessment of the financial sustainability (i.e. can an option's revenues cover its costs) and an assessment of funding sources for the project
- a summary table of the whole-of-life capital and operating costs and revenue in outturn dollars.

Outturn dollars are the estimated dollar value for which the project will be completed assuming a given delivery period. Outturn dollars are calculated by escalating the estimated project cash flow for each year of the project to represent the actual project cost in future year dollars.

16.3. Revenue and Cost Estimation Reviews

To support successful project outcomes, an independent peer review of the cost estimation should be undertaken to evaluate the soundness and appropriateness of the approach and results. A summary of the independent peer reviewer's findings should be included, particularly in relation to adequacy of documentation, methodology, standards, assumptions, and results. A declaration of the peer reviewer's interest or conflict of interest should also be included.

16.4. Potential Government Funding Sources

Consideration should be given to budgetary impacts, as well as potential government (local, state and federal) funding sources for the Reference Project. Queensland Treasury must be consulted.

16.5. Risk-adjusted Financial Net Present Value

The outputs of risk assessments (Section 8) will allow for a probabilistic, Monte Carlo simulation to be used to provide the probability of various estimates of revenue and costs to a P90 level of confidence.

Provide a summary table of the risk adjusted costs and revenue in real NPV terms, together with any necessary commentary concerning specific associated issues. Ensure that revenue or cost items that have changed as a result of the risk assessment are clearly identified. Report on:

- real P90 FNPV outputs
- risk adjusted cash flow impacts for each year over the project horizon
- a summary table of the risk adjusted whole-of-life capital and operating costs and revenue in outturn dollars.



17. CONTROL POINT 3

Control Point 3 has now been reached. Before progressing with the DBC, complete the following checklist.

CONTROL POINT 3				
#	Have the following tasks been completed?	Section	Yes	No
1	Identification of all revenues and costs generated by the project.	s16.2		
2	Creation of a financial model that projects the cash flow profile (revenues and costs) generated from a project over its lifetime.	s16.2		
3	A value capture and user charging assessment.	s16.2.6		
4	An independent peer review of the revenue and cost estimation.	s16.3		
5	Consideration of budgetary impacts, as well as potential government (local, State and Commonwealth) funding sources.	s16.4		
6	Determine whether identified risks have consequences for the financial cash flow estimates and/or wider project benefit and cost estimates associated with the project.	s16.5		
7	Consideration of whether the public or private sector may be responsible and best able to manage each identified risk.	s8.5.1		
8	Perform a Monte Carlo simulation (e.g. @Risk) on the financial cash flow to a P90 level of confidence.	s16.5		
#	Have the following outputs been produced?	Section	Yes	No
1	A summary table of project revenues and costs reported in real net present value (NPV) terms (including any necessary commentary).	s16.2.7		
2	Net cash flow impact for each year over the project horizon.	s16.2.7		
3	A financial net present value (FNPV) for the project.	s16.2.7		
4	Documentation of the methodology applied, assumptions made, and information sources used to produce revenue and cost projections.	s16.2.7		
5	Documentation of any limitations to the assessments performed.	s16.2.7		
6	A summary of budgetary impacts, as well as potential government funding sources.	s16.2.7		
7	A summary table of the whole-of-life revenues and costs in outturn dollars.	s16.2.7		
8	A summary document demonstrating how each risk has been factored into a cost, revenue or benefit in the financial model.	s16.5		
9	A real P90 FNPV.	s16.5		
10	Documentation of the risk adjusted cash flow impacts for each year over the project horizon.	s16.5		
11	Risk register has been updated to include risk assessments from Section 16.	s8.4		



18. COMPREHENSIVE SOCIAL IMPACT EVALUATION

This section outlines the evaluation of social impacts of the Reference Project that cannot be monetised (and included in the CBA) to ensure that impacts are clearly identified and accounted for in the decision-making process. The social impact evaluation incorporates non-quantifiable environmental impacts identified and described in Section 14.

18.1. Approach

The Impact Risk Assessment (IRA) conducted in the PBC should have identified the material social impacts. The IRA should be updated in the DBC for the Reference Project. Another attempt should be made to determine if the social impacts identified in the IRA are able to be monetised to be included in the DBC CBA. If they cannot be monetised an alternative metric should be applied (e.g. the impact on biodiversity can be measured by the change in number of species within an affected area). If an appropriate metric cannot be assigned to a social impact, a proxy metric measuring the effect of the social impact should be used instead, e.g. absenteeism rate used as a proxy for workplace satisfaction. If Queensland legislation has required an Environmental Impact Statement (EIS), the SIE should draw on this work to avoid duplication.

Further detailed guidance can be found in the Building Queensland SIE Guide, which provides details on how to undertake a quantitative SIE as well as guidance on how to present the results of the evaluation.

18.2. Stakeholder Engagement

Stakeholder engagement is critical for a social impact evaluation and is a key principle of the Social Return on Investment Analysis approach. Stakeholder engagement enables an understanding of the relationship between activities related to the Reference Project and the outcomes experienced by stakeholders. Table 24 illustrates how stakeholders might be engaged in an SIE.

Table 24: Example Stakeholder Involvement

STAKEHOLDER INVOLVEMENT		Recommend Involvement	Could be involved
Plan	Establishing scope		✓
	Identifying stakeholders	✓	
	Decide how to involve stakeholders		✓
Develop analysis	Identifying SIB	✓	
	Identifying social impacts	✓	
	Clarifying social impacts	✓	
Data collection	Collecting social impact data		✓
	Establishing duration of social impacts		✓
Conduct analysis	Impact risk assessment	✓	
	Assessing impact deadweight		✓
	Determine materiality of social impacts	✓	
	Establishing metrics for social impacts		✓
	Quantifying social impacts		✓
	Verify results of analysis	✓	
Results	Using the results	✓	



18.3. Evaluation

Identified social impacts can be divided into three assessment categories:

- social impacts that can be quantified and monetised (include in the CBA)
- social impacts that can be quantified and not monetised
- social impacts that cannot be quantified or monetised.

The relationship between social impacts and the evaluation approach to be applied is illustrated in Table 25.

Table 25: Relationship Between Social Impacts and Approach

RELATIONSHIP BETWEEN SOCIAL IMPACTS AND APPROACH			
	Quantified	Monetised	Approach
Social Impacts	✓	✓	CBA
	✓		Impact Risk Assessment
			Impact Risk Assessment

Ensure that the following tasks are completed for the Reference Project:

- determine whether each identified social impact can be quantified and monetised
- determine the appropriate evaluation approach for each social impact
- ensure all social impacts that can be monetised are incorporated into the CBA (Section 19)
- ensure all social impacts that cannot be monetised undergo an impact risk assessment (Section 18.4).

18.4. Impact Risk Assessment

If an IRA has not been completed in the PBC, it should be conducted in the DBC. An IRA should be undertaken on the social impacts that cannot be monetised. The IRA should ideally be conducted for all the key stakeholder groups. Guidance on undertaking an IRA is provided in the SIE Guide. On completion of the IRA, strategies can be developed to address predicted negative social impacts and to enhance potential positive impacts. The results of the SIE (i.e. evaluation of social impacts that cannot be monetised) should be reflected in the overall risk assessment.

18.5. Quantitative Social Impact Evaluation

Social impacts that can be quantified but not monetised must be considered in the quantitative SIE.

The quantitative measure of the impact should ideally be measured as the average impact at the individual stakeholder level. For example, reduced waiting times for medical procedures should be measured as the average reduction in time (weeks) for each patient rather than the total reduction in waiting time for all patients.



19. ECONOMIC ANALYSIS

This section outlines the economic analysis (e.g. CBA) of the Reference Project and supports informed investment decision-making.

19.1. Approach

There are a variety of approaches to economic analysis, the suitability of which depends on the purpose of the assessment and the availability of data and other resources. Fundamental to economic analysis is that all costs and benefits need to be identified as comprehensively as possible. These costs and benefits are characterised by impacts on people, rather than organisations or decision-makers and are characterised by observable consequences that are measurable.

Regardless of the approach, a CBA must be undertaken for all infrastructure projects with capital costs exceeding \$50 million. This requirement also extends to the inclusion of an environmental assessment (Section 14), social impact evaluation (Section 18) and sustainability assessment (Section 20). Reference should be made to the Building Queensland Cost Benefit Analysis (CBA) Guide in developing the economic case, including decision criteria for the Reference Project.

The decision criteria outlined in the Building Queensland CBA Guide is considered the minimum requirements for all projects. Given the potential diversity of infrastructure investments that Building Queensland may consider, and the size of the capital programs likely to accompany each of these projects, consistent application of relevant decision criteria is important.

19.2. Methodology

Describe the methodology adopted for the economic analysis of the Reference Project. This should be highly detailed, and include reference to, and documentation of:

- assumptions underlying the analysis (e.g. base price year, discount rate, modelling and forecasting assumptions)
- key inputs (e.g. costs, modelling) to the analysis
- description of the base case and the project case (Reference Project).

Data limitations may prevent all project costs and benefits being incorporated into the calculation of a Benefit Cost Ratio (BCR). In such circumstances, benefits that cannot be monetised are considered separately (Section 18). Project Net Present Value (NPV) should be presented in addition to the BCR.

A high degree of certainty (P90) surrounding the estimate of costs and benefits is required for a DBC. A P90 project cost value is an estimate of the project cost based on a 90 per cent probability that the cost will not be exceeded.

The central case should be calculated using a discount rate of seven per cent with sensitivity testing at four per cent and 10 per cent. Additional discount rates may be sourced from Queensland Treasury.

19.3. Benefits

Identify the benefits including any party positively or negatively impacted by the Reference Project. The purpose of estimating benefits is to consider whether the benefits are worth the costs. The general rule is that benefits should be valued unless it is clearly not practicable to do so.

Key benefit streams such as improved service/s, increased productivity, or reduced costs, should be presented separately in a table or graph.



19.4. Costs

Identify the economic costs of the Reference Project. For significant infrastructure projects, the relevant costs are likely to equate to the full economic cost of providing the associated goods and services over the lifecycle of the asset. For these proposals, the full economic cost should be calculated, net of any expected revenues, for the Reference Project. This includes direct and indirect costs, and attributable overheads.

Note that in most cases a number of adjustments will need to be made to project costs in order to convert outturn estimates to real economic costs for application in the economic analysis, including removal of financial accounting treatments such as inflationary escalation.

Key costs should be summarised in a table, and should be detailed into specific cost categories.

19.5. Cost Benefit Analysis Results

Provide a summary of the value of incremental benefits and costs (at P90 level) and the resulting NPV and BCR, along with a discussion of the results for the Reference Project. Table 26 shows results across different applied discount rates, disaggregated cost and benefit streams, and key economic indicators.

Table 26: Cost Benefit Analysis Results Template

COST BENEFIT ANALYSIS RESULTS (P90)			
Item	4%	7%	10%
Project Benefits			
Total Benefits			
Project Costs			
Total Costs			
Net Present Value			
Benefit Cost Ratio			

19.6. Sensitivity Analysis

The cost benefit results are based on what has been established as the best estimate of costs and benefits. It is recognised that there will always be some level of uncertainty regarding the future. Sensitivity testing is a way to assess uncertainty around assumptions. In line with national guidance, the cost benefit analysis should be tested, at a minimum, for variations in:

- discount rate
- project costs (construction and operating costs)
- project benefits.

Provide a brief description of the sensitivity and scenario tests undertaken along with a summary of the results in a tabulated form (Table 27). The selected sensitivity testing should be informed by those project drivers that result in significant changes to economic analysis results.



Detailed economic evaluation should generate results that are aligned to any required funding templates, including any additional detailed information.

Table 27: Sensitivity Analysis Results Example Template

SENSITIVITY ANALYSIS RESULTS		
Test	NPV (\$year) (\$ million)	BCR
P90 capital costs		
Sensitivities at:		
P50 cost estimate		
Discount rate: 4%		
Discount rate: 7%		
Discount rate: 10%		
Capital costs +20%		
Capital costs -20%		
Operating costs +20%		
Operating costs -20%		
Benefits +20%		
Benefits -20%		

CBA results should also be presented using pie charts or graphs.

19.7. Economic Analysis Review

To help ensure successful project outcomes, an independent peer review of the economic assessment should be undertaken for the Reference Project to evaluate the soundness and appropriateness of the approach and results.

A summary of the independent peer reviewer’s findings should be included, particularly in relation to adequacy of documentation, methodology, assumptions and results. A declaration of the peer reviewer’s interest or conflict of interest should also be included.

20. SUSTAINABILITY ASSESSMENT

The purpose of this section is to identify sustainability considerations relevant to the Reference Project in order to understand and, where possible, avoid or mitigate immediate and long term impacts. A sustainability assessment assists with documenting the economic, social and environmental impacts of the project not just its financial performance.

This assessment draws upon analysis already undertaken in the preceding sections of the DBC, including but not limited to the Economic Analysis, Environmental Assessment and the Social Impact Evaluation. The sustainability assessment aims to address how to best design and deliver the Reference Project. In addition, the overall sustainability achievement of the Reference Project may also be a relevant consideration for government in choosing to fund a project.



20.1. Approach

The sustainability assessment should consider the quadruple bottom line (QBL) impacts and opportunities. This assessment is based on the Infrastructure Sustainability (IS) rating scheme themes and categories and was developed in collaboration with the Infrastructure Sustainability Council of Australia (ISCA). Principle areas covered in this assessment are shown in Table 28.

Table 28: Example Sustainability Assessment Principles

PRINCIPLES FOR SUSTAINABILITY ASSESSMENTS			
Governance	Environment	Social	Economic
Context	Material use	Social procurement	Whole-of-life impacts
Strategic planning	Climate Change mitigation	Employees	Valuing externalities
Leadership, knowledge sharing and innovation	Natural hazards adaptation and resilience	Social return	
Procurement and supply chain	Water management	Community and stakeholders	
	Resource recovery	Heritage	
	Land selection	Equity	
	Ecology and critical natural capital		
	Green infrastructure		

A description and guiding questions for each of these principles is included in the sustainability assessment template in Section 20.3.

20.2. Application

Projects assessed between \$50 million to \$100 million should use the Building Queensland sustainability assessment approach. Projects assessed at above \$100 million should either use a fit for purpose tool (e.g. ISCA) or the Building Queensland approach.

The assessment format will indicate the level of achievement for each sustainability principle rated according to the achievement levels described in Table 29 and criteria for this assessment.

20.3. Sustainability Assessment

A sustainability assessment should be considered up-front and undertaken in conjunction with the risk assessment, as it will influence the understanding and assessment of project risk.

Steps:

1. Evaluate the principles contained in the sustainability assessment approach (Section 20.1) for relevance to the project. Not all principles may be appropriate.
2. Identify the broad suite of stakeholders, their interests and drivers and the Reference Project's impact on these parties (drawing information from Section 13 of the DBC).
3. Conduct a sustainability workshop involving diverse expertise to apply the sustainability framework, and develop innovative approaches to all relevant principles. It should take a holistic, long-term and integrated perspective.
4. The questions for each principle are an important guide for the issues to be discussed and addressed. However, the project type, location, context and issues may suggest alternative or additional questions.



5. Identify any principles that are not relevant to the project. This is to be indicated in the assessment format, with an accompanying justification as to why the principle is not relevant. A level of achievement is not required in these cases.
6. The workshop should include the following steps:
 - examine the wider system and the significant connections or relationships for the project
 - identify the most important drivers of change 10–20 years into the future and their implications for the project
 - identify the broad suite of stakeholders—their interests, drivers and likely project impacts
 - identify any principles that are not relevant to the project
 - use the guiding questions to direct thinking and to develop solutions that are innovative, lasting, and result in multiple benefits. Integrated solutions are likely to have environmental, social and economic benefits, or benefits across a number of principles
 - challenge the project team to go beyond a ‘business as usual’ response when developing solutions, avoid a narrow approach or one that only focuses on risk and overlooks opportunities.
7. The level to which each principle has been fulfilled should be indicated in the assessment format template (Table 30). The information and evidence presented for each principle must substantiate this assessment, and be concise but with sufficient detail to demonstrate the key elements and benefits of the approach. Information should be succinctly presented (dot point style is encouraged), with a maximum length of half a page per principle. Also outline information sources and/or sections of the DBC or supporting documentation that have been used to undertake the assessment.
8. Unless already captured in the assessments in Sections 14, 18 or 19, the impacts of significant sustainability issues (rated poor, compliant or basic) should be reflected in the risk assessment where appropriate and, if required, subsequently in the project cost estimates.
9. Unless already captured in Sections 14, 18 or 19, impacts identified in the sustainability assessment that can be monetised should be incorporated in the CBA in Section 19.
10. Unless already captured in Section 18, social or environmental impacts that cannot be monetised should be incorporated into the comprehensive social impact evaluation.
11. An overall achievement level across the 20 principles (advanced, moderate, basic, compliant or poor) should be assigned and reported.



Table 29: Sustainability Assessment Rating

SUSTAINABILITY ASSESSMENT RATING	
Level	Criteria
Advanced	<ul style="list-style-type: none"> Generates significant additional value and new opportunities not previously evident, such as changing a liability into an asset 'Designs out' the problem up-front rather than relying on managing impacts later Solutions generate flow-on benefits outside the project boundary
Moderate	<ul style="list-style-type: none"> Solutions to significant issues result in multiple benefits through economic, social and/or environmental outcomes Meets immediate community and user needs and will be resilient and efficient into the future Significant innovation and leading practice incorporated into the project
Basic	<ul style="list-style-type: none"> Avoids harm and negative effects Solutions create project efficiencies Solutions have an immediate or short term focus
Compliant	<ul style="list-style-type: none"> Meets legislative and regulatory requirements
Poor	<ul style="list-style-type: none"> Fails to meet legislative and regulatory standards Solutions may result in dis-benefits and negative effects

It is assumed that all projects will meet this level. Sustainable solutions are therefore expected to go beyond regulatory compliance.



Table 30: Sustainability Assessment Template

SUSTAINABILITY ASSESSMENT	
<p>Demonstrate how the project fulfils the following sustainability principles <i>Succinctly outline the major initiatives or elements of the approach that will achieve each principle, plus the most significant outcomes or benefits. Specific, quantitative information should be included where available.</i> Information should be succinct (dot points encouraged) and no more than half page per principle.</p>	<p>Achievement level of the principle: (indicate level achieved) Advanced, moderate, basic, compliant, or poor</p>
GOVERNANCE	
<p>1. Context</p> <p>All infrastructure projects sit within a broader context, and should be planned, designed and operated to connect with the wider system (including other infrastructure, economic activity, landscapes, population hubs and movements, flows of resources, materials, goods and people). This could occur at neighbourhood, town, city, region or state scales.</p>	
	<ul style="list-style-type: none"> ▪ What is the problem that is being solved by this project? Have social, environmental and economic issues been considered?
	<ul style="list-style-type: none"> ▪ What are the key elements, interrelationships and interdependencies of the wider system or network for this project that are fundamental to its long term effectiveness?
	<ul style="list-style-type: none"> ▪ How will the project integrate with, or respond to these elements?
<p>2. Strategic planning</p> <p>Design infrastructure to be the solution to identified problems taking into consideration strategic goals and objectives. Focus on longer term use and outcomes so that the infrastructure leaves a positive legacy. Consider adaptability to respond to future changes, challenges and trends.</p>	
	<ul style="list-style-type: none"> ▪ Has a full range of options been considered including non-infrastructure solutions?
	<ul style="list-style-type: none"> ▪ How will the project solve the identified problem/s? How does it align with departmental and/or state goals and objectives?
	<ul style="list-style-type: none"> ▪ Does the project respond to the most significant (i.e. those with greatest impact and most probable) drivers of change over the next two decades including technological, demographic, political, environmental, economic trends?
<p>3. Leadership, knowledge sharing and innovation</p> <p>The leadership team are responsible for implementing, measuring and reporting on the sustainability performance as well as the creation of a culture of innovation and knowledge sharing.</p>	
	<ul style="list-style-type: none"> ▪ How will this project engage a committed leadership team to embed sustainability into the planning, design, building and operation of this infrastructure project?
	<ul style="list-style-type: none"> ▪ How will a culture of innovation be created across the project life cycle and include both proponent and contractor?
	<ul style="list-style-type: none"> ▪ How will knowledge and lessons be shared with the project team, other projects and the supply chain? How will lessons learnt from previous projects be incorporated?
	<ul style="list-style-type: none"> ▪ How will the supply chain be prepared for the sustainability and innovation requirements of this project?
<p>4. Procurement and supply chain</p> <p>Procurement activities are responsible and consider human rights, society and environment.</p>	
	<ul style="list-style-type: none"> ▪ How will sustainable procurement including human rights, society and the environment be incorporated into the project's procurement activities?



SUSTAINABILITY ASSESSMENT (CONTINUED)

ENVIRONMENT

<p>5. Material use Materials used on the project have a low life cycle impact and have low toxicity.</p> <ul style="list-style-type: none"> How will this project assess materials used in terms of their environmental life cycle impact and toxicity? 	
<p>6. Climate-change mitigation The project will mitigate climate change through identifying an infrastructure solution to reduce global carbon emissions.</p> <ul style="list-style-type: none"> How will this project mitigate climate change? 	
<p>7. Natural hazards adaptation and resilience Considering natural hazards, including the changing conditions as a result of climate change, and designing in resilience.</p> <ul style="list-style-type: none"> How will this project consider natural hazards which affect the project location and consider changing conditions in the future due to climate change? 	
<p>8. Water management Managing water consumption and discharge according to local conditions now and in the future.</p> <ul style="list-style-type: none"> Will this project use large amounts of water in construction and operation? Is this project located in an area of water scarcity? If not, how will water scarcity in the future affect its construction and operation? Will this project discharge water to sensitive environments during construction and/or operation? 	
<p>9. Resource recovery Reducing waste generated and increasing reuse in construction and operation.</p> <ul style="list-style-type: none"> How will this project manage waste and resource recovery? 	
<p>10. Land selection The project is located on previously disturbed land and limits impacts to local habitat.</p> <ul style="list-style-type: none"> Will this project be located on previously disturbed land? 	
<p>11. Ecology The local and regional habitat and ecology will be enhanced.</p> <ul style="list-style-type: none"> How will this project improve ecology within the local region? Will this project impact critical natural capital (irreplaceable natural features, species, habitats etc.)? 	
<p>12. Green infrastructure Traditional infrastructure is replaced with natural processes to do the same job. The term 'green infrastructure' refers to an interconnected network of landscape assets that is intertwined with engineered (grey) infrastructure and buildings (all the natural, semi-natural and artificial networks of multifunctional ecological systems within, around, and between urban areas, at all spatial scales).</p> <ul style="list-style-type: none"> Describe the opportunities to replace traditional infrastructure (grey) with green infrastructure. 	

SOCIAL

<p>13. Social procurement Creating positive social outcomes through using procurement spend and processes.</p> <ul style="list-style-type: none"> How will this project use procurement spend to create socially beneficial outcomes e.g.. engagement of small and medium enterprises, social enterprises, indigenous enterprises or local businesses etc? 	
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SUSTAINABILITY ASSESSMENT (CONTINUED)

14. Employees

Supporting and improving the lives of all employees including sub-contractors of the infrastructure project.

- How will this project support and improve employee outcomes especially marginalised and disadvantaged groups?

15. Social return

The project will have a positive social return on investment meaning for every dollar spent, there will be over one dollar worth of social outcomes.

- What will be the social return of this project? Describe how this project will benefit society e.g. reduced travel times, increased well-being, improved air quality, increased social cohesion.

16. Community and stakeholders

Understanding and incorporating community and stakeholder views including marginalised and affected groups, to increase the social license to operate.

- How will community and stakeholder views be considered and incorporated into the decision-making processes throughout the project?
- How will marginalised and affected groups be included in the engagement?

17. Heritage

Protecting indigenous and non-indigenous heritage and sites highly valued by the community.

- Will this project affect heritage or areas highly valued by the community? Are there any opportunities to enhance heritage?

ECONOMIC

18. Equity

Share the benefits and costs of infrastructure development in a fair and equitable way.

- Who are disadvantaged or made vulnerable through this project? How is this being addressed?
- How are the benefits shared equitably?

19. Whole-of-life impacts

Making decisions based on the whole-of-life impacts and benefits of a project.

- How will the whole-of-life impacts and benefits be incorporated into the project's decision-making processes?

20. Valuing externalities

Putting a value on material externalities and incorporating them into the decision-making process.

- What are the material externalities of this project? How will they be valued (monetised and non-monetised values) in the decision-making process?



21. CONTROL POINT 4

Control Point 4 has now been reached. Before progressing with the DBC, complete the following checklist.

CONTROL POINT 4				
#	Have the following tasks been completed?	Section	Yes	No
1	Perform a social impact evaluation (SIE).	s18 & SIE Guide		
2	Perform economic analysis (CBA) to a P90 level of confidence.	s19 & CBA Guide		
3	Perform sensitivity testing of the CBA.	s19.6 & CBA Guide		
4	An independent peer review of the economic analysis.	s19.7		
5	Perform a sustainability assessment.	S20		
#	Have the following outputs been produced?	Section	Yes	No
1	Documentation of the methodology adopted, sources used and assumptions made in undertaking the SIE.	s18		
2	A social impact risk assessment matrix.	s18 & SIE Guide		
3	An Appraisal Summary Table (AST) incorporating quantitative social impacts.	s18.3 & SIE Guide		
4	Documentation of the assumptions underlying the CBA analysis (including key inputs to the analysis).	s19.2		
5	A summary table of the value of incremental benefits and costs (based on a P90 level).	s19.5 & CBA Guide		
6	A P90 Net Present Value (NPV).	s19.5 & CBA Guide		
7	A Benefit Cost Ratio (BCR).	s19.5 & CBA Guide		
8	A summary table of the CBA sensitivity analysis results.	s19.6 & CBA Guide		
9	A summary of the findings of an independent peer review of the CBA.	s19.7		
10	Documentation of the assumptions underlying the sustainability assessment (including key inputs to the analysis).	s20		
11	A sustainability assessment results table.	s20.3		
12	Risk register has been updated to include risk assessments from Sections 18, 19 and 20.	s8.4		



22. DELIVERY MODEL ANALYSIS

The purpose of this section is to outline and assess the range of potential delivery models to procure and deliver the Reference Project. The objective of the assessment is to identify a delivery model that is likely to provide the best value for money in meeting the identified service need.

22.1. Approach

Where there has been a lag or delay between project phases, the analysis performed at the PBC stage should be updated.

Where the Reference Project is recommended to be delivered as a PPP, analysis should follow the National PPP Policy and Queensland PPP supporting guidelines. Otherwise, the assessment approach detailed in this section should be followed.

Describe the methodology adopted for a traditional delivery model assessment for the Reference Project. This will likely include documentation of the:

- assumptions underlying the analysis
- project characteristics (i.e. objectives, scope, timelines, stakeholders)
- project key inputs to the analysis (i.e. costs, risks, market sounding, financial analysis)
- literature used to inform the assessment, in particular, current issues and case studies on delivery of similar projects in Queensland and other jurisdictions
- packaging opportunities and scenarios
- project item not considered as part of the analysis
- criteria and measures for analysis including the importance of the criteria
- evaluation and mitigation of risks.

Where staging options are being considered, identify and discuss what packaging options for various project items may drive opportunities for additional benefits and better value for money.

Undertake an assessment of packaging options against the evaluation criteria, taking into consideration relevant market sounding feedback and financial analysis. Table 31 provides an example of a packaging template.

Table 31: Packaging Assessment Template

PACKAGING ASSESSMENT				
Evaluation Criteria	Package option 1	Package option 2	Package option 3	Package option 4
Criteria 1				
Criteria 2				
Criteria 3				

22.2. Traditional Delivery Model Assessment

Outline which traditional delivery models were assessed. These may include:

- design and construct (D and C)
- design then construct (D then C)
- design, construct and maintain (D, C and M)



- design, construct, maintain and operate (D, C, M and O)
- alliance
- competitive alliance
- early contractor involvement (ECI)
- early tenderer involvement (ETI)
- managing contractor.

Describe the delivery models considered for each package and project component/s (if applicable) and key considerations (i.e. precedent projects, risk allocation) and undertake an assessment against the evaluation criteria. Workshops may be required to facilitate discussion and assessment.

A summary of a traditional delivery model assessment is provided in Table 32.

Table 32: Tradition Delivery Model Assessment

TRADITIONAL DELIVERY MODEL ASSESSMENT		
Works Package	Component	Preferred Traditional Delivery Model
Package 1	Component 1	
	Component 2	
Package 2	Component 3	
	Component 4	
	Component 5	
Package 3	Component 6	

Describe the preferred traditional delivery model and rationale for selection and associated risks.

22.3. PPP Delivery Model Assessment

Where the Reference Project was recommended to be delivered as a PPP with private finance, report the outcomes of the assessment (including the preferred PPP delivery model) undertaken against the National PPP Policy and Queensland PPP supporting guidelines.

23. PUBLIC SECTOR COMPARATOR

The Public Sector Comparator (PSC) is a financial model that estimates the risk-adjusted, whole-of-life cost of a project to the government using a traditional delivery method. The PSC represents the most likely and efficient form of public sector delivery of the Reference Project. The PSC also provides a benchmark against which decision-makers can compare private sector bids for projects when delivered under a Public Private Partnership (PPP) delivery.

23.1. Approach

Describe the analysis methodology adopted for establishing the PSC for the Reference Project. The methodology must follow the National PPP Policy and supporting PAF Guidelines where a PPP delivery model is preferred. The approach is to document:

- assumptions underlying the analysis (i.e. duration, discount rate)



- analysis key inputs (i.e. costs, risks, market sounding, financial analysis, delivery model and packaging)
- literature used to inform the assessment, e.g. current issues and case studies on delivery of similar projects in Queensland and elsewhere
- packaging opportunities and scenarios
- project items not considered
- criteria and measures for analysis including the importance of the criteria
- evaluation and mitigation of risks.

23.2. Public Sector Comparator Assessment

The PSC is limited to those components that would be in the scope of services for the private sector to include in its tender response. Accordingly, the PSC provides a like-for-like comparison with potential private sector bids. Additional costs which would be incurred by the state in procuring the Reference Project under a different delivery model are not included in the PSC.

Tabulate items to be included in the PSC. An example is provided in Table 33.

Table 33: Summary of Items Included in the PSC Template

ITEM INCLUDED IN THE PSC	
Scope item	Included in the PSC
Item 1	
Item 2	
Item 3	

Outline all key assumptions including:

- key dates for project delivery
- escalation (capital and operations)
- discount rate
- cost assumptions
- design life.

Tabulate PSC costs (Table 34).

Table 34: PSC Costs Template

PSC COSTS	
Works Package	
Package 1	Component 1
	Component 2
Package 2	Component 3
	Component 4
	Component 5
Package 3	Component 6



24. AFFORDABILITY ANALYSIS

This section brings together the range of detailed discussion in preceding chapters of the DBC to outline affordability considerations for the Reference Project. The purpose is to present all relevant information to allow decision-makers to assess whether the Reference Project is affordable over the whole of its life by taking into account all sources of existing revenue, as well as additional income from other sources.

24.1. Approach

Project affordability is measured by the expected risk-adjusted finance net-cost to the state of delivering the Reference Project through traditional delivery.

Describe the assessment methodology for the affordability analysis.

24.2. Affordability Assessment

Identify the affordability of the Reference Project. This could include an assessment of staging options, revenue sources (if applicable), preferred delivery options and funding availability (in terms of both capital and operating costs), conditions and timing—acknowledging that the delivery options under consideration will have implications for funding profiles.



25. CONTROL POINT 5

Control Point 5 has now been reached. Before progressing with the DBC, complete the following checklist.

CONTROL POINT 5				
#	Have the following tasks been completed?	Section	Yes	No
1	An assessment of a range of potential delivery models (traditional and PPP) to determine which delivery model is likely to deliver the best value for money.	s22		
2	An assessment of packaging options.	s22		
3	Establish a Public Sector Comparator (PSC).	s23		
4	Consideration of the affordability of the project (taking into account all the previous analysis performed in the DBC).	s24		
#	Have the following outputs been produced?	Section	Yes	No
1	Documentation of the methodology adopted for the delivery model assessment.	s22		
2	A summary of the outcomes of a packaging options assessment.	s22		
3	A summary of the outcomes of a Value-For-Money PPP Assessment.	s22		
4	A summary of the outcomes of a traditional delivery model assessment.	s22		
5	Documentation of the methodology adopted for establishing the Public Sector Comparator (PSC).	s23		
6	The PSC.	s23		
7	A summary of the outcomes of an affordability assessment.	s24		
8	Risk register has been updated to include risk assessments from Sections 22, 23 and 24.	s8.4		



26. CONCLUSIONS

This purpose of this section is to summarise the service need or problem, outcome sought, options analysis and Reference Project.

Taking into consideration the estimates of the Reference Project's costs and benefits, depth of technical investigations, sensitivity analysis, market sounding and recommended procurement strategy, discuss the Reference Project's affordability and value for money. All conclusions should be stated concisely.

27. IMPLEMENTATION PLAN

If the DBC recommends the Reference Project progresses to procurement, an implementation project plan and resource plan for undertaking the next stage is required. Full examination of the requirements to implement the project should be included in a plan, in particular:

- governance
- project plan
- procurement strategy
- resource requirements
- change management
- risk management
- benefits realisation
- cost estimate.

This material is to be detailed and should explain how implementation will be managed and delivered. Key points to raise include:

Governance

Describe the governance arrangements for procurement and implementation of the project including:

- the roles and responsibilities to account and report on project deliverables—the key project deliverables should be identified
- document and outline how the governance arrangements are to be resourced from within the agency, the private sector or from other agencies
- state whether (because of the scale, risk and complexity of the project) assistance is being sought, or is to be provided, by a central agency or Building Queensland.

Project Plan

Identify the key project milestones. For each milestone record the date and responsible person. Ensure that it is clear what is in scope and out of scope.

Procurement Strategy

Describe the procurement objective or what result is expected from the procurement including:

- the value for money from the procurement choice and the governance arrangements for managing the procurement (this is to compliment the description of the governance arrangements identified above)
- the market characteristics (as this may influence the method of procurement or who to procure from)



- how the market is to be engaged (i.e. whether open tender, from a pre-qualified list of tenders etc.)
- an outline of the key steps and timing for developing and implementing the procurement method
- an outline of the cost of procurement and the key risks and management methods
- a realistic statement of the capacity and resources of the agency to manage the procurement process and to manage the agency's responsibilities under the contract (may be included in the project plan).

Change Management

Describe the approach to managing organisational change throughout the project, including:

- the effect the implementation of the project proposal will have upon existing services, processes and people
- outline how current business/work practices will be enhanced/improved and/or changed as a result of implementation of the project proposal
- identify legislation, policy and regulatory issues
- document the stakeholders who will be involved in the change management process—including the agency, a business unit within an agency, other agencies (where there are cross agency implications), service providers, users or recipients
- document the change management roles and responsibilities such as a change sponsor, change agents and the stakeholders that will have to make changes to their work practices
- outline the communication strategies and plans to be developed
- outline the training tools, processes or work methods to be developed
- state the mechanism to monitor and measure the effectiveness of the change management process.

Resource Requirements

Outline the required skills and capabilities for this project proposal, including:

- what resources are necessary to implement this project and realise the benefits of the project
- are the necessary resources available (taking into account the agency's current commitments and capacity to deliver)
- where applicable, describe the training requirements and how the requirements will be addressed.

Benefits Realisation

Describe the benefit realisation methodology to be adopted by developing a plan that:

- describes the benefit to be achieved
- describes the contribution to agency service delivery
- identifies the person responsible for implementation
- describes what will be managed and measured during implementation to ensure that the objectives and/or benefits will be achieved
- tracks whether the project is being implemented in a way to give assurance that the benefits will be achieved (including a set of measurable key performance indicators that have a results logic to the post-implementation benefits)
- identifies performance measure or service level before and after the service change
- identifies target date/s for the objectives and/or benefit to be implemented or realised.



28. RECOMMENDATIONS

The purpose of this section is to:

- summarise the Reference Project which has been identified to progress to procurement, and indicate the basis of justification for the project proceeding
- summarise the recommended delivery option for the project
- if the recommendation is to proceed to procurement, seek approval for the Implementation Plan (and associated documents)
- highlight significant issues or risks for decision-makers, if appropriate.

29. REFERENCES

AS/NZS ISO 31000:2009 Risk Management—principles and guidelines.

Australian Government (2015), National PPP Policy Framework

Queensland Government (2015), Project Assessment Framework: Business Case Development

Queensland Government (2015), Project Assessment Framework: Preliminary Evaluation

Queensland Government (2015), Project Assessment Framework: Queensland PPP supporting guidelines

Queensland Government (2016), State Infrastructure Plan



30. CONTROL POINT 6

Control Point 6 has now been reached. To conclude the DBC, complete the following checklist.

CONTROL POINT 6				
#	Have the following tasks been completed?	Section	Yes	No
1	Prepare a detailed project implementation plan.	s27		
2	Bringing together all of the analysis in the DBC, prepare a concluding statement, recommendations and an executive summary.	s27, s28, s2		
#	Have the following outputs been produced?	Section	Yes	No
1	A detailed implementation plan.	s27		
2	Recommendations, including: <ul style="list-style-type: none"> ▪ whether the Reference Project should progress to procurement ▪ the preferred delivery model ▪ the preferred traditional delivery model for the preferred option. Recommendations must be accompanied by: <ul style="list-style-type: none"> ▪ a request for approval of the implementation plan ▪ documentation of any significant issues or risks for decision-makers. 	s28		
3	A concluding statement.	s26		
4	An executive summary.	S2		

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