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)
Page 19	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)
Page 43	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)
Appendix K	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)
Appendix M	Hornby Cluster – Information has been deleted to prevent prejudice or disadvantage in relation to negotiations the Ministry of Education will have or is undertaking.	s9(2)(j)
Appendix M	Linwood Cluster - Information has been withheld to maintain the constitutional convention protecting the confidentiality of advice tendered by officials.	s9(2)(f)(iv)
Appendix M	Parkland Cluster - Information has been withheld to maintain the constitutional convention protecting the confidentiality of advice tendered by officials. Information has been deleted to prevent prejudice or disadvantage in relation to negotiations the Ministry of Education will have or is undertaking.	s9(2)(f)(iv) s9(2)(j)
Appendix M	Port Hills Cluster – Information has been withheld to maintain the constitutional convention protecting the confidentiality of advice tendered by officials.	s9(2)(f)(iv)
Appendix M	Shirley Cluster - Information has been deleted to prevent prejudice or disadvantage in relation to negotiations the Ministry of Education will have or is undertaking.	s9(2)(j)
Appendix O	Information has been withheld to maintain the constitutional convention to protect the confidentiality of advice tendered by officials. Information has been deleted to maintain the effective conduct of public affairs through the free and frank expression of opinions.	s9(2)(f)(iv) s9(2)(g)(i)
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 2 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

Appendix A
Investment Logic Map

Investment Logic Maps support the development of the strongest case for an individual investment. It identifies the major problems that the investment will be required to address, the strategic interventions and solutions that will best respond to the problem identified and the benefits that the investment will be required to deliver.

The percentages are used to weigh the Key Performance Indicators (KPIs) against each other.

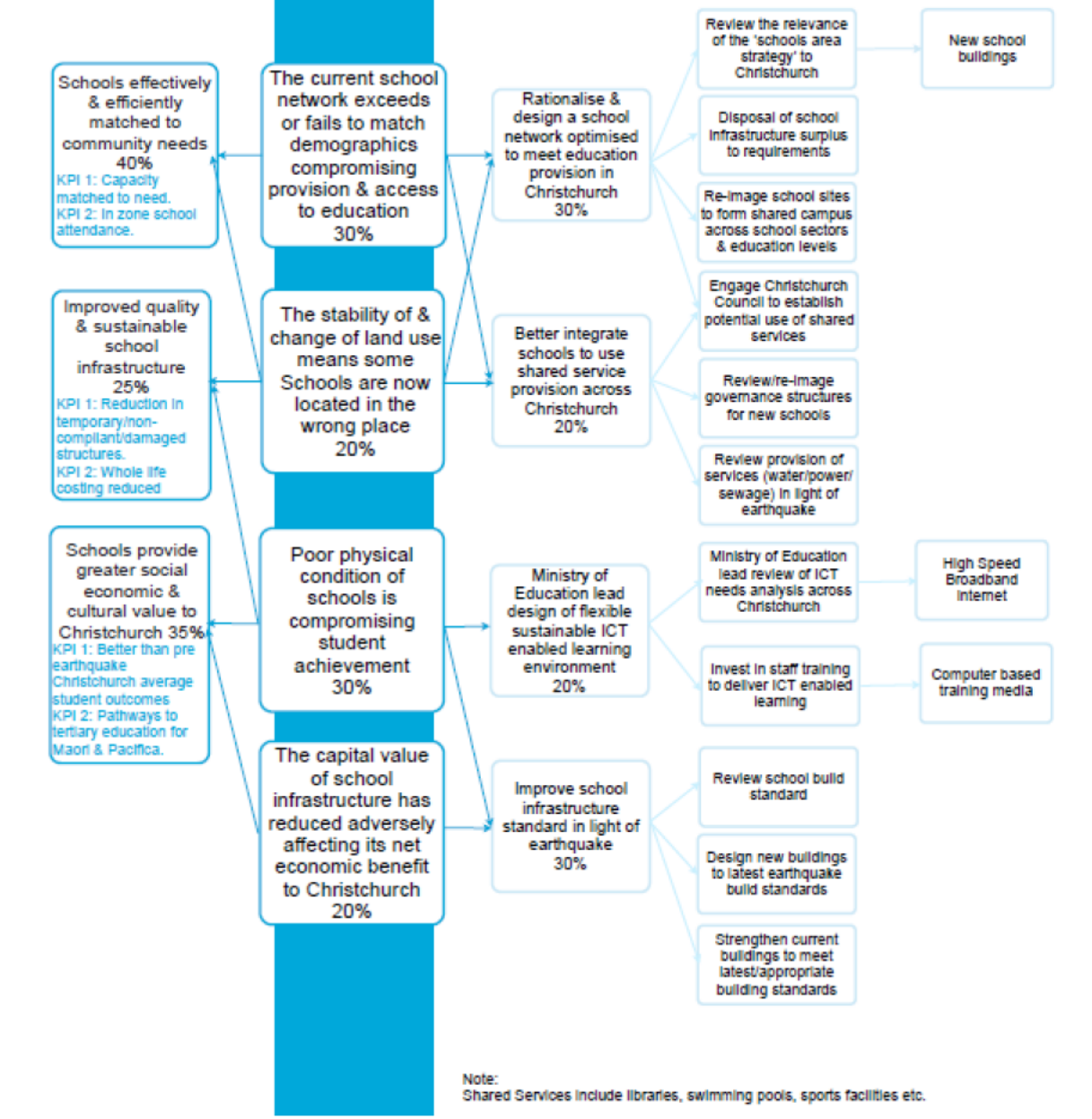
Further information on Investment Logic Maps can be found here:
http://www.infrastructure.govt.nz/publications/betterbusinesscases

Post Earthquake Renewal of the Education System in Canterbury

Ministry of Education

INVESTMENT LOGIC MAP
Initiative

Investor: Kim Shannon
Facilitator: Stephen Davies Howard
Initial Workshop: 16/09/2011
Version no: V 1.0
Last modified by: Stephen Davies Howard



Note:
Shared Services include libraries, swimming pools, sports facilities etc.

Appendix B
CERP Objectives and Principals

The Ministry of Education- 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 of Education in response to the earthquakes are well researched, carefully planned, effectively delivered and provide value for money.

The CERP will identify the scope, governance arrangements, budget allocations, resources, work plan and milestones of the programme and projects. The CERP will develop and implement quality, risk and value management processes and a monitoring regime to oversee the programmes and projects.

Strategic objectives

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. Functioning schools contribute to community resilience and maintain a sense of identity. Restoring capacity and renewing the school network is a tangible sign of a community returning to a new normality.

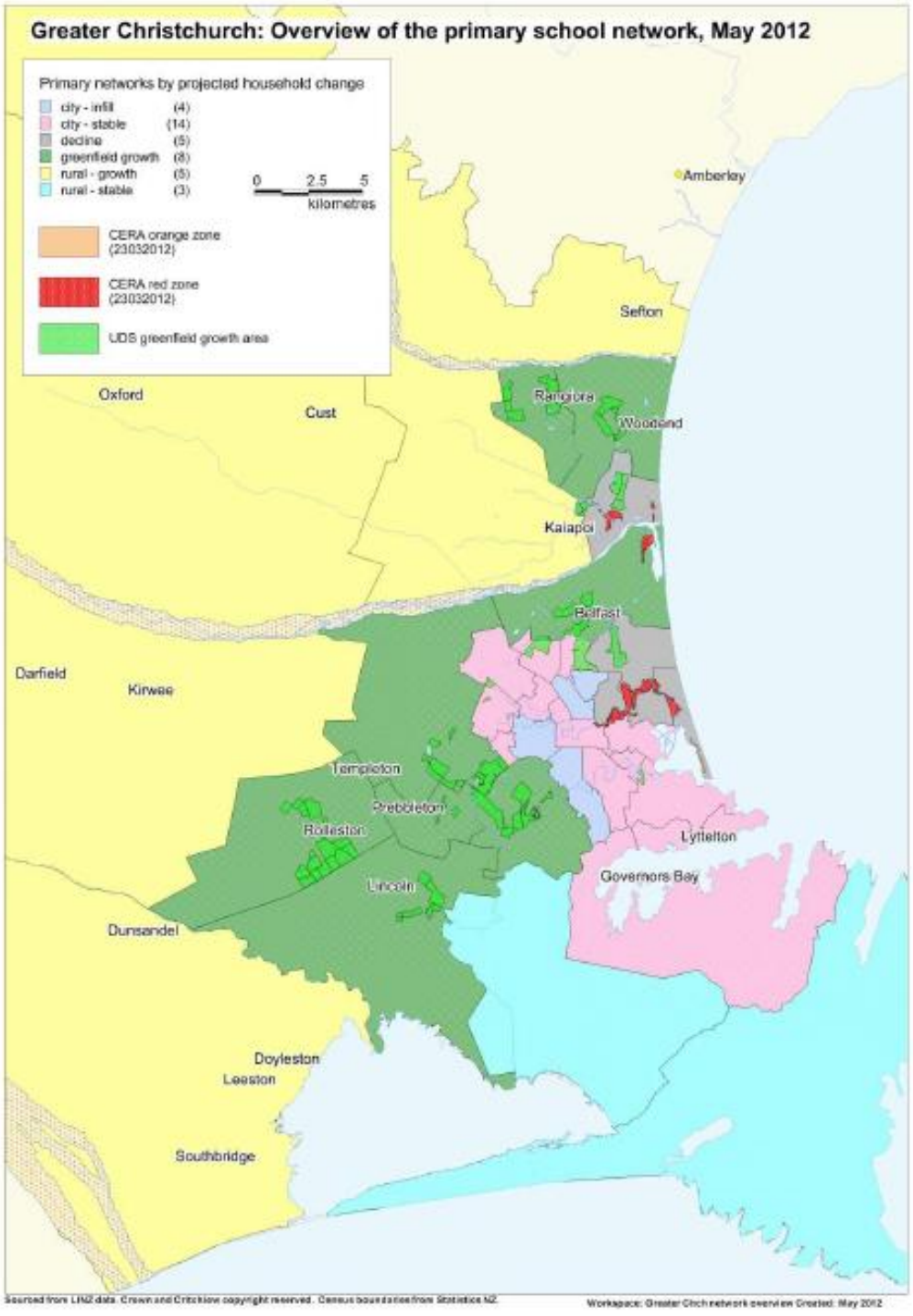
Vision	The network of education provision gives Greater Christchurch a distinctive social, cultural and economic advantage. Future Learning Network giving Canterbury a distinctive advantage; socially, culturally and economically.
Goals	Ensure strong foundations and support for participation in work.
	Every student in Canterbury gaining NCEA level two or above with a pathway to further education or training.
	100 percent of youth are learning or earning.
	There are strong links between employers and post-compulsory education and clear pathways for all young people to be successful in the labour market.
Objectives	Recover from earthquake events quickly.
	Restore capacity to school network infrastructure.
	Reconfigure the school network infrastructure to take the opportunity to deliver education in a better way.
	Achieve value for money by avoiding unnecessary or abortive spending.
	Maintain alignment to MOE strategic goals.
Principles	All education renewal decisions should:
	1. Enhance outcomes across the education system and over the lifetime of the learner
	2. Give Greater Christchurch a distinctive advantage for its long term future
	3. Manage Crown ownership interest to get the best value and outcome for the Crown investment in Canterbury
	4. Support the wellbeing of Canterbury's communities over the short and long term
	5. Deliver value for money: promoting innovative and sustainable solutions

Appendix C
Existing and projected supply and demands

Overview of the network in greater Chch

The following map shows the broad categorisation of school networks across greater Christchurch. These broad categories are based on projected changes in household numbers. Figure one shows this visually, and Table one lists the networks and projected change in house hold numbers.

Figure one: overview of the primary school network across greater Christchurch

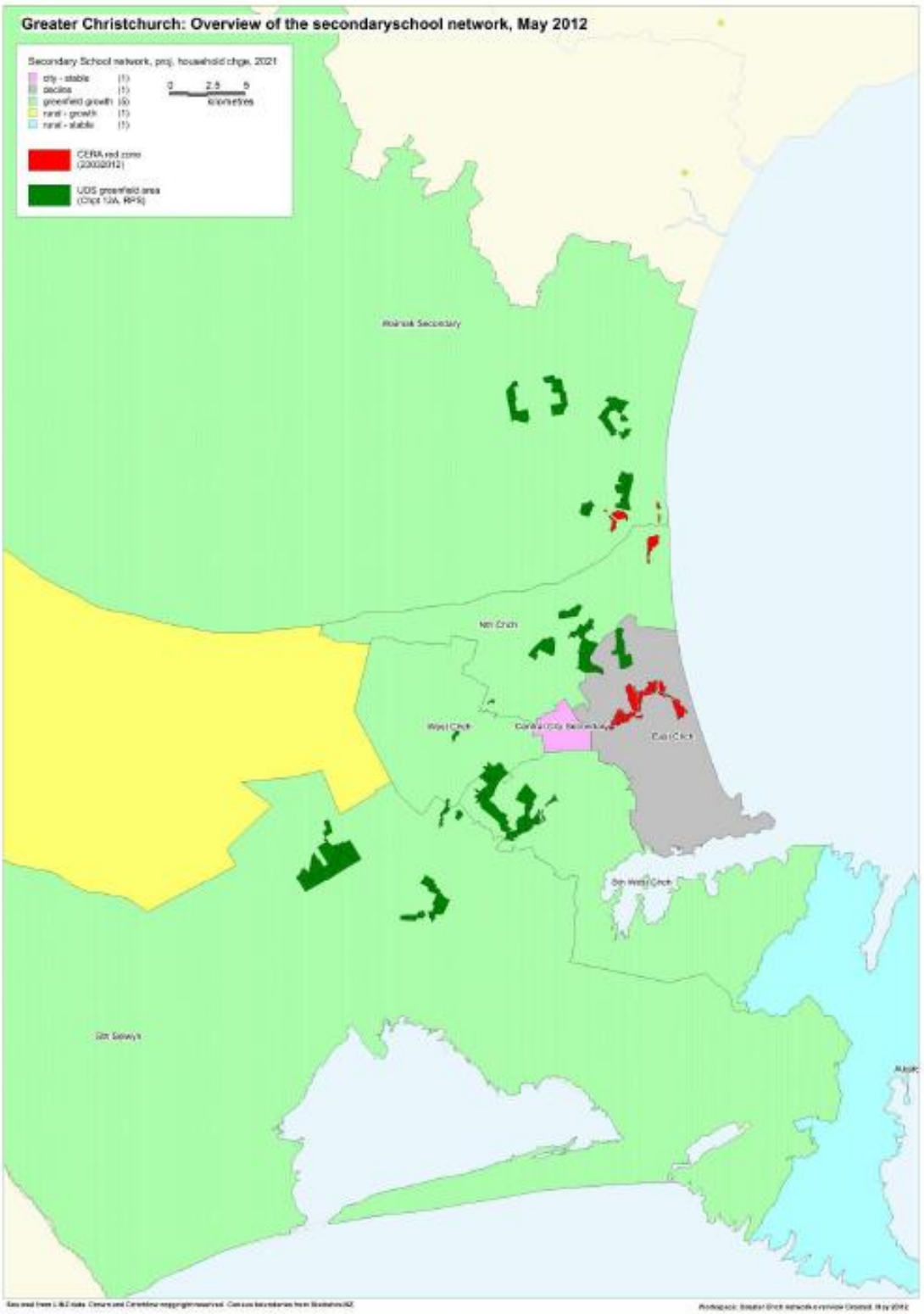


Greater Chch Primary network overview								
Source:	# households - UDS partners household projections (Quick Scenario - recommended by CCC), April 2012							
	Under the 'Quick' scenario the Central City Plan and its aspirations for residential growth are not reflected.							
	networks - MOE definitions							
	network status - MOE definitions							
			# households			Chge from 2011 households		
network	network growth category	MOE response (10 yrs)	pre quake 2011	2016	2021	pre quake 2011	2016	2021
Akaroa	rural - stable	BAU	1178	1184	1220	-	6	42
Aranui	decline	reorganisation	5773	4855	4860	-	-918	-913
Avonhead	city - stable	BAU	8218	8323	8383	-	105	165
Belfast	greenfield growth	grow exisiting provision	4381	4546	4935	-	165	554
Brighton	decline	reorganisation	7781	6297	6321	-	-1484	-1460
Burnside	city - stable	BAU	6239	6349	6401	-	110	162
Cashmere	city - infill	grow exisiting provision	11202	11630	12170	-	428	968
Central City	city - stable	BAU	6219	6210	6498	-	-9	279
Darfield	rural - growth	grow exisiting provision	3755	4166	4409	-	411	654
Elmwood	city - stable	BAU	2497	2516	2561	-	19	64
Halswell	greenfield growth	grow exisiting provision	11729	12394	13654	-	665	1925
Hornby	greenfield growth	grow exisiting provision	8391	9219	10334	-	828	1943
Hororata	rural - stable	BAU	542	568	602	-	26	60
Kaiapoi	decline	reorganisation	5382	5226	5319	-	-156	-63
Leeston	rural - growth	grow exisiting provision	2343	2478	2624	-	135	281
Lincoln	greenfield growth	grow exisiting provision	2500	3495	4447	-	995	1947
Linwood	city - stable	reorganisation	7859	7637	7822	-	-222	-37
Lyttelton	city - stable	reorganisation	1389	1405	1429	-	16	40
Lyttelton Harbour	city - stable	BAU	1181	1257	1375	-	76	194
Mairehau	city - infill	grow exisiting provision	3158	3406	3536	-	248	378
Oxford	rural - growth	grow exisiting provision	2252	2458	2700	-	206	448
Papanui	city - stable	BAU	5855	6036	6167	-	181	312
Parklands	decline	reorganisation	8109	7098	7378	-	-1011	-731
Port Hills	city - stable	reorganisation	6827	6802	6842	-	-25	15
Prebbleton	greenfield growth	grow exisiting provision	1340	1669	1993	-	329	653
Rangiora	greenfield growth	new provision	6052	6926	7074	-	874	1022
Redwood	city - stable	grow exisiting provision	3108	3156	3274	-	48	166
Riccarton	city - infill	grow exisiting provision	6994	7289	7665	-	295	671
Rolleston	greenfield growth	new provision	3797	4449	5120	-	652	1323
Roydvale	city - stable	BAU	5788	5902	5926	-	114	138
Shirley	decline	reorganisation	8024	7283	7335	-	-741	-689
St Albans	city - infill	grow exisiting provision	7683	8086	8393	-	403	710
St Martins	city - stable	BAU	7736	7832	7948	-	96	212
Tai Tapu	rural - stable	BAU	674	692	710	-	18	36
Upper Riccarton	city - stable	BAU	1539	1581	1596	-	42	57
Waimak North	rural - growth	grow exisiting provision	1477	1628	1804	-	151	327
Waimak rural	rural - growth	grow exisiting provision	2613	3047	3099	-	434	486
Woodend/Pegasus	greenfield growth	grow exisiting provision	2364	4073	4652	-	1709	2288
Woolston	city - stable	BAU	3007	3137	3265	-	130	258

Networks have been categorised based on the projected household changes, according to the UDS projections.

The boundaries for the networks have been compiled by aggregating meshblocks. This approach allows an assessment of the projected change in households in each meshblock.

Figure two: overview of the secondary school network across greater Christchurch



Greater Chch Secondary network overview

Source: # households - UDS partners household projections (Quick Scenario - recommended by CCC), April 2012

Under the 'Quick' scenario the Central City Plan and its aspirations for residential growth are not reflected.

networks - MOE definitions

network status - MOE definitions

			# households			Chge from 2011 households		
network	network growth category	MOE response (10 yrs)	pre quake 2011	2016	2021	pre quake 2011	2016	2021
Akaroa Secondary	rural - stable	BAU	857	863	884	-	6	27
Central City Secondary	city - stable	grow exisiting provision	7647	7774	8081	-	127	434
East Chch	decline	reorganisation	62002	58262	59487	-	-3740	-2515
Nth Chch	greenfield growth	grow exisiting provision	31860	32670	33557	-	810	1697
Nth Selwyn	rural - growth	BAU	4916	5374	5674	-	458	758
Sth Selwyn	greenfield growth	new provision	10391	12459	14547	-	2068	4156
Sth West Chch	greenfield growth	grow exisiting provision	31445	32904	35259	-	1459	3814
Waimak Secondary	greenfield growth	grow exisiting provision	20140	23358	24648	-	3218	4508
West Chch	greenfield growth	grow exisiting provision	17697	18640	19704	-	943	2007

Appendix D
Details of key service requirements

Plan education provision as a network

The objective of the school network is that it is close to communities. However, communities are now less defined by location and more defined by interest and background.

Much of the current policy frameworks for accessibility relate to public transport subsidies. These allow for subsidy on student travel where the distance to the closest primary school exceeds 3.8 kilometres and secondary school exceeds 4.8 kilometrse. However, any public transport option reflects a failure to deliver schools for local communities. While public transport is a necessary and appropriate tool where communities are isolated from the wider community, the primary objective is to place schools close to the local demographic demand, regardless of past or existing school locations or transport links.

The issues of location are wide, with the community recognising that proximity and accessibility to schools is more important in communities with lower socio economic profiles and less transport options. In the same context there was a commitment to provide niche services and facilities in communities where there is a demonstrable need. This may be a more pro-active response than allowing local BoTs to determine demand.

Implications:

- Standardised measures of distance to communities
- Proactively locating specialist facilities in communities
- Greater concentration of facilities in areas with limited transport options

Modern flexible and inclusive learning environment

The Ministry has shown a strong commitment to new models of teaching. In particular it has embraced the Modern Learning Environment as an option for teaching space. This champions more flexible teaching configurations, including shared classrooms and more break-out space and may require a different style of teaching and more flexibility in staffing classrooms.

The Ministry has identified that flexible teaching style can impact on the achievement levels in some specific targeted social economic cohorts. It would therefore aim to actively promote this configuration teaching spaces in areas where it wants to improve education outcomes and seek to ensure these options are available in some demographic areas

Implications

- Nationally derived architectural process, commonly replacing BoTs funding and procurement processes.
- A greater emphasis of more flexible space and adaptation of existing teaching areas.

Improve digital strategy for learning

Inherent in this is a commitment to more extensive use of information technology, accomplished with greater use of Broadband internet access. The Ministry would be seeking to drive internet access as part of the improved network, especially into areas where it seeks to improve education performance

Implications

- Integrated procurement and delivery model for broadband
- Design process which allows for easier reticulation of information technology

Improved transition between providers and into careers

The analysis of the education delivery and the consultation with the community highlight a need for a more integrated approach between education providers. In particular, the Ministry has recognised that 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. It is at these transition points that pupils begin to fail and there is a risk that their needs for additional support are not recognised.

In addition, there are stronger linkages between the school and the communities where learners transition between schools on the one site. Part of the integration process allows for cooperation between providers, each of which may offer slightly different options. This implies a coordination role at a Governance level, where a cluster of schools may work cooperatively to provide a range of education options. It is intended to adopt a model where the focus is on improving all students rather than a model to attract high achievement students.

The other component of integration is to seek greater collocation of providers onto one site, and therefore into one community of teaching. Under this model early child education and primary may be located onto one site, and every site should have the potential to provide an early child education centre. There also needs to be the ability to transition into tertiary education or industry training, potentially as part of the site or with solid linkages.

The issue is complicated by the difference in land tenure, with the majority of early child education being provided by private sector operators, compared to the state network for primary or secondary education. Similarly community use, such as provision of community sporting facilities will require a new model of shared funding, so that community groups can contribute to the additional maintenance and utilities that they require.

The implications of this are larger and more complex sites. This will have great impacts on issues such as car parking and transport. It also means the ability to control access to the site is different, with less ability for schools to limit use of school facilities after hours.

Implications:

- Need for larger sites with multiple access points
- Financial structures that allow the Community to pay for shared use
- Provision for greater transport, car parking and accessibility issues
- A framework for sharing sites with private sector education providers

Ensure that identities culture and languages of learners are valued

The Canterbury school network has limited options for the learners who want to pursue bi-lingual or Māori language immersion options. Currently the options for bi-lingual education are limited and the range of topics taught in te reo is relatively narrow. The Ministry recognises that a strong sense of identity is important in ensure Māori learners achieve the skills to contribute to the economy.

In addition, Ngāi Tahu, as the Tangata Whenua for the Canterbury region, have a strong interest in seeking all Māori students achieve. They aim to engage with many of the Governance issues in shaping the nature and performance of education delivery.

Implications:

- A cooperative model for establishing complementary areas of focus for individual schools.
- A framework to link iwi aspirations into Governance frameworks
- Active promotion of options which are under-represented such as bi-lingual schooling or niche and industry related training.

Improve outcomes of learners with special needs

The Ministry recognised the need to provide options for learners with special needs. It is balancing a need for special facilities against an objective of mainstreaming children into local schools.

To deliver on this option may require the development of specialist facilities in the network, and potentially on sites shared with other schools.

Implications

- A procurement model for funding special needs education*
- A framework for sharing facilities on one site

Note: This only relates to the property funding model for the procurement of special needs education facilities.

Support quality teaching and leadership

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

As part of this there is the opportunity to provide on-going training and support. This may require models for Governance and management which span multiple schools and link to a portfolio approach.

Implications

- Integration between schools at a Governance and Management level to identify and develop future education leaders

Appendix E
Benefits Discussion

Monetary Benefits

Contribution to education delivery

Currently the ability to deliver education in a number of Canterbury schools is either unachievable or significantly compromised because facilities are unusable. Ad-hoc measures such as 'double-bunking' at schools have provided an interim short term framework for the delivery of education, however there is a fundamental framework for the delivery of education within New Zealand based around a traditional school environment. The framework is backed by not only a community expectation of how education will be delivered but national guidelines, governance frameworks, and funding models which are based on independent schools on stand-alone properties.

The scale of the compromised facilities is significant and greatly impacting on the ability to provide education. At its peak 55%* of the 155,000 school students were in some form of shared facilities or managed programme. While the process has greatly eased, with ad-hoc facilities in place for most schools, the infrastructure does not have the capacity to deliver the type or model of education which the Ministry commonly seeks from the school network.

The Government's current $825 million contribution to education in the Canterbury region is therefore compromised.

1. *Significant government funding is committed to the education sector within the Canterbury region. From Vote Education, $825.20 million is committed per year to ensure the provision of ECE services and schooling options for young Cantabrians.*

Better procurement through alignment with corporate objectives

Diverting staff from education outcomes

An implication of an orchestrated renewal programme will be to allow school staff, management and governance to refocus on education delivery. Commonly, a BoT would be established prior to the design and planning of the school however this requires significant time and resources in planning and engaging with the design team. A wider portfolio perspective will free up local communities to work on their other infrastructure while the Ministry works on school infrastructure

Reduced maintenance and energy costs

Although many of the buildings have been well managed, the standards of maintenance are variable. The Ministry has a long standing challenge in understanding the quality of the portfolio and how maintenance has been delivered. There is evidence that the focus has been on cost minimisation rather than whole of life costs.

- The rebuild or repair of the buildings will provide opportunities to improve the energy use of the assets. These savings will impact on the 'whole-of-life' costs of the building and reduce energy costs for the BoTs over a sustained period.
- The improved focus of 'whole-of-life' reduces the risk to the Ministry in the long term availability of school buildings. It will provide surety that the buildings are well maintained and available to provide education outcomes in the future.

The framework will allow the maintenance to align with the long term projections of demand. In some cases this may be to minimise maintenance on buildings which have limited long term demand.

Note: This figure relates to Secondary School students in Canterbury.

Better delivery of education through asset design or asset location

Upgrading of facilities to Modern Learning Environment

The Government has placed significant emphasis on evaluating how teaching spaces need to adapt to new styles of teaching and the impact of technology in the classroom. This has been developed into new guidelines, defining the Modern Learning Environment (MLE). There is a strong commitment to this format and, in fact, the Ministry has stated that schools need to align their buildings with the new configurations for the new styles of teaching prior to addressing any other capital investment.

Where the rebuilding process results in an upgrade of the facilities earlier in the process, the benefits are twofold:

- The net gains from the MLE will be achieved earlier, resulting in a marginal increase in education outcomes.
- The subsequent investment in MLE required to be made by the BoTs will be a direct off-set, although the timeframe for their delivery will be earlier and therefore required to be discounted for their earlier delivery.

Improved school network

The rebuilding process will allow a regional and portfolio perspective on the network of schools. Currently the location of schools is largely historic, often reflecting suburban patterns of development that are fifty or a hundred years old. The funding framework is based on individual schools and BoTs, who promote and develop their schools in isolation from, and potentially in competition with, other schools. By focusing on the local network there will be opportunities to rationalise the network.

- Education outcomes may be improved because of a better mix of schools and school sizes.
- The optimum network, which may have otherwise come from a slow process of schools declines and restructuring, will be achieved earlier.

Non-Monetary Benefits

The gains in Non-Monetary benefits relate largely to the role of schools within their communities and the Governments broader strategy to improve economic performance.

Better economic activity

The fundamental purpose which the Government ascribes to schools is their ability to educate the population and therefore generate higher incomes and greater productivity. The role of the improved school environment will result in better education outcomes, which have been associated as a direct benefit. However, these will subsequently flow onto greater economic performance. An effective and well-resourced framework for education will result in wider economic benefits throughout the community. Part of this may be the result of students staying longer in the school system, or opting to pursue tertiary education because of a better school experience.

One aspect which the Ministry is pursuing is to create more seamless links between industry and education. The potential for business parks on campuses is more likely to be provided within the tertiary sector, however this is a functionality which could link to secondary education, and industry linkage programmes.

Using schools to anchor communities

The wider Government perspective on the location of schools will assist with the process of rationalisation which will be linked to transport networks and retail patterns. The schools can play a role in anchoring and providing focus for a community. The selection process may use this to provide a central focus on new initiatives. For instance the Ministry's commitment to a new school in a location may appear to make a suburb attractive to young couples, and provide recreation facilities in areas where the Council has yet to deliver this.

Less staff turnover (Previously withheld)

Note: This refers to the total school roll decline of 4,311 students since 2010 across all schools in Greater Christchurch and is not related to the proposals for school closures or mergers.

The disruption and depopulation of schools has resulted in a lower demand for teachers. This has not been an issue in the short term, but projections suggest that as many as 140 teaching staff* may be lost from the education system in Canterbury. The concern is that the high quality teaching staff may exit either the profession or the region as a result of the lower student numbers and not be available if the demand returns. This will result in savings in recruitment costs and disruption as new staff are introduced to the school.

Longer retention at schools of targeted students

The improved school environment, better mix of schools and greater focus on education may result in greater retention at schools. The percentage of people who are not in education, employment, or training (NEET) in Christchurch has deteriorated when compared to the rest of New Zealand. The percentage of people aged 20-24 who are NEET in Christchurch rose from 10.6% to 12.2% between 2010 and 2011, while the corresponding movement for New Zealand as a whole was a fall from 11.6 to 10.6%. The numbers of young people aged 24 or under on the unemployment benefit increased by 15% in the year to July 2011.

Appendix F
Critical Success Factors

Value for money and holistic and whole of life decision-making

The focus of value for money and holistic and whole of life decision making is to provide the best long term solutions. To deliver on this critical success factor the options need to consider the extent of the problem, future requirements, other programmes of work, the status and availability of other assets and the ability to minimise whole of life costs.

There are likely to be many circumstances where a marginal increase in investment will allow the replacement or upgrade of assets, rather than repair of the existing facilities, which may be justified by the associated benefits. Benefits could include reduced maintenance cost (whole of life decision making), less disruption during rebuilding and improved teaching environments.

An understanding of how future demand for the school may change is required to deliver this critical success factor. 'Value for money' addresses the need for the school in the short, medium and long term and should consider an appropriate level of remediation accordingly to minimise the amount of expenditure on schools that are not required in the long term. This is particularly relevant given the population shifts that have occurred and will continue to occur in Canterbury.

The response will need to align school specific decisions to those in the local network of schools and community assets. Different options may be available to share specialist facilities between schools or between schools and the community. Rather than multiple average (and potentially budget constrained) assets being built, collaboration between investors could provide a single, superior facility at lower capital and whole of life costs.

Whole of life decision making requires the life of the asset to be considered in the remediation decision making so the maintenance and running costs of the schools can be minimised. The ability to make informed decisions and understand the trade-offs associated with reducing capital costs are also important in making whole of life decisions.

Holistic decision making to coordinate the remediation with other programmes would gain efficiencies and minimise long term disruption. Programmes such as the Building Improvement Programme, SNUP and Modern Learning Environment (currently included in the 5YA funding) all influence and are influenced by the remediation response in Christchurch, and the options considered going forward need to consider dependencies with other programmes of work.

Flexible and responsive to changing requirements

One of the problems that the network is currently faced with, is the remaining functional stock does not meet the demand. 'Flexible and responsive' refers to the ability to make changes to the network should the predicted demand not match the actual requirements, where 'value for money' decision making (considered under a separate critical success factor) considers the life of the asset. The flexibility and responsiveness of the remediation has two aspects, the first being the hard assets, the second being the contractual terms.

There is the continued risk that as the rebuild progresses the population continues to shift so the network again no longer meets the requirements. The ability to expand, shift or close buildings or schools needs to be considered in the rebuilding. The concept of 'temporary' assets to meet short term demand is a value for money consideration, whereas the relocation or allocation of permanent assets, should they no longer be required in their current location, is a flexible response to changing requirements. The ease at which changes can be made, the time lag and the ability prioritise work also need to be considered to in order to meet this critical success factor. This includes the contractual terms of a contract and the costs or penalties that are likely to be incurred by the Ministry.

Linkages to the community

The Government has recognised that rebuilding public infrastructure will have a significant impact on the rebuilding of communities. Schools also play a major role in anchoring and defining a local community. However, it is important that the process is community-led, rather than led by the school or Ministry. The engagement with the community will be a major factor in whether the school is successful in achieving education outcomes. This is because the community links are important in parental engagement and 'ownership' of the school. In addition, any wider role for the school will be dependent on the community feeling that they have a role in defining and design the school.

In addition there is the potential to share facilities with the community. In many cases school facilities may take the place of community resources lost in the earthquake. However, shared use of facilities will also be important in ensuring that resources are effectively allocated in the rebuild process.

Market capability and capacity

The scale of the rebuild across Christchurch and the recent developments in modern learning environment and construction standards means the remediation of school infrastructure may be constrained by the industry's capability and capacity.

The current capacity in Christchurch's construction sector is not expected to meet the demand of the rebuild. Even with growth in this sector, the ability for the market to deliver the projects needs to be considered when determining the most suitable options to progress. Reduced market capacity also decreases competition so the delivery options considered need to consider the Ministry's ability to gain competitive rates and service.

Options which fit with the existing market capability, or use nationally provided components which do not place added strain on the Canterbury resources are likely to be attractive. A model where standardised classroom which are prefabricated outside Canterbury is therefore likely to place less demand on local resources, freeing them for competing projects

Future proof and deliver quality in design

In order to meet this critical success factor, the option needs to provide a robust school network that has a reduced likelihood of building failure and responds better to future seismic events. Schools should receive less damage as well as having better contingencies to expedite response times.

The option should have the ability and flexibility to make informed decisions on the standard of repair required. Changes to the Building Code as a result of the Christchurch earthquakes as well as other Ministry standards (such as the weather-tightness standards) that are greater than the minimum code requirements need to be included in the decision making.

It is important that following a natural disaster that a level of normalcy is restored. The remediation option should consider and look to improve the likely response times following future natural disasters (not just earthquakes). Given that schools are often used as Civil Defence emergency or welfare shelters, the options need to consider the ability to return to a full level of service with the provision of school services as well as a minimum level of service to perform Civil Defence and emergency response functions.

Appendix G
Procurement Options
Detailed Analysis

To facilitate the quantitative assessment of procurement options, a point rating system was proposed and agreed. Points are allocated against each Evaluation Criteria, reflecting how well these were accommodated within the proposed procurement model as outlined in Table 17 below.

Table 17: Procurement assessment scoring

Procurement Option Assessment	
Points	**Description**
3	Procurement option is extremely effective in satisfying the requirements of the criterion
2	Procurement option is highly effective in satisfying the requirements of the criterion
1	Procurement option is reasonably effective in satisfying the requirements of the criterion
0	Procurement option is neutral in satisfying the requirements of the criterion
- 1	Procurement option is reasonably ineffective in satisfying the requirements of the criterion
- 2	Procurement option is highly ineffective in satisfying the requirements of the criterion
- 3	Procurement option is extremely ineffective in satisfying the requirements of the criterion

Evaluation Matrix of Procurement Options

The results of the procurement options assessment are summarised in the table below using the scoring system presented above. A brief discussion follows each analysis.

Demolition

The evaluation of the options for Demolition are shown in the following table.

Table 18: Demolition procurement evaluation

Demolition					
Evaluation Criteria	**Head Contract (HC)**	**Design & Construction (D&C)**	**Managing Contractor (MC)**	**SLA**	**Public Private Partnership (PPP)**
Time	+3	0	+3	+3	-2
Optimal Risk Transfer	+3	-1	+1	+1	-2
Innovation	0	0	0	0	0
Whole of Life Cost	0	0	0	0	0
Client Control	0	0	+2	-1	-2
Scale & Scope Efficiencies	+2	-1	+3	-2	-1
Procurement costs & competition	+2	+1	+2	-1	-2
TOTAL SCORE	**10**	**-1**	**11**	**0**	**-9**

The outcome is that the Head Contract and Managing Contractor approach to demolition is most suitable. This is consistent with general building practices and is predominately based on the relatively straight forward nature of the work and the ability of clients to sensibly package the scope of each project. This enables the private sector to price each project competitively.

Minor Remediation Projects

The evaluation of the options for Minor Remediation Projects are shown in the following table.

Table 19: Minor remediation procurement evaluation

Minor Remediation Projects

Minor Remediation Projects					
Evaluation Criteria	**Head Contract (HC)**	**Design & Construction (D&C)**	**Managing Contractor (MC)**	**SLA**	**Public Private Partnership (PPP)**
Time	+2	+1	+3	+1	-2
Optimal Risk Transfer	+3	+1	-1	-1	-1
Innovation	+1	+2	0	0	-2
Whole of Life Cost	+2	+1	+1	0	+2
Client Control	+2	+1	+3	+1	-1
Scale & Scope Efficiencies	+2	+1	+3	-1	-1
Procurement costs & competition	+3	+2	+3	0	-1
TOTAL SCORE	**15**	**9**	**12**	**0**	**-6**

The outcome is that the Head Contract and Managing Contractor approach to minor remediation projects are the most suitable. This is consistent with general building practices and is predominately based on the relatively straight forward nature of the work and the ability of clients to sensibly package the scope of each project. This is further supported by the limited number of sub-contractor packages involved and can be completed by general building companies. This enables the private sector to price each project competitively.

Major Remediation Projects

The evaluation of the options for Major Remediation Projects are shown in the following table.

Table 20: Major remediation procurement evaluation

Major Remediation Projects					
Evaluation Criteria	**Head Contract (HC)**	**Design & Construction (D&C)**	**Managing Contractor (MC)**	**SLA**	**Public Private Partnership (PPP)**
Time	+2	+1	+3	+1	-2
Optimal Risk Transfer	+3	+1	-1	-1	-1
Innovation	+1	+2	0	0	-2
Whole of Life Cost	+2	+1	+1	0	+2
Client Control	+2	+1	+3	+1	-1
Scale & Scope Efficiencies	+2	+1	+3	-1	-1
Procurement costs & competition	+3	+2	+3	0	-1
TOTAL SCORE	**13**	**9**	**12**	**0**	**-6**

The outcome is that there are three potential options being Design and Contraction, Head Contract and Managing Contractor approach to major remediation projects. Whilst the inclusion of the Head Contract and Managing Contractor models are consistent with general building practices the Design and Construct model will be suited to projects where a large portion of the work is known. Likewise, where there is scope uncertainty or time constraints, the Managing Contractor may be more suitable.

Temporary Accommodation

The evaluation of the options for Temporary Accommodation are shown in the following table.

Table 21: Temporary accommodation procurement evaluation

Temporary Accommodation					
Evaluation Criteria	**Head Contract (HC)**	**Design & Construction (D&C)**	**Managing Contractor (MC)**	**SLA**	**Public Private Partnership (PPP)**
Time	+1	+3	-2	-1	+3
Optimal Risk Transfer	+2	+2	+1	+1	+3
Innovation	+1	+1	-2	-1	+3
Whole of Life Cost	+2	+1	0	0	+2
Client Control	+2	+1	+3	0	+1
Scale & Scope Efficiencies	+2	+1	+3	0	+3
Procurement costs & competition	+1	+1	+3	+1	+1
TOTAL SCORE	**12**	**10**	**6**	**0**	**16**

The outcome is that there are three potential options being Head Contract, Design and Construct and PPP. This is an interesting area of procurement as there is traditionally more flexibility for private sector innovation and leveraging of capability as the inputs to the project can be standardised and replicated. Therefore there are large returns to be gained for developing smart solutions. Historically the Ministry has not leveraged this area of the market by bundling up the number of projects to provide a large scale investment.

New Buildings (Existing Sites)

The evaluation of the options for new buildings (existing sites) are shown in the following table.

Table 22: New buildings procurement evaluation

New Buildings (Existing Sites)					
Evaluation Criteria	**Head Contract (HC)**	**Design & Construction (D&C)**	**Managing Contractor (MC)**	**SLA**	**Public Private Partnership (PPP)**
Time	+2	+2	+3	+1	+1
Optimal Risk Transfer	+2	+2	+1	0	-1
Innovation	+2	+3	+1	0	+1
Whole of Life Cost	+2	+1	0	0	+2
Client Control	+2	+1	+3	0	+2
Scale & Scope Efficiencies	+1	+1	+3	+1	+1
Procurement costs & competition	+3	+1	+3	+2	-1
TOTAL SCORE	**14**	**11**	**14**	**4**	**5**

The outcome is that there are three potential options being Head Contract, Design and Construct and Managing Contractor. The SLA model was not suited as there are issues with the scale of the project.

The available time for each project and the level of involvement of the local school community will be the ultimate drive the determination of the model.

New Buildings (Existing Sites)

A detailed evaluation process for the development of new schools has not been undertaken as this is currently the subject of a specific Indicative Business Case (by others). However, based on the Detailed Business Case completed for the current Hobsonville Schools PPP, the likely applicable models are:

- Head Contract (traditional Lump Sum approach);
- Single Line Accountability Model (traditional new school approach);
- Design & Construct, and
- Public Private Partnerships (PPP)

There are likely to be a number of benefits of continuing with the PPP approach to procurement based on the initial findings of the current PPP project. The private sector continues to advocate for opportunities to be involved in the rebuild of Christchurch and this may present one of the best opportunities for this, from a broader Government perspective.

Procurement discussion

Having identified the preferred project scope options, the most suitable procurement method to ensure efficient and effective project delivery was determined.

Each procurement delivery model has its own strengths, weaknesses and characteristics that suit different project conditions and circumstances. High level analysis assisted in the determining the procurement delivery model that best suits the projects. While analysis may suggest several viable different procurement delivery models, the underlying driver will be towards selecting a 'value for money' model that best suits the Ministry's project intent.

The procurement options considered for the preferred project scope were:

1. Head Contract (traditional Lump Sum approach);
2. Single Line Accountability Model (traditional new school approach);
3. Design & Construct;
4. Managing Contractor; and
5. Public Private Partnerships (PPP)

These options were identified as reflecting those that most appropriately covered the spectrum of risk transfer to the private sector while balancing public / private sector participation in the delivery of the project. The selection of these options was also informed by precedent procurement models adopted in the delivery of similar infrastructure elsewhere in New Zealand and internationally, both for Government and private sector projects.

The following sections outline the various procurement delivery models and outline their advantages and disadvantages. It is provided to inform the Ministry approvals and infrastructure procurement decisions.

Head Contract (HC)

This is a commonly used form of contract. Traditional development and project delivery involves the Ministry engaging one or more Design Services Consultants to fully design and document the works prior to calling of construction tenders. These consultants are usually managed by another consultant engaged as the Project Manager/Contract Administrator for that project.

This form of delivery allows the Ministry to retain maximum control over the design, enables design cost management procedures to be put in place and allows greater user input into design development. This form of delivery requires milestones and for the stages of the works to be defined prior to calling tenders for one or more Head Contractor(s). Following award, the construction program

has little flexibility for change without significant expense to the Ministry, either in the form of extensions of time with cost or in the form of Agreed Damages for the Ministry caused delays.

Under this form of delivery, the Design Services Consultant exercises only best endeavours to ensure the design is fit for the intended purpose. The Ministry carries the risk for errors and omissions in the design documentation, except where the Consultant has failed in their responsibilities because of poor performance, omissions or error. In addition, the Ministry must determine whether errors or omissions are Design or Construction errors. This imposes a high cost requirement for effective Contract Administration as there are possibly two separate lines of responsibility for errors or omissions.

Head Contractors tender a lump sum fee with a fixed completion date (subject to variations and extensions of time) which, depending on the quality of the design documentation, provides The Ministry with good levels of cost certainty.

A construct only contract is predicated on the contractor being provided with a fully documented design at the time of tendering, with no further design documentation necessary except shop drawings by the contractor, the documentation of variations (if any) and design documentation for Provisional Sum Work.

The contractor tenders a price for the works subject to adjustments provided for in the contract (e.g. if there are agreed variations). Irrespective of the actual cost of the works, the contractor will be entitled to be paid the contract sum, as agreed between the parties prior to commencing the works. However, in practice, the construct only contract can exceed the original contract sum if not properly planned and managed.

When using the Head Contract (Construct Only) method, the Ministry engages consultants to design the project. Once the design is complete (apart from Provisional Sum work), the Ministry calls for tenders from contractors to undertake construction in accordance with the design as documented. The responsibility and risk allocation of the various phases of a Head Contract procurement delivery model is highlighted in Figure 14 below.

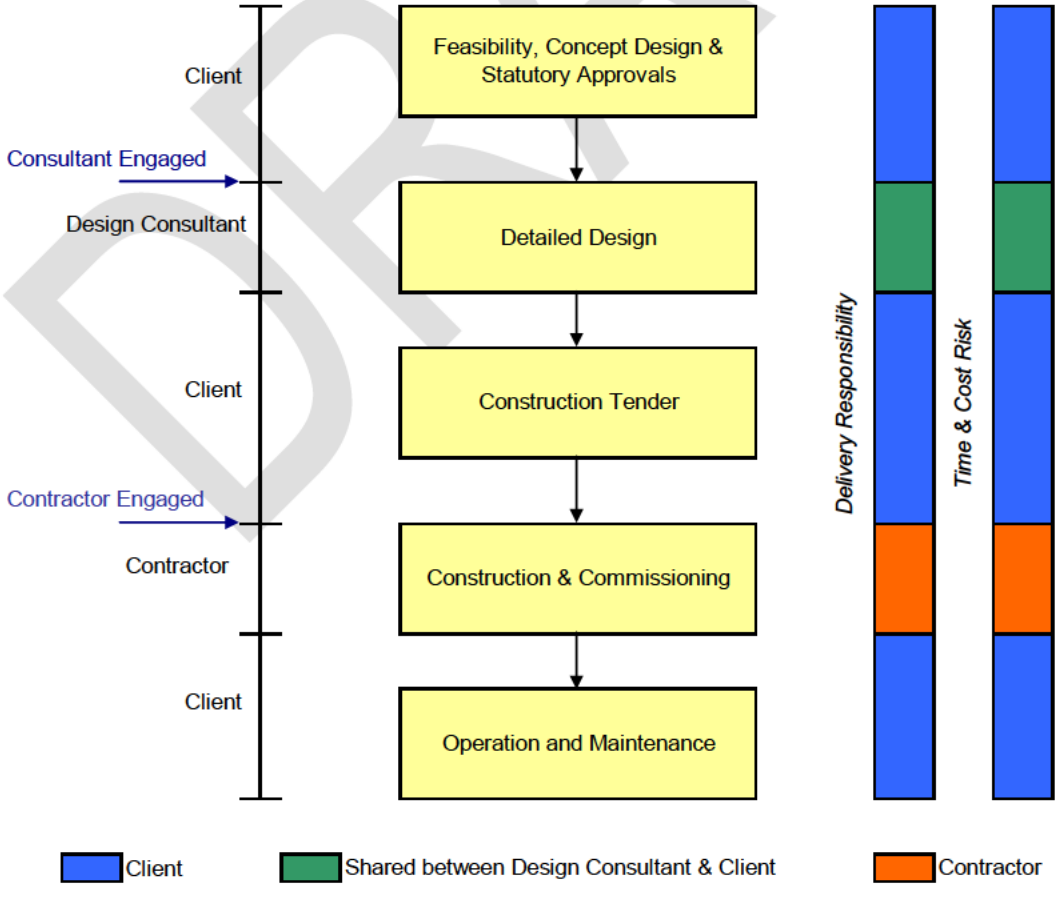


Figure 14: Head Contract Procurement Model

Potential advantages and disadvantages of the Head Contract model is summarised in Table 23 below.

Table 23: Head Contract Advantages & Disadvantages

Advantages	Disadvantages

• Highest level of The Ministry control and certainty in regards to project scope because The Ministry engages design consultants and scope is well defined prior to works commencing.
• Contract value is known before construction commences because:
  ○ the full design is prepared and endorsed prior to tendering;
  ○ design complexities are resolved before contract award;
• Potential lower cost of tendering for tenderers and The Ministry (although design costs borne by departments);
• Larger pool of potential tenderers, increasing competition;
• Greater scope for competitive prices because of design certainty; and
• The Ministry can manage stakeholder management process.
	• Separate design and construction contracts mean no single accountability / responsibility for the project;
	• Potential claims and delays due to design deficiencies and separation of design from construction;
	• Minimal opportunity for cost value management or 'build-ability' input from contractor during design development;
	• The Ministry retains the risk of constructability of design, design construction coordination, fitness for purpose and design generally;
	• Nature of relationship between Designers and Contractors means there is no input from constructors into the build-ability of the design, which may increase the time and cost significantly;
	• The chance of dispute between The Ministry and the contractor is high;
	• Difficulty in fast tracking projects because of the long lead times needed usually to prepare design documentation, meaning longer overall project duration;
	• Little incentive for innovation by all parties;
	• The Ministry acts as project manager (although usually through a contracted third party) requiring additional cost and resources;
	• Adversarial contract environment means there is a possibility of higher costs from claims; and
	• A potential lack of focus on asset lifecycle costs and considerations.

Examples of where Head Contracts may be the preferred contracting delivery model are:

- Greenfield sites or refurbishment of existing facilities where the user/occupant has vacated the site and the Design Services Consultant has had significant time and resources to commit to investigation of the existing latent conditions;
- Where the project scope is well-defined and there is little likelihood of scope creep or wholesale changes to requirements;
- Where there is little incentive or need for innovation from the contractor; and
- Where it is desirable and there is sufficient time to complete design documentation prior to tendering.

The Head Contract procurement delivery model is a well understood and utilised contracting strategy in the Ministry and in the private sector across New Zealand. Knowledge and experience by The

Ministry, professional practitioners and the construction industry is high and skills in this procurement delivery model are readily available in the local marketplace.

Design and Construct (D&C)

Under the Design and Construct (D&C) contract model, the Ministry prepares a design brief which outlines the functional and key user requirements in performance terms for the works. However, design documentation but is less fully developed than that associated with a traditional Head Contract model. The Ministry then seek tenders for the completion of the detailed design, consistent with the design brief and construction of the works described in the design brief.

This method is very effective for construction where time is critical and the requirements are simple and well defined. In this form of delivery, the design brief needs to be clear and objective in regards to performance standards and the quality criteria.

While the D&C model offers some time advantages over the more traditional Head Contract delivery method, its biggest advantages is that it provides an opportunity for the benefits of innovation to be passed onto the Ministry. On the other hand, this is the most adversarial hard dollar form of contract and if the design brief is poorly written, then value is likely to be stripped out of work at every available opportunity.

This delivery model has limited application to low dollar value contracts and, generally, projects requiring Public Works Committee (PWC) referral are not suitable due to the unknown cost uncertainty associated with this model. The chance of contractual dispute is high as Tier 2 and 3 contractors are least likely to being willing to accept any losses or cost overruns.

The responsibility and risk allocation of the various phases of a D&C Contract procurement delivery model are highlighted in Figure 15 below.

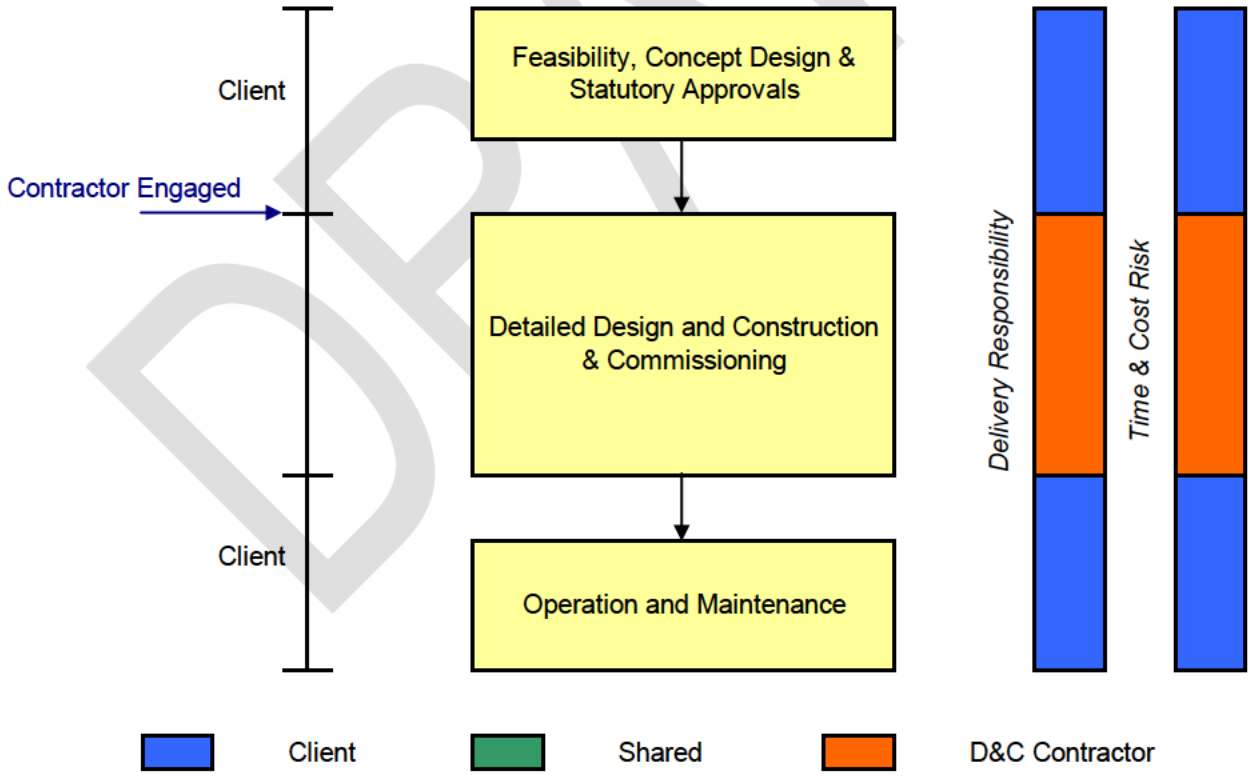


Figure 15: Design & Construct Procurement Model

The potential advantages and disadvantages of the Design & Construct model are summarised in Table 24 below.

Table 24: Design & Construct Contract Advantages & Disadvantages

Advantages	Disadvantages

• Single point of accountability for design and construction makes it unnecessary for The Ministry to distinguish between defects in design and construction (in pursuing rectification from the contractor); • Administrative efficiency; • It is possible to fast track projects because construction can commence ahead of full design documentation (provided there is adequate control over design quality); • The Contractor has the opportunity to contribute construction experience into the design, potentially resulting in innovation and efficiencies in design and construction; • The Contractor normally warrants design including 'fitness for purpose'; and • Lump sum for design and construction.	• There is limited input by the Contractor into early design development; • A longer tender period is needed to allow tenderers to assess design risk; • The Ministry may pay a premium to transfer design risks; • There is less of a focus on asset lifecycle costs and considerations; • The availability of experienced resources to manage this type of contract; • The Ministry retains whole-of-life asset risk; and • The Ministry may be liable for time and cost over runs.

Some examples of where Design & Construct may be the preferred contracting delivery model are:

- Projects involving simple building work (i.e. barrack blocks, recreational facilities and similar low risk facilities);
- When requirements are tightly specified before tender and do not or are very unlikely to change during construction;
- When there is a The Ministry requirement for a fixed price contract;
- Where The Ministry has developed the concept design, performance specification and quality requirements for the design brief to a level of detail sufficient to ensure the delivery of the required product prior to calling tenders; and
- Where the design brief is expressed in clear objective terms as to performance and quality criteria, to measure whether the project satisfies those requirements when completed.

Managing Contractor (MC)

Using the Managing Contractor form of delivery transfers the design and construction risks from the Ministry to the contractor, while enabling The Ministry to maintain reasonable control over the design process.

The Managing Contractor strategy provides the Ministry with maximum flexibility in determining the elements to be included in a project and the design of those elements whilst appointing a head contractor (the Managing Contractor) to assist and advise in developing the design, coordinating the interface between design and construction. The managing contractor is responsible for administering these subcontracts and accepts some delivery risk.

The Ministry and the Managing Contractor generally negotiate a fixed lump sum management fee. The Managing Contractor may also receive incentive payments for achieving cost and schedule targets. The Managing Contractor is engaged early in the process to manage the scope definition, design documentation and construction of the works. The managing contractor sometimes performs elements of the design and/or construction and is paid for that in addition to the management fee

The Managing Contractor typically:

- is paid a management fee and incentive payments for achieving target price, schedule and other key parameters;
- undertakes some or all of the design activities;
- may perform some of the construction works but does not necessarily have to do so;

- is responsible for preliminaries (e.g. crane hire, site sheds, supervision services etc.), general project requirements (e.g. security, insurances etc.) and project management (e.g. scheduling, coordinating, liaising, monitoring, reporting etc.); and
- prepares the trade packages and conducts the tender process, selecting suppliers in close collaboration with the Ministry using novated consultants for a Fixed Lump Sum.

The responsibility and risk allocation of the various phases of a Managing Contractor procurement delivery model are highlighted in Figure 16 below:

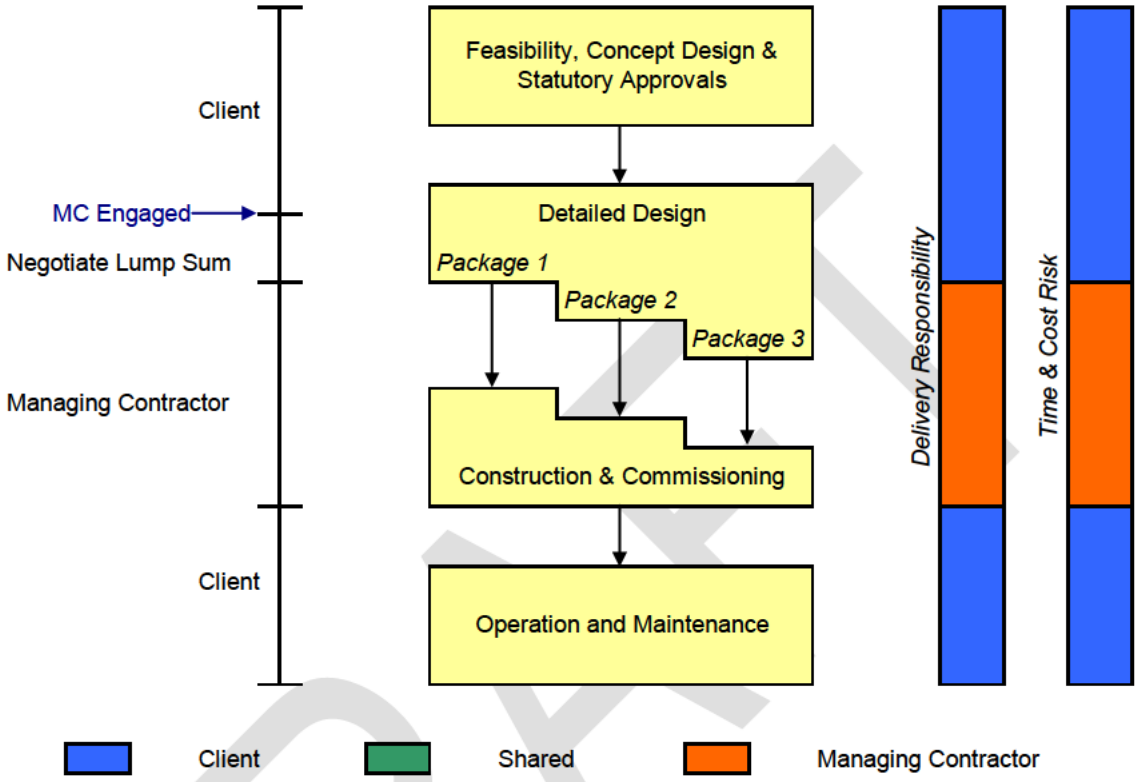


Figure 16: Managing Contractor Procurement Model

Sometimes the Managing Contractor engages suppliers as subcontractors and is responsible for paying them. This variation of the Managing Contractor model is more like a Head Contract or Design & Construct arrangement and may be preferred depending on the risk allocation, payment and incentive structure considered to be most appropriate.

Variations to the standard generic model have been developed in some cases to overcome the main disadvantages of the MC described below. An example of such a variation currently in use is the two-stage design, novate and construct, guaranteed maximum price approach.

The potential advantages and disadvantages of the Managing Contractor model is summarised in Table 25 below.

Table 25: Managing Contractor Contract Advantages & Disadvantages

Advantages	Disadvantages
• There is potential for a shorter design and construction program as construction can commence during design development due to early contractor involvement in the project; • A remuneration strategy which motivates the Managing Contractor to explore alternative design and construct delivery methods; • Allows The Ministry to retain control of the	• The fixed lump sum is typically negotiated not competitively tendered; • The Ministry and the Managing Contractor share the risk of time and cost until the end of design development; • More risk to The Ministry for cost, time, design and not achieving best value-for money outcome; • Difficulty setting cost targets with limited

design development stage which means The Ministry's requirements can be accommodated within specific designs rather than a functional specification; • The Managing Contractor can advise the design team on building issues during the design development process which facilitates integrated planning of construction and operations; • Allows the early involvement of all project participants and stakeholders; • Reduces demand on The Ministry departmental project management resources; • Prime liability of the Managing Contractor to The Ministry for the quality of design and construction; • Warrants the quality of the works and completion of the works by the date of Practical Completion; • Risk of documentation lies with the Contractor; and • Often less adversarial tension between the contractor and The Ministry as mechanisms for resolving issues and sharing benefits exist.	design details; • Time and cost overruns can be expensive where the design is not fully agreed and documented prior to construction commencement (construction holding costs can be expensive); • Overall design and fit-for-purpose risk lies with the Ministry; • Significant investment in managing the contract; • Only applicable to larger more complex multi-element projects; • Limited number of potential suitable tenderers may lead to higher cost in management margins; and • Lack of focus on lifecycle costs and considerations.

Examples of where this form of contract model may be most suitable are:

- Complex or high-risk projects with uncertain scope, risks or technology;
- Where The Ministry is required to maintain maximum control over the construction activities so as to maintain the Base or The Ministry operational capability;
- Where there is flexibility in the delivery phase to manage uncertain risks;
- Where a high degree of expert The Ministry input is available; and
- Where early contractor involvement is beneficial.

Public Private Partnerships (PPP)

The engagement of the private sector in the financing and ownership of the Ministry infrastructure is dependent upon whether this procurement model provides value for money over the life of the asset.

A Public Private Partnership (PPP) is a service contract between the Ministry and the private sector, where The Ministry pays the private sector (typically a consortium specially created for the project) to deliver infrastructure and related services over a long term duration.

PPPs can be delivered through various delivery models where the private sector takes on responsibility for non-construction functions in addition to the construction role. In each model, the private sector undertakes a different combination of roles. Example of these models includes:

- **Design-Build-Finance-Operate (DBFO):** The private sector designs, finances and constructs a new infrastructure asset and operates/maintains it under a long-term lease. The private sector transfers the infrastructure component to the public-sector partner when the lease is finished; and
- **Build-Own-Operate-Transfer (BOOT):** The private sector is granted authorisation to finance, design, build and operate an infrastructure asset (and to charge user fees) for a specific period of time, after which ownership is transferred back to the public sector.

The Ministry engages the private sector to assume responsibility for construction, financing, operations and maintenance. The Ministry maintains certain 'step-in' rights in the event of default by the private sector consortium.

The Ministry's responsibilities for managing the project are therefore different from the other delivery models described previously. The Ministry becomes a purchaser of asset-based services that are paid for according to agreed performance standards and measures. The Ministry allocates certain risks to the private sector, locks in whole-of-life budgets and quality standards and as a result is able to focus more on its core business.

There are advantages in using a PPP to deliver large scale, complex projects; however, the process of investigating the project's feasibility for delivery as a PPP and developing the necessary documentation can be lengthy.

The responsibility and risk allocation of the various phases of a PPP procurement model are highlighted in Figure 17 below.

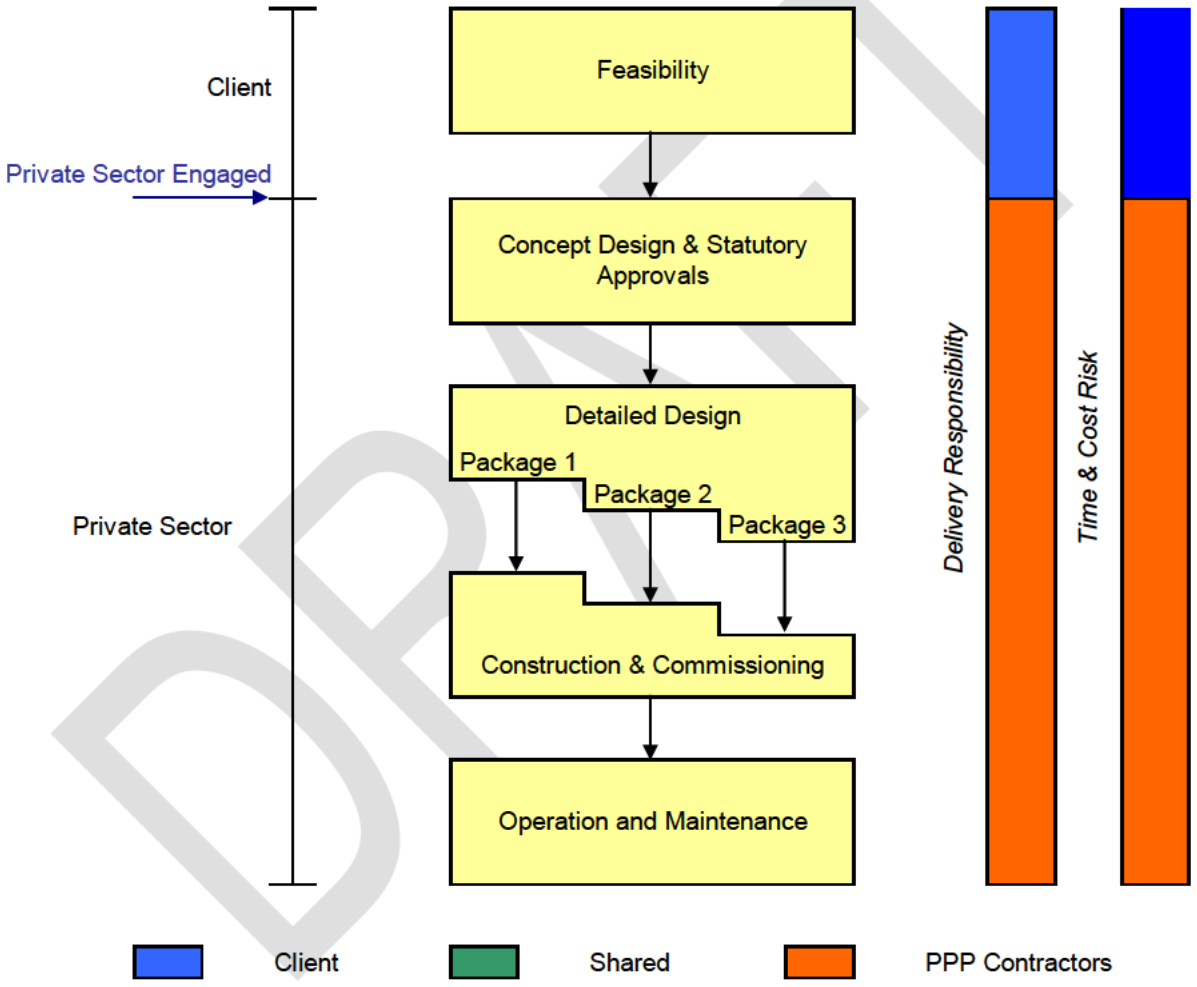


Figure 17: Public Private Partnership Procurement Model

The potential advantages and disadvantages of a PPP form of procurement is summarised in Table 26 below.

Table 26: PPP Contract Advantages & Disadvantages

Advantages	Disadvantages
• Full integration of design, construction, financing, operational, maintenance and refurbishment responsibilities; • Greater transfer of risk (including price risk) to the Contractor at each phase;	• Success relies on well-defined functional and service specifications; • Where there are multiple concept designs being developed simultaneously during the bid phase, this can require significant stakeholder

• Opportunity to develop innovative and better value for money solutions; • Transfer of lifecycle cost risk encourages efficient design and quality construction and finishes – therefore certainty of maintenance standards as agreed and cost certainty as approved for a long term (e.g. 25 years); • The Contractor carries time, cost and quality risk; • Overall design and fit-for-purpose risk lies with the Contractor; • Potential for lower cost of asset development and service provision; • Less demand on The Ministry resources long term; • Payments only commence following successful commissioning; and • Performance standards and measures are in place.	resources; • Changes to design may require contract negotiations; • The ability to make a variation needs to be addressed in the contract; • Potential for higher The Ministry tendering costs (this higher cost should be considered against savings in asset development and service provision through PPP delivery); • Requires specialist skills and experience to manage financial and technical assessment, tendering and management; and • Need to educate stakeholders who are likely to be unfamiliar with this procurement method to ensure that other project success factors are not compromised.

Examples of where this form of contract model may be most suitable are:

- when the outputs can be clearly defined and measured;
- when projects are likely to attract strong market interest;
- when the risks transferred to the private sector are commercial in nature and measureable;
- when there is scope for innovation in design which enables the private sector to bring new ideas to the way the service(s) are provided; and
- where the Ministry requirement for the asset is likely to remain long term (e.g. 25+ years).

Approach to Options Assessment

The Procurement Options Assessment is designed to help identify the most suitable models for consideration based on the projects individual circumstances. It involves the development of relevant selection criteria, usually with an appropriate weighting system, for each evaluation criterion.

Criteria

The relevant criteria for assessment of each Procurement Model against each project have been considered. The following were agreed as the project value drivers:

- **Time:** The speed, or timeframe in which, each stage of the project and the whole of the project can be completed with regard to the need;
- **Optimal Risk Transfer:** The extent to which each option can maximise optimal risk allocation, thereby minimising the whole-of-life cost to the Ministry;
- **Innovation:** The extent to which each option maximises the potential and ability for innovation;
- **Whole of Life Cost:** The extent to which each option maximises The Ministry's ability to realise value-for-money from implementing whole-of-life cost considerations in the project;
- **Client Control:** The level of control the Ministry wants over the process and the project deliverables including the degree of flexibility in accommodating changes
- **Scale & Scope Efficiencies:** The extent to which each option maximises the project scale and scope efficiencies realised by The Ministry;
- **Procurement Costs and Competition:** The extent to which each option balances the requirement for a competitive bidding process with the costs that are incurred in participating in that process. This extends to the availability of a market for the proposed procurement method

Quality outcome is a given. The cost and time will vary.

The evaluation is based on a qualitative approach, rather than a quantitative, assessment of the differences between the alternate procurement options. Further work will be required as part of the Detailed Business Case.

Appendix H
Programme options assessment

The programme options assessment has been done on a cluster and network basis not for individual schools.

This assessment is based on the format required by Treasury's Better Business Case model. www.infrastructure.govt.nz/publications/betterbusinesscases

The programme options assessment has been done on a cluster and network basis not for individual schools.

	Scale and Scope				Service Solutions										
Description of Option	Do minimum	Needs based (supply and demand including rationalisation)	Remediate all damaged assets	Respond to damaged assets in schools that are currently occupied	Dual Campus	Split Shift	Cluster wide student engagement strategies	Governance and management review	Close schools	Merge schools	Rebuild or repair on existing site	Rebuild on new site	Incentivise schools to better utilise assets	Consolidate and share specialist facilities	ICT Provision
Investment Objectives (EDUCATION)															
Supporting life-long learning by enhancing outcomes across the education system.	No	Yes	Partial	Partial	Partial	Partial	Yes	Yes	Partial	Yes	Yes	Yes	Partial	Yes	Yes
Give greater Christchurch, and New Zealand as a whole, a distinctive advantage.	No	Yes	Partial	Partial	Yes	Yes	Yes	Yes	Partial	Partial	Yes	Yes	Partial	Yes	Yes
Enhance long-term wellbeing of communities while minimising short-term disruption and impacts.	No	Yes	Partial	Partial	Yes	Yes	Yes	Yes	Partial	Yes	Partial	Yes	Yes	Yes	Yes
Promote innovative and sustainable solutions.	No	Yes	Partial	Partial	Yes	Yes	Yes	Yes	Yes	Yes	Partial	Partial	Yes	Yes	Yes
Investment Objectives (PROPERTY)															
Rationalise and design a school network optimised to meet education provision in Chch	No	Yes	No	Partial	Yes	Yes	N/A	N/A	Yes	Yes	Partial	Yes	Yes	Yes	Yes
Better integrate schools to use shared facilities provision across Christchurch	No	Yes	No	Partial	Yes	Yes	N/A	N/A	Partial	Yes	Partial	Yes	Partial	Yes	Yes
Improve school infrastructure standard	Partial	Yes	Yes	Partial	Yes	Yes	N/A	N/A	Yes	Partial	Yes	Yes	Partial	Yes	Yes
Critical Success Factors															
Value for money, holistic and whole of life decision making.	No	Yes	No	No	Yes	Yes	Partial	Partial	Yes	Yes	Partial	Yes	Yes	Yes	Yes
Flexible and responsive to changing requirements.	No	Yes	No	No	Yes	Yes	Yes	Yes	Partial	Partial	Partial	Partial	Yes	Yes	Yes
Market capability and capacity.	Yes	Yes	No	Partial	Yes	Yes	Yes	Yes	Yes	Yes	Partial	Partial	Yes	Yes	Yes
Future proof and deliver quality in design.	Partial	Yes	Partial	Partial	Yes	Yes	Yes	Yes	Partial	Partial	Yes	Yes	Partial	Yes	Yes
SUMMARY	Continued for Vfm	Preferred	Continued for VfM	Discounted	Poss ble	Poss ble	Poss ble	Possible	Possible	Possible	Possible	Possible	Possible	Possible	Poss ble
															

The programme options assessment has been done on a cluster and network basis not for individual schools.

	Service Delivery-Programme				Service Delivery- Project			Implementation- Staging			Implementation- Timing			
Description of Option	Centrally Based Programme Management of Christchurch	National Programme Management of all Ministry Programmes	Locally Based Programme Management Delivered by Ministry Staff	Locally Based Programme Management Delivered by Private Contractors	Local Ministry Project Delivery	Local Private Project Delivery	Local Delivery of Minor Project, Private Delivery of Major	Prioritised and staged	Individual projects	Grouped/ packaged projects	Big bang'	Prior to requiring	As required	Defer due to dependencies
Investment Objectives (EDUCATION)														
Supporting life-long learning by enhancing outcomes across the education system.	Partial	Yes	Yes	No	Yes	Yes	Yes							
Give greater Christchurch, and New Zealand as a whole, a distinctive advantage.	Yes	No	Yes	Partial	Yes	Yes	Yes							
Enhance long-term wellbeing of communities while minimising short-term disruption and impacts.	Partial	Yes	Yes	Partial	Yes	Partial	Partial							
Promote innovative and sustainable solutions.	No	No	Partial	Yes	Yes	Yes	Yes							
Investment Objectives (PROPERTY)														
Rationalise and design a school network optimised to meet education provision in Chch	Partial	Yes	Partial	No	Yes	No	Yes	Yes	Yes	Partial	No	Yes	No	Partial
Better integrate schools to use shared facilities provision across Christchurch	Partial	Yes	Partial	Partial	Yes	No	Yes	Yes	Partial	Partial	No	Partial	No	Partial
Improve school infrastructure standard	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Partial	Partial
Critical Success Factors														
Value for money, holistic and whole of life decision making.	Partial	Yes	Partial	Yes	Yes	Partial	Yes	Partial	No	Yes	No	Yes	Yes	Yes
Flexible and responsive to changing requirements.	Yes	Yes	Partial	Yes	Partial	Yes	Yes	Yes	Yes	Partial	No	Partial	Partial	Partial
Market capability and capacity.	Partial	Yes	Partial/No	Partial	No	Yes	Yes	Yes	No	Partial	No	Yes	Partial	Yes
Future proof and deliver quality in design.	Yes	Yes	Yes	Partial	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Partial	Partial
SUMMARY	Discounted	Discounted	Preferred	Discounted	Discounted	Discounted	Preferred	Possible	Discounted	Possible	Discounted	Possible	Discounted	Poss ble

Appendix I
Indicative Costs and Benefits

Note: These represent indicative estimates as of July 2012 and as further infrastructure related costing information is obtained through detailed engineering evaluations, condition assessment updates, and water-tightness investigations, the estimates will be updated. The roll numbers are based on data from March 2012, this data has now been updated.

Note: These represent indicative estimates as of July 2012 and as further infrastructure related costing information is obtained through detailed engineering evaluations, condition assessment updates, and water-tightness investigations, the estimates will be updated. The roll numbers are based on data from March 2012, this data has now been updated.

School	Condition Assessment Total	Number of Students	Renewed Y/N		OPTION 1: Do Minimum	OPTION 2: Status Quo	OPTION 3: Repair All	OPTION 4: Minor Rationalisation	OPTION 5: Major Rationalisation		Students in renewed schools (OP5)
Addington School	$ 3,716,548	200	n		$ 2,395,628	$ 3,630,407	$ 3,716,548	$ 3,716,548	$ 3,716,548		0
Akaroa Area School	$ 1,521,483	142	y		$ 456,445	$ 1,490,242	$ 1,521,483	$ 1,521,483	$ 1,521,483		142
Allenvale Special School & Res. Centre	$ 4,005,282	127	na		$ 2,552,755	$ 3,649,933	$ 4,005,282	$ 4,005,281	$ 4,005,281		0
Aranui High School	$ 9,969,105	553	y		$ 4,857,531	$ 5,754,856	$ 9,969,105	$ 12,000,000	$ -		553
Aranui School (Christchurch)	$ 4,023,525	144	y		$ 2,420,113	$ 2,711,912	$ 4,023,525	$ 12,000,000	$ -		144
Avondale School (Christchurch)	$ 2,697,883	320	y		$ 1,006,612	$ 2,291,939	$ 2,697,883	$ 12,000,000	$ -		320
Avonhead School	$ 5,742,431	489	n		$ 5,252,317	$ 5,538,318	$ 5,742,431	$ 5,742,431	$ 5,742,431		0
Avonside Girls' High School	$ 48,385,224	985	y		$ 17,254,474	$ 8,385,224	$ 48,385,224	$ 48,385,224	$ -		985
Bamford School	$ 993,638	79	n		$ 378,364	$ 699,855	$ 993,638	$ 993,638	$ 993,638		0
Banks Avenue School	$ 9,261,929	387	y		$ 6,614,788	$ 7,449,294	$ 9,261,929	$ 20,000,000	$ 20,000,000		387
Beckenham School	$ 3,346,027	409	n		$ 1,224,983	$ 2,892,534	$ 3,346,027	$ 3,346,027	$ 3,346,027		0
Belfast School	$ 6,474,981	439	n		$ 4,668,594	$ 6,325,227	$ 6,474,981	$ 6,474,981	$ 6,474,981		0
Bishopdale School	$ 5,643,852	112	n		$ 5,063,630	$ 5,241,464	$ 5,643,852	$ 5,643,852	$ 5,643,852		0
Branston Intermediate	$ 7,919,620	169	y		$ 7,200,954	$ 7,810,271	$ 7,919,620	$ 7,919,620	$ -		169
Breens Intermediate	$ 1,018,658	251	y		$ 305,598	$ 874,315	$ 1,018,658	$ 1,018,658	$ -		251
Bromley School	$ 1,150,426	239	y		$ 345,128	$ 917,029	$ 1,150,426	$ 4,470,426	$ 4,470,426		239
Burnside High School	$ 12,873,544	2537	n		$ 9,366,777	$ 12,322,978	$ 12,873,544	$ 12,873,544	$ 12,873,544		0
Burnside Primary School	$ 8,894,119	198	y		$ 6,148,267	$ 8,785,473	$ 8,894,119	$ 8,894,119	$ -		198
Burwood School	$ 4,708,753	275	y		$ 2,779,295	$ 3,953,623	$ 4,708,753	$ 4,708,753	$ -		275
Casebrook Intermediate	$ 7,928,362	399	n		$ 6,746,290	$ 7,519,505	$ 7,928,362	$ 7,928,362	$ 7,928,362		0
Cashmere High School	$ 16,650,644	1674	n		$ 9,903,452	$ 15,326,839	$ 16,650,644	$ 16,650,644	$ 16,650,644		0
Cashmere Primary School	$ 2,463,478	450	n		$ 944,265	$ 2,328,299	$ 2,463,478	$ 2,463,478	$ 2,463,478		0
Central New Brighton School	$ 4,350,728	124	y		$ 3,851,627	$ 4,085,226	$ 4,350,728	$ 4,350,728	$ -		124
Chisnallwood Intermediate	$ 12,526,692	759	n		$ 8,296,086	$ 11,735,174	$ 12,526,692	$ 2,966,703	$ 2,966,703		0
Christchurch Boys' High School	$ 26,534,282	1299	y		$ 22,017,071	$ 23,879,347	$ 26,534,282	$ 12,526,692	$ -		1299
Christchurch East School	$ 2,966,704	188	y		$ 1,506,820	$ 2,129,061	$ 2,966,704	$ 50,734,282	$ 46,594,282		188
Christchurch Girls' High School	$ 11,644,562	1085	y		$ 3,522,438	$ 4,532,282	$ 11,644,562	$ 54,000,000	$ -		1085
Christchurch South Intermediate	$ 2,934,904	503	n		$ 1,307,657	$ 2,568,200	$ 2,934,904	$ 2,934,904	$ 2,934,904		0
Clearview Primary	$ 195,000	450	n		$ 58,500	$ 195,000	$ 195,000	$ 195,000	$ 195,000		0
Cobham Intermediate	$ 9,751,679	671	n		$ 7,892,257	$ 9,665,483	$ 9,751,679	$ 9,751,679	$ 9,751,679		0
Cotswold School	$ 7,657,583	487	n		$ 5,941,346	$ 7,104,605	$ 7,657,583	$ 7,657,583	$ 7,657,583		0
Diamond Harbour School	$ 355,808	105	na		$ 106,742	$ 243,812	$ 355,808	$ 355,808	$ 355,808		0
Discovery One School	$ 20,000,000	146	y		$ -	$ 6,000,000	$ -	$ 20,000,000	$ 15,000,000		
Duvauchelle School	$ 273,996	26	y		$ 82,199	$ 272,976	$ 273,996	$ 273,996	$ 273,996		26
Elmwood Normal School	$ 2,704,632	478	n		$ 1,545,179	$ 2,384,251	$ 2,704,632	$ 2,704,632	$ 2,704,632		0
Fendalton Open Air School	$ 2,557,414	449	n		$ 1,205,927	$ 2,300,199	$ 2,557,414	$ 4,837,414	$ 4,837,414		0
Ferndale School (Christchurch)	$ 1,730,485	96	na		$ 576,252	$ 989,540	$ 1,730,485	$ 1,730,485	$ 1,730,485		0
Freeville School	$ 5,710,258	284	y		$ 3,196,855	$ 3,955,243	$ 5,710,258	$ 5,710,258	$ -		284
Gilberthorpe School	$ 2,486,556	96	n		$ 2,268,127	$ 2,412,571	$ 2,486,556	$ 3,346,556	$ 3,346,556		0
Glenmoor School	$ 2,176,257	40	y		$ 1,889,895	$ 2,139,002	$ 2,176,257	$ 2,176,257	$ -		40
Governors Bay School	$ 513,743	61	na		$ 298,949	$ 479,267	$ 513,743	$ 513,743	$ 513,743		0
Hagley Community College	$ 19,561,097	1946	n		$ 15,187,076	$ 17,234,005	$ 19,561,097	$ 19,561,097	$ 19,561,097		0
Halswell Residential College	$ 10,733,257	32	y		$ 10,413,734	$ 10,724,436	$ 10,733,257	$ 16,000,000	$ 16,000,000		32
Halswell School	$ 4,666,340	530	na		$ 1,415,100	$ 2,269,558	$ 4,666,340	$ 10,733,257	$ 10,733,257		0
Hammersley Park School	$ 8,891,656	49	y		$ 7,750,982	$ 7,959,621	$ 8,891,656	$ 8,891,656	$ -		49
Harewood School	$ 2,053,915	164	n		$ 1,294,562	$ 1,745,415	$ 2,053,915	$ 2,653,915	$ 2,653,915		0
Heathcote Valley School	$ 2,864,646	241	n		$ 1,604,507	$ 1,861,533	$ 2,864,646	$ 2,864,646	$ 2,864,646		0
Heaton Normal Intermediate	$ 4,054,631	523	n		$ 1,876,130	$ 2,004,892	$ 4,054,631	$ 4,054,631	$ 4,054,631		0
Hillmorton High School	$ 7,144,730	662	n		$ 4,080,365	$ 6,877,473	$ 7,144,730	$ 7,144,730	$ 7,144,730		0
Hoon Hay School	$ 5,096,144	390	n		$ 4,121,688	$ 4,918,934	$ 5,096,144	$ 5,096,144	$ 5,096,144		0
Hornby High School	$ 2,389,175	455	y		$ 1,398,401	$ 2,251,284	$ 2,389,175	$ 3,769,175	$ 3,769,175		455
Hornby Primary School	$ 7,299,555	130	n		$ 6,963,217	$ 7,185,372	$ 7,299,555	$ 7,299,555	$ 7,299,555		0
Ilam School	$ 3,559,013	410	n		$ 1,485,160	$ 3,526,351	$ 3,559,013	$ 3,559,013	$ 3,559,013		0
Isleworth School	$ 4,126,807	210	n		$ 3,534,562	$ 3,832,205	$ 4,126,807	$ 4,726,807	$ 4,726,807		0
Kaiapoi Borough School	$ 5,130,829	437	y		$ 1,773,244	$ 4,593,845	$ 5,130,829	$ 16,000,000	$ 16,000,000		437
Kaiapoi High School	$ 12,528,387	636	n		$ 10,838,632	$ 12,296,287	$ 12,528,387	$ 12,528,387	$ 12,528,387		0
Kaiapoi North School	$ 4,906,966	428	n		$ 3,974,985	$ 4,747,564	$ 4,906,966	$ 6,646,966	$ 6,646,966		0
Kendal School	$ 3,254,226	91	y		$ 3,033,771	$ 3,250,290	$ 3,254,226	$ 3,254,226	$ -		91
Kirkwood Intermediate	$ 3,484,893	349	n		$ 2,798,530	$ 3,451,018	$ 3,484,893	$ 3,484,893	$ 3,484,893		0
Le Bons Bay School	$ 117,601	11	y		$ 35,280	$ 114,500	$ 117,601	$ 117,601	$ 117,601		11
Linwood Avenue School	$ 1,630,768	259	y		$ 694,486	$ 1,508,193	$ 1,630,768	$ 1,630,768	$ -		259
Linwood College	$ 12,234,281	865	y		$ 6,821,854	$ 7,880,715	$ 12,234,281	$ 40,000,000	$ 40,000,000		865
Linwood Intermediate	$ 3,203,801	127	y		$ 2,218,291	$ 2,471,013	$ 3,203,801	$ 3,203,801	$ -		127
Linwood North School	$ 3,177,785	122	y		$ 1,423,187	$ 2,404,360	$ 3,177,785	$ 3,177,785	$ 3,177,785		122
Little River School	$ 725,946	85	y		$ 217,784	$ 725,946	$ 725,946	$ 725,946	$ 725,946		85
Lyttelton Main School	$ 1,041,748	112	n		$ 582,654	$ 787,900	$ 1,041,748	$ 2,341,748	$ 2,341,748		0
Lyttelton West School	$ 888,848	128	n		$ 388,516	$ 544,088	$ 888,848	$ 888,848	$ -		0
Mairehau High School	$ 4,505,764	427	y		$ 2,333,516	$ 3,573,546	$ 4,505,764	$ 77,000,000	$ 77,000,000		427
Mairehau School	$ 7,617,548	341	n		$ 6,460,976	$ 7,251,092	$ 7,617,548	$ 7,617,548	$ 7,617,548		0
Manning Intermediate	$ 6,925,704	155	y		$ 5,719,933	$ 5,605,174	$ 6,925,704	$ 6,925,704	$ -		155
Marshland School	$ 373,115	195	y		$ 179,960	$ 275,969	$ 373,115	$ 14,000,000	$ 14,000,000		195
Merrin School	$ 4,136,704	311	n		$ 3,342,319	$ 4,063,064	$ 4,136,704	$ 4,136,704	$ 4,136,704		0
Mt Pleasant School	$ 2,671,983	321	n		$ 801,595	$ 2,114,653	$ 2,671,983	$ 4,011,983	$ 4,011,983		0
North New Brighton School	$ 5,693,861	207	n		$ 3,571,850	$ 3,179,467	$ 5,693,861	$ 10,633,861	$ 10,633,861		0
Northcote School (Christchurch)	$ 4,258,142	137	n		$ 3,963,938	$ 4,226,350	$ 4,258,142	$ 4,258,142	$ 4,258,142		0
Oaklands School	$ 6,561,883	495	n		$ 4,888,904	$ 6,292,605	$ 6,561,883	$ 6,561,883	$ 6,561,883		0
Okains Bay School	$ 166,113	17	y		$ 49,834	$ 107,000	$ 166,113	$ 166,113	$ 166,113		17
Opawa School	$ 2,185,156	358	n		$ 1,177,122	$ 2,058,387	$ 2,185,156	$ 2,185,156	$ 2,185,156		0
Ouruhia Model School	$ 586,685	100	y		$ 176,006	$ 472,472	$ 586,685	$ 586,685	$ -		100

Note: These represent indicative estimates as of July 2012 and as further infrastructure related costing information is obtained through detailed engineering evaluations, condition assessment updates, and water-tightness investigations, the estimates will be updated. The roll numbers are based on data from March 2012, this data has now been updated.

Papanui High School	$ 9,863,195	1523	n		$ 5,019,534	$ 9,086,275	$ 9,863,195	$ 14,763,195	$ 14,763,195		0
Papanui School	$ 848,341	171	n		$ 491,041	$ 811,208	$ 848,341	$ 848,341	$ 848,341		0
Paparoa Street School	$ 9,648,170	495	n		$ 6,575,154	$ 9,227,985	$ 9,648,170	$ 9,648,170	$ 9,648,170		0
Parkview School	$ 1,703,468	287	n		$ 511,041	$ 1,450,687	$ 1,703,468	$ 1,703,468	$ 1,703,468		0
Phillipstown School	$ 3,529,835	137	y		$ 1,705,671	$ 1,435,825	$ 3,529,835	$ 7,000,000	$ -		137
Queenspark School	$ 2,852,510	532	n		$ 931,894	$ 2,590,247	$ 2,852,510	$ 2,852,510	$ 2,852,510		0
Redcliffs School	$ 1,812,562	243	y		$ 691,476	$ 1,509,659	$ 1,812,562	$ 14,000,000	$ -		243
Redwood School (Christchurch)	$ 6,162,648	353	n		$ 4,165,521	$ 5,968,271	$ 6,162,648	$ 6,162,648	$ 6,162,648		0
Riccarton High School	$ 9,568,638	981	n		$ 6,350,948	$ 9,264,409	$ 9,568,638	$ 9,568,638	$ 9,568,638		0
Riccarton School	$ 3,795,283	182	n		$ 3,596,044	$ 3,765,656	$ 3,795,283	$ 3,795,283	$ 3,795,283		0
Richmond School (Christchurch)	$ 892,219	38	y		$ 377,155	$ 671,389	$ 892,219	$ 892,219	$ -		38
Rolleston School	$ 967,172	615	n		$ 338,109	$ 839,270	$ 967,172	$ 967,172	$ 967,172		0
Rowley Avenue School	$ 483,105	102	n		$ 144,931	$ 233,000	$ 483,105	$ 483,105	$ 483,105		0
Roydvale School	$ 2,067,320	279	n		$ 640,707	$ 2,029,820	$ 2,067,320	$ 2,667,320	$ 2,667,320		0
Russley School	$ 4,855,677	361	n		$ 3,551,945	$ 4,727,872	$ 4,855,677	$ 4,855,677	$ 4,855,677		0
Shirley Boys' High School	$ 18,257,945	1293	y		$ 7,709,213	$ 7,660,828	$ 18,257,945	$ 18,257,945	$ -		1293
Shirley Intermediate	$ 4,543,057	222	y		$ 2,791,308	$ 3,530,558	$ 4,543,057	$ 20,000,000	$ -		222
Shirley School	$ 2,167,828	230	n		$ 716,160	$ 1,060,028	$ 2,167,828	$ 5,907,828	$ 5,907,828		0
Sockburn School	$ 1,969,694	118	y		$ 1,558,759	$ 1,937,644	$ 1,969,694	$ 14,000,000	$ 14,000,000		118
Somerfield School	$ 3,386,250	414	n		$ 2,354,205	$ 3,221,746	$ 3,386,250	$ 3,386,250	$ 3,386,250		0
South Hornby School	$ 5,221,636	282	y		$ 4,607,098	$ 4,825,384	$ 5,221,636	$ 14,000,000	$ 14,000,000		282
South New Brighton School	$ 3,808,957	438	y		$ 1,436,332	$ 2,818,947	$ 3,808,957	$ 3,808,957	$ 3,808,957		438
Spreydon School	$ 2,380,328	264	n		$ 1,885,434	$ 2,222,487	$ 2,380,328	$ 2,380,328	$ 2,380,328		0
St Albans School	$ 3,218,575	454	n		$ 1,223,655	$ 2,613,727	$ 3,218,575	$ 3,218,575	$ 3,218,575		0
St Martin's School	$ 7,077,234	443	n		$ 2,351,446	$ 2,359,684	$ 7,077,234	$ 7,077,234	$ 7,077,234		0
Sumner School	$ 1,893,593	393	n		$ 726,115	$ 1,814,948	$ 1,893,593	$ 3,233,593	$ 3,233,593		0
Templeton School	$ 3,123,011	325	n		$ 2,149,978	$ 3,009,581	$ 3,123,011	$ 3,123,011	$ 3,123,011		0
Thorrington School	$ 4,534,933	427	n		$ 2,951,130	$ 4,225,387	$ 4,534,933	$ 4,534,933	$ 4,534,933		0
TKKM o Te Whanau Tahi	$ 1,551,000	73	n		$ 465,300	$ 1,546,000	$ 1,551,000	$ -	$ -		0
TKKM o Waitaha	$ 320,000		n		$ 96,000	$ 320,000	$ 320,000	$ 1,551,000	$ 1,551,000		0
Unlimited Paenga Tawhiti	$ 23,841,843	403	y			$ 9,841,843	$ 3,841,843	$ 23,841,843	$ 3,694,439		403
Van Asch Deaf Education Centre	$ 7,950,049	0	na		$ 6,716,346	$ 7,807,567	$ 7,950,049	$ -	$ 7,950,049		0
Waimairi School	$ 3,694,439	435	n		$ 1,486,710	$ 3,362,757	$ 3,694,439	$ 1,730,023	$ 3,694,439		0
Wainoni School	$ 5,627,981	83	y		$ 5,051,108	$ 5,226,876	$ 5,627,981	$ 596,609	$ -		83
Wairakei School (Christchurch)	$ 1,130,023	217	n		$ 800,167	$ 860,300	$ 1,130,023	$ 797,625	$ 1,730,023		0
Waitaha Learning Centre	$ 596,610	30	na		$ 178,983	$ 469,000	$ 596,610	$ 2,131,087	$ 596,609		0
Waltham School	$ 797,625	121	n		$ 362,648	$ 593,229	$ 797,625	$ 6,306,760	$ 797,625		0
West Spreydon School	$ 2,131,087	186	n		$ 1,353,442	$ 1,740,940	$ 2,131,087	$ 11,901,430	$ 2,131,087		0
Westburn School	$ 6,306,760	427	n		$ 4,773,522	$ 6,080,558	$ 6,306,760	$ -	$ 6,306,760		0
Wharenui School	$ 907,346	148	n		$ 493,692	$ 817,476	$ 907,346	$ -	$ 907,346		0
Windsor School	$ 6,501,430	546	n		$ 4,040,080	$ 5,534,450	$ 6,501,430	$ -	$ 11,901,430		0
Woolston School	$ 1,723,764	220	y		$ 1,307,200	$ 1,388,672	$ 1,723,764	$ -	$ -		220
Yaldhurst Model School	$ 1,278,486	115	y		$ 383,546	$ 1,203,486	$ 1,278,486	$ -	$ -		115
SUBTOTAL	$ 651,902,123	**44987**			**$ 402,945,426**	**$ 489,063,026**	**$ 651,902,123**	**$ 924,808,536**	**$ 643,303,770**		

Note: Avonside Girls, Discovery, Unlimited are irreparable. Cond Assess cost replaced with new build

Other Capital Costs					**OPTION 1: Do Minimum**	**OPTION 2: Status Quo**	**OPTION 3: Repair All**	**OPTION 4: Minor Rationalisation**	**OPTION 5: Major Rationalisation**		
New Schools											
Rolleston PS						$ 14,000,000	$ 14,000,000	$ 14,000,000	$ 14,000,000		700
Rolleston SS						$ 25,000,000	$ 25,000,000	$ 25,000,000	$ 25,000,000		1250
Unlimited/Discovery								$ 30,000,000	$ 30,000,000		1500
Philipstown/Woolston								$ 14,000,000	$ 14,000,000		700
Aranui cluster								$ 45,000,000	$ 45,000,000		2250
Expansion							$ 19,880,000	$ 19,880,000	$ 19,880,000		994
SUBTOTAL					$ 402,945,426	$ 528,063,026	$ 710,782,123	$ 1,072,688,536	$ 791,183,770		
20% for fees					$ 80,589,085	$ 105,612,605	$ 142,156,425	$ 214,537,707	$ 158,236,754		
SUBTOTAL					$ 483,534,511	$ 633,675,632	$ 852,938,548	$ 1,287,226,243	$ 949,420,523		
Students in renewed schools					0	1950	2944	21268	21,268		
Students in schools that should be renewed but arent					31491	19318	18324	0	0		
5YA in schools that arent renewed					$ 8,250,616	$ 5,061,316	$ 4,800,888	$ -	$ -		
TOTAL CAPITAL INVESTMENT					**$491,785,126**	**$638,736,948**	**$ 857,739,436**	**$1,287,226,243**	**$ 949,420,523**		
ECONOMIC COSTS AND BENEFITS					**OPTION 1: Do Minimum**	**OPTION 2: Status Quo**	**OPTION 3: Repair All**	**OPTION 4: Minor Rationalisation**	**OPTION 5: Major Rationalisation**		
Benefit to education delivery					$ -	$ 1,209,000	$ 1,825,280	$ 13,186,160	$ 13,186,160		
10yr benefit to education delivery					$ -	$ 12,090,000	$ 18,252,800	$ 131,861,600	$ 131,861,600		
Cost to education delivery					$ 19,524,358	$ 11,977,160	$ 11,360,880	$ -	$ -		
10yr cost to education delivery					$ 195,243,580	$ 119,771,600	$ 113,608,800	$ -	$ -		
TOTAL COSTS AND BENEFITS					**-$ 195,243,580**	**-$ 107,681,600**	**-$ 95,356,000**	**$ 131,861,600**	**$ 131,861,600**		

Appendix J
Assumptions used in cost calculations

Note: These assumptions are based on averages for modelling purposes only. They are not exact entitlement figures.

Note: These assumptions are based on averages for modelling purposes only. They are not exact entitlement figures.

1. Cost to Rebuild	
Description	Used to calculate the cost to rebuild instead of repair. Do not know the floor area so needs to be done on a per student basis ($/student)
Basis	New Schools Template
Floor area per student	
Process	Calculated floor area for 3 different roll sizes for both Primary and Secondary schools using the New Schools Template Averaged the floor area per student.
Results	Secondary School= average 9m2/student Primary School= average 7m2/student
Ratio of Primary and Secondary	
Process	Took a sample of the schools to which rebuilding is most applicable (Type 3- Major repairs and damage). Totalled the primary and secondary to develop a ratio.
Results	Secondary School= 45% Primary School= 55%
Cost per square metre	
Process	Rates from New Schools Template.
Results	Secondary= $2,300/m2 Primary= $1,800/m2
Calculate rate for rebuild	
Process	Use results developed above (ratio x m2/student x $/m2)
Results	0.55 x 7 x 1,800 = $6,930 per student 0.45 x 9 x 2,300 = $9,315 per student Total = $16,245 per student 20% for Site Works = **$ 19,494 per student rounded up to $20,000**

2. Annual Education Cost	
Description	Used to determine the impact that poor targetting of the school network (i.e. supply not matching demand) and the cost of the disruption during the works period has on the delivery of education
Basis	Annual operation budgets (Statement of Intent)

Note: These assumptions are based on averages for modelling purposes only. They are not exact entitlement figures.

Determine Annual Cost of Education	
Process	Data from the Statement of Intent Number of students = 764,000 Operational expenditure (Primary) = $2730mil Operational expenditure (Secondary) = $2007mil
Results	**$6,200 per student per year**

3. Annual PMG and 5YA Funding	
Description	Used to calculate the annual property maintenance expenditure. This is important because if the building area is reduced or buildings are rebuilt rather than repaired the PMG funding will be decreased. As we do not have a building area, the PMG funding will be calculated on a per student basis.
Basis	2010/11 School Property Capital Plan
Determine annual cost of funding	
Process	Developed on a per student basis from the Annual Budgets. Total annual PMG = $81,500,000 Total 5YA = $1,000,000,000 Annual 5YA= $200,000,000 Total number of student= 764,000
Results	Annual PMG= **$106 per student** Annual 5YA= **$262 per student**

Appendix K
Funding Analysis

Note: This entire appendix was previously withheld

PREFERRED OPTION
(Option 5)

Cost of Preferred Option	**$949,420,523**										
Cost excluding Funding from Insurance	[redacted]										
Distribution of Expenditure	10%	15%	20%	20%	10%	10%	5%	5%	3%	3%	**100%**

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))

Cost Analysis										
Capital Investment	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Year 7**	**Year 8**	**Year 9**	**Year 10**
Value of Assets	-$1,091,890	$83,915,676	$206,293,814	$363,800,290	$511,856,377	$566,087,047	$617,063,876	$622,511,070	$627,631,432	$611,209,059
Capital Investment	[redacted]									
Depreciation	[redacted]									
Total Book Value of Assets	**$83,915,676**	**$206,293,814**	**$363,800,290**	**$511,856,377**	**$566,087,047**	**$617,063,876**	**$622,511,070**	**$627,631,432**	**$611,209,059**	**$595,772,028**
Total Annual Investment	[redacted]									
Costs										
Total Annual Costs	[redacted]									
Depreciation	[redacted]									
Capital Charge	[redacted]									

Total Depreciation	[redacted]
Total Capital Charge	[redacted]
Subtotal	[redacted]
Additional Funding	[redacted]

BASE CASE (Option 2)

Cost of Status Quo Option	**$638,736,948**										
Cost excluding Funding from Insurance	**N/A**										
Distribution of Expenditure	10%	15%	20%	20%	10%	10%	5%	5%	3%	3%	**100%**

Cost Analysis											
Capital Investment	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Year 7**	**Year 8**	**Year 9**	**Year 10**	
Value of Assets	$43,135,697	$104,421,250	$193,966,517	$310,075,915	$419,218,750	$457,939,320	$494,336,655	$496,613,303	$498,753,352	$484,796,575	
Capital Investment	$63,873,695	$95,810,542	$127,747,390	$127,747,390	$63,873,695	$63,873,695	$31,936,847	$31,936,847	$15,968,424	$15,968,424	
Depreciation	-$2,588,142	-$6,265,275	-$11,637,991	-$18,604,555	-$25,153,125	-$27,476,359	-$29,660,199	-$29,796,798	-$29,925,201	-$29,087,795	
Total Book Value of Assets	**$104,421,250**	**$193,966,517**	**$310,075,915**	**$419,218,750**	**$457,939,320**	**$494,336,655**	**$496,613,303**	**$498,753,352**	**$484,796,575**	**$471,677,204**	
Total Annual Investment	**$63,873,695**	**$95,810,542**	**$127,747,390**	**$127,747,390**	**$63,873,695**	**$63,873,695**	**$31,936,847**	**$31,936,847**	**$15,968,424**	**$15,968,424**	
Costs											
Total Annual Costs	**-$10,941,842**	**-$21,782,596**	**-$36,444,064**	**-$52,142,055**	**-$61,788,271**	**-$67,023,292**	**-$69,389,264**	**-$69,697,066**	**-$68,708,927**	**-$66,821,971**	
Depreciation	$2,588,141.81	$6,265,274.98	$11,637,991	$18,604,555	$25,153,125	$27,476,359	$29,660,199	$29,796,798	$29,925,201	$29,087,795	**$210,195,440**
Capital Charge	$8,353,699.98	$15,517,321	$24,806,073	$33,537,500	$36,635,146	$39,546,932	$39,729,064	$39,900,268	$38,783,726	$37,734,176	**$314,543,907**

Total Depreciation	$210,195,440
Total Capital Charge	$314,543,907
Subtotal	$524,739,347
Additional Funding	**$113,997,600**

Appendix L
Quantitative criteria to determine scale of response

Criteria	Measure			
Access	Distance to closest school. Capacity to meet demands on projected rolls.	**Age 5-9yrs** <3.2km to nearest school	**Age 5-9yrs** >3.2km to nearest school but within 2.4km of bus route.	**Age 5-9yrs** >3.2km to nearest school and no bus route.
		Age 10+yrs <4.8km to nearest school	**Age 10+yrs** <4.8km to nearest school but within 2.4km of bus route.	**Age 10+yrs** <4.8km to nearest school and no bus route.
Equity	Education diversity measured at a cluster level	Available in cluster	Available in neighbouring cluster	Not available in cluster or neighbouring cluster
Education and Governance	Student performance, engagement and length between ERO review cycles. Note: NCEA Level 2 data uses an adjusted average based on the Decile Standardised Average. Provisional 2011 data has been used.	**Student Engagement** <2 per 100 students AND, **ERO Cycle** 3yrs plus **NCEA Level 2** >85%	**Student Engagement** >2 per 100 students OR, **ERO Cycle** 2yr review cycle **NCEA Level 2** 70 – 85%	**Student Engagement** >2 per 100 students AND, **ERO Cycle** 2yr review cycle **NCEA Level 2** <70%
Infrastructure	Roll size. Percentage utilisation. Scalability and flexibility (Site Area).	**Roll** PS>250 Int>600 SS>1000	**Roll** 150<PS<250 450<PS<600 650<SS<10000	**Roll** PS<150 Int<450 SS<650
		Utilisation >85%	**Utilisation** 65-85%	**Utilisation** <65%
		Site Area >2.5 ha	**Site Area** 2 – 2.5 ha	**Site Area** <2 ha or unsuitable for rebuild
Scale of Investment	Total projected cost (maintenance and capital) over the next 10 yrs.	<$10,000 per student	$10,000 to $20,000 per student	>$20,000 per student

In determining the above criteria it is recognised that there is a substantial volume of data available which can be assessed. The above criteria were determined as providing a robust snap shot of the condition of the network and in forming a solid basis on which further assessment can be undertaken, on a cluster by cluster or school by school basis.