# Business case for implementation

[AUTHOR]

[DATE]

VERSION

**[PROPOSAL NAME]**

**Detailed business case to proceed from initiation to implementation**

[Insert partner logos/image]



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This document is available from the NZ Transport Agency on request.

This document provides guidance for a detailed business case (DBC) report, in support of an investment – project, procurement or scheme.

In all cases, a programme business case or indicative business case (IBC) should have been completed and agreed, prior to the submission of this document for approval.

Prior to pre-implementation, the main purpose of the DBC is to evidence that the most economically advantageous offer is being procured and that it is affordable. In addition, the DBC demonstrates that the required outputs can be successfully achieved.

The template is for guidance purposes only and should be completed in accordance with NZ Transport Agency guidelines set out on the NZ Transport Agency’s website.

## Approval

|  |  |  |  |
| --- | --- | --- | --- |
| Prepared by | Reviewed by | Endorsed by | Endorsed by |
|  |  |  |  |
| [Job title] | [Job title] | Proposal sponsor | P&I Case Manager |
| Date: | Date: | Date: | Date: |
|  |  |  |  |

## Revision status\*

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| Revision number | Implementation date | Summary of revision |
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## Template version

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## Glossary of Terms

|  |  |
| --- | --- |
| Abbreviation | Term |
| AEE | Assessment of environmental effects |
| AO | Approved organisation |
| BCR | Benefit-cost ratio |
| CAPEX | Capital expenditure |
| CBD | Central business district |
| CEMP | Construction environmental management plan |
| CVIU | Commercial vehicles investigation unit |
| D&C | Design and construct |
| DE | Design estimate |
| EEM | *Economic evaluation manual* |
| EIR | Environmental impact report |
| EOI | Expression of interest |
| EPA | Environmental Protection Agency |
| FYRR | First year rate of return |
| GPS | Government Policy Statement |
| HCV | Heavy commercial vehicle |
| HNO | Highways and Network Operations |
| HPT | Historical Places Trust |
| IAP2 | International Association for Public Participation |
| ILM | Investment logic map |
| IRS | Investment and revenue strategy |
| ITS | Intelligent transport systems |
| KPI | Key performance indicator |
| LLR | Lessons learnt review |
| LTMA | Land Transport Management Act |
| MOU | Memorandum of understanding |
| MVKT | Million vehicle kilometres travelled |
| NES | National environmental standards |
| NIU | National infrastructure unit |
| NLTF | National Land Transport Fund |
| NLTP | National Land Transport Programme |
| NOR | Notice of requirement |
| NPC | Net present cost |
| NZCID | New Zealand Council for Infrastructure Development |
| NZTA (or the Agency) | The New Zealand Transport Agency |
| NZTS | New Zealand transport strategy |
| OPEX | Operating expenditure |
| P&I | Planning and Investment |
| PI | Performance indicator |
| PMS | Project management services |
| PoPS | Portfolio procurement strategy |
| PPFM | Planning Programming and Funding Manual |
| PPM | Principal Project Manager |
| PPP | Public Private Partnership |
| PT | Public transport |
| PWA | Public Works Act |
| RAMM | Road Assessment and Maintenance Management |
| RFP | Request for proposal |
| RLT | Regional Land Transport |
| RLTS | Regional Land Transport Strategy |
| RMA | Resource Management Act |
| RoNS | Road of national significance |
| SAR | Scheme assessment report |
| SE | Scheme estimate |
| SH(#) | State Highway (number) |
| SOI | Statement of intent |
| SSC | State Services Commission |
| SSEMP | Site specific environmental management plan |
| TA | Territorial Authority |
| TDM | Traffic demand management |
| TOC | Total outturn cost |
| VAC | Value Assurance Committee (formerly SSRC) |
| VMS | Variable message sign |
| WEBs | Wider economic benefits |

Add more as appropriate.

## Executive Summary

Someone should read the summary and be able to understand what the issues are, what the proposed solution is and why it is the best fit. You could use the outline below as a guide:

* Background
* Issues/Opportunities/Objectives
* Options considered and why some were rejected
* Description of recommended solution and the cost/benefits
* Summarise the factors that influenced the selection and why it is the best course of action
* Risks associated with the project meeting its objectives for the proposed costs
* How are we going to take it forward to implementation (approach to detailed design, consenting and construction)?
* Confidence in the project planning going forward (internal resources, governance)
* Conclusion.

# PART A – THE CASE FOR THE PROJECT

## Background

Use this summary box to succinctly explain what is in this chapter sufficient for someone who does not want to read the whole report to obtain a general understanding of the key messages of the chapter.

Briefly outline the project. The information in this section should be obtained from the previous Indicative Business Case. However, some of the underlying assumptions and triggers behind the case for change could have changed in the period between establishing the Strategic Case and the Detailed Business Case. It is therefore critical to review and update these sections to ensure the underlying assumptions and drivers still support the strategic objectives and the proposed activity. Significant changes from the Indicative Business Case should be highlighted and explained.

Provide an overview of how and why the project has developed. Much of this information will be contained in the Indicative Business Case. For some projects, a decision may have been taken to combine stages in which case an Indicative Business Case document may not exist.

Reference the Strategic Assessment Report and the Investment Logic Map which should be included as Appendix A.

### Work completed to date

This section will outline the work completed (or currently being completed) on the project to date. It is relevant to know when a project was first identified and how it arrived to this point. This should not be a detailed account, but should highlight the important milestones. Refer to the previous approved ‘Indicative Business Case” (where relevant) and comment on any major differences and emphasise key decisions.

#### Use up to tier-three subheadings as appropriate

To provide clarity use up to tier three format headings throughout the document as appropriate. But do not change the format styles.

### Project governance

Summarise the project governance arrangements during the business case development phase.

### Organisation structure

Figure ‑: Table Title (use this figure style .. copy and paste, figure titles to appear BELOW the figure)

### NZ Transport Agency Board

The NZ Transport Agency Board has overall responsibility for NZ Transport Agency projects. The Board reports directly to the Minister of Transport and is responsible for:

* land transport planning
* managing the state highway network
* regulating access to, and participation in, the land transport network
* promotion of land transport safety and sustainability.

### Highways and Network Operations Group Value Assurance Committee

The HNO Group Value Assurance Committee (VAC) is the most senior project decision making team within the HNO group, which comprises the National Manager Professional Services and various other senior managers and technical specialists.

### Add other project governance as appropriate

### Project sponsor

The project sponsor is ….. The project sponsor is responsible for:

* Ultimate authority and responsibility for the project
* Endorsing changes to scope, schedule, budget and quality
* Endorsing escalation and championing recommendations to the Highways VAC
* Providing policy guidance to the Project Manager
* Endorsing the Project Management Plan to confirm that project scope and deliverables are correct
* Reviewing progress and providing advice on resolution of issues
* Supporting the Project Manager
* Resolving issues beyond the Project Managers authority.

## Problems, Opportunities and Constraints

This Chapter forms part of the Strategic Case which demonstrates whether or not an investment is needed, either now or in the future. It should demonstrate the case for change – that is, a clear rationale for making the investment; and strategic fit, how an investment will further the aims and objectives of the NZ Transport Agency.

More specifically, the Chapter needs to clearly specify the business need for a project(s). Determining the case for change and strategic fit should be an iterative process as a business case develops, and always supported by robust evidence, such as identifying key risks and constraints. Consulting main stakeholder groups is an important step in identifying aims and is covered in Section 4.

The questions likely to be asked by an investor include:

* What is/are the identified problem(s), with timescales and the key drivers? What would happen if the problems were not addressed?
* Who is the target and/or affected population(s) and what is known about their needs, current behaviours and attitudes?
* What are the existing arrangements for the provision of services?
* Why is an activity / intervention needed now?
* Are there any internal or external business drivers or pressures that make it necessary to act?

Use this summary box to succinctly explain what is in this chapter sufficient for someone who does not want to read the whole report to obtain a general understanding of the key messages of the chapter.

### Problems and opportunities

Outline the key problems and opportunities that have led to a need for a transport activity. Describe the seriousness of the predominant problem (opportunity), the seriousness aspect is particularly important as not all problems necessarily need addressing if they are not aligned with the wider drivers and strategies of the NZ Transport Agency. Use previous words from other documents where appropriate.

Briefly describe key economic, social, transport trends and the condition and performance of the transport network.

### Issues and constraints

Briefly describe key economic, social, environmental, transport, stakeholder and other issues and constraints which could have an effect on the scope of the project outcomes and outputs.

‘Issues’ are uncertainties that the study may not be in a position to resolve, but must work within the context of. Examples of Issues include:

* Uncertainty at the time of the study whether a major road or rail link will be built that will affect the study area;
* The impact of a major new land-use development has yet to become clear; and
* A study for a neighbouring area may lead to a proposal that results in significant changes to through trips passing across a study area.

Practitioners should account for, or if possible neutralise, such Issues through liaison with neighbouring authorities, government departments and agencies, and transport operators.

Constraints represent the bounds within which a study is being undertaken. These may include, but are not limited to:

* The statutory powers of an authority to promote change;
* The funding levels that can realistically be obtained;
* legislation; and
* NZ fiscal policy.

Similarly, constraints on the shape of a particular option could be affected by:

* Sensitive areas of ecological, landscape or heritage importance;
* Built-up areas;
* Rivers or railway lines which are expensive to bridge;
* Rough terrain making infrastructure works expensive; and
* Unusual existing patterns of development such as industry and commerce spread over wide areas outside the traditional urban centre.

## Outcomes

This Chapter forms part of the Strategic Case which demonstrates whether or not an investment is needed, either now or in the future. It should demonstrate the case for change – that is, a clear rationale for making the investment; and strategic fit, how an investment will further the aims and objectives of the NZ Transport Agency.

More specifically, the Chapter needs to clearly specify what need will be met by the project. This should be put into context by drawing up a series of outcome aims. The outcomes then need to be assessed against what the organisation (and wider Government) wants to achieve as a whole.

The questions likely to be asked by an investor include:

* What are the high-level strategic and operational benefits envisaged? How do they link to the objectives of the project?
* What are the organisation’s main aims, and how does the project fit within these?
* How does the scheme contribute to key objectives, including wider transport and government objectives?
* Are there any other objectives, such as local, regional or network objectives that the scheme might contribute to?

Use this summary box to succinctly explain what is in this chapter sufficient for someone who does not want to read the whole report to obtain a general understanding of the key messages of the chapter.

This Chapter will clearly identify the project outcome objectives and demonstrate clear alignment to the Programme objectives and Strategic Assessment objectives established in earlier stages of the project.

### Strategic outcomes

Clearly describe the strategic objectives to be achieved as defined in the Strategic Assessment Report.

### Programme outcomes

Clearly describe the suite of objectives to be achieved by the programme of activities for which this project is one element. Use previous words from other documents such as the Indicative Business Case or Programme Business Case. These objectives should be SMART (Specific, Measureable, Achievable, Relevant and Timed).

* For example: “To contribute to the economic wellbeing of Auckland the Level of Service on SH1 will be improved from a forecast E/F in 2026 to B/C”.
* For example: “The incidents of fatal and serious crashes are twice the national average for a route of this kind. We aim to halve the incidents of fatal/serious crashes from 10 per 5-years to 5 per 5-years by 2021”.

### Project outcomes

Often, not every project will contribute to all of the objectives of the Programme or a number of activities will be required to be implemented to fully reach the target set for a specific outcome. From the Programme Outcome Objectives, clearly describe the subset of objectives to be achieved by this project. Where the objective has been revised (such as the measure refined or timing revisited) between this Detailed Business Case and earlier stages, explain the rationale for this and how this objective has been derived. Demonstrate that the revised objective does not undermine the intent of the programme or strategic outcomes sought.

## Stakeholders

This Chapter forms part of the Strategic Case which demonstrates whether or not an investment is needed. Consulting stakeholder groups is an important step in identifying the need for change and in establishing agreed project outcomes.

The questions likely to be asked by an investor include:

* Who is the target and/or affected population(s) and what is known about their needs, current behaviours and attitudes?
* What are the attitudes of key groups (eg the general public, residents, businesses and wider stakeholders) to the problems, opportunities and constraints and how have those attitudes informed the outcomes sought?

Use this summary box to succinctly explain what is in this chapter sufficient for someone who does not want to read the whole report to obtain a general understanding of the key messages of the chapter.

This chapter outlines the stakeholder consultation and communication strategy used to consult with stakeholders as part of Project Development and the Detailed Business Case process and the views expressed by these stakeholders.

This chapter will need to place adequate emphasis on the consultation with affected parties that will/has taken place as part of the study, but will also need to address the broader requirements of the business case.

### Consultation and communication approach

This section will detail the consultation and communication approach used during the study and Detailed Business Case process. This will include:

* Process used to identify, consult and communicate with each of these stakeholders
* Identification of stakeholders.

### Professional engagement process

This section will detail the professional engagement process that was undertaken as part of the Business Case around option development and project selection. This is likely to include the following participant groups:

* Constructors;
* Funders;
* Operators;
* Maintenance;
* Planners (Transport and Regulatory).

### Stakeholder views

This section will detail the views of the stakeholders identified above, including how their views have been incorporated (or not) into the option development.

## Alternative and Option Assessment

The questions likely to be asked by an investor include:

* Can the existing arrangements for the provision of services be better utilised, or are more fundamental changes required? What are the constraints?
* What are the aims of the proposed alternative/option and how do they address the problems identified?
* How do the alternatives/options draw on evidence about what has worked in the past and/or understanding of existing and potential barriers to behaviour change?
* What are the attitudes of key groups (eg the general public, residents, businesses and wider stakeholders) to the alternatives/options and how have those attitudes informed the assessment?
* What was the process for generating and shortlisting options?
* What are the constraints and dependencies, in light of other programmes and projects which are underway?

Use this summary box to succinctly explain what is in this chapter sufficient for someone who does not want to read the whole report to obtain a general understanding of the key messages of the chapter.

### Alternatives analysed

The purpose of this section is to record, in brief, the development of the recommended option through the Initiation Stage. This should not be a detailed account, but should be sufficient for the reader of this document to be confident that the development of the recommended option has been based on robust analysis of all the shortlisted solutions brought forward from the Indicative Business Case.

Summarise the alternatives analysed in the Indicative Business Case and summarise the reasons why they were rejected / chosen. Use the *HNO Indicative Business Case Assessment Summary Table*.

Alternatives are other means of achieving the same objectives and the Indicative Business Case will have considered whether the objectives of the project could also be achieved by low cost measures such as transport demand management, providing multi-modal solutions and optimisation of existing networks by small scale improvements. The Land Transport Management Act 2003 (LTMA) stipulates that the NZ Transport Agency can only approve activities if it is satisfied that the activity has, to the extent practicable, been assessed against other land transport alternatives. The project manager must therefore, for consistency, record that alternatives were considered by providing a list of all the alternatives that were considered during the Start-Up stage of the project.

### Recommended package of alternatives

The Indicative Business Case will most likely have demonstrated that no single alternative can solve the problems and meet the objectives alone. This section must summarise the final package of alternatives settled on that meet the objectives coming from the Programme Business Case/Indicative Business Case and explain which options this Business Case has developed further for consideration for Implementation.

### Options analysed

List the options analysed and summarise the reasons why they were rejected / chosen. Use the *HNO Detailed Business Case Assessment Summary Table*.

Options are variations on the proposal. Options may include different alignments for a roading project, or different surfaces, or noise barriers for noise mitigation purposes.

## Recommended Project Option

Use this summary box to succinctly explain what is in this chapter sufficient for someone who does not want to read the whole report to obtain a general understanding of the key messages of the chapter.

### Scope

Define the project scope. This involves identifying and describing the work that is needed to produce the project (or next phase) in sufficient detail to ensure that:

* The project team understands what it must do
* All of the reasonably knowable project work has been identified
* Appropriate management controls can be applied.

What constitutes ‘sufficient detail’ will vary by project: too much detail can be as troublesome as too little detail. In addition, control may often be exercised at a level higher than that needed for understanding.

It is also useful to state what is excluded from the project; this is important because by identifying clearly what you do not want to happen will help everyone keep things contained.

In Scope:

* **Minimum Requirements:** that are expected from the project; these reflect the essential elements that must be successfully delivered.
* **Desirable Requirements:** to be met; these are the requirements that would add value and bring about additional benefits but are not essential to successful delivery.
* **Optional Requirements:** those things that might be delivered if sufficient budget were to be available.
* **Excluded from scope:** State those things that are excluded from this project. This is a powerful tool to prevent scope creep.

## Recommended option – assessment

The assessment of the recommended option forms part of the Economic Case for the project in conjunction with the Economic Analysis. The assessment identifies all the impacts of the proposal, and the resulting value for money, to fulfil the NZ Transport Agency’s requirements for appraisal and demonstrating value for money in the use of public money.

In line with the Agency’s appraisal requirements, the impacts considered are not limited to those directly impacting on the measured economy, nor to those which can be monetised. The economic, environmental, social and distributional impacts of a proposal are all examined, using qualitative, quantitative and monetised information. In assessing value for money, all of these are consolidated to determine the extent to which a proposal’s benefits outweigh its costs.

The NZ Transport Agency will ask what economic, environmental, social and distributional impacts a proposal is expected to have, and whether these have been estimated in line with the current best practice and NZ Transport Agency guidance. It will also ask how strong the resulting value for money is expected to be.

The questions likely to be asked by an investor include:

* How does the recommended option contribute to key objectives, including wider transport and government objectives?
* What is the overall level of impact in combination with other connected schemes?
* What will constitute success for the project, and how will it be measured? Is there a clear logic model for how the outcomes will be achieved? What wider impacts will the project have?

Use this summary box to succinctly explain what is in this chapter sufficient for someone who does not want to read the whole report to obtain a general understanding of the key messages of the chapter.

This section assesses the performance of the recommended option against four key criteria:

* The project outcomes
* Implementability assessment
* Wider project impacts
* Cost optimisation.

A summary of performance against the above criteria is given. The economic assessment of the recommended option is reported in Section 8, Economic Analysis.

### Outcomes

How will the recommended option meet the desired project outcomes? Does the option meet all of the specific measures? How certain are we of achieving these outcomes?

### Implementability

This section considers the mechanics of delivery. How complex is the project? Is it deliverable from technical, operational and consentability perspectives?

#### Constructability

Text

#### Operability

Summarise the outcome of the operations review of the recommended option including the wider network implications for operations and operational infrastructure costs to optimise the investment. Are there any implications for operational budgets (Capex and Opex)? How is the recommended project superior to alternatives against these criteria?

#### Statutory requirements

Identify the designations, resource consents, other consents required for the option(s). Comment briefly on risk and timing associated with this. How is the recommended project superior to alternatives against these criteria? This section should **NOT** include your consenting strategy.

#### Property impacts

Summarise the property impacts which have influenced the choice of the recommended option. How is the recommended project superior to alternatives against these criteria? This section should **NOT** include your property strategy.

#### Asset management

Summarise the outcome of the asset management review of the recommended option including the full life cost and on-going maintenance costs. Are there any implications for maintenance or renewal budgets? How is the recommended project superior to alternatives against these criteria?

### Wider project impacts

#### Environmental impact

Explain how environmental impacts have influenced the choice of the recommended option(s). How is the recommended project superior to alternatives against these criteria?

#### Social impact

Explain how social impacts have influenced the choice of the recommended option(s). How is the recommended project superior to alternatives against these criteria?

#### Joint working

Set out whether there are any opportunities for joint working with other Approved Organisations or stakeholders to obtain value for money and how this has influenced the choice of this recommended option(s). This might take the form of working with a utility company to upgrade services with the road works, or working with a partner organisation to deliver joint benefits.

### Other

Set out any other factors that influenced the choice of the recommended option(s).

### Do-minimum option

Describe the Do-Minimum scenario against which the recommended option has been assessed. Describe the rationale and process for establishing this as the Do-Minimum.

In developing the business case the Do-Minimum should represent the minimum level of expenditure required to maintain a minimum level of service, NOT the minimum level of investment required to achieve the project objectives. The exercise of comparing the minimum investment against other options for achieving the project outcomes is anticipated to have been undertaken as part of the option evaluation process.

It is important not to overstate the scope of the do-minimum, ie it shall only include that work which is absolutely essential to preserve a minimum level of service.

This definition is consistent with that described in the NZ Transport Agency *Economic evaluation manual*.

## Recommended Option - Economic Analysis

The Economic Analysis forms part of the Economic Case and is focused on the monetised element of the analysis as defined in the NZ Transport Agency *Economic evaluation manual* requirements.

The expected economic impacts of a proposal are established following methods set out in the NZ Transport Agency’s EEM guidance. These are presented in an Appraisal Summary Table, providing a brief and consistent summary of expected monetised impacts.

To assess value for money, the monetised impacts are summed to establish an benefit-cost ratio, which implies an effectiveness rating (H/M/L).

The following elements make up the minimum requirement for the Economic Analysis. These should be easily identifiable in the business case in order to demonstrate that they have been covered.

Use this summary box to succinctly explain what is in this chapter sufficient for someone who does not want to read the whole report to obtain a general understanding of the key messages of the chapter.

This section will detail the results of the economic analysis. A benefit cost analysis should be provided. Use the table below and summarise the tangible and intangible benefits. Full calculations using the specified *Economic evaluation manual* (EEM) proforma should be included as an appendix.

### Economic summary of recommended project option

Table ‑: Economic summary table (use this table title style, copy and paste, figure titles to appear ABOVE the table)

|  |
| --- |
| Timing |
| Earliest implementation start date |  |
| Expected duration of implementation |  |
| Economic efficiency |
| Time zero | 1 July XXXX |
| Base date for costs and benefits | 1 July XXXX |
| Present value of total project cost of do minimum | $ m |
| Present value net total project cost of recommended option | $ m |
| Present value net benefit of recommended option (exc. WEBs) | $ m |
| Present value net benefit of WEBs of recommended option | $ m |
| BCR (exc. WEBs) |  |
| BCR (inc. WEBs) |  |
| First year rate of return (FYRR) |  |
| P50 costs |
|  |  |  | Present value |
| Do minimum | Recommended option | Do minimum | Recommended option |
| Design | $ m | $ m | $ m | $ m |
| Statutory applications | $ m | $ m | $ m | $ m |
| Property | $ m | $ m | $ m | $ m |
| Construction/ implementation | $ m | $ m | $ m | $ m |
| External impact mitigation | $ m | $ m | $ m | $ m |
| Other capital (eg insurances) | $ m | $ m | $ m | $ m |
| Capital risk | $ m | $ m | $ m | $ m |
| Management |  |  |  |  |
| Total implementation cost | $ m | $ m | $ m | $ m |
| Maintenance | $ m | $ m | $ m | $ m |
| Renewal | $ m | $ m | $ m | $ m |
| Operating | $ m | $ m | $ m | $ m |
| Other ongoing costs (eg toll collection) | $ m | $ m | $ m | $ m |
| Post project evaluation | $ m | $ m | $ m | $ m |
| Ongoing cost | $ m | $ m | $ m | $ m |
| Project contingency | $ m | $ m | $ m | $ m |
| Total P50 project costs | $ m | $ m | $ m | $ m |
| Benefits |
|  |  |  | Present value |
|  |  |  | Do min | Recommended option |
| Travel time savings |  |  | $ m | $ m |
| Vehicle operating cost savings |  |  | $ m | $ m |
| Accident cost savings |  |  | $ m | $ m |
| Vehicle emissions reductions |  |  | $ m | $ m |
| Reduced driver frustration |  |  | $ m | $ m |
| Walking and cycling (EEM v2) |  |  | $ m | $ m |
| Travel behaviour change (EEM v2) |  |  | $ m | $ m |
| PV total net benefits | $ m | $ m |

### Comparison with earlier stages

This section highlights where the updated estimate varies from previous estimates in the Programme Business Case or Indicative Business Case. For the earlier estimates the base date for dollar values of project benefits and costs shall be updated to the current financial year to allow a like-with-like comparison to the current estimate. Significant differences should be discussed in this section.

Table ‑: Economic history summary table

|  |
| --- |
| Timing |
|  | Previous estimate | Current estimate |
| Earliest implementation start date |  | From table 8-1 |
| Expected duration of implementation |  | From table 8-1 |
| Economic efficiency |
|  | Previous estimate | Previous estimate updated | Current estimate |
| Base date for costs and benefits | 1 July XXXX | From table 8-1 |
|  |  |  |
| Total implementation cost | $ m | $ m | $ m |
| Total ongoing cost | $ m | $ m | $ m |
| Total project cost | $ m | $ m | $ m |
| Present value of costs of do minimum | $ m |  | $ m |
| Present value net cost of recommended option | $ m |  | $ m |
| Present value net benefit of recommended option (exc. WEBs) | $ m |  | $ m |
| Present value net benefit of WEBs of recommended option | $ m |  | $ m |
| BCR (exc. WEBs) |  |  |  |
| BCR (inc. WEBs) |  |  |  |

### Sensitivity analysis

#### Cost/Benefit variability

The forecasting of future costs and benefits always involves some degree of uncertainty and the economic analysis can be sensitive to the assumptions or predictions inherent in the analysis. Two types of uncertainty may occur: the first relating to the size or extent of costs or benefits, such as variations in construction, maintenance or operating costs or predicted traffic flows not eventuating and the other relating to the timing and scale of unpredictable events.

Summarise the sensitivity analysis undertaken what variables have been examined and what the impact on the project BCR and FYRR are.

Table ‑: Sensitivity analysis

|  |
| --- |
| Sensitivity testing |
| Variable | Base case | Lower bound | Upper bound |
| Value | BCR | Value | BCR |
| Cost variability | $ m | $ m |  | $ m |  |
| Construction / implementation | $ m | $ m |  | $ m |  |
| Maintenance | $ m | $ m |  | $ m |  |
| Renewal | $ m | $ m |  | $ m |  |
| Operating | $ m | $ m |  | $ m |  |
| Benefit variability |  |  |  |  |  |
| Travel time savings | $ m | $ m |  | $ m |  |
| Vehicle operating cost savings | $ m | $ m |  | $ m |  |
| Accident cost savings | $ m | $ m |  | $ m |  |
| Vehicle emissions reductions | $ m | $ m |  | $ m |  |
| Reduced driver frustration | $ m | $ m |  | $ m |  |
| Walking and cycling (EEM v2) | $ m | $ m |  | $ m |  |
| Travel behaviour change (EEM v2) | $ m | $ m |  | $ m |  |

#### Discount rate/evaluation period sensitivity

In some instances it might be appropriate to consider effects of various discount rates and/or evaluation period on the economic viability of the project. If this is the case, outline here the rationale for considering alternative analyses and report the results.

### Assessment Profile

The project was assessed using the latest NZ Transport Agency Investment and Revenue Strategy profiles. An assessment profile of XXX has been determined for the project using the NZ Transport Agency’s funding allocation process as detailed below:

Strategic fit of the problem, issue or opportunity that is being addressed: H/M/L

Explain rationale ….

Effectiveness of the proposed solution: H/M/L

Explain rationale…

Economic efficiency of the proposed solution: H/M/L

Rationale…

## Financial Case

The Financial Case concentrates on the affordability of the proposal, its funding arrangements and technical accounting issues (value for money is scrutinised in the Recommended Option – Assessment and Recommended Option – Economic Analysis sections). It presents the financial profile of the recommended options and the impact of the proposed deal on the Department’s budgets and accounts.

The Financial Case contributes towards the overall business case presented for consideration. The questions likely to be asked by an investor include:

* How much does the project cost each year? Who is paying for it?
* Are the various types of cost (administration, resource and capital) falling to the NZ Transport Agency and HNO clearly identified? Do they have budget cover in each of the years in which they fall (ie are they affordable)?
* How reliable and committed are third party funders to the project?
* If funding for the project involves borrowing (eg from the government or wider market), how robust is the arrangement? Are there risks associated with servicing the repayment and interest?
* What are the key financial risks? Have these been quantified? Is there a robust risk management strategy?
* Has any sensitivity analysis been undertaken? What are the results?
* Does the project depend on third party income streams – eg from fees or tolls? If so, how robust are the estimates/forecasts? Are any risk sharing arrangements contemplated?
* What are the accounting implications ie is it on or off the public sector balance sheet?
* Are there any state aid issues to address ie which may constrain or limit public sector support?
* Is the funding compliant with other central government guidance? Is Treasury approval needed?

Use this summary box to succinctly explain what is in this chapter sufficient for someone who does not want to read the whole report to obtain a general understanding of the key messages of the chapter.

### Project delivery costs

This section will outline the key cost assumptions, including:

* Timing assumptions
* Property purchase, management and disposal costs
* Design costs
* Construction costs
* Statutory application costs
* Operating costs
* Maintenance costs
* Other costs (insurances etc)
* Risk assessment
* Post project evaluation.

Comment on significant cost changes from previous approvals.

An updated Capital Cost Estimate must be produced for this Business Case and should be attached at Appendix D. It must include a comprehensive, costed risk assessment to provide the contingency and it must be clear that all costs of the project (actual and forecast) have been reflected. There must be evidence to show that this latest estimate has been used in the Economic Analysis.

Include an Implementation Funding Forecast (Appendix F) and explain how overall affordability has been taken into consideration.

### Ongoing maintenance and operations costs

Outline the key ongoing expenditure assumptions, including:

* Operating Costs
* Maintenance Costs
* Tolling collection Costs
* Renewals Costs.

Comment on significant cost changes from previous approvals.

An updated Maintenance Cost Estimate must be produced for this Business Case and should be attached at Appendix E. It must include a comprehensive, costed risk assessment to provide the contingency and it must be clear that all costs of the project (actual and forecast) have been reflected. There must be evidence to show that this latest estimate has been used in the Economic Analysis.

### Project revenues

Outline any key revenue assumptions, including:

* Third party contributions
* Development contributions
* Toll revenue forecasts.

### Funding options

Outline the likely funding options for the proposed activity. In most instances this will refer to Activity Classes within the National Land Transport Programme (NLTP).

Where alternative funding sources, such as public/private partnerships (PPP), have been explored and are proposed a more detailed reporting of the options for funding should be incorporated into the Business Case and specialist advice sought from the HNO Manager Professional Services.

### Financial risk

Where alternative funding sources, such as public/private partnerships (PPP), have been explored outline the likely funding risk for the proposed activity.

# PART B – READINESS AND ASSURANCE

## Commercial Analysis

The commercial case provides evidence on the commercial viability of a proposal and the consenting/procurement strategy that will be used to engage the market. It should clearly set out the financial implications of the proposed procurement strategy. It presents evidence on risk allocation and transfer, contract timescales and implementation timescale as well as details of the capability and skills of the team delivering the project and any personnel implications arising from the proposal.

The questions likely to be asked include:

* Is there a robust contracting and procurement strategy?
* Is the risk transfer supported by incentives (positive or negative) that prompt the intended outcomes, eg will the contractor lose money if there are any cost overruns?
* Who is taking marginal risk, including on planning consent, demand, revenue availability and integration risk?
* How was the proposed procurement approach developed?
* Is there a developed market for the proposed procurement approach and financing arrangements?
* How confident are we that appropriate contractual/commercial arrangement can be defined to make the structure and risk transfer work in practice?
* Is the proposed risk allocation consistent with the cost estimate?
* How does the mechanism incentivise performance, efficiency and innovation?

### Introduction

Outline the approach taken to assess commercial viability.

### Output based specification

Summarise the requirement in terms of outcomes and outputs that will form the basis of the full specification to be developed during the implementation phase.

### Implementation strategy

Summarise the proposed implementation strategy taking into consideration the proposed approach to consenting, property and procurement as well as the projects overall fit within the State Highway Programme. Provide a summary of the assessment undertaken, including a summary of:

* The overall process
* The options considered
* The preferred strategy.

This section should be based on a number of complementary more detailed strategies which should be included as an appendix to this report.

### Risk allocation and transfer

Present an assessment of how the types of risk might be apportioned or shared, with risks allocated to the party best placed to manage them subject to achieving value for money.

### Sourcing options

Explain the options for sources of provision of services to meet the business need eg partnerships, framework, existing supplier arrangements, with rationale for selecting preferred sourcing option.

### Payment mechanisms

Set out the proposed payment mechanisms that will be negotiated with the providers eg linked to performance and availability, providing incentives for alternative revenue streams.

### Pricing framework and charging mechanisms

To include incentives, deductions and performance targets.

### Contract length

Set out scenarios for contract length (with rationale) and proposed key contractual clauses.

### Contract management

Provide a high level view of implementation timescales. Detail additional support for in service management during pre-implementation. Set Out arrangements for managing the project through pre-implementation / implementation.

### Schedule

Provide a summarised plan focusing on the sequence of all activities required to complete the pre-implementation.

If you have a Gantt chart, eg from Microsoft Project, cut/paste a copy of it here. If you do not have a suitable Gantt chart, it is relatively simple to create one using a tool like Excel or PowerPoint.

You are required to insert a visual programme here, whatever the format!

## Management Case

The management case assesses whether a proposal is deliverable. It tests the project planning, governance structure, risk management, communications and stakeholder management, benefits realisation and assurance.

There should be a clear and agreed understanding of what needs to be done, why, when and how, with measures in place to identify and manage any risks. The Management case sets out a plan to ensure that the benefits set out in Part A are realised and will include measures to assess and evaluate this. All projects and programmes are expected to have a risk management plan, proportionate to their scale.

4. The Management Case will contribute towards the overall business case and will need to demonstrate that an appropriate project management regime is in place for the project. The questions likely to be asked include:

* Who is the client/sponsor?
* What are the key go/no go decision points? Is it clear what would happen at each stage after a go/no go decision?
* Who is in charge? Is there a project board or similar? Are they following best practice (eg by being able to answer these questions satisfactorily)? And are they properly skilled?
* What is the allocation of roles and responsibilities between HNO, stakeholders and other Groups in the NZ Transport Agency? Who has the final say on committing funds and accepting risk?
* What is the composition of the project board (eg is it people who make decisions, or are they people who simply represent interests)? Do they have the relevant skills and experience?
* What are the metrics: milestones, targets, desired outcomes and wider impacts? Is there a programme for measuring/evaluating them? Is there a clear logic model for how the outcomes will be achieved?
* What is the proposed reporting and approval process?
* How are stakeholders involved? Are they being managed?
* Where the NZ Transport Agency employs a programme manager externally, does the NZ Transport Agency have the skills and capacity to manage the programme manager?
* Who is advising the client? Are they credible in the context of the project? What is their track record in the field?
* What risks are left with the client, what are the cost implications and how will they be managed? What would be the impact on the NZ Transport Agency if the risk materialised?
* Who has assessed risk? Are they an expert in the field? Do we need/have an independent view?
* Does the project have independent assurance in place?

### Project roles

The project team will comprise of:

|  |  |
| --- | --- |
| Role | Name |
| Project Sponsor (HNO) | Mandatory field |
| Investor Client (P&I) | Mandatory field |
| Project Manager | Mandatory field |
| Senior supplier | Example – add/change as required |
| Team leader | Example – add/change as required |
|  |  |
|  |  |

### Governance structure

Show the reporting lines between each of the key roles described above in a project organisation chart.

Identify which (if any) advisory or governance groups will be involved in the project and clearly define the decision making tree.

Note that the primary decision-maker in all projects is the Project Sponsor.

You may wish to summarise these here and include the main charts as an appendix.

### Assurance and acceptance

What form of audit and / or peer review will take place during pre-implementation and implementation (internal or external)?

Outline how and when audits and reviews will take place, and how and when they will be responded to. What are the escalation triggers to the Project Sponsor, Business Unit Decision Making Teams, Value Assurance Committee (VAC) and P&I?

HNO Value Gate processes are required to be applied to ensure that the project receives ‘formal acceptance’ (sign-off).

Highlight the key project assurance deliverables for the pre-implementation and implementation stages in the following table:

|  |  |  |
| --- | --- | --- |
| Item | Component | Description |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

### Change control

How will the requested changes to project scope and deliverables be managed (captured, logged, reviewed, approved, etc.) to ensure they do not negatively impact the project outcomes or forecast budget? What are the escalation triggers to the Project Sponsor, Business Unit Decision Making Teams, Value Assurance Committee (VAC) and P&I.

### Cost management

What is the process for tracking and managing actual costs to ensure they stay in line with the project budget? What are the escalation triggers to the Project Sponsor, Business Unit Decision Making Teams, Value Assurance Committee (VAC) and P&I?

### Issues management

Discuss how issues will be managed (identified, logged, periodically reviewed and evaluated, escalated, reported, etc.) to ensure they are resolved and avoid negative impact on the project? What are the escalation triggers to the Project Sponsor, Business Unit Decision Making Teams, Value Assurance Committee (VAC) and P&I.

## Lessons Learned and Post Implementation Monitoring

### Lessons learned

Outline the approach proposed for feeding Lessons Learnt for this project back into the project development and delivery lifecycle. Who is accountable for undertaking the review? What budget has been set aside for this work and how was it derived? What are the timelines for the review?

### Post implementation monitoring - approach and schedule

Outline the proposed approach to Post Implementation Monitoring. Who is accountable for the review? What Key Performance Indicators (KPI’s) will be monitored? How will success be judged? What budget has been allowed for this review and how was it derived?

## Appendix A - Investment Logic Map

Include the investment logic map from the strategic assessment.

## Appendix B – Alternatives Assessment Summary

Include a summary table of the alternatives assessed in the indicative business case, the more detailed assessment and assessment summary tables should be incorporated in the indicative business case. Where no indicative business case exists, the alternatives assessment should be included here.

## Appendix C – Options Assessment Summary Tables

Include summary tables for the options assessment undertaken for the detailed business case.

## Appendix D – Capital Cost Estimates

Include the capital cost estimates using the proforma set out in SM014.

## Appendix E – Maintenance Cost Estimates

Include the maintenance cost estimates using the proforma set out in SM014.

## Appendix F – Implementation Funding Forecast

|  |  |
| --- | --- |
| Forecast ($state year) | Financial year starting 1 July |
|  | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
| Design | $ m | $ m | $ m | $ m | $ m | $ m | $ m | $ m | $ m | $ m | $ m | $ m |
| Statutory applications  | $ m | $ m | $ m | $ m | $ m | $ m | $ m | $ m | $ m | $ m | $ m | $ m |
| Property purchase | $ m | $ m | $ m | $ m | $ m | $ m | $ m | $ m | $ m | $ m | $ m | $ m |
| Property management  | $ m | $ m | $ m | $ m | $ m | $ m | $ m | $ m | $ m | $ m | $ m | $ m |
| Property disposal | $ m | $ m | $ m | $ m | $ m | $ m | $ m | $ m | $ m | $ m | $ m | $ m |
| Construction / implementation | $ m | $ m | $ m | $ m | $ m | $ m | $ m | $ m | $ m | $ m | $ m | $ m |
| External impact mitigation | $ m | $ m | $ m | $ m | $ m | $ m | $ m | $ m | $ m | $ m | $ m | $ m |
| Other capital (eg insurances) | $ m | $ m | $ m | $ m | $ m | $ m | $ m | $ m | $ m | $ m | $ m | $ m |
| Capital risk management | $ m | $ m | $ m | $ m | $ m | $ m | $ m | $ m | $ m | $ m | $ m | $ m |
| Total implementation cost | $ m | $ m | $ m | $ m | $ m | $ m | $ m | $ m | $ m | $ m | $ m | $ m |

## Appendix G –Project Risk Analysis

### Risk analysis process

This section overviews the risk analysis process undertaken. This will include:

* Risk workshops
* Modelling approach.

### Key project risks

This section will present a summary description of the key project risks and will reference the risk register (to be included as an appendix).

### Risk quantification

This section will present the risk costing to be applied to the project.

## Appendix H –Reviews and Audits

### Peer review

Has a peer review been undertaken? Please summarise the outcome.

### Safety audits

Summarise the outcome and effects of safety audits undertaken. If no safety audit has been undertaken at this stage please state why.

## Appendix I – Consenting Strategy

Summarise the consenting strategy.

## Appendix J – Property Strategy

Summarise the property strategy, including the approach to management and disposal.

## Appendix K – Procurement Strategy

Summarise the procurement strategy.