The Greater Christchurch Education Renewal Programme Interim Business Case

Information that has been withheld

Page	Deletions	Section of the Official Information Act
Page 9	Financial details have been deleted to prevent prejudice or disadvantage in relation to negotiations the Ministry of Education will have or is undertaking with its insurer.	s9(2)(j)
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Appendix Q	Information has been withheld to maintain the constitutional convention to protect the confidentiality of advice tendered by officials.	s9(2)(f)(iv)

The Ministry of Education does not believe there are any public interest considerations that outweigh the withholding of this information as outlined in section 9(1) of the Official Information Act 1982.

Points to Note

Page	Comments
Appendix I - page 1	Note that these figures are indicative and have been and will be updated as new information becomes available.
Appendix M - title page	Note that there are some differences between preferred options in this document and the proposals made on 13 September. That not all clusters were covered by the business case. That no formal proposal has been made for secondary school provision. That a copy of the proposal for each cluster is attached at the end of the business case for reference.
Appendix M - Roydvale Cluster	Note that the preferred option for Breens Intermediate shown is different from the proposal announced on 13 September.
Appendix M - Secondary Cluster	Note that no proposal has been made for Secondary School Provision as more geotechnical information is required.
Pages 9 and 43, Appendices E, K and M (Belfast and Lyttleton Clusters)	Previously withheld information has now been made available. (February 2013)

This Business Case was completed in July 2012. Some information and data has been updated as new information has become available.

Part 1 of 3

This Business Case was developed using Treasury's Better Business Case model www.infrastructure.govt.nz/publications/betterbusinesscases

Greater Christchurch Education Renewal Plan

Programme Business Case

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Executive Summary

Introduction

The earthquakes of 2010-11 have caused huge disruption and loss for the people of Greater Christchurch: individuals, families, whanau, and community. The impact of the quakes on the lives of young learners- present and future- is a matter of great concern and educational opportunities are crucial for the wellbeing and vitality of the community. It has also been the catalyst for much creative thinking. The consensus seems to be: yes, we have lost much, but these events also give us an opportunity, as we rebuild, to rethink how we do things in education.

The Ministry established the Canterbury Earthquake Recovery Programme (CERP) to coordinate and respond to the challenges of rebuilding the school network. This Programme Business Case has been developed to fulfil the requirements of Treasury's Better Business Case Guidelines by coordinating the Directions for Education Renewal and the Indicative Property Business Case to:

- Understand the strategic context;
- Define existing processes and areas of potential improvement;
- Scope the potential benefits, risks and contingencies;
- Develop Business Requirements; and
- Explore the preferred way forward.

These outputs were developed in consultation with key stakeholders.

Strategic context

The Ministry's wider strategic objectives are outlined in its 'Statement of Intent' which states six priorities for the delivery of education, four of which are related to early childhood and school level education. The six priorities are:

- Increasing opportunity for children to participate in high-quality early childhood education;
- Every child achieves literacy and numeracy levels that enable their success;
- Every young person has the skills and qualifications to contribute to their and New Zealand's future;
- Relevant and efficient tertiary education provision that meets student and labour market needs;
- Māori achieving education success as Māori; and
- The Ministry is capable, efficient and responsive to achieve education priorities and deliver core business functions.

Key investment objectives

The underlying objective of any Ministry investment is to provide the capability for education delivery to improve the performance of learners. While these factors remain central to the Ministry's approach, the rebuild of the Greater Christchurch school network has some distinctive investment objectives (including education and people performance and infrastructure).

Education and people investment objectives

- Supporting life-long learning;
- Give Greater Christchurch, and New Zealand as a whole, a distinctive advantage;
- Support the wellbeing of communities; and
- Promote innovative and sustainable solutions.

Property and infrastructure investment objectives

- Building an optimised network to meet education demand;
- Better integrate schools to use shared facilities; and
- Improved infrastructure standards.

Business Requirements

The evaluation of the business requirements required a review of the key objectives which the programme needs to achieve. This considered the framework for high priority objectives and those which were only sought where they could be achieved cost-effectively.

- Education provision is provided as a network including a demand analysis which links to other schools and considers the network on a cluster basis;
- Modern, flexible and inclusive learning environments;
- Transitions are managed and career guidance is accessible;
- Ensure identity, language and culture of learners is valued;
- Improved outcomes for learners with special needs;
- Quality teaching and leadership is supported;
- Flexible facilities which can either be relocated or investment minimised until demand is established;
- Ability to redefine roles of schools;
- Linkage to other schools in delivery of network;
- Partnership and understanding of potential links to the community;
- Remediation programme which appropriately remediates and upgrades buildings; and
- Innovative procurement process which incorporate whole of life.

Benefits, risks, constraints and dependencies

The expected benefits will largely derive from education delivery. Commonly the development of schools follows a well-practiced framework of building schools to meet demographic changes and projected roll growth. Population shifts following the earthquakes have resulted in a network that no longer matches demands. The analysis of benefits also extends to consider where there are additional benefits to be gained over the traditional property development process either through better design or location and considering whole of life costs. The benefits of the programme are as follows:

- Facilities in schools will be fully accessible and available to contribute to the provision of education;
- Remediation will result in more facilities being aligned with the Modern Learning Environment standards, contributing to a better delivery of the curriculum;
- Reduced maintenance and energy costs as a result of remediating with a 'whole of life' approach;
- Better procurement through alignment with corporate objectives and the ability to make informed trade-offs;
- Better delivery of education through asset design and location;
- A more efficient schools network through the rationalisation of excess buildings and schools; and
- Reduced staff turnover.

The predominant risk is that the benefits are less than expected or the process does not achieve the gains that may be available because of poor design or management processes. Ad-hoc delivery is also identified as a major risk. An effective communication and change management strategy is therefore critical to the process.

Critical Success Factors

The Critical Success Factors were used to evaluate the possible programme options. The focus is to identify the elements which are crucial to the delivery of the benefits from the project.

The five critical success factors identified are:

- Value for money, holistic and whole of life decision making;
- Flexible and responsive to changing requirements;
- Linkages to the community;
- Market capability and capacity; and
- Future proof and deliver quality in design.

Programme options

There are five investment approaches that varying in scale and scope that can deliver the investment. These were:

- Do Minimum;
- Status Quo;
- Repair All Damage;
- Major Investment with Minor Rationalisation; and
- Major Investment with Major Rationalisation.

The preferred way forward that delivers value for money and provides the flexibility to develop an education network that matches demand is the *Major Investment with Major Rationalisation* approach. The major rationalisation considers the requirements of the current and projected learning populations and how the current property portfolio meets these requirements.

A wider range of options were considered as part of the business planning process. To examine the options, the decisions have been categorised into:

- When work should be done (scale and scope);
- What standard of work (service solution);
- How work is designed and commissioned (service delivery);
- How the project should be managed (implementation); and
- How the project can be funded (funding).

A separate rigorous evaluation was made of the procurement options following the development of the programme options. The procurement process considers the basis of the tendering and contractual relationship with the suppliers of services and materials.

Determining preferred way forward

While the programme options focused on different standards and tools for remediation and different management and procurement measures, the short list details five different 'packages of options'. The packages are all targeted at delivering a total solution to the Greater Christchurch School Network, albeit with different timeframes, different scope and implementation frameworks. The five short-list options were determined to be:

- Do-minimum (base case);
- Status quo (base case)
- Repair all damage (value for money);
- Major investment with minor rationalisation (possible); and
- Major investment with major rationalisation (preferred).

Option	Scope	Cost	Benefits
Option 1: Do minimum (Base	• Limit the investment by only completing health and safety related works.	$470-520mil	-$190-210mil

Case)	• Buildings are habitable and able to be used to deliver education. • At a network scale there is sufficient capacity so there is no provision for expansions of existing schools or rebuilds where schools are irreparable. • New schools will be provided to serve large scale shifts in population.		
Option 2: Status Quo (Base Case)	• Complete the works that were required prior to the earthquakes. • Includes earthquake prone, weather tightness and programmed maintenance. • Property response and not a renewal of the education network.	$610-670mil	-$100-110mil
Option 3: Repair All Damage (Value for money assessment)	• Return the network to its state prior to the earthquake. • There is no scope for rationalisation or expansions to meet demands. • New schools may be built on new sites due to large scale population shifts	$810-900mil	-$90-100mil
Option 4: Major Investment with Minor Rationalisation (Possible)	• Rationalisation on a building by building basis. • Does not allow for a network approach that allows for school rationalisation. • There will be no rationalisation in schools where only minor repairs are required. • The scope of the major investment includes all minor and major repairs and rebuilds following rationalisation. • New schools will be built to service population shifts, to replace irreparable schools and new classrooms provided in response to roll growth.	$1.22-1.35bn	$130-140mil
Option 5: Major Investment with Major Rationalisation (Preferred Option)	• Rationalisation that considers roll decline and roll size prior to completing repairs or rebuilds. • A network approach by looking at the capacity and level of damage of neighbouring schools when considering the opportunity to rationalise the number of schools. • Option to merge two schools to service a local demand as well as rationalising assets by sharing specialist facilities. • Major rebuild includes new schools on both new and existing sites as well as expansions to existing schools to meet increased demands.	$900mil-1bn	$130-140mil

Key Procurement Strategies

A key factor in evaluating value for money outcomes from building and infrastructure investments is the procurement strategy. Procurement strategy decisions made at the beginning of an asset investment process will affect asset performance, service delivery, cost and value for money throughout asset whole of life. Sound procurement decisions involve a comprehensive examination of a range of procurement models to determine the approach that is best suited for each project. This ensures that opportunities for achieving increased value for money and improved infrastructure investment outcomes are readily identified and capitalised.

There are many forms of procurement available to potentially deliver this programme of works. The decision to adopt a particular form of procurement will be guided by a range of issues such as a particular model's fitness to manage the risks inherent in the capital delivery, historic practice, ability to capitalise on the efficiency due to the large body of work and market capacity to name a few.

The following is a summary of the Procurement Options Analysis, which must be investigated further as part of future business cases.

Procurement Approach	Applicability	Scope

Minor conventional purchasing	Given the scale of the investment this procurement approach is rarely applicable. It could be utilised for the engagement of specialist professional or consulting services where the scale cannot be classified as 'major conventional purchasing'. The preferred option for implementation is to group or bundle small projects together, as a result these will fall into the 'major conventional purchasing' category.	Initial project scoping and minor professional fees.
Major conventional purchasing	Applies to both the procurement of consultants as well as assets. Approaches may include: • Panel arrangements for professional and consulting services. • Head Contract or Managing Contractor for capital asset investment. • Single line accountability (current Ministry approach).	Professional services, demolition, minor and major remediation, temporary accommodation, rebuilds and new schools.
Panel Arrangement	Appropriate where there are a number of suppliers who can provide a service and where there is an on-going demand. It allows for varying procurement methodologies to be used without the need to go to market for individual projects. It provides fast and streamlined access to providers whilst maintaining competitive tension.	Professional services, demolition and repairs.
Alliance approach	The collaborative approach with the private sector to deliver a project is most appropriate where risks are not known prior to tendering. Given the additional people resources required by the Ministry to enter into an alliance approach combined with clarity of risk at tender, the benefits of this approach are limited.	Not appropriate.
Public Private Partnerships	Most appropriate for new schools where the scope can be clearly defined.	New schools, temporary accommodation.

Outlining the Financial Case

The relationship between the capital requirements and financial management of the Ministry is defined by the capital charge and the depreciation made on the assets. The issue is further complicated by the fact that assets which are developed to replace or repair damaged buildings are likely to have a life significantly longer than the ten year planning horizon used in the business case.

The following table summarises costs for the preferred 'major rebuild, major rationalisation' option which would be borne by the Ministry over the ten year horizon.

Component	Projected costs (pre-earthquake status quo base case)	Renewal cost (major repair and major rationalisation)
Capital Charge	$210mil	[redacted]
Depreciation	$314mil	[redacted]
Insurance	-	[redacted]
Additional funding	$115mil	[redacted]
Total	$639mil	$949mil

Financial details have been deleted to prevent prejudice or disadvantage in relation to negotiations the Ministry of Education will have or is undertaking with its insurer (s9(2)(j))

Note: The entire table was previously withheld

Programme of works

An indicative programme of works can be developed by classifying clusters into one of three categories. Appendix M provides detailed school by school assessment

Level of response	Key Facts	Clusters

1. Restore/ expand- minor change **$ 280mil**	**41** schools in 14 clusters and 2 part clusters Only building related issues. Closures where minor impact on surrounding network. Can be **started immediately.** Announce, engage and consult as appropriate. Example – Halswell School Redevelopment	**Primary:** Avonhead, Cashmere, Elmwood, Lyttelton Harbour, Mairehau, Redwood, Riccarton, St Albans, St Martins, Upper Riccarton, Burnside, Rolleston *Part clusters: Halswell* **Secondary:** North Christchurch, South West Christchurch, *Part clusters: West Christchurch*
2. Consolidate- moderate change **$ 170mil**	**38** schools in 10 clusters and 2 part clusters Building and some people related issues Change requirement is not imminent Engagement and Consultation proposed for **3rd quarter 2012** Example – closing Glenmoor Primary due to low roll	**Primary:** Kaiapoi, Parklands, Lyttelton, Akaroa, Belfast, Papanui Roydvale, Special Schools *Part clusters: Halswell, Rolleston* **Secondary:** Akaroa, Waimakariri, *Part clusters: West Christchurch*
3. Rejuvenate- major change **$ 490mil**	**44** schools in 12 clusters Major land, building and people related issues A range of merge and closure options Consultation initiation proposed for **4th quarter 2012** Example – a range of options for the Shirley cluster	**Primary:** Aranui, Brighton, Linwood, Shirley, Port Hills, Central City, Hornby, Woolston, MME **Secondary***:* East Christchurch, North West Christchurch, Central City

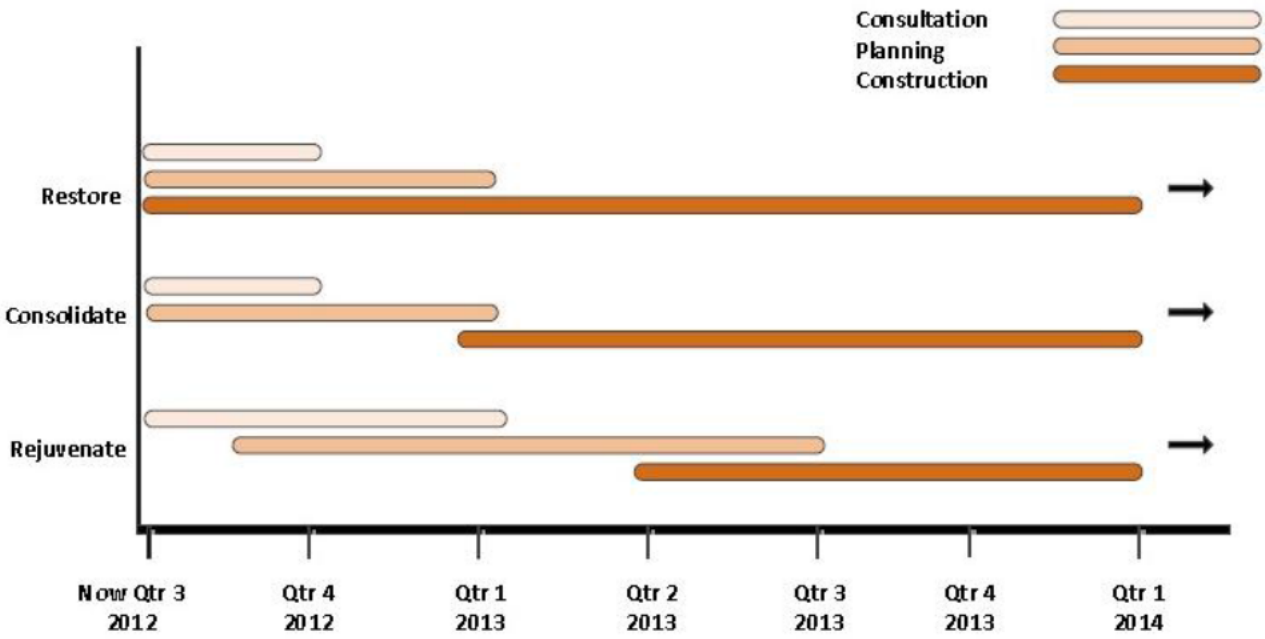
Note: Some of the proposals for these clusters have been updated since the preparation of this Business Case and the announcement on 13 September.

Phasing and sequencing of projects

The Christchurch-wide rebuild is likely to result in a resource constrained market. Initial Treasury projections estimate the rebuild of Christchurch to commence in July 2012. The implementation approach needs to take advantage of the market capacity prior to the Christchurch wide rebuild commencing, account for lead in times of project phases and allow for dependencies on other programmes of work.

The preferred option to implement the programme prior to requiring the schools/buildings accounts for lead times and provides a network that is in place to service demand. In some cases there will be a need to defer works based on dependencies with other programmes of work, population shifts or community consultation.

Short Term Implementation Plan



The following is a summary of the Implementation Options analysis, which should be investigated further as part of the Detailed Business Case.

Timing

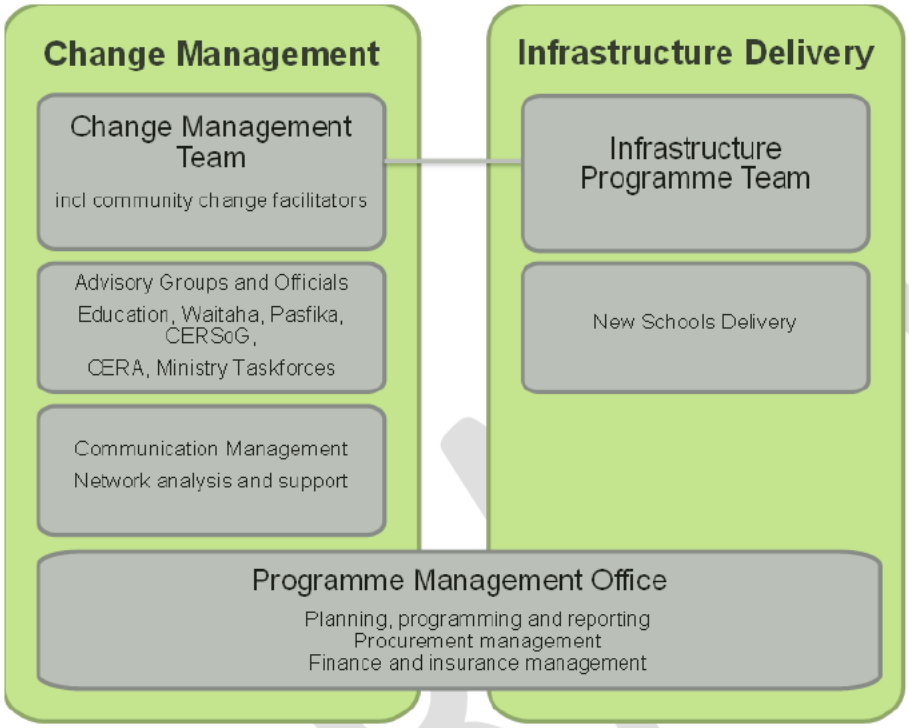
- Commence remediation prior to requiring to account for lead in times;
- Commence minor repairs as soon as possible to take advantage of market capacity;
- Allow for works to be deferred based on dependencies (for example rationalisation following rebuilds or repairs); and
- Allow for further investigation in cases where population shifts are likely to affect decision making and defer works until the network analysis can be verified.

Staging

- Group projects based on the level of damage and the required response (scale and scope).
- Where applicable to take advantage of timing also group by service solution (for example temporary accommodation).

Management approach

The management structures will require a dedicated mix of both change management and infrastructure delivery expertise to deliver the education renewal programme in Greater Christchurch whilst constantly considering how the remediation contributes to the Ministry's wider school network. The Ministry currently does not have the resources or the capability to manage a programme of this scale* In addition, the organisational structure is currently based around supporting the Boards of Trustees in the development of schools. Achieving the target expenditure will require a dedicated management capability.



Note: The Ministry has subsequently put in place a programme office which includes a Programme Manager, Case Managers, Change Managers and a range of specialists. Additionally Advisory Groups have been set up for the delivery of the programme.

1 Introduction

The earthquakes of 2010-11 have caused huge disruption and loss for the people of Greater Christchurch: individuals, families, whanau, and community. The impact of the quakes on the lives of young learners- present and future- is a matter of great concern and educational opportunities are crucial for the wellbeing and vitality of the community. It has also been the catalyst for much creative thinking. The consensus seems to be: yes, we have lost much, but these events also give us an opportunity, as we rebuild, to rethink how we do things in education.

People: Focus first and foremost on our children and young people

All parents want to see their children eager to learn, achieving success, and gaining knowledge and skills that will, in time, enable them to become confident, adaptable, economically independent adults. Regrettably it has not turned out this way for a significant proportion of our young people. We need to ask ourselves as we plan the rebuild, how can we use this opportunity to address inequities and raise outcomes. We need to give priority to actions that will have the greatest positive impact on learners.

Property: Find economically viable ways to deliver diversity, choice and innovation

Generally the school property portfolio responded well compared to other asset categories, but given the size of the seismic events the network has suffered severe damage. The Greater Christchurch Schools Condition Assessment Project established a projection of $572mil for the maintenance and capital investment across the Greater Christchurch school network over the next 10 years. The cost of the rebuild will be considerable and dreams need to be tempered by a sense of what is pragmatic and realistic to deliver on strategic objectives.

Land: Consider the practicalities of sites and the changes in communities and urban infrastructure

Land damage has been a major element in the loss of urban infrastructure. While some buildings have been relatively undamaged, the sites they occupy have been significantly compromised and many will be unsuitable or costly to rebuild on. As a result large residential suburbs have been designated untenable for reconstruction, which in turn, has changed the nature and pattern of urban development within Greater Christchurch. Changes in residential areas will have a significant impact on the pattern and demand for schools in the region.

A coordinated approach to education and property delivery

The Ministry established the Canterbury Earthquake Recovery Programme (CERP) to coordinate and respond to the challenges of rebuilding the school network. This Programme Business Case has been developed to fulfil the requirements of Treasury's Better Business Case Guidelines by coordinating the Directions for Education Renewal and the Indicative Property Business Case. The scope includes:

- Understanding the strategic context;
- Defining existing processes and areas of potential improvement;
- Scoping the potential benefits, risks and contingencies;
- Developing Business Requirements; and
- Exploring the preferred way forward.

2 The Strategic Case

2.1 The Case for Change

2.1.1 Identifying key stakeholders

Table 1: Input from key stakeholders

		Plan development	Consultation
Education	Refer to Section 2.3.2.4		
Property	Ministry of Education- Property	✓	-
	Ministry of Education- Network	✓	-
	Treasury	✓	-
	CERA	✓	-
	Tertiary Education Commission	-	✓
	Boards of Trustees and principals	-	✓
	Communities, learners and parents	-	✓

2.1.2 Investment Logic Map (ILM)

Note: This ILM was primarily produced by the Ministry of Education.

The Investment Logic Map was developed with input from key stakeholders who are responsible for the delivery of the Education Renewal Plan. A summary of the problems identified during the ILM is provided in Table 2 and a detailed ILM is provided in Appendix A.

Table 2: Summary of the Investment Logic Map

'Problems' identified during the ILM process
The current school network exceeds or fails to match demographics compromising provision and access to education.
The stability of and change of land use means some schools are now located in the wrong place.
Poor physical condition of schools is compromising student achievement.
The capital value of the school network has reduced adversely affecting its net economic benefit to Greater Christchurch.

2.2 Strategic Context

2.2.1 Organisational Overview

The Greater Christchurch rebuild is of national significance and the response has appropriately been a whole-of-government approach. The context of the business case needs to consider both the Ministry's strategic objectives and the wider Government objectives, which are represented by Canterbury Earthquake Recovery Authority's (CERA) strategic plan. This section considers the respective strategic contexts for both organisations and considers how they may overlap.

2.2.1.1 Priorities of the Ministry of Education

The Ministry's wider strategic objectives are outlined in its 'Statement of Intent' which states six priorities for the delivery of education, four of which are related to early childhood and school level education. The six priorities are:

- Increasing opportunity for children to participate in high-quality early childhood education;
- Every child achieves literacy and numeracy levels that enable their success;
- Every young person has the skills and qualifications to contribute to their and New Zealand's future;
- Relevant and efficient tertiary education provision that meets student and labour market needs;
- Māori achieving education success as MāoriMāori; and
- The Ministry is capable, efficient and responsive to achieve education priorities and deliver core business functions.

2.2.1.2 The Ministry of Education's Canterbury Earthquake Renewal Programme

The Ministry of Education has initiated the Canterbury Earthquake Recovery Programme (CERP) to ensure that the programmes and projects required to be delivered by the Ministry in response to the earthquakes are well researched, carefully planned, effectively delivered and provide value for money.

2.2.1.3 Canterbury Earthquake Recovery Authority (CERA)

The Government has emphasised that planning for the redevelopment of Canterbury needs to reflect a 'whole-of-government' approach. To ensure this eventuated, the Government established the Canterbury Earthquake Recovery Authority (CERA) to lead and coordinate the ongoing recovery effort by vesting special powers to enable an integrated, effective and timely response across a range of organisations.

CERA's focus will change over time. Planning on the long-term recovery strategy has begun, but short-term effort mainly went in to restoring physical infrastructure, demolishing at risk properties and meeting immediate needs. In the medium term, CERA will coordinate the implementation and monitoring of recovery plans. This will be followed by the gradual transfer of powers and responsibilities to other organisations.

CERA's Statement of Intention outlines:

> *"The Minister for Canterbury Earthquake Recovery and CERA will be working in a spirit of collaboration with the Christchurch City Council, Selwyn District Council, Waimakariri District Council and Environment Canterbury and engage with the local communities of greater Christchurch, including Ngāi Tahu, the private sector and business interests."*

2.2.2 Alignment to existing strategies

This programme fits within the context of a 'whole-of-government' approach to the Christchurch earthquake recovery as well as the 'community well-being' stream of the CERA recovery strategy. The goals, objectives and principals of the CERP are detailed in Appendix B. The CERP is tasked with delivering the Education Renewal Recovery Plan that has been approved by Cabinet under section 16 of the Canterbury Recovery Act 2011 (CER Act). There are six plans that sit under the Recovery Strategy:

Figure 1: Link between CERA structure and education renewal

2.2.2.1 Linking the Statement of Intent to programme objectives

The strategic objectives of the Ministry generate five key frameworks for how the rebuilding process should be addressed. These are:

1. Innovative processes for procurement: Nationwide the Ministry will write approximately $1bn of new contracts in the next financial year and is seeking to provide better 'value for money'.
2. Plans are developed in partnership with the Boards of Trustees (BoTs): The devolved model of delivery is an important element in the way education is provided in New Zealand. The BoTs are seen as effective in making education relevant for the local community.
3. Focus is on health and safety: A fundamental requirement for the Ministry is that students, staff and the community are in safe environments.
4. Redevelopment complements the Modern Learning Environment (MLE): The Ministry has placed significant emphasis on the MLE as a tool for improving education outcomes and have committed to ensuring facilities are appropriate for the new curriculum.
5. Emphasis is on regional demand for facilities and alignment with the new urban plan: The current demand for facilities is changing. The Ministry has placed emphasis on regional property plans to identify and address over and under supplies of school facilities.

2.3 Investment Objectives, Existing Arrangements and Business Needs

2.3.1 Key investment objectives

The underlying objective of any Ministry investment is to provide the capability for education delivery to improve the performance of learners. While these factors remain central to the Ministry's approach, the rebuild of the Greater Christchurch school network has some distinctive investment objectives (including education and people performance and infrastructure).

2.3.1.1 Education and people investment objectives

Four key education and people investment objectives have been identified:

1. Supporting life-long learning: Investment will enhance outcomes across the education system from early learning to tertiary, help learners make good decisions about their careers, and maximise benefits across the education system. The education renewal provides clear pathways at key decision points throughout a learner's education, and transition points are managed to promote active engagement.
2. Give Greater Christchurch, and New Zealand as a whole, a distinctive advantage: Investments shall provide Greater Christchurch- and New Zealand as a whole- a distinctive and enduring advantage economically, socially and culturally. More learners will be actively engaged in education through a network that is accessible, diverse and meets their individual needs.
3. Support the wellbeing of communities: Enhance long-term wellbeing of communities while minimising short-term disruption and impacts. The links between community, Council and other Government organisations are recognised and integrated into the education response to support learners in multiple facets of their lives.
4. Promote innovative and sustainable solutions: the cost of the network wide education renewal will require innovative solutions to provide education opportunities.

2.3.1.2 Property and infrastructure investment objectives

Three key property investment objectives have been identified:

1. Building an optimised network to meet education demand: The ILM identified the investment objective to '*rationalise and design a school network optimised to meet education provision in Christchurch*'. This aligns with the strategic objective of the Ministry to ensure '*appropriate facilities are available in the right location'*. The objective takes a network wide approach to determine the need for schools, their current suitability to meet education provision needs and makes better use of available land.
2. Better integrate schools to use shared facilities: The renewal of the Greater Christchurch school network has the opportunity to be coordinated between schools or between a school and the community. The Ministry has the opportunity to better utilise assets such as halls and gyms. This initiative aligns with the investment objective to *'better integrate schools to use shared facilities provision across Christchurch'* by optimising the investment by maximising asset utilisation.
3. Improved infrastructure standards: The investment should deliver quality standards in New Zealand schools and develop a resilient network more capable to respond to future natural disasters. The ILM developed the strategic intervention to *"improve school infrastructure standard"* in order to meet the Ministry's strategic objective to provide *"safe and inspiring learning environments"*. The Ministry has existing programmes that can assist in delivering on

this investment objective including earthquake strengthening, Building Improvement Programme, SNUP and the Modern Learning Environment standards.

2.3.2 Existing arrangements

Nearly 150,000 students and upwards of 10,000 staff were engaged in education in Canterbury when the February 2011 earthquake struck. Within minutes, staff across the region were totally engaged in making arrangements for the safety of learners. All tertiary providers, schools, and early childhood centres closed their doors until further notice.

2.3.2.1 Immediate steps

The Ministry of Education and the Tertiary Education Commission immediately began working with the sector to restore education provision as soon as possible. Many providers, particularly schools, became Civil Defence posts and evacuation centres. Within three weeks of the earthquake schooling was available for 84% of all students and within a month and one day all students were able to be back at school. There were four key aspects to the immediate earthquake response.

1. Asset assessment: visual and structural property assessments followed by building repairs, fencing off unsafe buildings, delivering site based water, sewerage and toilet solutions and the deployment of relocatable classrooms.
2. Student Transport: 17 schools suffered severe damage that required students to be transported to alternative sites.
3. Shared services: Ten learning hubs were established to account for the staggered return to service for the most severely damaged schools and were phased out as schools returned to full operation. The Ministry also put in place a temporary enrolment scheme in order to prevent the mass migration of students across the Greater Christchurch school network.
4. The earthquake education welfare response: Included EAP counselling services which were made available for all teachers in Greater Christchurch schools.

2.3.2.2 Post-earthquake assessment and remediation

The move from immediate response to recovery involved emergency repairs to schools and supporting the psychological state of the people and the resilience of communities. Where possible, schools have intentionally been kept intact to build community resilience and retain a sense of identity.

All non-urgent repairs in the Greater Christchurch area have been put on hold as a result of the CERA land use study which identifies area where residential building is no longer viable. The relocation of families within identified zones of Christchurch City will have implications for the school network and the longer term renewal needs to be further defined before work can progress.

Work outside the city boundaries (with the exception of Kaiapoi and Rolleston) is progressing as the land has suffered less damage and is less affected by CERA's residential zoning and demographic change. To date, repairs have been completed at 86 schools outside of the Greater Christchurch area.

The Christchurch Schools Condition Assessment Project was completed for 123 schools and provides the full extent of forward capital maintenance liabilities for earthquake affected schools in the Greater Christchurch area over a 10 year period. Liabilities included those associated with earthquake strengthening and repairs, weather-tightness and capital, cyclical and programme maintenance. Table 3 provides a summary of the projected investment but does not address costs associated with demographic shifts.

Table 3 Summary of the extent of required investment

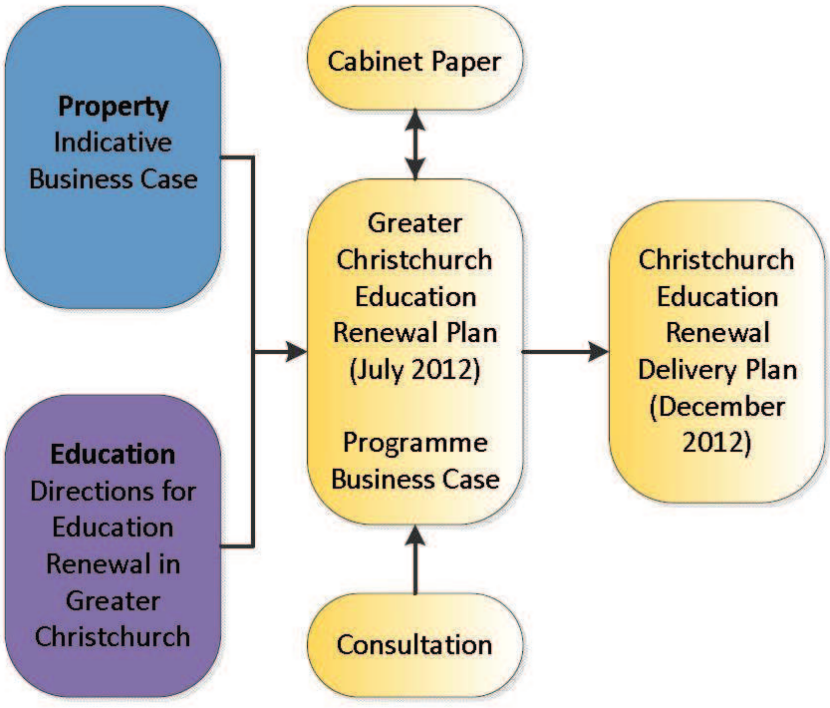
Summary of Condition Assessment

Summary of Condition Assessment	
Capital Maintenance	$ 54 mil
Cyclical Maintenance	$ 34 mil
Programme Maintenance	$ 2 mil
Weather Tightness	$ 102 mil
EQ Repair Works	[redacted]
EQ Prone	$ 296 mil
TOTAL	[redacted]

Financial details have been deleted to prevent prejudice or disadvantage in relation to negotiations the Ministry of Education will have or is undertaking with its insurer (s9(2)(j))

2.3.2.3 Current earthquake renewal planning

The Government has recognised the importance of re-establishing the education network as a response to the Canterbury earthquakes. The Government's objectives are wider than just rebuilding damaged school properties. It recognises that education will be fundamental to develop the skills to ensuring a growing economy. It also recognises that schools are an important part of the social infrastructure which will support the remediation process. This Programme Business Case coordinates the current education and property responses that have been running in parallel. The figure below describes the work being completed by the Ministry.



Note: This Business Case was released in July 2012, this target date of December 2012 was indicative and has now been changed to 2013.

Figure 2: The Education Renewal planning process

On 10 May the Minister of Education released for public consultation the draft Education Renewal Recovery Programme- *Directions for Education Renewal in Greater Christchurch* which sought community input to a number of proposals for education in line with the Government's commitment to rebuild Greater Christchurch. The obvious scale of change required provides a significant opportunity to reposition education in Greater Christchurch for the knowledge age, and to support the establishment of world-leading, innovative practices for New Zealand.

A dedicated Taskforce and Advisory Boards are being established to support delivery of a renewed education network for Greater Christchurch. To build on existing educational success and address areas of under-performance and inequity this Taskforce will be supported by an Education Advisory Board reflecting local knowledge, expertise, educational leadership, and consider the views of iwi and the community to foster joint ownership of outcomes.

The Greater Christchurch Taskforce will need to link closely with the work of other taskforces being formed to deliver the Better Public Services (BPS) results for education set by Government (to increase participation in ECE, attainment of NCEA Level 2 [or equivalent qualification] and the proportion of 25- to 34-year olds gaining at least a Level 4 qualification).

BPS targets for education will not be achieved without lifting educational performance across Greater Christchurch as:

- the level of NCEA2 attainment (for groups of students that include European, Māori and Pasifika) has been below the performance of these groups at the national level.
- the area has one of the highest rates of educational inequity in New Zealand with only marginal improvements made in recent years:
    - in 2010, 37.4% of the Māori leaver population left school without an NCEA1 qualification, and
    - on recent trends, more than half of Māori school leavers will exit the school system without achieving NCEA2.

Key to addressing the significant gap in attainment will be ensuring Māori and Ngāi Tahu, through the Waitaha Education Authority, inform the design and implementation of national taskforce actions to support Māori learners.

2.3.2.4 Existing consultation programme

In October 2011, sector and community views were sought on the future shape of education provision in Greater Christchurch in the wake of the Canterbury earthquakes. Feedback was received from 229 groups and individuals which, along with input from key stakeholders and national and international research, informed the development of the draft Education Renewal Recovery Programme- *Directions for Education Renewal in Greater Christchurch*."

In May 2012, following the launch of this document by the Minister of Education, the Ministry and Tertiary Education Commission engaged in extensive consultation with educators and the community under the banner of *Shaping Education / Te Tāreinga Mātauranga – Future Directions*. The focus of this consultation was the future of education from early childhood through to tertiary (not the future of individual schools or services/facilities).

In association with CORE Education the Ministry ran a series of 15 Future Direction focus groups, including community forums. Attendees included civic leaders, students, parents and residents, members of the health, education and business sectors and wider community. Many participants represented larger groups and used the Ministry focus groups to gain an understanding of the proposed directions before engaging in their own sector or community-based groups.

Self-facilitated focus groups were held by bodies that included the Greater Christchurch Schools Network, CORE, NZEI, Primary, Intermediate and Secondary Principals Associations, Special Education, Pasifika and Ngāi Tahu. Some schools also initiated their own focus groups, and a Canterbury Earthquake Recovery Authority community forum was also hosted. "*Directions for Education Renewal in Greater Christchurch*" was presented to a wide number of stakeholders and associations for their comments, including CERA, the Australian Public Leaders Group, Ngāi Tahu, Primary and Secondary Principal Associations, NZEI, PPTA, the health sector, Christchurch City and Waimakariri District councils.

The *Shaping Education* website, developed for engagement in October 2011, was revised to support consultation. A downloadable PowerPoint and background information was provided to support self-facilitated focus groups, along with an on-line submission form. 554 submissions were lodged. Most agreed the draft programme was a fair representation of the initial engagement process and signalled

community appreciation for this further opportunity to provide input. The outcomes of consultation have informed actions being developed to guide the direction of education renewal in Greater Christchurch.

2.3.3 Specifying business needs

The service deliverables have been categorised into groups and aligned with the strategic interventions outlined in the ILM. The 'Business Needs' bridge the gap between the investment objectives and the existing arrangements. Current problems, issues and shortfalls with the current arrangements mean the objectives cannot be met without further investment.

Table 4: Existing Surplus Property Disposal Incentive Scheme options

Strategic Interventions	Existing Arrangements (Current State)	Business Needs	Business Requirements (Future State)
Rationalise and design school network optimised to meet education provision	Individual school focus	Demand analysis which links to other schools and considers the network.	Optimised school network
	Schools in dedicated locations linked to BoT and community	Flexible facilities which can either be relocated or minimise investment until demand established	Network that responds to shifts
	Traditional locations and school sites	Ability to redefine roles of schools	Schools located close to students
Better integrate schools to use shared facilities provision across Greater Christchurch	BoTs with incentives to focus and promote on individual school without regard for neighbourhood.	Linkage to other schools in delivery of network	Coordinated delivery of school property programmes
	Community slowly generating facilities over long period with fund raising and support	Partnership and understanding of potential to link to community	Access to quality facilities by community and shared infrastructure.
Improve school infrastructure	Portfolio of schools of various ages conditions with significant recent damage	Remediation programme which appropriately remediates and upgrades buildings	School network that complies with Building Act
	Process focused on short term development	Innovative procurement processes which incorporate whole of life	Value for Money with reduced whole of life costs
	Process based on individually designed and developed schools	Flexible designs and capacity in new developments	School network that is resilient to future natural disasters

2.3.3.1 Future projections of demand

There are areas in the city and surrounding districts that are seeing significant, even dramatic, growth. Prior to the earthquakes, none of these areas would have expected to grow so fast or so soon. Conversely, there are areas (predominantly to the east of the city) where the number of households, and therefore school populations, have already been impacted and are projected to decline further. The graph in Figure 4 provides a cluster by cluster summary of the projected demands across Greater Christchurch.

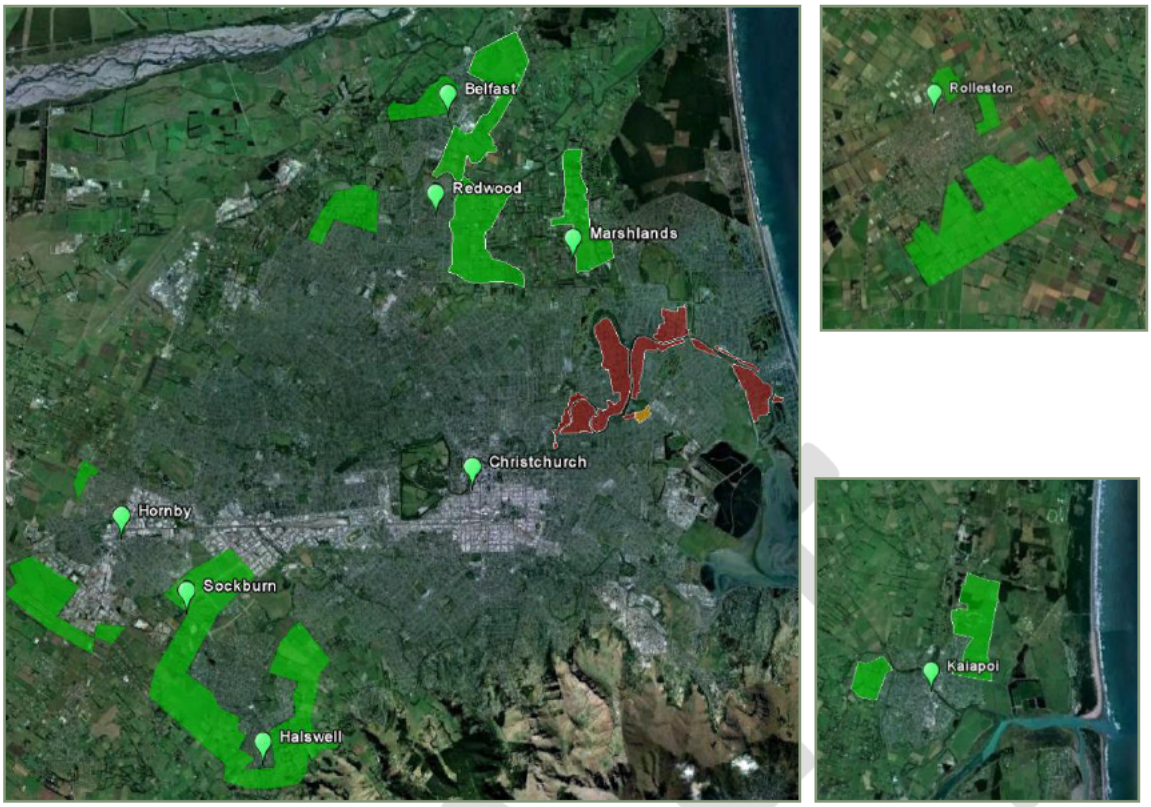


Figure 3: Greater Christchurch projected growth areas

2.3.3.2 Deficiencies in current provision

To date, the school network has been put back together so sufficient access is provided to ensure continuity of learning, however the network cannot return to its previous state. The earthquakes have disrupted communities so schools are no longer necessarily where they are needed. The impact of the earthquakes on education provision was, and still is, substantial. For example:

- 21 early childhood centres have been permanently closed and a further nine are operating from temporary premises pending decisions on buildings or sites.
- Following the February earthquake, over 12,000 students left the school they had been attending and enrolled elsewhere- often at a school outside the region. Many have since returned, but as of March 2012, 4.500 fewer students were enrolled in Greater Christchurch schools compared to March 2010.
- As of June 2012, there were approximately 1,100 students living in red zones and a further 46 living in white zones.
- In 2011 domestic enrolments in tertiary education were down by 14% on the previous year; international enrolments were down by 31%. Across the two universities based in Greater Christchurch, first-year numbers were down by 28%.

Figure 4 provides a summary of the projected demands and capacities. Where a network is projected to have a demand that is greater than 85% of capacity it is likely that some schools within that network will require expansion. Further details are provided in Appendix C.

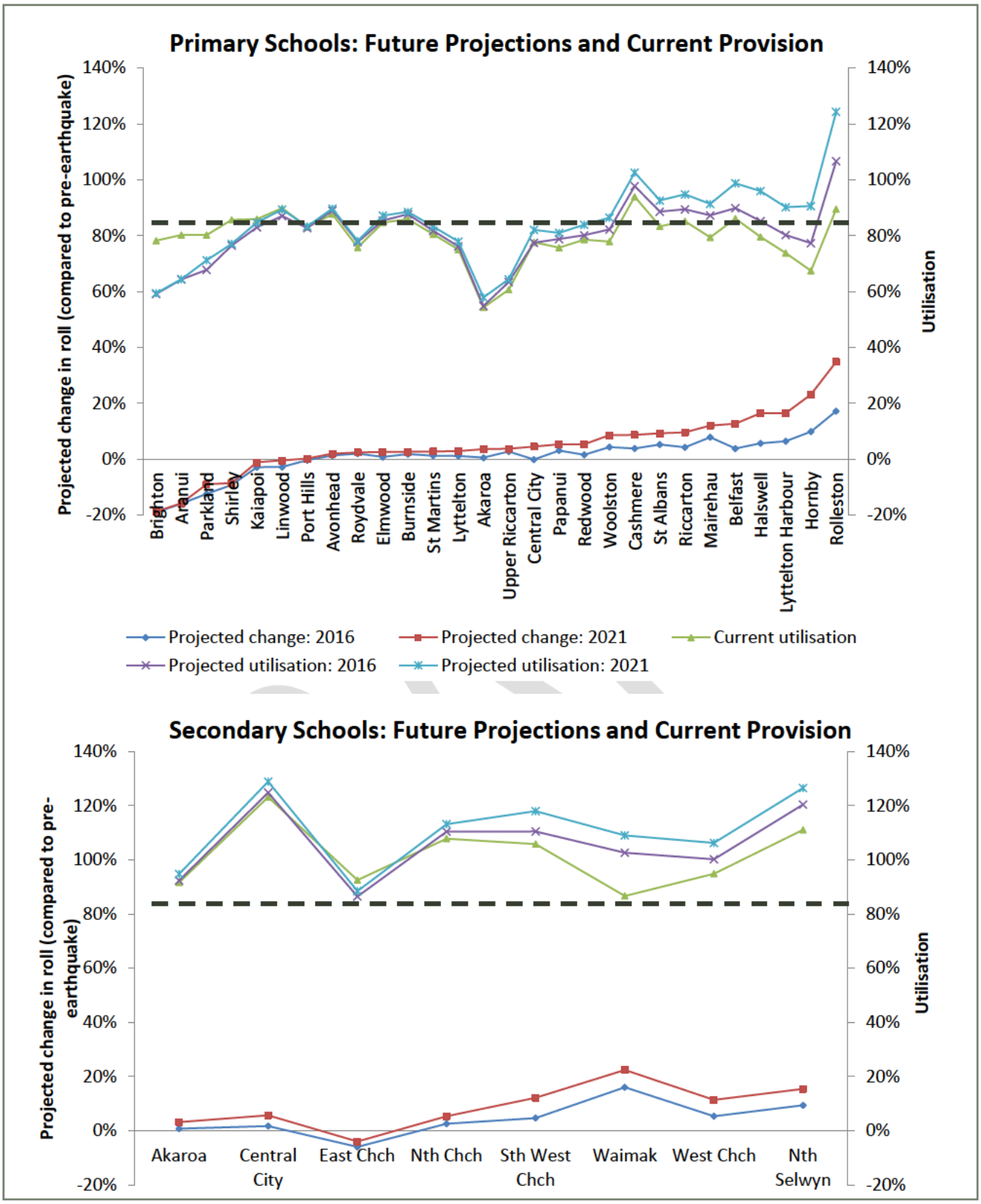


Figure 4: Projected changes in demand and network capacities

2.4 Key Service Requirements and Potential Business Scope

The earthquake response in Greater Christchurch provides an opportunity for the Ministry to take a holistic view around how education is provided and the contribution that the assets make. The framework for decision making, and the underlying objective of the business case, is to use the

Note: Not all clusters for which proposals were announced on 13 September were included in this Business Case. These clusters were not included because they lie outside the scope of the Business Case.

rebuilding process (as a result of the earthquakes) as an opportunity to deliver an improved school network that contributes to education performance.

The scope of the Programme Business Case looks to address education delivery and assets across Greater Christchurch. Greater Christchurch comprises of 123* schools in Christchurch and areas of the Selwyn and Waimakariri districts (namely Rolleston and Kaiapoi). All schools have been affected to varying extents by the Canterbury earthquakes.

The scale of the earthquake damage has been significant in terms of not only damage to the school network, but on the communities which feed into the network. This has resulted in schools which have been:

- Wholly destroyed and the land is not viable for reconstruction;
- Largely destroyed but the land is viable for reconstruction, however the long term demand no longer supports a school in that location; and
- Damaged and are repairable, but where the local residential catchment areas have been significantly damaged and the need for a school in the existing location is not required.

The need to substantially rebuild the school network comes at a time where there are radical changes in the way a school network is expected to perform. This relates to issues of:

- Changing demographics which impacts on the location of assets;
- Poor school design and maintenance which has resulted in a high proportion of school network assets which do not perform as intended; and
- Changes in the way education is delivered within the classroom, as a result of both the impact of information technology but also more inclusive teaching practices.

The result is that the Ministry recognises it has the opportunity to establish new infrastructure and methodologies for delivering education across Greater Christchurch. Furthermore, there is an appetite within the community to trial new frameworks and initiatives for education, and an interest on how the lessons from these trials can be applied to the national school network.

2.4.1 Establishing key service requirements

The list below provides a summary of the key service requirements. Appendix D provides further details on key issues.

Digital strategy for learning

- Seeking to drive internet access as part of the improved network, especially into areas where improved education performance is sought.

Transitions are managed and career guidance is accessible

- The largest risk of learners being left behind is during the transition between early child education and primary and the subsequent move between primary and secondary education.
- Demographic specific solutions are required to address transitions and career guidance.

Ensure that identity, language and culture of learners are valued

- Demographic specific solutions to promote cultural awareness.

Modern, flexible and inclusive learning environments which can either be relocated or investment minimised until demand is established:

- Flexible teaching style can impact on the achievement levels in some specific targeted social economic cohorts.
- Aim to actively promote this configuration of teaching spaces in areas where improved education outcomes are required.
- The pattern of demand is likely to develop over the next decade.

- An optimised network will be dependent on the ability to respond to changing demands. Ability to respond to rapid population shifts whilst still providing integrated schools.

Improved outcomes for learners with special needs

- Balance the need for special facilities against an objective of mainstreaming children into local schools.

Quality teaching and leadership is supported

- Teaching and leadership will be important in re-establishing the network and implementing different teaching methods and greater linkages with the community.

Governance and management structures that promote student engagement

- Governance and management will be important when addressing and improving student engagement, possibly at a network level and not on a school by school basis.

Demand analysis which links to other schools and considers the network

- Current processes are based around individual school activities and only partially considers neighbouring schools.
- The preferred model of development is to develop facilities as part of a school network solution considering not only location but the interests and backgrounds of the communities.

Ability to redefine roles of schools

- The school offering may need to be adapted to respond to particular demands in particular locations.
- Schools may offer alternative courses (such as technical courses) or cater for particular markets (single sex and intermediate offerings).

Linkage to other schools in delivery of network

- The school offering may need to be adapted to respond to particular demands in particular locations.
- Schools may offer alternative courses (such as technical courses) or cater for particular markets (single sex and intermediate offerings).

Partnership and understanding of potential links to the community

- Strategic implementation of links with the community.
- Infrastructure that is jointly used by the community or link to private sector providers.

Remediation programme which appropriately remediates and upgrades buildings

- Focus not only on repair but long term sustainability and asset performance.

Innovative procurement process which incorporate whole of life

- Asset specification and selection shall be inherent in the procurement process and shall not present a future maintenance liability.
- The scale of the rebuild lends itself to innovative procurement process.

2.4.2 Defining potential business scope

A more fundamental issue is how the network of schools can improve access and choice for students, support equity in education provision and be rationalised to reduce duplication. The potential business scope considers the Ministry's appetite for different aspects of rationalisation and the potential trade-offs between initiatives.

The service deliverables have been categorised into different groups and aligned with the strategic interventions outlined in the Investment Logic Mapping. These are summarised in Table 5.

Table 5: Potential business scope

Strategic Intervention	Business Requirement	Service Level	Core	Desirable	Out of Scope
Rationalise and design school network optimised to meet education provision	Optimised school network	Sufficient capacity within network.	•		
		Surplus capacity providing range of options for all students.		•	
		Choices of both courses and schools including bi-lingual and special schools.		•	
	Network that responds to shifts	Flexible class rooms and the ability to develop assets quickly.	•		
	Schools located close to students	80% of students located within 3km school for low decile secondary schools.		•	
		Diverse and equitable teaching options available in all locations.		•	
Better integrate schools to use shared facilities provision across Greater Christchurch	Coordinated delivery of school property and education programmes	Shared facilities.	•		
	Access to quality facilities by community and shared infrastructure.	Facilities which are usable by the community.		•	
		Role in establishing and defining communities.		•	
		Providing community assets for new suburbs.			•
Improve school infrastructure	School network that complies with Building Act	All building equal or exceed earthquake standards.	•		
		All buildings meet disabled access, fire and health and safety standards.	•		
	Value for Money with reduced whole of life costs	Long term maintenance is understood and appropriately managed.	•		
		The relationship between school size and capital and operational costs is understood and managed.	•		
		Short term solutions are available but understood to be short term.		•	
	School network that is resilient to future natural disasters	Capacity within school network for disaster relief and the ability to expand or reallocate facilities within the network.		•	

2.5 Benefits, Risks, Constraints and Dependencies

2.5.1 Identifying expected benefits

The expected benefits will largely derive from education delivery. Commonly the development of schools follows a well-practised framework of building schools to meet demographic changes and projected roll growth. Population shifts following the earthquakes have resulted in a network that no longer matched demands. The analysis of benefits also extends to consider where there are additional benefits to be gained over the traditional property development process either through better design or location and considering whole of life costs.

There is also a raft of non-monetary benefits which are difficult to quantify. Along with the monetary benefits, these are shown in the table below with detailed discussion provided in Appendix E.

Table 6: Benefits identification

Developing an estimate of benefits		
Monetary Benefits	**Beneficiary**	**Direct or Indirect**
Facilities in schools will be fully accessible and available to contribute to the provision of education.	Ministry	Direct
Remediation will result in more facilities being aligned with the Modern Learning Environment standards, contributing to a better delivery of the curriculum.	Ministry	Direct
Reduced maintenance and energy costs as a result of remediating with a 'whole of life' approach.	BoTs	Direct
Better procurement through alignment with corporate objectives and the ability to make informed trade-offs.	BoTs and Ministry	Direct
Better delivery of education through asset design and location.	Ministry	Direct
More efficient schools network through the rationalisation of excess buildings and schools.	Ministry	Direct
Reduced staff turnover.	Ministry	Direct
Non-monetary and intangible benefits	**Beneficiary**	**Quantitative or Qualitative**
Improved economic activity.	Public	Quantitative
Schools anchoring communities.	Public	Qualitative
Public confidence in school environment.	Public	Qualitative
Longer retention of learners in schools due to improved access and equity.	Public	Quantitative

2.5.2 Identifying the main risks

There are a number of significant inherent risks due to project scale and dependencies. The challenge is ensuring the identified benefits accrue from the Government's significant investment in school facilities.

Table 7: Main risks

Identifying the Main Risks			
Risk Event	**Impact (H/M/L)**	**Probability (H/M/L)**	**Risk Management Approach**
The scale of the programme limits the ability to manage the change process in a timely manner. Demographic change is uncertain meaning it may be too early to determine the optimal approach for some clusters	M	H	A change management process that provides certainty in process if not actual solutions. Progress minor works or those that are expected to experience growth as soon as possible to break down programme of works.
Ability to quickly change the use of current school sites is likely to be impacted on by Resource Management Act requirements related to land designations	M	H	
Public and sector resistance to proposals, specifically to the closure and merge options	M	H	Provide public access to data used for the basis of decision making, with the aim to gain buy in on the way forward.
School demand does not recover.	H	M	Develops facilities as demand increases, and allows opportunities to slow processes where required.
Community patterns are different to school network.	M	L	The planning will need to place emphasis on flexibility rather than specific solutions. Greater use of relocatables or standardised solutions.
Benefits are not as great as estimated.	M	M	On going evaluation of new facilities.
Partial delivery through ad-hoc implementation.	H	M	Linking initiatives and funding proposals.
Public relations result in ad-hoc response to delivery.	M	H	Communication strategy and community engagement in rationalisation process.
Lack of market capability or engagement.	M	L	Careful analysis of the market opportunity. Use of standardised solutions may allow firms outside delivery to provide resources.
State integrated and private schools do not rebuild increasing the demand on public schools.	H	M	Early consultation with state integrated schools to ensure a network wide response is taken.
Cost escalation due to demands from the larger Christchurch rebuild in a resource constrained market.	H	H	Panels of contractors and consultants and a transparent pipeline of forward work load will promote competition.

2.5.3 Optimism bias

There are a number of areas of potential optimism bias, many of which are identified in the risk management process. The optimism bias is most likely to manifest in over optimism around the improvements in education outcomes. Education delivery is highly variable and dependent on the quality of management and quality of teaching more than physical environments. The nature of schools is that they are highly successful at adapting to constraints and continuing to deliver education. The optimism bias may therefore overstate the gains in delivery, although potentially understated the additional demands the current situation is placing on school staff and management.

There is significant evidence that the quality of the school environment is not a major determining factor in the way parents select schools. They are more commonly based on a range of other activities including decile level and comparative success rates in NCEA. In fact, there may be a stronger preference for older schools, despite the older infrastructure. Parent preference does not provide a good indicator of education outcomes, however it does indicate issues such as community engagement.

In the Detailed Business Case it will be important to provide sensitivity analysis across both the costs and the potential benefits to understand the potential optimism bias.

2.5.4 Identifying and managing constraints

The constraints are derived from the scale of the project, which has high financial impacts on the Ministry and significant impact on the industry's capacity to respond.

1. Financial constraints: The Ministry faces funding constraints in the current economic climate which is compounded by the fiscal requirements of other public sector rebuilding in the Canterbury region. Undertaking the project in part could compromise its delivery, especially where there are different options within the network that are dependent on each other.
2. Resource constraints: Resource capacity may be the major constraint both within the Ministry and across the private sector. While there are significant resources available in the current market, this situation is likely to change and the rebuild of Greater Christchurch combined with any upturn in the economy will further constrain resources. The issue is further compounded by the specialised nature of some of the rebuild works including increased construction standards and rebuilding existing compared to new builds. It is also likely that the number of firms who could orchestrate an integrated regional programme is small, and they may well be over committed during the Canterbury rebuild.

2.5.5 Identifying dependencies

The renewal of the school network in response to the Canterbury earthquakes has a wide range of dependencies.

1. Private sector buy-in: Significant private sector buy-in will be required to deliver an integrated and coordinated rebuild programme. The extent to which the Ministry partners with the private sector will also depend on the private sector buy-in. There is a risk that the private sector will approach the rebuild on a cost-plus basis where they are interested in simplifying their role and using low cost labour in a resource constrained market.
2. Partnerships with Boards of Trustees: The current framework for asset development is dependent on a process of agreement with the BoTs. The models for the renewal shall consider short-cutting the process of design, specification and tendering whilst carefully managing implications for subsequent maintenance funding. The process is therefore heavily dependent on the ability to form a viable negotiation process with the BoTs which maximises the advantages or the redevelopment, while minimising the costs.
3. Engagement with communities: The Ministry is currently developing tools and processes to engage with the community which will be critical in both planning and implementing any

renewal process. There is a real risk that with so much disruption within the community, the engagement is not effective or community leaders are not championing the process. The process of engagement is critical to ensure the benefits are identified and carried forward and understood by the community.

4. Understanding of Council, Central Government and infrastructure intentions: There is a very real need to link any strategies to planning processes undertaken by other Government agencies. The scale of the process provides many opportunities for linkages to be missed including: local government (with definition of communities); central government (with roading and facility planning); and major utilities (who may be providing changes to the network).

3 The Economic Case

3.1 Critical success factors

This section establishes Critical Success Factors which will be used to assess the programme options. The focus is to identify the elements which are crucial to the delivery and have been derived from the base and policy information circulated by the Ministry.

The risk when assessing the options for education renewal is to focus solely on property issues. However, the eventual solutions are likely to incorporate a mix of people and building initiatives to meet the investment objectives including:

- student engagement strategies;
- governance and management reviews;
- teacher and leadership training and support;
- asset repair and recommissioning;
- development of new facilities and potentially new schools;
- transportation strategies between suburbs and communities; and
- partnerships with community for shared use of facilities.

The evaluation of options therefore needs to understand not only which option is preferred, but why it is preferred and whether there are initiatives which will support its delivery. It is important to ensure that the evaluation of options is derived from a focus on the assessment of the problems, the expected benefits and the strategic interventions. The benefits are seen largely around an investment which improves the quality, effectiveness and efficiency of the school network.

Table 8: Main risks

Critical Success Factors
Value for money, holistic and whole of life decision making
Flexible and responsive to changing requirements
Linkages to the community
Market capability and capacity
Future proof and deliver quality in design

The relationships between the benefits and the strategic interventions are shown in Figure 5 and are linked to the Critical Success Factors. A discussion of the Critical Success Factors and how they can be assessed is included in Appendix F.

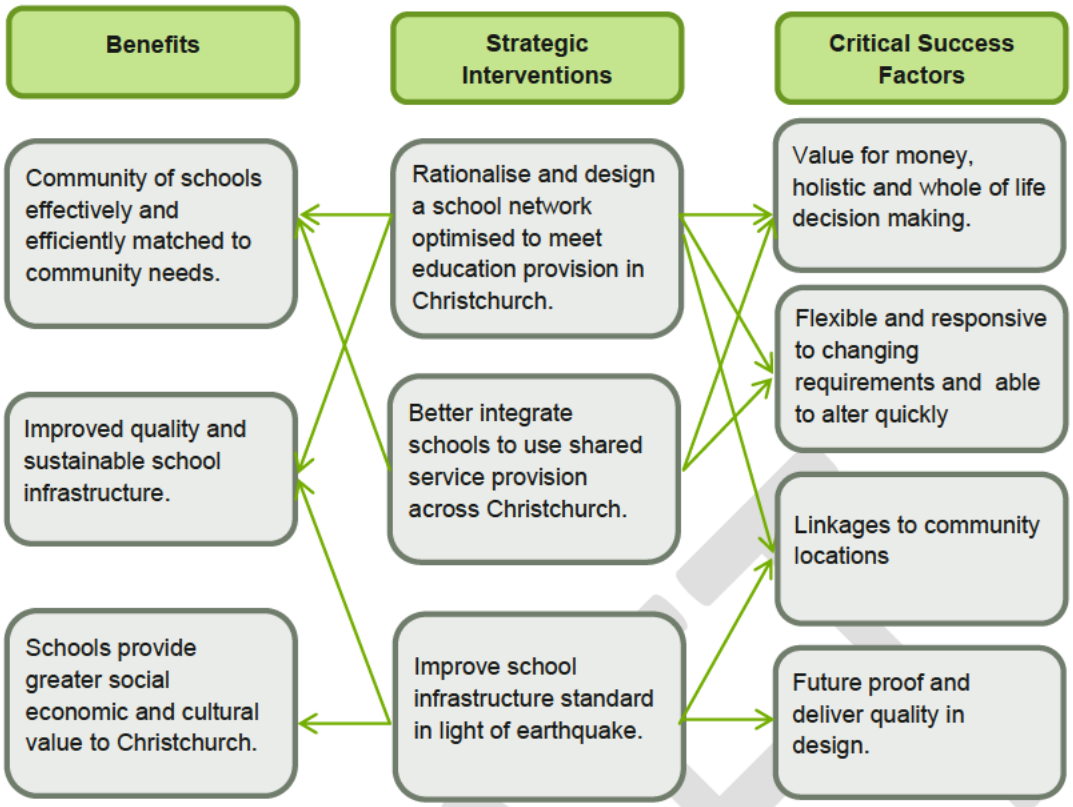


Figure 5: Links between Benefits, Strategic Interventions and Critical Success Factors

3.2 Programme Options Identification and Assessment

3.2.1 Identifying programme options

The investment in schools needs to be managed from two perspectives. Firstly, the investment needs to ensure property contributes to education performance. Secondly, the investment needs to be managed and targeted to schools that have future demand to ensure value for money decision making and a manageable Government investment.

Five investment approaches that vary in scale and scope have been considered. These are:

- Do Minimum: The minimum cost to respond to defective buildings so they are safe to occupy.
- Status Quo: Costs faced by the Ministry prior to the earthquakes.
- Repair All Damage: Return the network to its state prior to the earthquake. Supply does not match demand.
- Major Investment with Minor Rationalisation: Rationalisation is considered on a building by building basis. Does not take a coordinated approach to capacity across the network.
- Major Investment with Major Rationalisation: Rationalisation is considered at a network level resulting in building and school rationalisation. A rationalised network allows for investment in new schools, rebuilds and expansions.

The preferred way forward that delivers value for money and provides the flexibility to develop an education network that matches demand is the *Major Investment with Major Rationalisation* approach. The major rationalisation considers the requirements of the current and projected learning populations and how the current property portfolio meets these requirements.

A major renewal of the education network is the preferred way forward and forms the starting point for the scale, scope and location assessment of options for the Programme Business Case. This allows impractical solutions to be ruled out and to focus on further defining the scale, scope and location on a cluster by cluster basis.

3.2.1.1 Scale, scope and location

The scale, scope and location are largely dictated by the current asset base. The possible scale, scope and location options are:

- Do minimum.
- Needs based (supply and demand including rationalisation).
- Remediate all damage.
- Respond to all damaged assets in schools that are currently occupied

Subsequent workshops (due to the scale and immediacy of the investment) outside the Programme Business Case scope have provided grounding for a more specific analysis of the scale, scope and location options than is required by the Programme Business Case, this is highlighted further in Section 4.4: Management Case and cluster assessments are provided in Appendix M.

3.2.1.2 Service solution

The scale of the network renewal allows different approaches to be taken to deliver education across the Christchurch network. Community consultation feedback has acknowledged the need to provide solutions that meet the needs of the learners; one solution does not fit all. A range of people and property options are possible for delivery of the investment objectives.

Table 9: Summary of service solutions

Option for delivery	Rationalise and design school network optimised to meet education provision	Better integrate schools to use shared facilities provision across Greater Christchurch	Lead the design of flexible and sustainable ICT enabled learning network	Improve school infrastructure
Dual shift schooling	✓	✓		
Split sites	✓	✓		
Cluster wide student engagement strategies	✓			
Governance and management review	✓			
Closing schools	✓			
Merging schools	✓			
Rebuild or repairing on existing site	✓			✓
Rebuild on a new site	✓			✓
Incentivise schools to better utilise assets	✓			
Consolidate and share specialist facilities	✓	✓		
ICT provision	✓		✓	✓

With reference to Table 9, the following definitions are provided for clarity:

- **Dual Shift Schooling:** Same school on same site operating a morning and an afternoon school to facilitate teaching and learning for a larger number of learners while requiring lesser facilities. Dual Shift Schooling emerged from innovative solutions implemented as emergency responses to the earthquakes.
- **Split sites:** One school entity operates on more than one site to allow for maximum use of facilities and consolidated governance, leadership and management.

3.2.1.3 Service delivery

Service delivery addresses how the work should be designed and commissioned and addresses the linkages between evaluating the options, designing the solution and procuring the work. The options are:

Programme Management:

- Centrally based programme management of Greater Christchurch.
- National programme management of all Ministry programmes.
- Locally based programme management delivered by Ministry staff.
- Locally based programme management delivered by private contractors.

Project Delivery:

- Local Ministry project delivery.
- Local, private project delivery.
- Local delivery of minor projects by Ministry staff and private delivery of major projects.

Procurement:

- Single Line Accountability Model (traditional new schools approach).
- Head Contract (Traditional Lump Sum approach).
- Design and Construct.
- Managing Contractor (MC).
- Public Private Partnerships (PPP).

Evaluation of the procurement options was undertaken separately from the assessment of programme options and different criteria were used. The issues were more about defining the best prices and level of risk transfer, rather than determining which work is required. An analysis of the procurement option is provided in Appendix G.

3.2.1.4 Implementation

Implementation considers the timing and staging of the service solutions. The options are:

- Prioritised and staged.
- Individual projects.
- Grouped/packaged projects.
- All at once- "Big-bang".
- Remediate prior to requirement.
- Remediate as required.
- Defer remediation due to dependencies (other works, population shifts or community consultation and feedback on options.)

3.2.1.5 Funding

Insurance: Funds are available to fund the investment from insurance payouts due to earthquake damage.

Crown: Crown funding is an option to cover the investment. However, given the scale of the Greater Christchurch rebuild, it is acknowledge that funding may be constrained.

Private: Private funding and financing may be an option where assets are shared or alternative procurement methodologies (for example Public Private Partnerships) are adopted.

Depreciation and Capital Charge: Treasury currently funds the depreciation and capital charge of Ministry assets at the respective rates of 6% and 8% of the book value. The Ministry gives each Board of Trustees a capital funding budget to use over a five year period (5YA).

3.2.1.6 Base Case

Two 'Base Case' options have been adopted as reference points to determine relative value for money. This approach considers the cost (weather tightness, maintenance and earthquake prone) faced by the Ministry prior to the earthquakes and not just the remediation of earthquake damage.

Do Minimum: The minimum cost to respond to defective buildings (weather tightness, programmed maintenance, seismic strengthening and earthquake damage). It is a property response and does not look to address the education delivery. Property will be remediated to a point where it is safe to occupy. At a network level, supply exceeds demand allowing irreparable buildings to be decommissioned and students relocated to alternative education facilities. The result of the Do-Minimum option is a network that is usable but not necessary ideal for education delivery or located to match the demands of learners.

Status Quo: Prior to the earthquakes the Ministry was facing a requirement for significant investment in its Greater Christchurch assets. Compounding challenges of weather tightness, programme maintenance and seismic strengthening needed to be addressed. The Status Quo base case option looks at the cost faced by the Ministry prior to the earthquakes to repair all of its damaged assets. Unlike the Education Renewal brought about by the earthquakes, the Status Quo base case option is a property solution and does not address education delivery and does not match supply with demand.

3.2.2 Assessing the Programme Options

The process of assessing the programme options aligns with the Programme Business Case Guidelines. The possible programme options were assessed against the Investment Objectives that were identified as part of the Investment Logic Mapping process and the Critical Success Factors. A detailed assessment is provided in Appendix H. The approach taken to assess the options is based on a 'Yes', 'No' and 'Partial' scoring system whereby:

- **Yes:** the criteria is fully met for all situations;
- **Partial:** the criteria are fully met in some situations, whereas not at all in others.
- **No:** the criteria are not met in any situations.

Based on these assessment criteria, the mix of project options taken forward predominantly consists of 'Yes' with some 'Partials' but do not have any 'No's'. Figure 6 contains a summary preferred programme developed from the preferred options.

PREFERRED PROGRAMME OF WORKS

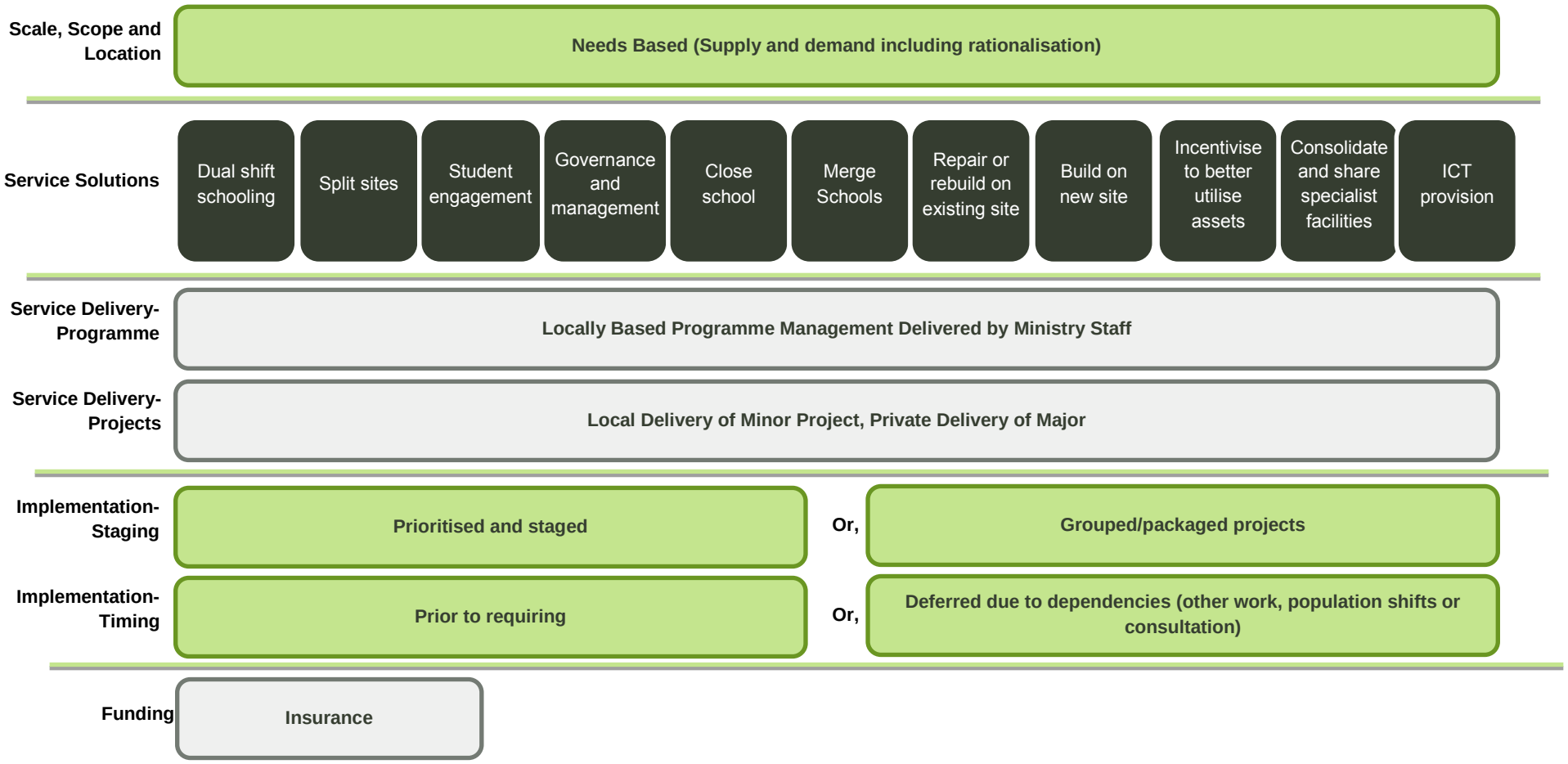


Figure 6: Summary of the preferred programme of works

4 The Recommended Preferred Way Forward

4.1 Indicative costs and benefits

There are five options of renewal that are varied in scale. Costs and benefits have been calculated for each. Details of the costs are provided in Appendix I with the assumptions used in Appendix J.

Table 10: Summary of indicative costs and benefits

Option	Scope	Cost	Benefits
Option 1: Do minimum (Base Case)	• Limit the investment by only completing health and safety related works. • Buildings are habitable and able to be used to deliver education. • At a network scale there is sufficient capacity so there is no provision for expansions of existing schools or rebuilds where schools are irreparable. • New schools will be provided to serve large scale shifts in population.	$470-520mil	-$190-210mil
Option 2: Status Quo (Base Case)	• Complete the works that were required prior to the earthquakes. • Includes earthquake prone, weather tightness and programmed maintenance. • Property response and not a renewal of the education network.	$610-670mil	-$100-110mil
Option 3: Repair All Damage (Value for money assessment)	• Return the network to its state prior to the earthquake. • There is no scope for rationalisation or expansions to meet shifting demands. • New schools may be built on new sites due to large scale population shifts.	$810-900mil	-$90-100mil
Option 4: Major Investment with Minor Rationalisation (Possible)	• Rationalisation on a building by building basis. • Does not allow for a network approach that allows for school rationalisation. • There will be no rationalisation in schools where only minor repairs are required. • The scope of the major investment includes all minor and major repairs and rebuilds following rationalisation. • New schools will be built to service population shifts, to replace irreparable schools and new classrooms provided in response to roll growth.	$1.22-1.35bn	$130-140mil
Option 5: Major Investment with Major Rationalisation (Preferred Option)	• Rationalisation that considers roll decline and roll size prior to completing repairs or rebuilds. • A network approach by looking at the capacity and level of damage of neighbouring schools when considering the opportunity to rationalise the number of schools. • Option to amalgamate two schools to service a local demand as well as rationalising assets by sharing specialist facilities. • Major rebuild includes new schools on both new and existing sites as well as expansions to existing schools to meet increased demands.	$900mil-1bn	$130-140mil

When education renewal is considered (and not just the property response) the range of projected costs varies from $825 million to $1.1 billion. However when considering the preferred way forward on a school by school basis, the projected cost is approximately $940 million.

4.2 Outlining the Commercial Case

The delivery of the rebuilding process in a cost effective manner will require strong partnerships with the private sector. However, delivery of the programme within the cost constraints will be difficult. It is expected that as other rebuild work comes on line in Greater Christchurch that there are going to be significant resource constraints. This will ultimately result in escalation issues and may impact the ability of the Ministry to transfer some risks to the private sector.

For this reason, standardised solutions are likely to be highly cost effective, as the work can be undertaken by a wider range of contracting firms. This would imply a greater use of relocatables and factory-built buildings to provide cost effective solutions.

It will be important that the construction industry (from design through to construction) are engaged. One of the likely issues will be the attractiveness of working on the Ministry projects. The overarching issue will be to achieve competition and value whilst making the work attractive so that appropriate resources are allocated. The size and type of each programme of work and various small projects will be important factors.

4.2.1 Key Procurement Strategies

A key factor in evaluating value for money outcomes from building and infrastructure investments is the procurement strategy. Procurement strategy decisions made at the beginning of an asset investment process will affect asset performance, service delivery, cost and value for money throughout asset whole of life. Sound procurement decisions involve a comprehensive examination of a range of procurement models to determine the approach that is best suited for each project. This ensures that opportunities for achieving increased value for money and improved infrastructure investment outcomes are readily identified and capitalised.

There are many forms of procurement available to potentially deliver this programme of works. The decision to adopt a particular form of procurement will be guided by a range of issues such as a particular model's fitness to manage the risks inherent in the capital delivery, historic practice, ability to capitalise on the efficiency due to the large body of work and market capacity to name a few.

The following is a summary of the Procurement Options Analysis, which must be investigated further as part of future business cases. A detailed analysis of the procurement options is provided in Appendix G.

Table 11: Procurement strategies

Procurement Approach	Applicability	Scope
Minor conventional purchasing	Given the scale of the investment this procurement approach is rarely applicable. It could be utilised for the engagement of specialist professional or consulting services where the scale cannot be classified as 'major conventional purchasing'. The preferred option for implementation is to group or bundle small projects together, as a result these will fall into the 'major conventional purchasing' category.	Initial project scoping and minor professional fees.
Major conventional purchasing	Applies to both the procurement of personnel as well as assets. Approaches may include: • Panel arrangements for professional and consulting services. • Head Contract or Managing Contractor for capital asset investment. • Single line accountability (current Ministry approach).	Professional services, demolition, minor and major remediation, temporary accommodation, rebuilds and new schools.
Conventional design and construct	The success of Design and Build projects depends on the quality of the specification of requirements. Given the varied nature of the repair works, Design and Construct is best used where standard specifications can be used or the cost and time associated with developing project specific specifications can be justified.	Major remediation, new schools, temporary accommodation and rebuilds.
Panel Arrangement	Appropriate where there are a number of suppliers who can provide a service and where there is an on-going demand. It allows for varying procurement methodologies to be used without the need to go to market for individual projects. It provides fast and streamlined access to providers whilst maintaining competitive tension.	Professional services, demolition and repairs.
Alliance approach	The collaborative approach with the private sector to deliver a project is most appropriate where risks are not known prior to tendering. Given the additional people resources required by the Ministry to enter into an alliance approach combined with clarity of risk at tender, the benefits of this approach are limited.	Not appropriate.
Public Private Partnerships	Most appropriate for new schools where the scope can be clearly defined.	New schools, temporary accommodation.

4.2.1.1 Public Private Partnerships

The Ministry is in the process of delivering the first project in New Zealand delivered using a Public Private Partnership. The contract has reached Financial Close (April 2012) and is now well into construction of the primary school.

The Ministry developed Outline Business Cases and a Detailed Business Case for this project. Having completed the tendering processes and engaged with the market, the Ministry is well placed to provide to consider this procurement model further. This ensures that the lessons learned from the first PPP are adopted and implemented should this model of delivery be used.

There are a range of issues that will require further consideration should this procurement model be adopted. The issues include:

- Ensuring that there is market interest. This is in the context of other projects that maybe delivered using PPP and the total volume of available construction work. If contractors are able to source "easier' work then there may not be the desire to invest in the PPP process. The deal size will be a very important factor on this issue to ensure that value for money can be achieved.

- Ensuring competitive tension. The Learning Infrastructure Partnership (LIP) will have first mover advantage having successfully signed the Project Agreement. This will place them at an advantage and the Ministry will need to develop specific strategies to address this issue.
- Deal size will be important in the context of the broader re-build exercise.
- Bid costs – there is a significant expectation in the private sector that the Ministry will demonstrate how bid costs are being addressed and therefore lowered.
- General process improvements – there is an expectation that ITP processes will be improved.
- The availability of relevant insurances for the private sector will need to be assessed.
- Geotechnical risk will need to be specifically addressed.
- Legal issues such as force majeure will need to be addressed in the context of the broader industry issues and risk transfer.

4.2.1.2 Bundling

The Ministry has historically delivered projects on a school by school basis. The size of the proposed programme enables different strategies to be considered. Whilst the business as usual process is available (school by school), this will generate significant procurement and management costs and make securing appropriate resources difficult. The opportunity exists to bundle projects.

Schools can be bundled (to achieve scale) by type (eg minor works) or by clusters (various types). The advantages or bundling are:

- Achieves scale
- Lower procurement and transaction costs
- Resource allocations

The disadvantages of bundling are:

- Access to small contractors
- Delivery risk is restrained to a smaller number of contractors

The existing Canterbury Home Repair Programme in Christchurch is an example of bundling. EQC appointed Fletcher Construction to run a Programme Management office to complete home repairs through a central office and 21 Hubs from which project management teams organise repair work.

The 21 geographical Hubs are located in communities affected by the earthquakes, in five council areas: Christchurch, Selwyn, Waimakariri, Hurunui and Ashburton. There are also specialist Hubs for engineering and other technical services, urgent repairs and body corporate repairs.

Contract Supervisors based at the Hubs are the primary contacts for affected homeowners and the contractors appointed to undertake the work. In addition, the Hubs house Community Liaison Officers who provide direct assistance to homeowners, along with a range of other project management staff.

4.2.1.3 Required services

The required services can be broadly broken down into the following categories:

- Current functions of the Ministry of Education;
- Programme management;
- Project management;
- Professional services;
- Construction services;
- ICT providers; and
- Facilities Management (FM) services.

The required services are necessary to deliver on the Service Requirements detailed in Section 2.4.1.

Table 12: Required services to deliver on Services Requirements.

Service Requirements	Ministry of Education	Programme Management	Project Management	Professional services	Construction services	ICT providers	FM Services
Demand analysis which links to other schools and considers the network	✓	✓					
Modern, flexible and inclusive learning environments	✓		✓	✓	✓	✓	
Digital strategy for learning	✓	✓		✓		✓	
Transitions are managed and career guidance is accessible	✓						
Ensure that identities culture and language of learners are valued	✓	✓					
Improved outcomes for learners with special needs	✓						
Quality teaching and leadership is supported	✓						
Flexible facilities which can either be relocated or investment minimised until demand is established		✓	✓	✓	✓	✓	
Ability to redefine roles of schools	✓						
Linkage to other schools in delivery of network	✓						
Partnership and understanding of potential links to the community	✓	✓	✓				
Remediation programme which appropriately remediates and upgrades buildings		✓	✓	✓	✓	✓	
Innovative procurement process which incorporate whole of life		✓	✓	✓	✓	✓	✓

4.2.1.4 Facilities Management Services

Should a PPP procurement approach be taken, then Facility Management (FM) services are included in the required services. The initial Facility Management Services (FMS) to be included in a PPP are set out below:

Table 13: Facility management service requirements

Hard FM	
Building and Asset Maintenance (Whole of Life)	ICT Backbone
Grounds Maintenance	Furniture, Fittings and Equipment (FF&E)
Soft FM	
General Management	Cleaning
Help Desk	Security
Janitorial and Porterage	Pest Control
Waste Management	Utilities
Excluded from the contract	
Canteen (Tuck Shop)	ICT (does not provided value for money)

Service specifications have been developed for the current NZ Schools PPP.

4.2.1.5 Risk allocation

One of the fundamental drivers of Value for Money is to appropriately allocate risks to the party who can best manage them (ie public sector or private sector). The level of risk transfer depends on the procurement methodology that is implemented. The detailed procurement analysis provided in Appendix G includes an indication of the risk transfer based on scope and procurement methodology.

Table 14: Summary of risk transfer

Assessment of Risk Transfer					
Scope	**Head Contract (HC)**	**Design & Construct (D&C)**	**Managing Contractor (MC)**	**SLA**	**Public Private Partnership (PPP)**
Demolition	+3	-1	+1	+1	-2
Minor Remediation Projects	+3	+1	-1	-1	-1
Major Remediation Projects	+3	+1	-1	-1	-1
Temporary Accommodation	+2	+2	+1	+1	+3
New Buildings (Existing Sites)	+2	+2	+1	0	-1

Where the following scoring system was used:

- 3= Extremely effective in transferring risk.
- 2= Highly effective in transferring risk.
- 1= Reasonably effective in transferring risk.
- 0= Neutral in transferring risk.
- -1= Reasonably ineffective in transferring risk.
- -2= Highly ineffective in transferring risk.
- -3= Extremely ineffective in transferring risk.

4.2.1.6 Key contract provisions

The contract provisions will differ based on the scope and scale of the works. Standard contractual terms (both industry and government) will be utilised where possible to take advantage of market familiarity and to minimise programme administration costs and time. Standard contracts include:

- Professional Services: including (but not limited to) Institute of Professional Engineering NZ (IPENZ) Conditions of Contract for Consultancy Services, New Zealand Institute of Architects (NZIA) Standard Conditions of Contract and existing Ministry of Education professional services contracts.
- Standard Construction Service: Standard New Zealand NZS3910: Conditions of Contract for Building and Civil Engineering Construction.
- Alternative Procurement Methodologies: Treasury's standard form of PPP contract.

4.3 Outlining the financial case

The relationship between the capital requirements and financial management of the Ministry is defined by the capital charge and the depreciation made on the assets. The issue is further complicated by the fact that assets which are developed to replace or repair damaged buildings are likely to have a life significantly longer than the ten year planning horizon used in the business case.

The following table summarises costs for the preferred 'major rebuild, major rationalisation' option which would borne by the Ministry over the ten year horizon. The calculation of these costs is shown in the summary of options outlined in Appendix K. The cost of the required investment has reduced the book value of the assets and therefore reduced the depreciation and capital charge funding.

Table 15: Estimated costs over ten year time frame Note: The entire table was previously withheld

Component	Projected costs (pre-earthquake status quo base case)	Renewal cost (major repair and major rationalisation)
Capital Charge	$210mil	[redacted]
Depreciation	$314mil	[redacted]
Insurance	-	[redacted]
Additional funding	$115mil	[redacted]
Total	$639mil	$949mil

Financial details have been deleted to prevent prejudice or disadvantage in relation to negotiations the Ministry of Education will have or is undertaking with its insurer (s9(2)(j))

The investment in rebuilding Canterbury schools will result in a decreased capital charge paid by the Ministry and a subsequent decrease in the depreciation charges.

The capital charge, although an accounting entry paid by the Ministry to Treasury, is a proxy for the opportunity cost of the Government's investment in assets. Therefore, it provides a measure of both the economic costs to the country of the investment and the financial transactions between the respective parties.

Similarly, the depreciation is a measure of the declining functionality of the assets. It recognises that the ability of the assets to contribute to education will be eroded by the end of the ten year period. However, the depreciated book value of the assets allows measure that some options will result in a significantly different state of assets at the end of the ten year analysis period.

Handling of Insurance Payments

The financial analysis has included the financial contribution of the insurance pay-outs. However, the Government has the option of crediting any insurance payments to the consolidated fund. The amount of the insurance payments that will be received is not dependent on the rebuild that is undertaken and therefore there is no advantage of one option over the others when allowing for insurance payments. The decision about where to invest the insurance payments needs to be made on the same basis as any other Government investment.

Sale and purchase of land

The options do result in different capital land investments. Some of the options, particularly those involving major rationalisation are based on the closure of various schools. Under these circumstances the land would be sold resulting in a net gain to the Crown. This would have both financial implications, and potentially beneficial economic implications where the land was freed up for alternative uses. Similarly, the major rationalisation options may include the purchase of additional land sites.

However, the difficulty is, given the unique circumstances of the Canterbury earthquake, that the realisation value of the land cannot be estimated. In many cases the land being sold may be severely damaged or in area close to the 'red-zones' where there is limited future demand. Under this circumstance the land values are likely to be significantly discounted from the current 'book values'. Conversely, the rebuilding of schools in new locations may be in land which is in major demand during

the rebuilding process, and therefore the existing book values do not equate with the actual value of the land.

The amount of damaged land to be sold is significantly larger than the land required to acquired, and it has been assumed the cost or saving that may be realised is insignificant in terms of the scale of the programme of works. This will need to be addressed in greater detail in the Detailed Business Case.

Management Costs

Regardless of the option adopted, a dedicated team will be required to manage the implementation of the rebuilding programme. However the scale of the management function will vary between the options, and is largely dependent on the value of the remediation work which is being undertaken.

The management of the remediation process is a different role to the individual project management activities in each building project. These individual project management costs have been incorporated into the building costs assessment. However, in addition to this there is a management component to provide a portfolio perspective. For planning purposes this has been estimated at around 3% of the total expenditure under each of the options.

Value of temporary accommodation

The rebuilding process will require temporary accommodation to be provided during the construction period. The value of temporary accommodation will be proportional to the assets being constructed and is likely to be relatively expensive given the needs to establish and disestablish the temporary accommodation, but will not be required in all cases. As a result the value of temporary accommodation in options is estimated to equate with around 10% of the value of the assets being constructed.

4.4 Outlining the Management Case

4.4.1 Identifying the mix of projects

Acknowledging the level of renewal will vary across Greater Christchurch, three broad categories (Restore, Consolidate and Rejuvenate) have been used to develop the programme of works by considering the network cluster (location), degree of change (scale) and type of responses that are required (scope). Details of the criteria used to develop the programme of works is provided in the following sections.

4.4.1.1 Location: A cluster approach to education renewal

Schools have been grouped by clusters in order to develop the mix of projects. Clusters were defined based on the following considerations:

- Physical constraints such as rivers, hills and topography;
- Infrastructure such as roads (motorways) and the public transport network;
- Location of residential housing (both existing and planned); and
- Locations of the existing school network.

The cluster approach allows options to be developed and analysed for a group of education facilities or at the individual school level. The current status of the cluster was assessed by considering the people, land and buildings and took an integrated and innovative approach to future education provision. In assessing each cluster, consideration was given to the surrounding clusters and how each education service influences both its cluster and surrounding clusters.

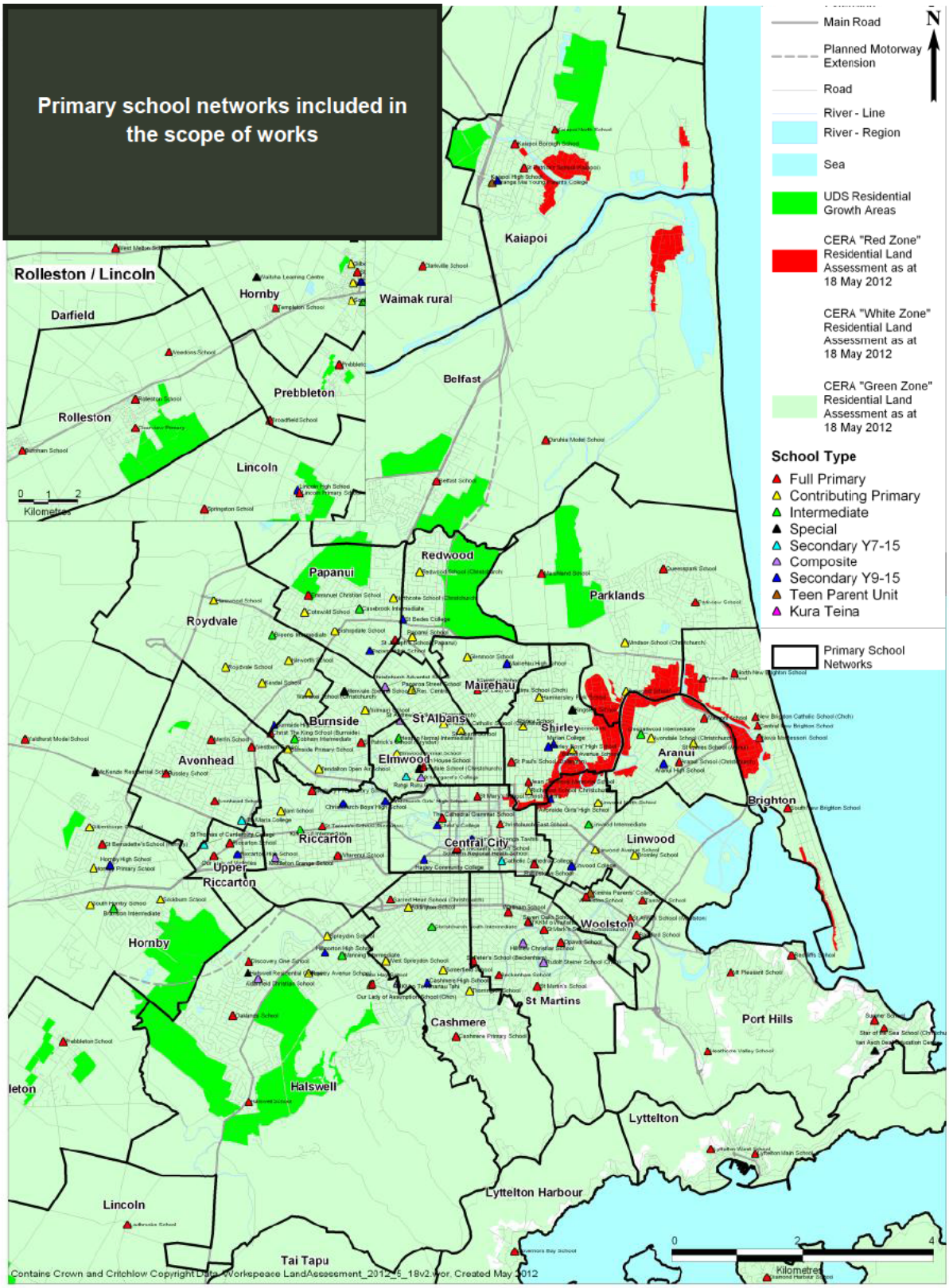


Figure 7: Greater Christchurch clusters.

4.4.1.2 Scale: A quantitative approach to identify the scale of response

The decision making criteria to determine the scale of response on a school by school basis considers the education requirements (access), how the existing property (infrastructure) aligns with the education delivery requirements, how successful existing schools are at delivering education (education and governance) and the best value for money response (scale of investment). Equity of education provision is considered holistically across the network. The assessment of scale more specifically adopted the following quanlitative criteria:

Criteria	Access	Equity of Provision	Education & Governance	Infrastructure	Scale of Investment
Factors	Physical Address	Choice	Student Achievement	School Viability / Size	Capital
	Student Demand	Pathways	Quality of Governance	Modern Learning Environments	Operating
	Demographic Changes	Equal Opportunity	Student Engagement	Asset Utilisation	Maintenance
				ICT	

Figure 8: Qualitative criteria for schools assessment

A table of the specific measurable criteria used to determine the scale is provide in Appendix L. The Scale of Investment and Education and Governance assessments of the Greater Christchurch Schools Network (123 schools) can be combined to demonstrate how the education and property issues are compounded and a holistic renewal approach is required.

Note: Not all clusters for which proposals were announced on 13 September were included in this Business Case. These clusters were not included because they lie outside the scope of the Business Case.

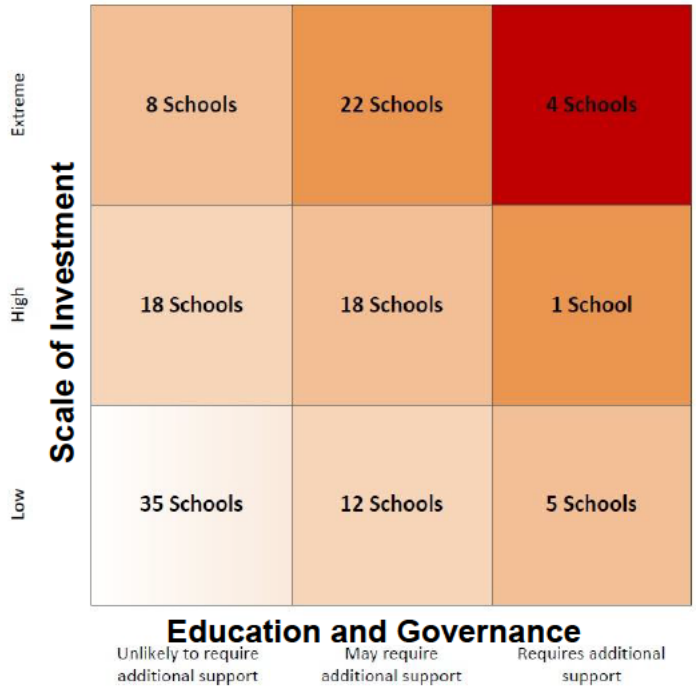


Figure 9: Scale of education and property response

The catalysts for change and investment can be broadly classified into People, Land and Buildings.

People: Projected increase or decrease in the number of students living in the catchment of a network. The Ministry has been monitoring 2011 and 2012 schools rolls across Greater Christchurch. The March 2012 data has been geocoded by the student home addresses to help understand the enrolment patterns across Greater Christchurch. UDS partners have developed household and population projections which will form the basis for planning for District and City Councils, NZTA, Canterbury Regional Council and other organisations including the Ministry of Education. The key measures to determine if *People* is a catalyst for change are:

- Demographic Change - large numbers of households moving across and out of certain parts of Greater Christchurch.
- Compromised Education Capability – damage facilities and temporary solutions since the earthquakes have reduced the capacity of the network to address learner achievement.
- Inequity in Education Provision and Performance – Māori and Pacifika learners in Greater Christchurch largely perform below the national average and MME provision is not equitably distributed.

Land: *Land* is a catalyst for change where is it deemed to be unsuitable to locate a school on. The Ministry has a programme to do geotechnical assessments of schools sites and is prioritising schools in East Christchurch and Kaiapoi. *Land* is a catalyst for change where the education site is deemed unviable due to unstable land conditions.

Building: *Building* is a catalyst for change where the investment required to repair or rejuvenate school property is uneconomical and suitable alternatives are available in the network. The Ministry has completed a condition assessment of school property across Greater Christchurch that includes all infrastructure related issues (e.g. leaky buildings, significant maintenance liabilities).

4.4.1.3 Scope: Building the network using layers of provision

A layered approach has been taken to define and analyse the Greater Christchurch school network. The base layer consists of the existing school network where schools are broken down into clusters based on geographical location. Figure 10 describes the Ministry's thinking in terms of the layers that comprise a successful education network. The base layer reflects the existing school network. Each subsequent layer reflects factors that need to be considered in the network assessment. The top layer (Shared Facilities) reflects the opportunities for integration into the broader rebuild efforts in Greater Christchurch.

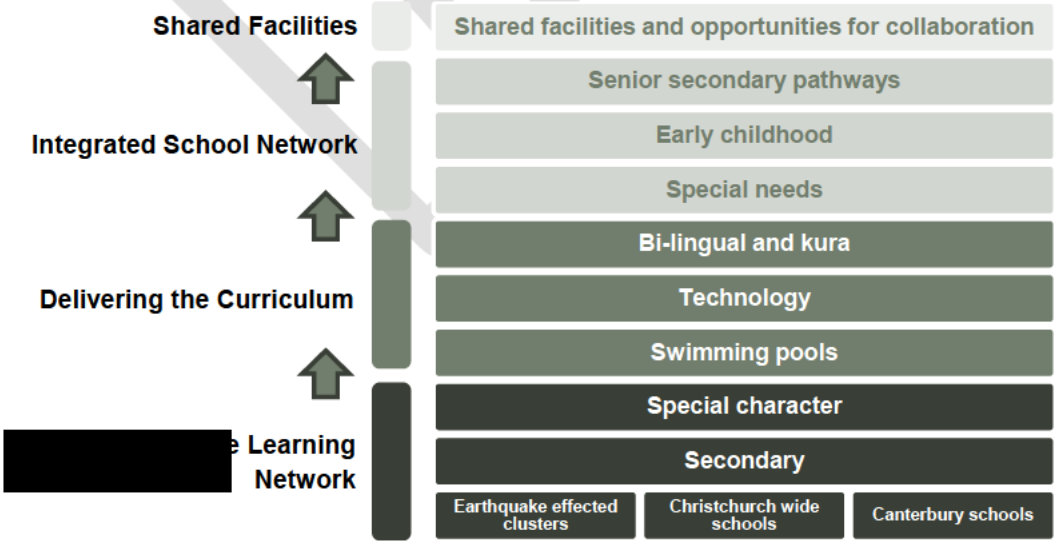


Figure 10: Layered approach to define the Greater Christchurch schools network

4.4.1.4 Indicative programme of works

An indicative programme of works can be developed by classifying clusters into one of three categories. Appendix M provides detailed school by school assessment.

Table 16: Overview of the indicative programme of works

Level of response	Key Facts	Clusters
1. Restore/ expand- minor change **$ 280mil**	**41** schools in 14 clusters and 2 part clusters Only building related issues. Closures where minor impact on surrounding network. Can be **started immediately.** Announce, engage and consult as appropriate. Example – Halswell School Redevelopment	**Primary:** Avonhead, Cashmere, Elmwood, Lyttelton Harbour, Mairehau, Redwood, Riccarton, St Albans, St Martins, Upper Riccarton, Burnside, Rolleston *Part clusters: Halswell* **Secondary:** North Christchurch, South West Christchurch, *Part clusters: West Christchurch*
2. Consolidate- moderate change **$ 170mil**	**38** schools in 10 clusters and 2 part clusters Building and some people related issues Change requirement is not imminent Engagement and Consultation proposed for **3rd quarter 2012** Example – closing Glenmoor Primary due to low roll	**Primary:** Kaiapoi, Parklands, Lyttelton, Akaroa, Belfast, Papanui Roydvale, Special Schools *Part clusters: Halswell, Rolleston* **Secondary:** Akaroa, Waimakariri, *Part clusters: West Christchurch*
3. Rejuvenate- major change **$ 490mil**	**44** schools in 12 clusters Major land, building and people related issues A range of merge and closure options Consultation initiation proposed for **4th quarter 2012** Example – a range of options for the Shirley cluster	**Primary:** Aranui, Brighton, Linwood, Shirley, Port Hills, Central City, Hornby, Woolston, MME **Secondary**: East Christchurch, North West Christchurch, Central City

Detailed cluster by cluster assessments are provided in Appendix M.

Note: Some of the proposals for these clusters have been updated since the preparation of this Business Case and the announcement on 13 September.

4.4.2 Phasing and sequencing of projects

The Christchurch-wide rebuild is likely to result in a resource constrained market. Initial Treasury projections estimate the rebuild of Christchurch to commence in July 2012. The implementation approach needs to take advantage of the market capacity prior to the Christchurch wide rebuild commencing, account for lead in times of project phases and allow for dependencies on other programmes of work.

The preferred option to implement the programme prior to requiring the schools/buildings accounts for lead times and provides a network that is in place to service demand. In some cases there will be a need to defer works based on dependencies with other programmes of work, population shifts or community consultation. Figure 11 and Figure 12 provide indicative lead in times and staging based on the scope of work.

The following is a summary of the Implementation Options analysis, which should be investigated further as part of the Detailed Business Case.

Timing

- Commence remediation prior to requiring to account for lead in times;
- Commence minor repairs as soon as possible to take advantage of market capacity;
- Allow for works to be deferred based on dependencies (for example rationalisation following rebuilds or repairs); and
- Allow for further investigation in cases where population shifts are likely to affect decision making and defer works until the network analysis can be verified.

Staging

- Group projects based on the level of damage and the required response (scale and scope).
- Where applicable to take advantage of timing also group by service solution (for example temporary accommodation).

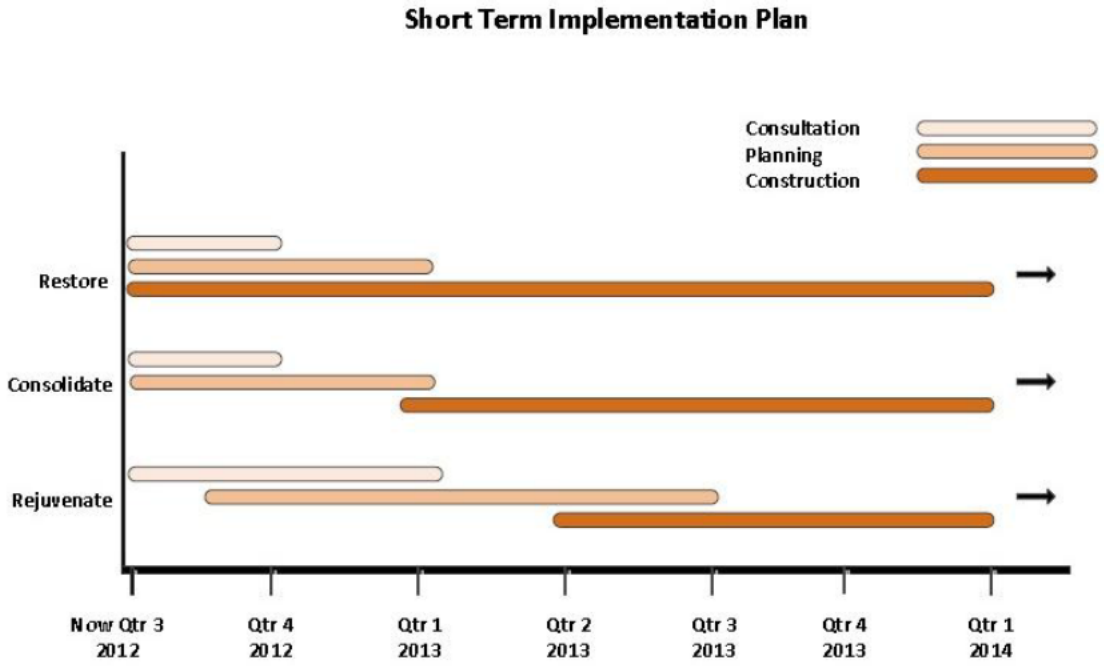


Figure 11: Short term implementation phasing

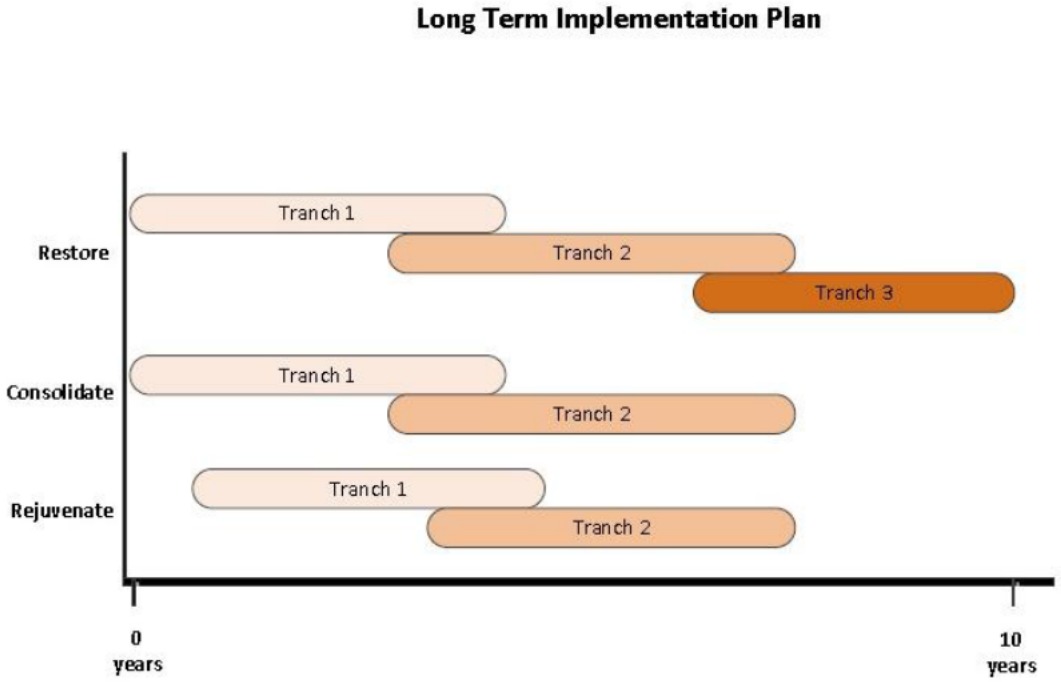


Figure 12: Long term implementation phasing

4.4.3 Programme management strategy and framework

The management structures will require a dedicated mix of both change management and infrastructure delivery expertise to deliver the education renewal programme in Greater Christchurch whilst constantly considering how the remediation contributes to the Ministry's wider school network. The Ministry currently does not have the resources or the capability to manage a programme of this scale*. In addition, the organisational structure is currently based around supporting the Boards of Trustees in the development of schools. Achieving change outcomes and associated property works will require a dedicated management capability.

Note: The Ministry has subsequently put in place a programme office which includes a Programme Manager, Case Managers, Change Managers and a range of specialists. Additionally Advisory Groups have been set up for the delivery of the programme.

Given the scale of the renewal and the number and variability of projects within it a coordinated programme delivery function is required in order to deliver on investment objectives. The key function of the Programme Management Office will be to translate the Ministry's corporate and investment objectives into the determination of the individual project decisions. This will require linkages between the proposed regional property strategy, which is linked to the core corporate decisions of the Ministry, and the individual investment decisions for school sites.

Many of the potential strategies will replace the existing delegation to the Boards of Trustees and this will require careful communication management. To be successful as a strategy, the remediation of earthquake damaged buildings will need to be linked to work to improve the overall performance of the school network including the school's broadband capability, the implementation of the modern learning environment, improving energy performance and long term maintenance requirements. The decision to postpone remediation, rationalise the number of buildings or close schools needs to be seen in the wider community as a strategy to improve the performance of the overall school network. Without the wider community understanding there is the risk that the process will be derailed by ad-hoc and reactive capital expenditure based on community lobbying rather than careful investment analysis. At a project level, the Ministry's expertise lends itself to manage community consultation and rationalisation due to their appreciation and understanding of regional strategies.

The scale of the education renewal in Greater Christchurch exceeds the Ministry's current project management capability. Traditional project management expertise can be contracted in to manage individual projects. This is commonly provided by private sector project managers. However, the scale of the wider Christchurch rebuild is likely to limit the availability of private project management resources, resulting in inflated pricing. To take advantage of the period prior to the rebuild commencing where there is limited capacity in the market, the option to develop a panel of project

management providers will provide value for money and ensure the resources are available when a large portion of the rebuild commences in quarter 1 2013.

The Ministry proposes to undertake detailed assessment and planning to address the implementation issues (change and property) prior to December 2012. Figure 13 is an overview of the management approach and the key functions and inputs required to deliver the programme of works.

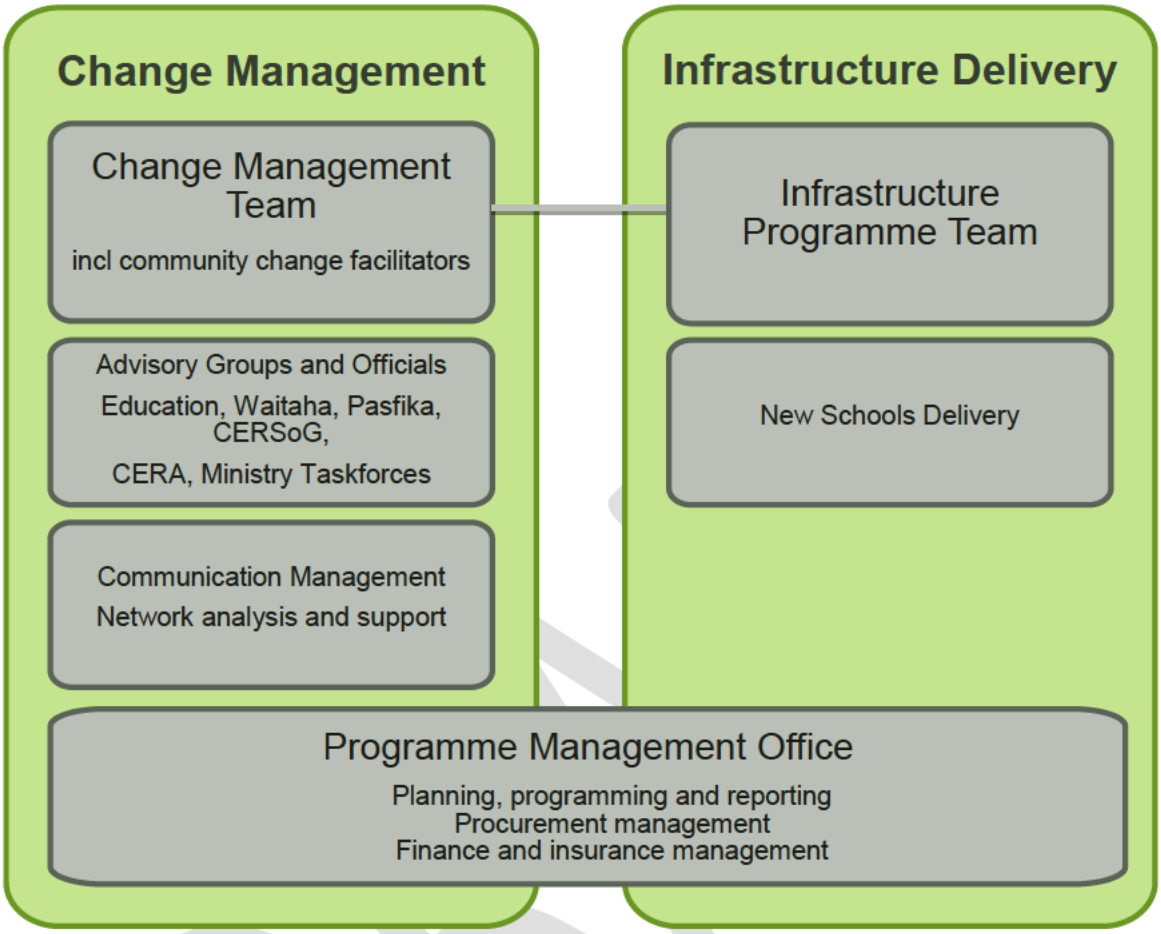


Figure 13: Overview of the management approach

4.4.3.1 Legislative implications

Given the innovative options proposed under the education renewal programme, some wording in the Education Act 1989 may need to be amended to provide a greater degree of flexibility. Cabinet has agreed to include an Education Amendment Bill (No. 2) in the 2012 legislative programme, which will be introduced in the House of Representatives before the end of the year [Cab Min (12) 7/7 refers). It is proposed to use this Bill to update certain provisions on attendance and alternative constitutions for Boards of Trustees, which will assist with the implementation of the educational renewal programme for greater Christchurch.

Attendance

The current provisions on attendance may limit emerging models of education provision where learners may be attached to more than one institution and schools may wish to run multiple timetables to accommodate learners' needs. Section 25 of the Act provides that learners must attend their school 'whenever it is open', and section 61 of the Act says that schools must be open for at least two hours before noon and two hours after noon. The Act does not expressly cater for multiple timetables for a single school.

Amending the legislation to allow any school, after consulting with its community, to request approval from the Minister to run multiple or overlapping timetables on the same day is proposed. These would not have to consist of two hours both before and after noon, and learners would have to attend school for the relevant timetable, rather than whenever the school is open. The board would be responsible for notifying each student and their family of the timetable the student must abide by. Timetables for students aged under 16 would still need to be full-time and all students would have the right to attend school full-time.

Alternative constitutions for Boards of Trustees

Section 105A sets out the circumstances where the Minister can approve an alternative constitution for a school's Board of Trustees, including varying how Trustees are appointed and/or elected. An alternative constitution can include a mixture or appointed and elected trustees. We propose extending this power to allow more flexibility in determining governance arrangements at the time of network changes, i.e. when Boards are combining, schools are merging or new schools are opening.

In all of these cases, the Minister of Education would have the power to choose between an initial election of a Board of Trustees with a standard constitution or the creation of an alternative constitution. This would allow stable governance in the critical early stages of a new institution's life, and would be particularly useful where network changes involve a number of schools or a staged process, for example, in greater Christchurch. It may also provide a suitable long term governance structure for more complex situations.

The Education Amendment Bill (No. 2) has been introduced. For further information please visit: http://www.minedu.govt.nz/~/media/MinEdu/Files/TheMinistry/PolicyAndStrategy/EducationAmendmentBill2012Factsheet4.pdf