

UK Government



Infrastructure
and Projects
Authority

Infrastructure Business Case: International Guidance

Annexes

February 2022



Infrastructure
and Projects
Authority



HM Treasury

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OGL

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Case Study

01

(see separate document)

Templates

02

A – Scoping, Assurance and Approval Document

This document should be completed by the project manager/business case authors and the approving authority prior to preparing the business case.

The purpose of this document is to set out an initial high-level scope for the project, agree the type of business case required, and agree what assurance and approval steps will be applied.

The anticipated coverage of the Business Case should be agreed in order to calibrate the analysis required, and to assist the business case review and approvals process. For infrastructure projects it is expected to follow the **Actions** set out in the Annexes.

Organisation/Department	
Proposal Title	
Sponsor/ Senior responsible owner	
Agreed type of Business Case:	Programme Business Case Project Business Case Business Justification Case (for small projects)

Date	Version	Revision history	Document reviewer

Project overview

What is the expected spend for delivering the project?	
What is the strategic aim of the project?	
What is the potential scope of the project?	
What is the expected procurement approach?	
What is the high-level timetable for the project?	
What are the potential land and consent issues?	
What are the potential ESIA issues?	
Could the project be suitable for PPP treatment?	
Is this likely to be a standard project or a complex project?	
What are the principal risks, constraints and dependencies?	
Is the current capability of the project team sufficient to deliver the project?	

The Business Case will follow the following Assurance and Approval Steps.

Templates: A – Scoping, Assurance and Approval Document

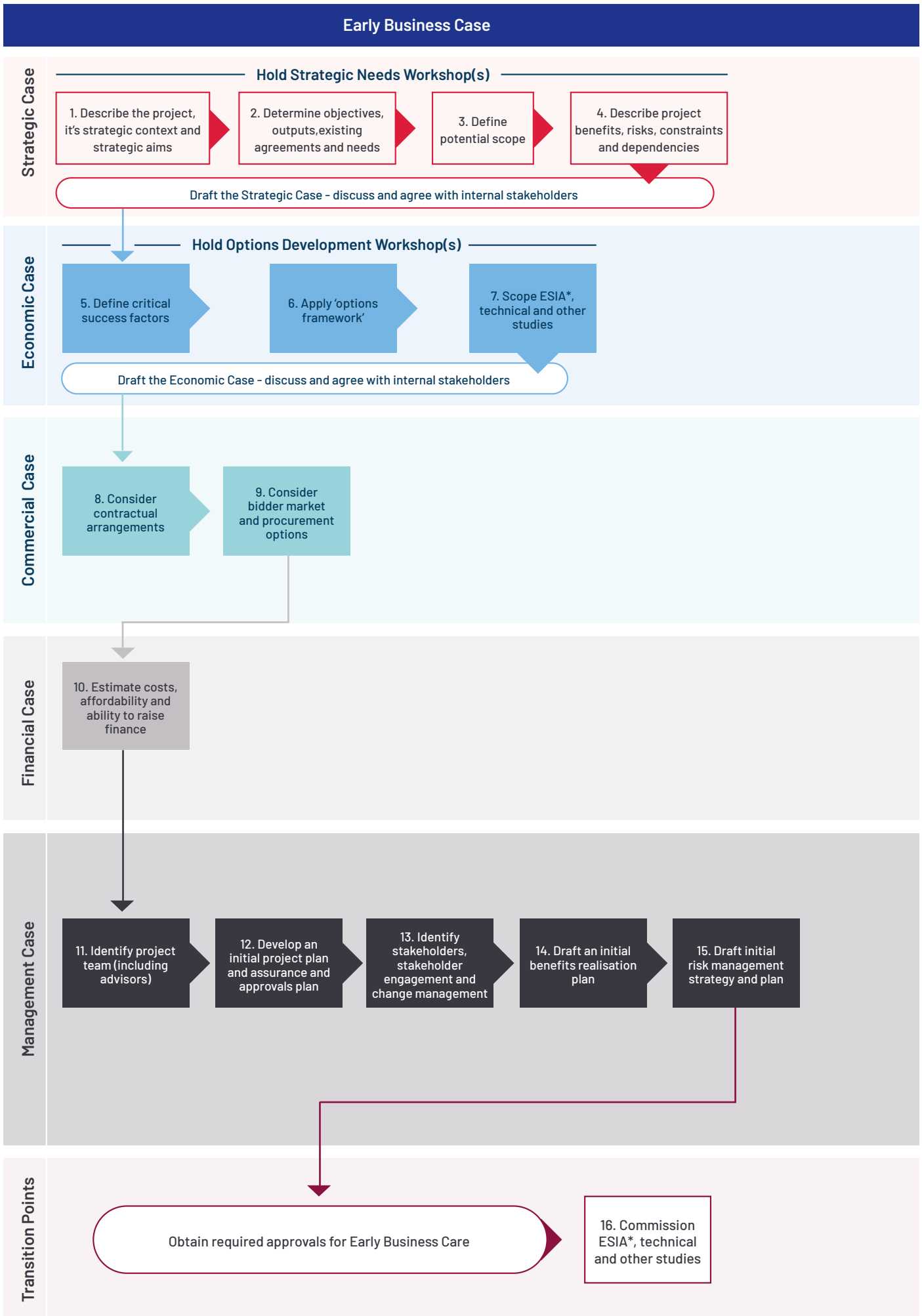
Completed by:

Project manager / representative:.....

Approving authority's representative:.....

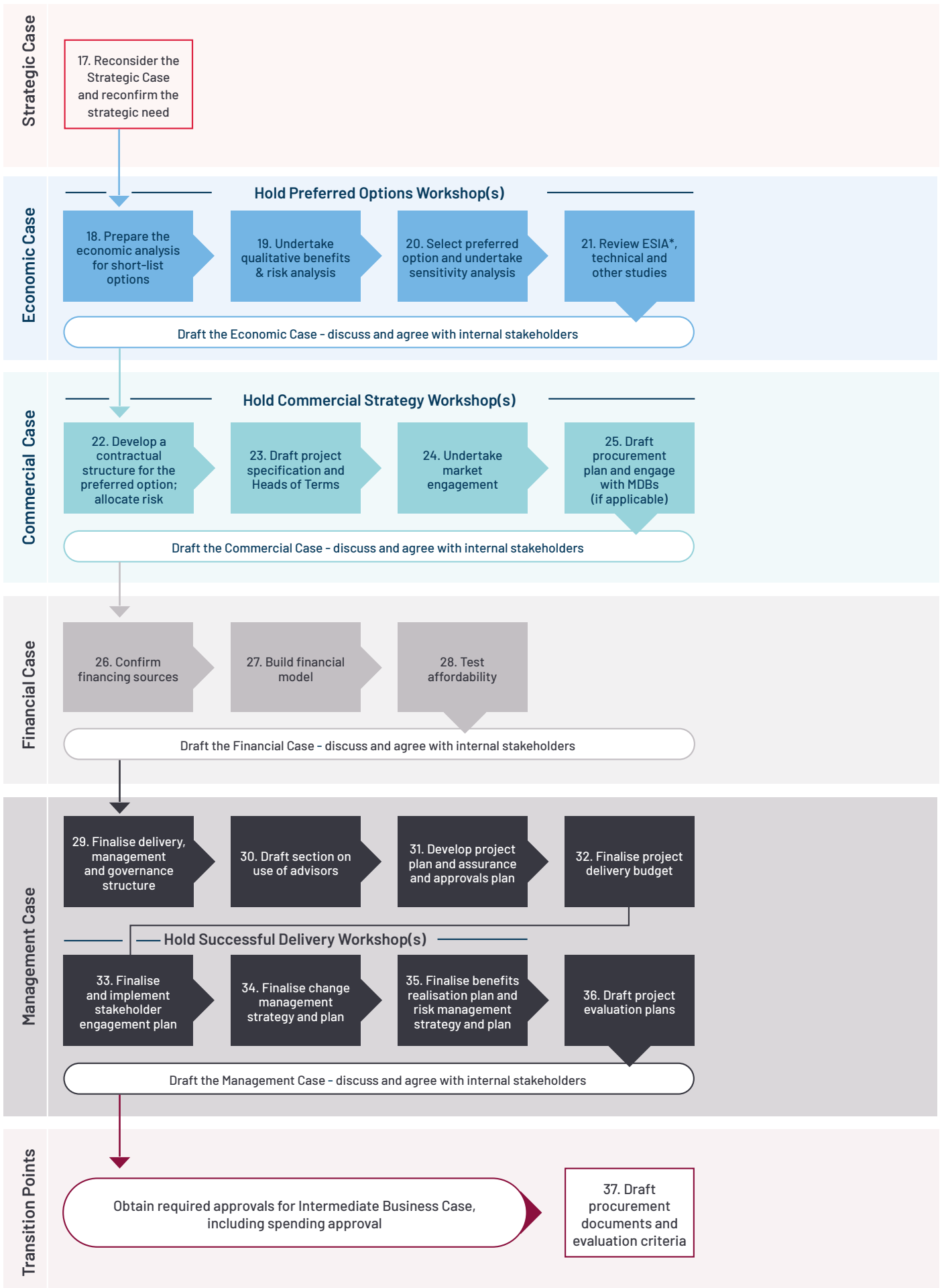
Date:.....

Date agreed for next review:..... (if required)

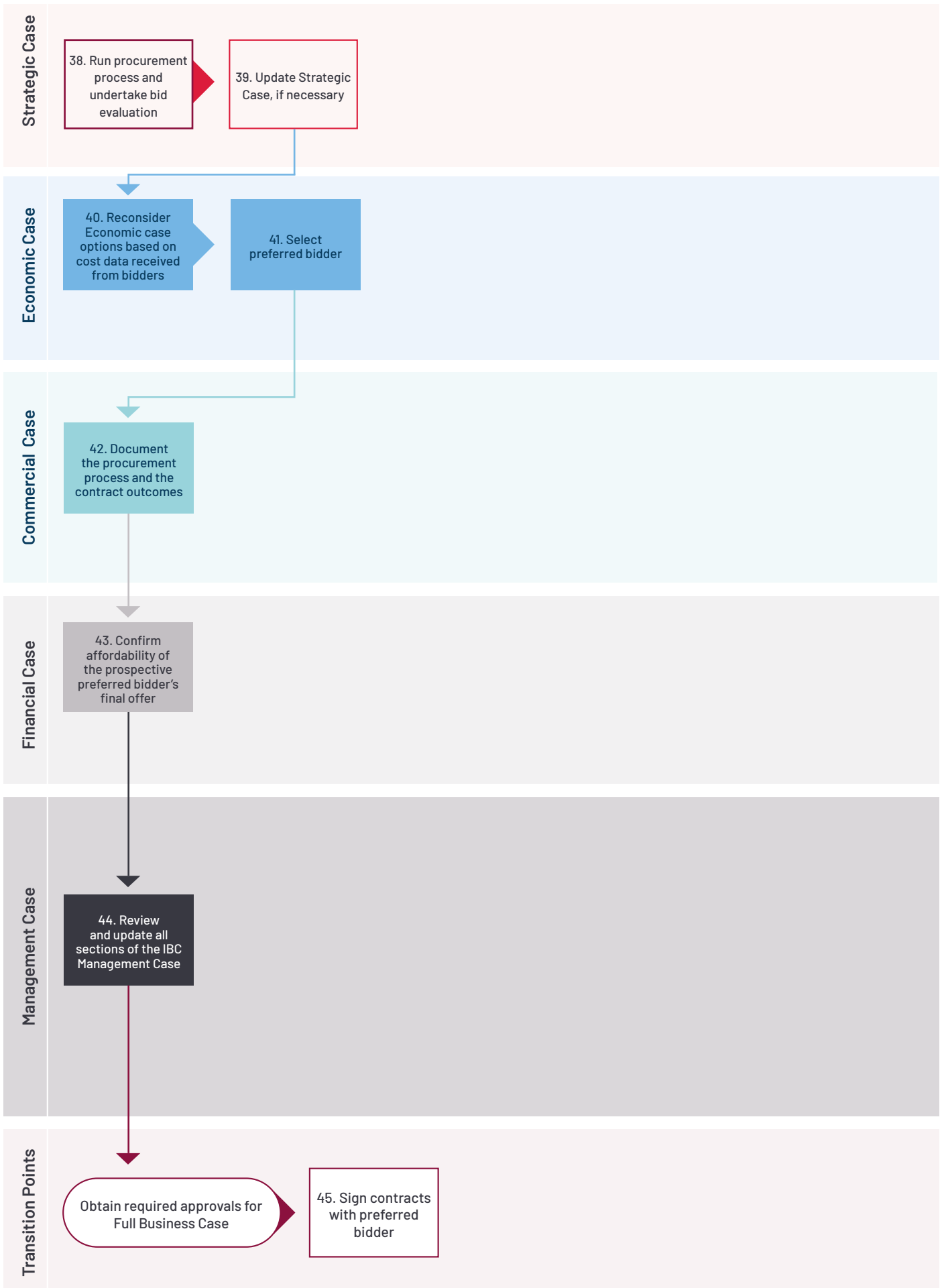


*ESIA Environmental Social Impact Assessment

Intermediate Business Case



Full Business Case



Introduction to Templates

The aim of the business case template family is to support your thinking, writing, engagement with stakeholders, and compliance with best practice. These templates provide a framework for scoping and planning project proposals, to support evidence-based decision-making. They should be used proportionately.

The Five Case Model can be used for the preparation of:

- Programme Business Cases;
- Project Business Cases (three stage: Early Business Case, Intermediate Business Case, Full Business Case);
- Business Justification Cases (One stage only)(BJC); and
- Policies and Strategies.

It is all about: Thinking, Evidencing, and Documenting. Business cases should be clear, concise, and avoid unnecessary repetition.

The two Single-Stage Business Justification Case templates are for smaller projects.

When in doubt, consider using the higher value business case templates, which provide more structure and support.

B – Early Business Case (EBC) Template

This template should be completed in conjunction with the ‘Infrastructure Business Case: International Guidance’. The relevant steps and actions in the Guidance are provided.

The purpose of the Early Business Case is to scope the project and to identify the preferred approach.

Business Case heading	Action	Guidance reference
Strategic assessment	Determine how the project aligns with other projects and programmes within the authority’s strategy, and supports the wider public sector’s objectives.	Action 1
Executive Summary	4 to 5 pages summarising the Business Case for senior stakeholders and external parties. In the first paragraph, outline the proposed project and spend for which approval is being sought.	-

Business Case heading	Action	Guidance reference
Strategic Case	Undertake a facilitated workshop to develop the Strategic Need for the project. Ensure that the senior responsible owner (SRO) attends along with key stakeholders and end users.	Schedule 2 Workshop 1: Strategic Needs
Project Rationale and Organisational Overview	Provide a concise description of the project rationale and a brief description of the organisation(s) that will be affected by the potential proposal.	Action 1 continued
Strategic Aims (National)	Brief description of the national strategies and policies that are driving investment.	Action 1 continued
Strategic Aims (Local)	Brief description of the local strategies and policies that are driving investment.	Action 1 continued
Objectives	A clear articulation of the project objectives and related outcomes expected from the proposed investment, which should be SMART.	Action 2
Existing arrangements	A factual description of the existing infrastructure and the related services.	Action 2 continued
Gap between existing arrangements and objectives (business needs)	A description of the gap between the existing arrangements and the objectives, describing for example deficiencies in terms of coverage, quality, cost and efficiency.	Action 2 continued
Potential scope	A high-level description of the potential scope of the envisaged project, to address the gap identified between existing arrangements and objectives	Action 3
Main benefits	Describe the main high-level benefits that it is envisaged that the potential investment/project will achieve, and the category of benefit to which they belong, including level of ambition on the Gender and Inclusion Framework.	Action 4
Main risks	Describe the main high-level risks identified, including environmental and social risks.	Action 4 continued
Constraints and Dependencies	Specify the constraints and dependencies that may limit the potential benefits.	Action 4 continued

Business Case heading	Action	Guidance reference
UN Sustainability Development Goals	Describe how the project will help the government to achieve UN Sustainability Development goals such as universal access to basic services, electricity and energy, water and sanitation, waste removal, transport, housing, health care and education and environmental sustainability.	Strategic Case
Social	Provide a summary of the social analysis including key findings of how the project will improve socio-economic opportunities – and access to these opportunities – for women and/or disadvantaged groups (for example, youth, people with disabilities). A statement on compliance with applicable social standards (for example, IFC Performance Standards).	Strategic Case
Environmental	Describe how the project will achieve environmental improvements and promote compliance with applicable environmental standards (this includes both local standards and standards enforced by key stakeholders, for example, IFC Performance Standards).	Strategic Case
Economic Case	Undertake a workshop for the completion of the Options Framework. Ensure that the senior responsible owner (SRO) attends along with key stakeholders and end users.	Schedule 2 Workshop 2: Options Development
Critical success factors (CSFs)	Describe your Critical Success Factors. Generic CSFs include: strategic fit; value for money; achievability; affordability; deliverability and compliance – tailor accordingly.	Action 5
Business as Usual	Describe the ‘Business as Usual’ option, including details on the Scope, Solutions, Deliverer and Financing	Action 6
Wide range of options (with RAG ratings)	List the options generated from using the options framework – with descriptions of how you’ve applied your Critical Success Factors and why you’ve chosen to dismiss certain options.	Action 6 continued
Shortlisted options	Describe how you’ve created your shortlist of options from the viable (Green and Amber) options from your options matrix – detailing how you’ve linked together Scope, Solution, Deliverer, Implementation and Funding.	Action 6 continued

Business Case heading	Action	Guidance reference
Preferred Approach	Describe the 'preferred approach' (usually the option that is all rated Green for all options) and why it is the optimal option available.	Action 6 continued
Environmental and Social Impact Assessment, technical and other studies	List the studies that need to be considered when pursuing certain options from the short list	Action 7
Commercial Case	Summarise your early stage thinking on the commercial elements that will need to be developed for the Preferred Approach'.	-
Possible contractual arrangements	Provide a high-level description of potential contractual arrangements that could be used for the 'preferred approach' established in the Economic Case and key issues arising.	Action 8
Possible bidders	Summarise the work done to identify potential bidders and an assessment of whether it will be possible to generate sufficient interest to run a meaningful competition.	Action 9
Procurement options	Provide a high-level description of the procurement options and how you will make the process equal, transparent, and fair, and meet relevant G20 Principles.	Action 9 continued
Financial Case	Summarise the preliminary understanding of how much the 'Preferred Approach' will cost, whether it is likely to be affordable, and what the non-governmental sources of finance might be.	-
Affordability	Provide a high-level assessment as to the affordability of the project, making clear any limitations on your assessment and highlighting any risks and/or issues of which the project board needs to be aware, especially any funding gap.	Action 10
Potential sources of finance	Provide a summary of the conclusions of your engagement with potential sources of finance; an assessment of any risks and/or issues of which the project board needs to be aware.	Action 10 continued
Management Case	Summarise how the 'Preferred Approach' will be managed considering; the structure of the project team, a project plan, assurance and approval, delivery costs, stakeholder engagement, benefits and risks management.	-

Business Case heading	Action	Guidance reference
Project team	Provide a summary description of the team (including advisers) that has worked on the Early Business Case, and how the team may need to be developed further to deliver the Intermediate and Full Business Cases; an initial budget, including estimates for external advisory costs.	Action 11
Project plan, including assurance and approvals plan	Provide a timeline that shows key points in the business case development process, along with actions that are needed to meet these.	Action 12
Stakeholder engagement	Provide a summary of the initial stakeholder analysis and resulting engagement plan. A summary of early engagement exercises you have already completed; assessment of any key issues which the project board needs to be aware of.	Action 13
Change Management	Provide the initial Change Management plan and assessment of any key issues of which the project board needs to be aware.	Action 13 continued
Benefits realisation plan	Provide the initial benefits realisation plan and assessment of any key issues of which the project board needs to be aware.	Action 14
Risk management strategy and plan	Provide the initial risk management strategy and plan and assessment of any key issues of which the Project Board needs to be aware.	Action 15

C – Intermediate Business Case (IBC) Template

This template should be completed in conjunction with the 'Infrastructure Business Case: International Guidance'. The relevant steps and actions in the Guidance are provided.

The purpose of the Intermediate Business Case is to identify the preferred option, make arrangements for procurement and financing of the option and the successful delivery of the project.

Business Case heading	Action	Guidance reference
Early Business Case (EBC) – Strategic and Economic Cases	Revisit the Early Business Case (EBC) and confirm that the short list options remain valid. This includes the Strategic Need and Objectives agreed in the strategic case section and the options appraised in the economic case section.	Action 17
Economic Case	Undertake a facilitated workshop to develop the preferred option for the intervention. Ensure that the senior responsible owner (SRO) attends along with key stakeholders and end users.	Schedule 2 Workshop 3: Preferred Option
Economic benefits	A table that shows your quantifiable benefits for each shortlist option, including the application of the discount rate and optimism bias – add footnotes or appendices that describe the reasons for your level of optimism bias. The approach to benefits appraisal should be: <ul style="list-style-type: none"> ■ Prudent – benefits should be capable of being realistically measured; ■ Proportionate – your estimates of the resources required to should be justifiable; and ■ Appropriate – your estimated benefits should be proportionate to the anticipated scope and spend of the option. 	Action 18
Economic costs	A table that shows the different categories of costs and their values for each shortlist option, Including the application of the discount rate and optimism bias. Add footnotes or appendices that describe the reasons for your level of optimism bias, along with a description of your underlying assumptions, including the sources and evidence basis for your figures.	Action 18 continued

Business Case heading	Action	Guidance reference
Economic risks	A table that shows your calculations for determining the 'risk cost' for each shortlist option, along with a description of your underlying assumptions, including the sources and evidence basis for your figures.	Action 18 continued
Public Value compared to BCR	A table that summarises the Cost-Benefit Analysis – showing the calculation of Public Value for each option, and how it compares to the Benefits Cost Ratio.	Action 18 continued
Qualitative Benefits and Risks	A detailed description of the Qualitative Benefits and Risks that you have analysed for each option, and the potential affects this has on the ranking of the options.	Action 19
Comparing Public Value, Benefits-Costs Ratio and Qualitative Scoring	A table that shows the Public Value, Benefits-Cost Ratio, Qualitative Risks and Benefits, and the ranking of each option. Supply detailed accounts on the decision-making process of ranking the options.	Action 19 continued
Preferred option	A detailed description of the preferred option with supporting tables that show the sensitivity of the option, and its Value for Money	Action 20
Review of environmental and social impact assessment, technical or other studies	A description of how the Environmental and Social Impact Assessment, technical or other studies need to be updated to reflect your preferred option.	Action 21
Commercial Case	Undertake a facilitated workshop to develop the Commercial Strategy for the Preferred Option. Ensure that the senior responsible owner (SRO) attends along with key stakeholders.	Schedule 2 Workshop 4: Commercial Strategy
Finalised Commercial Approach	A summary of the commercial approach for the preferred option, and description of why it has been chosen.	Action 22
Allocation of risks	A summary of how the risks of the preferred option will be allocated between project parties and how this allocation maximises value for money.	Action 22 continued

Business Case heading	Action	Guidance reference
Project specification and Heads of Terms	A summary of the project specification and Heads of Terms and the underlying principles, and a statement as to why the authority considers that the contract will maximise the value for money which can be achieved.	Action 23
Market engagement	A summary of the market engagement process, conclusions reached and actions undertaken as a result (for example, adjustments to the Heads of Terms); a statement as to the level of confidence that it will be possible to run a tender with a good level of competitive tension.	Action 24
Procurement Plan	A summary of the proposed Procurement Plan, how it complies with World Trade Organisation principles and relevant legislation and how it will achieve competitive tension and a good outcome for the authority.	Action 25
Engagement with MDBs (if applicable)	A summary of discussions held with multilateral development banks (MDBs)(if relevant), outcomes and potential risks to the authority.	Action 25 continued
Financial Case	Ascertaining affordability and funding requirement	-
Financial sources	A summary of updates to the analysis of financial sources undertaken at the Early Business Case stage; risks and issues of which the project board needs to be aware.	Action 26
Financial model	A summary of the estimated costs and revenues of the preferred option, the assumptions made in the financial model and of the conclusions you have drawn, highlighting any risks and issues of which the project board needs to be aware. Attach the financial model as an annex to the Business Case	Action 27
Affordability testing	Confirmation that the preferred option is affordable; risks to affordability; propositions as to how any gaps in affordability may be addressed.	Action 28
Management Case	Consider a workshop for the planning arrangements required for the successful delivery of the project. Ensure that the senior responsible owner (SRO) attends along with key stakeholders and end users.	Schedule 2 Workshop 5: Successful Delivery

Business Case heading	Action	Guidance reference
Delivery management and governance structure	A summary description of the delivery, management and governance arrangements for the project; any key issues of which the project board needs to be aware.	Action 29
Use of advisers	A summary of adviser costs; any key issues of which the Project Board needs to be aware.	Action 30
Project plan, including assurance and approvals plan	A summary of the project plan and the assurance and approvals plan highlighting key risks where delay and/or additional cost could arise and mitigations being put in place; any key issues of which the project board needs to be aware.	Action 31
Project budget	A detailed budget for the cost of the project team (including advisers) and any assets that will be required for delivery of the Business Case and/or project.	Action 32
Stakeholder engagement	A summary description of how your stakeholder engagement plan has been developed since the Early Business Case; a summary of the plan; a summary report of engagement undertaken and outcomes; a log of how the preferred option has been amended to reflect your engagement; any key issues of which the project board needs to be aware.	Action 33
Change Management	A summary description of how your change management plan has been developed since the Early Business Case; a summary of the plan; a log of how the preferred option has been amended to reflect the plan; any key issues of which the project board needs to be aware.	Action 34
Benefits register	A summary of the benefits realisation plan and any key issues of which the project board needs to be aware.	Action 35
Risk management strategy and plan; risk register	A summary of the updated risk management strategy and plan and of the risk register; any key issues of which the project board needs to be aware.	Action 35 continued
Evaluation plans	A description of how the benefits of the project will be evaluated after its completion.	Action 36

Business Case heading	Action	Guidance reference
Sustainable Development	<p>Summarise:</p> <ul style="list-style-type: none"> ■ Clear roles and responsibilities for environmental and social benefits across the governance of the project. Oversight and overall accountability for environmental and social benefits should be at senior leadership/SRO level; ■ Environmental and social specialist(s) with sufficient capacity and ability to properly monitor the project impacts; ■ Environmental and social measures integrated into monitoring and evaluation activities, for example, data disaggregated by sex, age and income quintile. At least one KPI relating to performance against social targets; ■ Environmental and social measures explicit within reporting requirements – in a proportionate manner; ■ Risk register includes full spectrum of environmental and social risks – the guidance can suggest IFC or WB standards as an aid; ■ QA support in place to assess quality and impact at key milestones; and ■ Identifying technical expertise that might be required downstream. 	-

D – Full Business Case (FBC) Template

This template should be completed in conjunction with the ‘Infrastructure Business Case: International Guidance’. The relevant steps and actions in the Guidance are provided.

The purpose of the Full Business Case is to select the most economically advantageous tender and to put in place the management arrangements for the successful delivery of the project’s outputs and activities.

Heading	Action	Guidance reference
Strategic Case	Revisit the Strategic Need. Confirm that the Strategic Need set out in the Intermediate Business Case (IBC) is still valid, and that the objectives for the project are specific, measurable, achievable, relevant and time-bound (SMART) for the purposes of post-project evaluation.	Action 39
Economic Case	Review the options developed in the IBC and select a preferred bidder from the procurement process.	-
Review of Economic Case	A description of how the costing information gained from bidders has been used to reassess the shortlisted options; and confirmation that the preferred option still remains.	Action 40
Preferred bidder	A detailed account of the decision-making process in choosing the preferred bidder.	Action 41
Commercial Case	Provide a summary of the procurement process. Set out the negotiated deal and contractual arrangements. Use the standard headings for the Commercial Case to document the negotiated deal between the public sector and its choice of service provider.	Action 42
Financial Case	Set out the financial implications of the deal. Use the standard headings from the IBC for the Financial Case to document the affordability and fundability of the project and attach the financial appraisal for the scheme.	Action 43
Management Case	Finalise the project delivery plans developed in the IBC.	-

Heading	Action	Guidance reference
	<p>Finalise project management arrangements and plans.</p> <p>Revisit the project management arrangements and plans outlined in the IBC and explain what has been agreed for the successful delivery of the project.</p> <p>Attach the project plan. Highlight any vacancies within the project delivery team and how it is intended to fill them.</p>	Action 44
	<p>Finalise change arrangements and plans.</p> <p>Revisit the change management arrangements and plans outlined in the IBC and explain what has been agreed for the successful delivery of the project.</p> <p>Attach the latest version of the change management plan to the FBC.</p>	Action 44 continued
	<p>Finalise benefits realisation arrangements and plans.</p> <p>Revisit the benefits realisation arrangements and plans outlined in the IBC and explain what has been agreed for the successful delivery of the project.</p> <p>Attach the latest version of the benefits register to the FBC.</p>	Action 44 continued
	<p>Finalise risk management arrangements and plans.</p> <p>Revisit the risk management arrangements and plans outlined in the IBC and explain what has been agreed for the successful delivery of the project.</p> <p>Attach the latest version of the risk register to the FBC.</p> <p>Include a contingency plan to manage the risk of service failure in the design, build and operational phases.</p>	Action 44 continued
	<p>Finalise contract management arrangements and plans.</p> <p>Record the contract management arrangements and plans that have been agreed between the organisation and the supply side.</p>	Action 44 continued

Heading	Action	Guidance reference
	<p>Finalise post-project evaluation arrangements and plans.</p> <p>Revisit the project assurance and post-project evaluation arrangements and plans outlined in the IBC and explain what has been agreed for the successful delivery of the project.</p>	<p>Action 44 continued</p>
<p>Project assurance</p>	<p>Undertake a review of the project’s ability to successfully deliver the agreed outputs and activities.</p>	<p>Gateway 3 (Investment Decision)</p>

E – Single Stage Business Case Template – Low Value

TEMPLATES

The two Single Stage Business Justification Case templates are for smaller projects.

When in doubt, consider using the higher value business case templates, which provide more structure and support.

For Procurements and Projects

- 1 Single Stage Business Case – Low Value and Risk (set your value threshold here using either project development cost or project value).
- 2 Single Stage Business Case – Medium Value and Risk (set your value threshold here using either project development cost or project value).
- 3 Three Stage Business Case (Early Business Case, Intermediate Business Case, Full Business Case) – High Value (set threshold here).

Each country will set its own values.

<Title of Investment Proposal>

SINGLE STAGE BUSINESS CASE – LOW VALUE AND RISK (Set value thresholds)

Senior responsible officer:	
Project manager:	
Organisation:	

	Name	Signature	Date
Prepared by:			
Reviewed by:			
Approved by:			

<Title of Investment Proposal>

Introduction

State the purpose of the business case and the project for which approval is being sought.

1. Strategic need

Describe the proposed project and the strategic needs you are seeking to satisfy. How does satisfying these needs contribute to the authority's strategy and objectives?

2. Options analysis

2.1 Main options

Describe the options considered: advantages and disadvantages, and conclusions. Consider the 'Do Minimum' and 'Business as Usual' options.

2.2 Recommended option

Describe the recommended option: scope and main deliverables, related cost(s), main benefits and risks, and timescales; and why this solution has been selected over other options.

2.3 Sources and assumptions

Describe the sources and assumptions for the evidence base supporting the recommended option, and why approvers should have confidence in the information provided.

3. Commercial approach

Describe what you are procuring and how this will be undertaken in accordance with procurement rules and regulations and any relevant organisational policies and procedures to deliver value for money.

4. Funding and affordability

Describe how the procurement will be funded and any additional resources required, including any commitments that have already been made to guarantee the funding or other resources required. Summarise the indicative financial implications and sources of funding for the proposed investment over the life of the project using the table below.

Table 1: Cost and funding for the recommended option

Lifespan		Year 1	Year 2	Year 3	Year 4	Year 5	Total
Capital expenditure							
1	Fixed assets						
2	Software						
3	Other capital items						
4	Total capital costs						
Operating expenditure							
5	Personnel						
6	Depreciation						
7	Maintenance						
8	Operating licences etc.						
9	Training						
10	Other operating costs						
11	Total operating costs						
Total expenditure							
12	Total project costs						
Funding							
13	Capital funding						
14	Operational funding						
15	Third party funding						
16	Third party funding						
17	Total funding						
Affordability assessment							
18	Capital deficit/surplus (Total capital costs minus total capital funding)						
19	Operational deficit/surplus (Total operating costs minus total operational funding)						

Revenue generation (if applicable)

Table 2: Revenue projections for the recommended option

Recommended option		Year 1	Year 2	Year 3	Year 4	Year 5	Total
Revenues							
1	Sales and other revenue						

5. Delivery arrangements

Describe the arrangements in place for successful delivery of the scheme:

- the governance arrangement (roles and responsibilities and reporting lines);
- the project plan;
- project assurance;
- benefits delivery;
- risk management; and
- any assistance required from other parts of government or the private sector.

F – Single Stage Business Case Template – Medium Value

<Title of Investment Proposal>

SINGLE STAGE BUSINESS CASE – MEDIUM VALUE AND RISK

Senior responsible officer:	
Project manager:	
Organisation:	

	Name	Signature	Date
Prepared by:			
Reviewed by:			
Approved by:			

<Title of Investment Proposal>

Introduction

State the purpose of the business case and the spend for which approval is being sought, specifically; “to procure X and/or to do X at the cost of £Y”. Provide an overview of sections 1-5 of your proposal in no more than half a page.

1. Strategic case

1.1 Context

Provide a high-level overview of the nature and work of the authority in which this procurement or project is taking place.

Describe how the proposed project supports the authority’s strategy and objectives, and any links to other programmes or projects.

Strategic need

1.1.1 Objectives

Specify the key objectives for undertaking the investment proposal, expressed in terms of what you are seeking to achieve by way of targeted outcomes.

- Key Note 1: Make your objectives SMART (specific, measurable, achievable, realistic and time-bound).
- Key Note 2: Consider the generic drivers for intervention and spend:
 - Economy (reducing cost);
 - Efficiency (improving productivity);
 - Effectiveness (improving quality);
 - Compliance (satisfying statutory or lender requirements);
 - Replacement (replacing a service that is about to expire); and
 - Advancement (meeting Gender and Inclusion goals, producing environmental benefits, promoting achievement of UN sustainability goals).
- Key Note 3: Consider a workshop (See Schedule 2 of International Guidance and Appendix I) for 'Strategic Needs', consisting of stakeholders, end users, the sponsor/ SRO and other key participants.

1.1.2 Existing arrangements

Describe any arrangements currently in place ('Business as Usual'): how services are presently organised and provided to users; including associated throughput, costs, current asset availability, utilisation and condition.

1.1.3 Identify the gap

Describe the problems and difficulties with the existing arrangements and what needs to be done to fill the service gap, that is, the difference between where we are now and where we want to be in terms of our objectives.

1.1.4 Potential scope and services

Describe the potential scope for service improvement on a continuum of need as follows:

- 'core' coverage – the 'essential' requirements without which the procurement will not be judged a success;
- 'desirable' coverage – the 'additional' requirements which the procurement may justify extra spend on a value for money basis; and
- 'optional' coverage – the 'possible' requirements which the procurement may justify on a marginal low cost and affordability basis.

1.1.5 Main benefits

Specify the beneficiaries and the benefits that will accrue from the achievement of the anticipated outcomes, taking into account: direct public sector benefits (to originating authority); indirect public sector benefits (to other public sector authorities); and wider benefits to society (households, individuals and businesses).

1.1.6 Main risks

Specify the risks associated with the achievement of the anticipated outcomes and the proposed counter measures for the mitigation and management of risk. Focus on the risks in the development, tendering, construction and operational phases of the investment proposal).

1.1.7 Constraints

Specify any constraints that have been placed on the investment proposal, including any external conditions and agreed parameters within which it must be delivered).

1.1.8 Dependencies

Specify any dependencies outside the scope of the investment proposal upon which successful delivery is dependent.

2. Options analysis

2.1 Critical success factors

Specify the critical success factors for the investment proposal, i.e. the attributes essential for successful delivery, against which the options will be appraised.

- Key Note 4: Consider the following and tailor as required for your investment proposal:
 - Strategic fit;
 - Value for money;
 - Achievability;
 - Affordability;
 - Deliverability; and
 - Compliance.

2.2 Main options

Identify and complete the financial appraisal for each option at Annex A, and attach as an Appendix to the Business Case. Your options must include:

- 'Business as Usual' (the baseline from which improvement will be measured);
- 'Do Minimum' (a realistic option that meets core requirements); and
- Any additional options considered.

Complete Table 1 below for each option, referencing the benefits and risks in relation to Sections 1.2.5 and 1.2.6 and the costs as shown in the financial appraisal in Annex A.

Key Note 5: consider a workshop (Schedule 2 of International Guidance and Appendix II) for ‘Options Development’ consisting of stakeholders, end users, the sponsor/SRO and other key participants; and use of the Options Framework.

Table 1: Summary of options appraisals

Option 1	‘Business as Usual’ (BAU)
Description	Potential scope, solution, delivery, implementation, and funding stream.
Net costs	
Advantages*	
Disadvantages*	
Conclusion	How well it meets the agreed critical success factors (CSFs) for the procurement.
Option 2	‘Do Minimum’
Description	Potential scope, solution, delivery, implementation, and funding stream.
Net costs	
Advantages*	
Disadvantages*	
Conclusion	How well it meets the agreed critical success factors (CSFs) for the procurement.
Option 3	
Description	Potential scope, solution, delivery, implementation, and funding stream.
Net costs	
Advantages*	
Disadvantages*	

* *Include an assessment of the extent to which the option will deliver the main benefits (Section 1.2.5 refers) and incur the main risks (Section 1.2.6 refers).*

2.3 Recommended option

Justify the recommended option (which will be taken forward for further analysis in Sections 3, 4 and 5).

3. Commercial approach

Describe the procurement route and how it complies with procurement rules and regulations and any other relevant organisational policy.

Describe the outputs – goods, services and works – that will be procured in relation to the recommended option, and how they will be paid for.

Describe how the goods, works or service will be paid for and risks tied down in the payment mechanism – for example, pay against milestones, delivery of services, performance, availability, usage.

Describe how the procurement will be contracted and whether a standard or bespoke contract will be required.

Explain any legal or personnel implications of the recommended option, if applicable, and how they will be managed.

4. Funding and affordability

Complete Tables 2 and 3 to specify the capital and operational requirements for the investment proposal, and provide an overall statement on affordability and funding. Ensure any affordability gaps are highlighted.

Key Note 6: This should reflect the whole life cost of the project proposal, that is, over the expected lifespan of the proposal. For investment proposals exceeding five years, expand the table accordingly.

Table 2: Cost and funding for the recommended option

Lifespan		Year 1	Year 2	Year 3	Year 4	Year 5	Total
Capital expenditure							
1	Fixed assets						
2	Software						
3	Other capital items						
4	Total capital costs						
Operating expenditure							
5	Personnel						

Lifespan		Year 1	Year 2	Year 3	Year 4	Year 5	Total
6	Depreciation						
7	Maintenance						
8	Operating licences etc.						
9	Training						
10	Other operating costs						
11	Total operating costs						
Total expenditure							
12	Total project costs						
Funding							
13	CAPEX funding						
14	OPEX funding						
15	Third party funding						
16	Third party funding						
17	Total funding						
Affordability assessment							
18	Capital deficit/surplus (total capital costs minus total capital funding)						
19	Operational deficit/surplus (Total operating costs minus total operating funding)						

Revenue generation (if applicable)

Table 3: Revenue projections for the recommended option

Recommended option		Year 1	Year 2	Year 3	Year 4	Year 5	Total
Revenues							
1	Sales and other revenue						

Balance sheet treatment

Explain any impacts on the balance sheet of the organisation and how these will be dealt with.

5. Delivery arrangements

Describe what arrangements have been put in place to ensure the successful delivery of the investment proposal, including:

- Project management arrangements: standards, governance arrangements, roles and responsibilities and plans.
- Project assurance (independent and impartial reviews) at different stages of the project lifespan.
- Change Management arrangements, if required.
- Benefits realisation and plans, including benefits register.
- Risk management arrangements and plans, including risk register.
- Contract management arrangements and plans, if required.
- Post-evaluation arrangements and plans including:
 - (1) the dates the project evaluation will be delivered (that is, to evaluate whether the project has been delivered to time, cost, and specifications, and to identify lessons learned); and
 - (2) who will be responsible for undertaking the evaluation.

Appendix I: Workshop – Strategic Needs

At least one workshop is recommended for establishing the Strategic Need, so that the key stakeholders are engaged early on, can challenge and assist to shape the direction of the project. This may comprise more than one actual workshop depending on need.

The purpose, objectives, key participants and outputs of this workshop are as follows:

<p>Workshop objectives</p>	<ul style="list-style-type: none"> ■ To agree why the project needs to happen and how the project fits within the government’s wider strategic aims, and alignment with SDGs. ■ To identify and agree a set of project objectives. ■ To describe the existing arrangements and the gap between the existing arrangements and the project objectives. ■ To define a high-level scope for the project. ■ To identify the benefits the project could generate, and the risks which the government will need to manage.
<p>Key participants</p>	<ul style="list-style-type: none"> ■ Senior decision-makers. ■ Project director. ■ Project manager. ■ Other stakeholders, including service user representatives.
<p>Outputs</p>	<ul style="list-style-type: none"> ■ Objectives. ■ Identification of SDGs relevant to the project. ■ Existing arrangements. ■ Gap between objectives and existing arrangements. ■ Project scope. ■ High-level benefits, risks, constraints and dependencies.

More detail on running the workshop is included in Schedule 2 of the ‘Infrastructure Business Case: International Guidance’, and the accompanying ‘Case Study’.

Appendix II: Workshop – Options Development

At least one workshop is recommended to identify and assess the options, so as to ensure that the key stakeholders are engaged early on, can challenge and assist to shape the direction of the project.

The purpose, objectives, key participants and outputs of this workshop stage are as follows:

Workshop objectives	<ul style="list-style-type: none"> ■ To identify Critical Success Factors. ■ To describe the 'Business as Usual' option. ■ To identify a range of options. ■ To consider low carbon options and opportunities. ■ To analyse these options through a structured process. ■ To identify a preferred approach.
Key participants	<ul style="list-style-type: none"> ■ Senior decision makers. ■ Project director. ■ Project manager. ■ Economic adviser. ■ Director of finance. ■ Environmental and social advisers. ■ Strategy advisers/consultants. ■ Representatives of customers/users of the current service (if applicable). ■ Representative of impacted, which may include NGOs.
Outputs	<ul style="list-style-type: none"> ■ A preferred approach. ■ A number of alternative options. ■ A description of the process undertaken.

More detail on running the workshop is included in Schedule 2 of the 'Infrastructure Business Case: International Guidance', and the accompanying 'Case Study'.

Appendix III: Workshop – Project Level Carbon

The following is an example project level low-carbon workshop from the UK Environment Agency. The information is intended to provide supporting information to trainers and project teams on the content, materials and outputs that have made up the sessions.

These can be adapted to suit the project, stakeholders, and infrastructure environment as appropriate.

The objective of the workshop is to:

1. Introduce and improve understanding of the structured carbon management process for projects at early design stage;
2. Challenge specific scheme elements and discuss and capture reduction opportunities from the team to be taken forward during construction; and
3. Provide additional information on low carbon opportunities and best practice.

Consider how we can refine and confirm the project scheme to meet its carbon target and contribute to the UK's Environment Agency's net zero ambitions.

Low Carbon Drivers – setting the scene

The following information may prove helpful to introduce the concept of carbon management and ensure everyone attending the workshop has the base understanding of its principles.

Why is carbon reduction important?	Short overview section on why managing carbon reduction is important, including: <ul style="list-style-type: none">■ The problem of climate change and global context;■ National context and government targets; and■ The role of infrastructure and its importance.
Project-sponsoring authority – policy and targets	Set out the authority's project carbon reduction targets, and wider government/national targets. Overview of the strategy in place to deliver on these targets. Outlining key actions intended to help meet these objectives.

What is whole life carbon?	<p>Definition of whole life carbon and how it is broken down (in the UK, this is based on PAS 2080 guidance).</p> <p>Overview of the stages included in whole life carbon and the emissions stages and sources involved:</p> <ol style="list-style-type: none"> 1. Capital carbon; 2. Operational carbon; and 3. End of life carbon. <p>Description of whole life carbon and the emissions sources specific to an example asset type, for example, water pumping station.</p>
How to quantify carbon emissions	<p>Brief description of the methods used to calculate carbon emissions of a project.</p> <p>Focus on the calculation-based approach and bottom up quantification process.</p>
The Carbon and Cost reduction hierarchy	<p>Introducing the Carbon and Cost reduction curve from PAS 2080.</p> <p>Outlining the carbon reduction hierarchy of:</p> <ul style="list-style-type: none"> ■ Build nothing; ■ Build less; ■ Build clever; and ■ Build efficiently. <p>Outlining where the build principles are best integrated in terms of work stages of the project's delivery.</p>
Challenge areas	<p>Outlining the areas that can be challenged and actions to consider with the specific scheme (dependent on what stage it is at) to maximise carbon reduction opportunities.</p>
Carbon assessment tools	<p>Overview of whole life carbon management assessment tools that are being used for the project or infrastructure sector (for the UK Environment Agency, the tool is called ERIC⁹, and a different example is available from Highways England with accompanying training¹⁰).</p> <p>Applicability to the 'Five Case Model' business case process.</p> <p>How to utilise them to identify key areas for carbon reduction.</p>

⁹ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/571707/LIT_7067.pdf

¹⁰ <https://www.gov.uk/government/publications/carbon-tool>

Overview of the project

An overview of the specific project being discussed should be undertaken to provide participants with a good understanding with regards to its location and area it will service, its specific purpose, potential solutions being considered, any known challenges / obstacles, delivery partners, key stakeholders etc.

The project will likely be at Early or Intermediate Business Case stage, therefore an update on its status and run through of key findings from the EBC / IBC should be undertaken.

If a preferred option(s) is known, then more detail should be provided on those, for example, early carbon baseline information etc.

Carbon hotspots and focus areas

This part of the session will look in more detail at identifying carbon hotspots in projects, and focus in on some of the solutions to help decarbonise the project and some case studies of how the authority/government has managed this on previous projects.

<p>Carbon hotspots</p>	<p>How to identify carbon hotspots on the scheme and a stage by stage overview of where they are likely to lie for each, for example:</p> <ul style="list-style-type: none"> ■ Options appraisal; ■ Design and preparation; ■ Construction; and ■ Operations. <p>Review of expected carbon hotspots for the specific project being discussed (based on early baseline assessments).</p>
<p>Focus areas</p>	<p>Review of some of the key focus areas to consider when designing and constructing the project. Including principles to apply to realise savings in each area, for example:</p> <ul style="list-style-type: none"> ■ Design optimisation; ■ Material selection and use of alternative materials for major carbon hotspots, for example: <ul style="list-style-type: none"> - concrete and use of low carbon concrete mixes; - steel and use of high recycled content, electric arc furnace (EAF) or lean duplex steel; ■ Design for Manufacture and Assembly (DFMA) efficiency approaches; and ■ On-site construction and installation practices.

Case studies	<p>Run through of a series of case studies highlighting real life practical examples of the carbon management approaches being undertaken, for example:</p> <ul style="list-style-type: none"> ■ Build nothing; <ul style="list-style-type: none"> – Opportunities for repair and refurbishment ■ Build less; <ul style="list-style-type: none"> – Selecting – Optimising design ■ Build clever, for example: <ul style="list-style-type: none"> – Early engagement with supply chain – Use of prefab/precast components – Low carbon material selection ■ Build efficiently; <ul style="list-style-type: none"> – Focus on reducing over-specification – Reducing construction programme
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Interactive session

An interactive session with the participants to brainstorm and collate ideas on carbon reduction opportunities to implement for the project, but also considering opportunities for carbon offsetting and removal activities.

The exercise is intended to cover whole life carbon measures that could be adopted for the entire project over its life cycle to get the teams thinking about the connection and trade-offs between capital and operational carbon.

The exercise can focus on different areas, but ones used in the past that have proved effective have included:

- Vision, leadership and project management;
- Procurement and supply chain;
- Construction and installation;

Appendix III: Workshop – Project Level Carbon

- Operations;
- End of life; and
- Carbon offsetting and removal.

The group can be separated into teams or carried out as an entire group, depending on numbers.

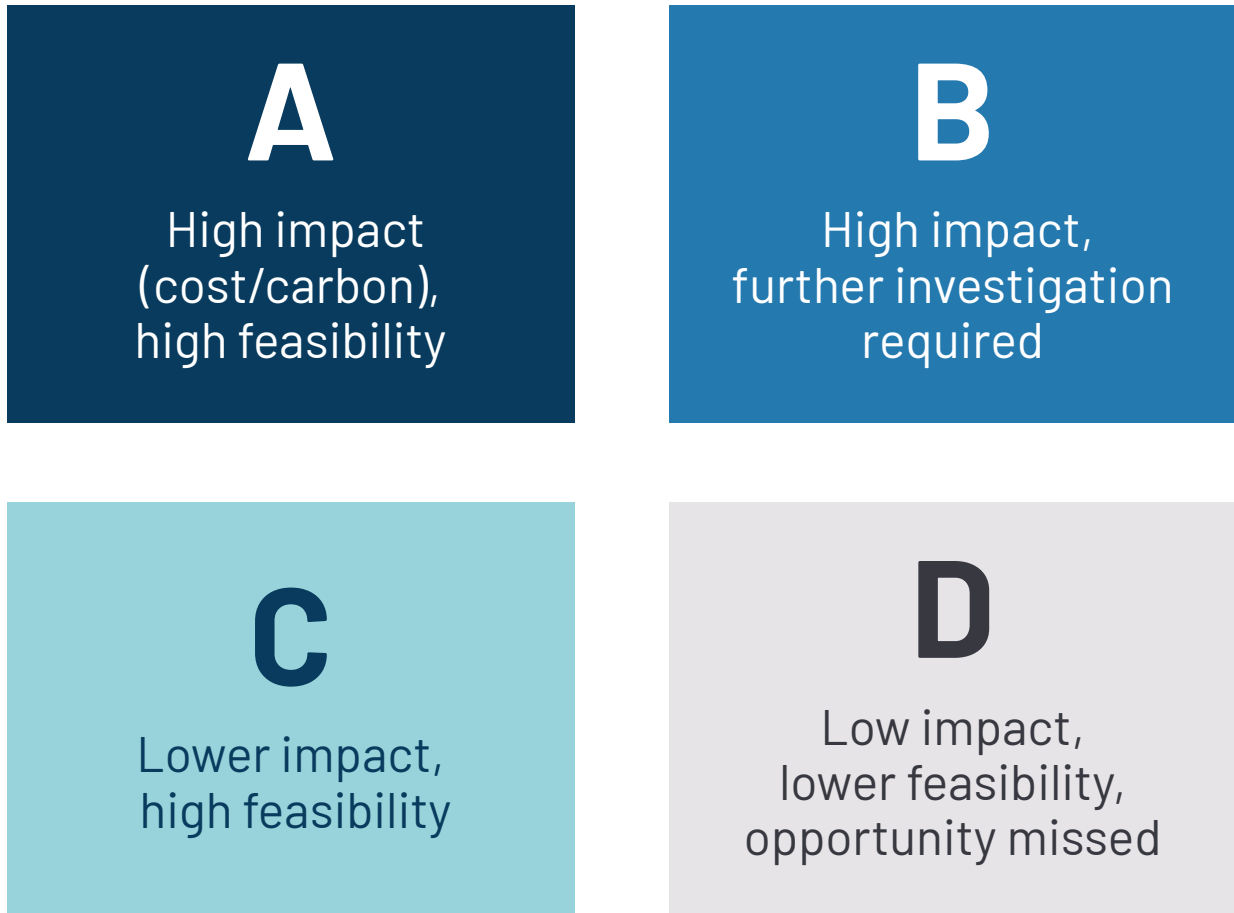
The participants/teams are encouraged to produce a 'carbon opportunities' register (for example, an Excel list) where each measure is categorised by:

- Applicable carbon reduction hierarchy step;
- Area;
- Impact;
- Feasibility; and
- Challenges/obstacles.

Once complete, the teams are encouraged to feedback to the whole group their most promising opportunities, identified based on an impact/feasibility matrix as outlined in Figure 1: Opportunities matrix below.

Figure 1: Opportunities matrix

An open discussion is encouraged across all participants to gauge which opportunities are the most suitable to be taken forward for consideration in the project's planning process.



An online set of materials is being developed; these will work with the Guidance to take you through the chronology of building a business case on a step-by-step basis, using the Guidance and Case study as base documents.

To gain a full understanding of the process, it will recommend that you:

- first read the Guidance as the prime source of learning;
- next read the Case Study as an example of good practice;
- work your way through the step-by-step training materials to learn how to develop a business case
- finally use the Templates to actually write your business case.

