

Ministry of Education  
Long Term Investment Plan  
December 2015

Consolidation of:

- Education Infrastructure
- ICT
- Office Accommodation & Other

16 December 2015

# Foreword

Taking a long term view in investment planning will enable the Ministry of Education (MoE) to make the best use of resources, position it well to respond to changes, provide transparency about shifts in priorities and service delivery, and assist Ministers to make informed decisions across the education sector and public service to support achieving outcomes. Collectively, this will help deliver on government priorities and ultimately benefit all New Zealanders.

MoE welcomes the introduction of Long Term Investment Plans (LTIPs) to bring a longer-term and more integrated focus to strategy and investment management in the public sector. This is the Ministry's first LTIP and has been developed in an emerging Crown investment management and asset performance environment. It does not provide all the answers and raises a number of issues which will need to be considered over the coming year and addressed in the next LTIP.

This document covers the period 2015/16 – 2024/25, and should be read in conjunction with MoE's Strategic Intentions as published in its Four Year Plan 2015-2019 and the MoE Budget 2016.

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16 December 2015

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# **1. Executive Summary**

## **1.1 Purpose of the LTIP**

The Long Term Investment Plan (LTIP) outlines the investment required to support delivery of the Ministry of Education's (MoE) strategy over the next 10 years (2015/16 to 2024/25). It identifies the extent to which the strategic objectives can be funded from within forecast resources, and the timing and amount of any additional capital and/or operating required. It also identifies opportunities and trade-offs to reduce the cost of the plan and/or fund from other sources.

MoE is classified as an "investment intensive agency" and is required to develop an LTIP as part of the first tranche. This is the first LTIP for MoE and is not expected to provide all the answers. There are a number of opportunities for improvement that will need to be addressed in the next LTIP.

## **1.2 Structure of this Paper**

The Ministry's assets are managed in three separate portfolios: Education Infrastructure, ICT and Office Accommodation & Other. Due to the size of Education Infrastructure a separate LTIP has been developed and accompanies this paper. This paper is in five sections:

- Section 1: Ministry overview (all three portfolios).
- Section 2: A separate LTIP for Education Infrastructure has been developed and accompanies this paper.
- Section 3: ICT LTIP.
- Section 4: Office Accommodation & Other LTIP.
- Section 5: Consolidated Financial Statements (all three portfolios).

## **1.3 Strategic Overview**

Education Infrastructure, ICT, Office Accommodation & Other assets provide the enabling conditions for the Ministry to deliver on its stewardship early childhood & schooling, and tertiary Education intentions. Ensuring that our investments are well managed, fit for purpose and high performing is key to delivering our strategic intentions and our long term outcomes for the education system:

- The education system is relevant and reaches all children and students.
- Every child and student achieves educational success.
- New Zealanders have the skills and knowledge for work and life.

The Education Infrastructure portfolio provides the buildings and facilities at over 2,080 state schools and supports achievement of the Ministry's strategic intentions by:

- Enabling 21st learning practices through provision of innovative learning environments
- Improving evidence based investment decisions
- Increasing efficiencies.

The strategy for Education Infrastructure recognises that there are significant issues impacting the current condition of the school infrastructure portfolio that need to be addressed, including the Christchurch earthquakes, weather-tightness defects and poor prior maintenance practice at some schools. These issues and the need to expand the portfolio to meet role growth represent significant investment drivers in the LTIP.

The strategy for the Ministry's non-school assets aims to increase effectiveness and reduce costs by upgrading, rationalising and integrating systems, reducing vehicle numbers and optimising the property footprint through co-location opportunities. The objective is to provide appropriate enabling capability to the frontline service providers to support their daily activities as much as possible.

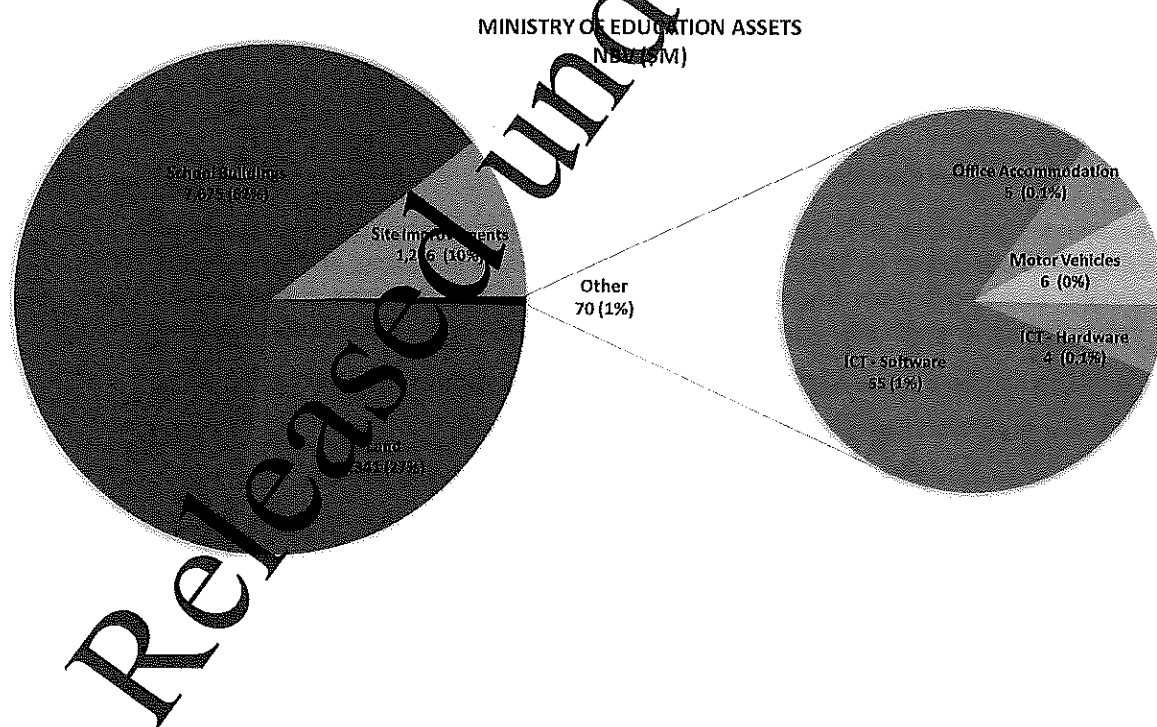
The Ministry's digital strategy supports innovative learning and enables stakeholders to have the information and data they need to make the best decisions for learners. In particular, it will enable:

- Better access to and use of data and information to support more evidence-based decision-making.
- Access to digital learning opportunities to support 21st century practice in teaching and learning.
- More efficient administration of education.

#### 1.4 The Ministry's Asset Portfolio

The total value of assets managed by the Ministry totalled \$12.4 billion<sup>1</sup> as at 30 June 2015. These assets are managed separately in three portfolios:

- School Infrastructure \$12.3 billion (99%)
- ICT \$ 59 million (less than 1%)
- Office accommodation, motor vehicles and other \$ 11 million (less than 1%)



<sup>1</sup> Net Book Value before impairment.

#### 1.4.1 School Infrastructure

The school infrastructure portfolio is managed by the Education Infrastructure Service (EIS) group. It comprises around 2,080 schools, 7,700 hectares of land and 29,300 buildings primarily supporting the delivery of school-level education. As at 30 June 2015 the book value of the school infrastructure portfolio was \$12.3 billion, with a replacement cost of \$23.6 billion, making it one of the Crown's largest social asset portfolios.

The scope of the LTIP covers investment in the school infrastructure portfolio, which accounts for approximately 85% of school-age education provision in New Zealand. It excludes investment in independent (i.e. private) schools, which are not owned or funded by the Crown. It also excludes State-Integrated schools. These are non-Crown owned, although the Crown does provide funding contributions to support the provision, maintenance and renewal of State-Integrated infrastructure<sup>2</sup>.

#### 1.4.2 ICT

The Infrastructure Communications and Technology (ICT) portfolio is managed by the ICT group within the corporate support area of the Ministry. ICT manages systems that help schools and providers, education agencies, and other sector groups to do their jobs effectively and efficiently. The group also manages a range of software systems and core infrastructure (including hardware, desktops, laptops, mobile and other devices) which support the Ministry.

#### 1.4.3 Office accommodation & other

The third portfolio is managed jointly by the Property Manager and Shared Services Manager, again within the corporate support area of the Ministry. Office accommodation covers 47 office properties and 17 other sites or leases. All properties are leased but office fit-outs, furniture and equipment is owned by the Ministry. Management of the leases and facilities is outsourced. The Ministry also owns 580 vehicles - fleet management is outsourced.

### 1.5 Forecast Investment and Funding

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Over the next 10 Years the Ministry forecasts capital expenditure totalling [REDACTED] across the three portfolios as follows:

- School Infrastructure
- ICT
- Office accommodation & other

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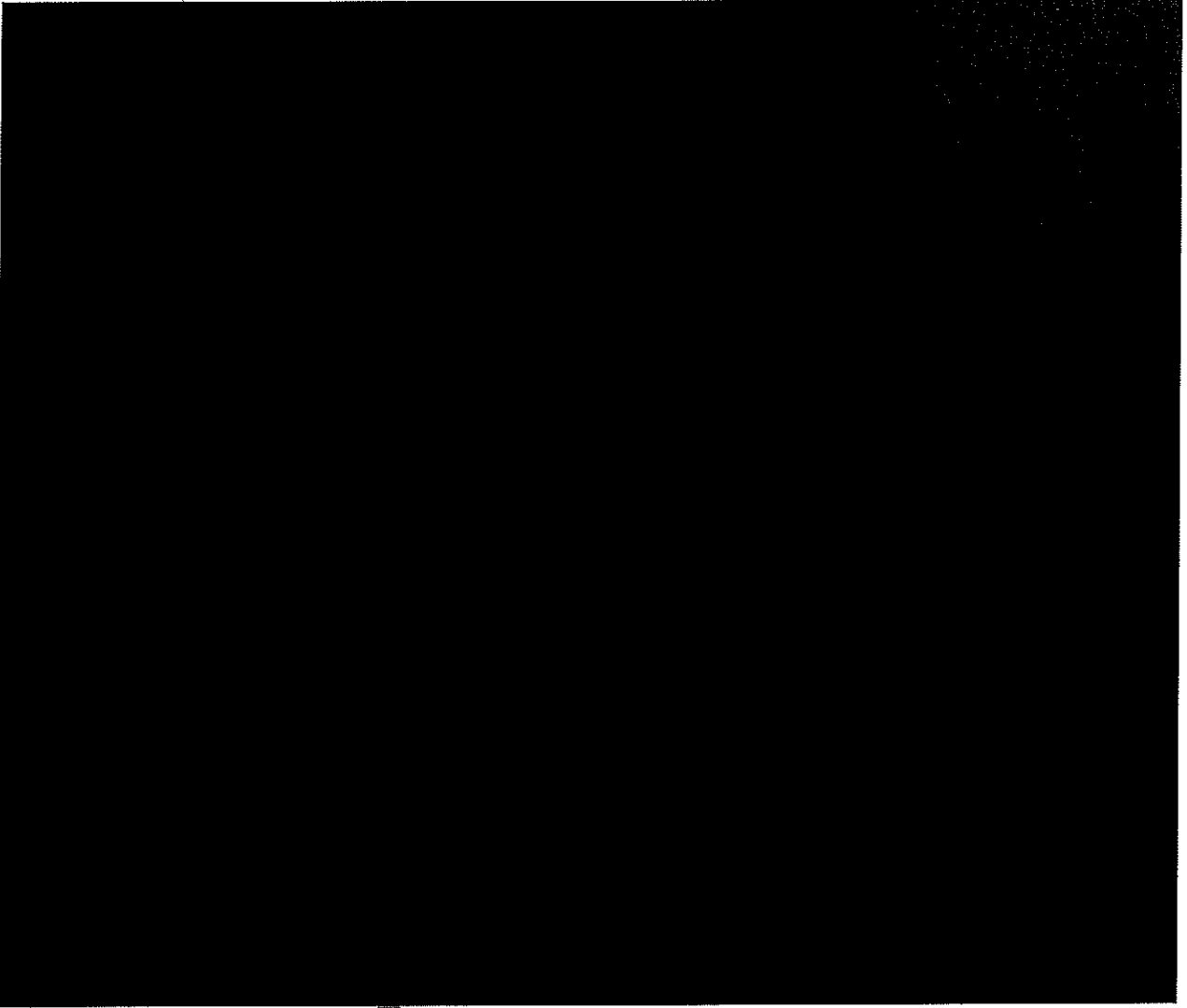
<sup>2</sup> This funding is excluded as the investment management rests with the schools' Boards of Trustees.

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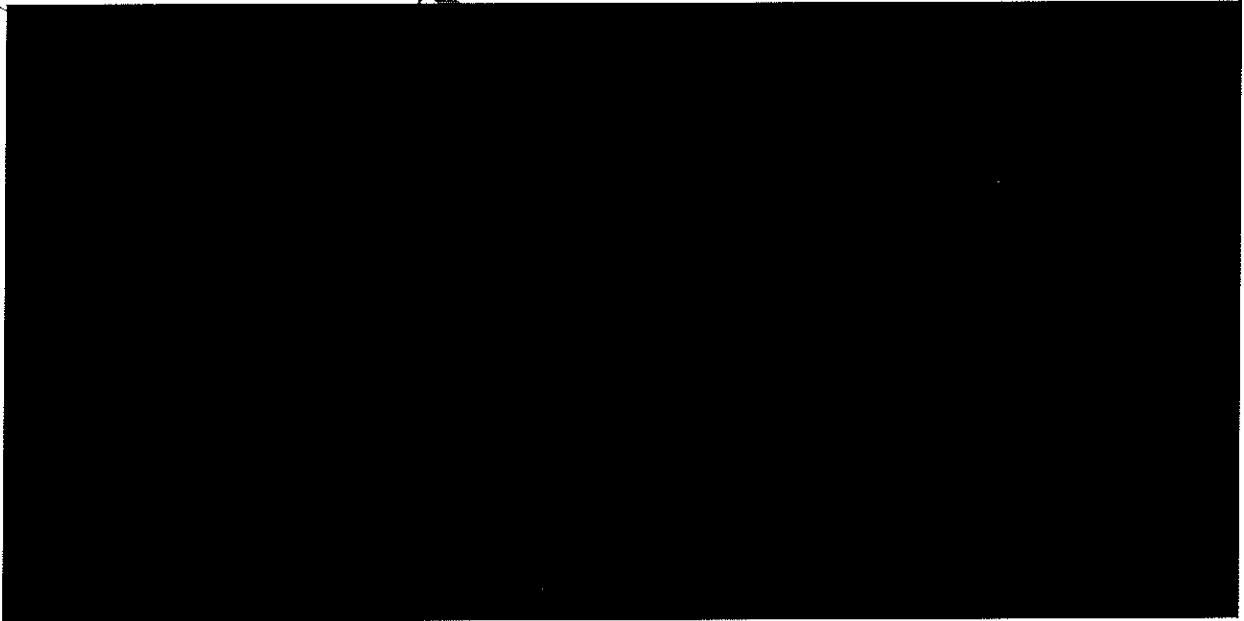
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## 1.7 Opportunities

### 1.7.1 Improving capital efficiency and value for money

Opportunities exist within the term of the LTIP to improve capital efficiency and value for money from investment. These include:

- Better procurement – including better use of Ministry purchasing power to negotiate national and regional contracts; promotion of project and network bundling to enhance local level economies of scale; improved vendor management to drive performance; greater consideration of alternative delivery options, including public private partnerships, leasing and alliancing.
- Better planning – both in terms of the quality of school level planning aimed at optimising in-school solutions to issues, and programme and portfolio level planning aimed at prioritising investments to maximise outputs and outcomes and supporting better procurement.
- Better investment governance – through a fully mature portfolio management office, improved reliability of forecasts, better business cases and robust decision making processes.
- Cost avoidance – through better utilisation of existing assets through demand and supply management enabling deferral or avoidance of some new school or building projects.

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- Increasing alternative funding sources - including through more efficient and effective asset disposal processes, successful claims against defective products and workmanship contributing to issues of weather-tightness, and the potential for increased private sector investment.

### 1.7.2 Reducing the size of forecast capital spend

Opportunities considered in this LTIP to reduce the size of the forecast capital spend include:

- Reducing the size of the School Infrastructure portfolio. The Ministry is actively managing down the School Infrastructure portfolio by:
  - Rationalising surplus property at schools with excess capacity due to demographic changes or population shifts.
  - Demolishing property where appropriate at the end of an asset's lifecycle, or where significant remediation or redevelopment work is not cost effective.
  - Disposing of land and houses that are surplus to requirements.
- Maximising utilisation. The Ministry aims to maximise the proportion of schools with classroom utilisation greater than 75% and less than 105%.

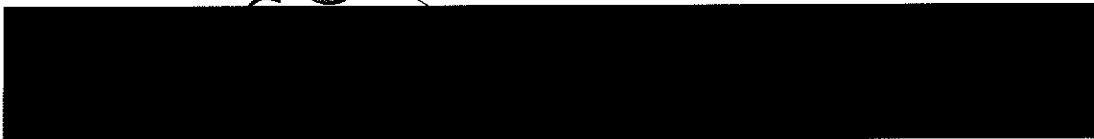
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- Changing the delivery model. The plan includes the impact of communities of learning, open learning spaces, digital learning and re-usable classrooms.
- Co-location of agencies in shared office accommodation.

### 1.8 Risks

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Key risks to the achievement of this LTIP include:

- 
- Reliability of forecasts – capital requirements to meet roll growth depend on the accuracy of population forecasts.

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- Price escalation - the LTIP is presented in real (2015 dollar) terms and does not take into account price escalation.

- Impact outside the 10-year horizon - the bulk of school building stock dates from the 1950s and 1960s. Significant maintenance requirements are likely to impact outside the 10-year horizon of this LTIP.
- Co-location arrangements - in some locations the Ministry is the lead agency with other agencies sharing premises. These arrangements are dependent on the other agencies contributing to the cost of the fit-out of the new premises as well as meeting their share of the standard operating costs.
- Impact of changes in office accommodation - PMCoE is undertaking a project that incorporates 24 agencies, including the Ministry of Education, that have office accommodation leases in the Wellington Central Business District that expire between 2016 and 2019. The impact on MoE at this stage is unknown.
- The ICT projects supporting the Education Digital Strategy are still being scoped and costed. It [REDACTED] The Ministry is preparing an investment management strategy to explore various means of prioritising and funding the ICT work programme.

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## 1.9 Assumptions, Constraints and Dependencies

Key assumptions, constraints and dependencies underpinning this LTIP include:

- Demand forecasts are materially accurate at the median level of Statistics NZ projections (growth in demand in Auckland is the most significant source of uncertainty).
- [REDACTED]
- The Market has the capability/capacity/products to successfully deliver the projects and programmes in the LTIP.
- Workforce and industry constraints do not limit the extent and timing of delivery of projects.
- Project and programme cost and timing estimates are reliable.
- No significant changes in Government priority or policy over the term of the LTIP.
- [REDACTED]
- [REDACTED]

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## 1.10 Next Steps

The Ministry's new Chief Financial Officer has initiated a Finance Transformation Programme which will lift the quality of financial management across the Ministry by investing in systems, processes, capability and capacity. As part of this programme, a strategic finance team of five is being established which will focus on the long-term financial management of the Ministry.

The strategic finance team's first deliverables will be a:

1. Strategic Finance Plan; and
2. Comprehensive end-to-end investment management framework.

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## **2. Education Infrastructure**

The detailed LTIP for Education Infrastructure is attached as a stand-alone document.

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### 3. ICT

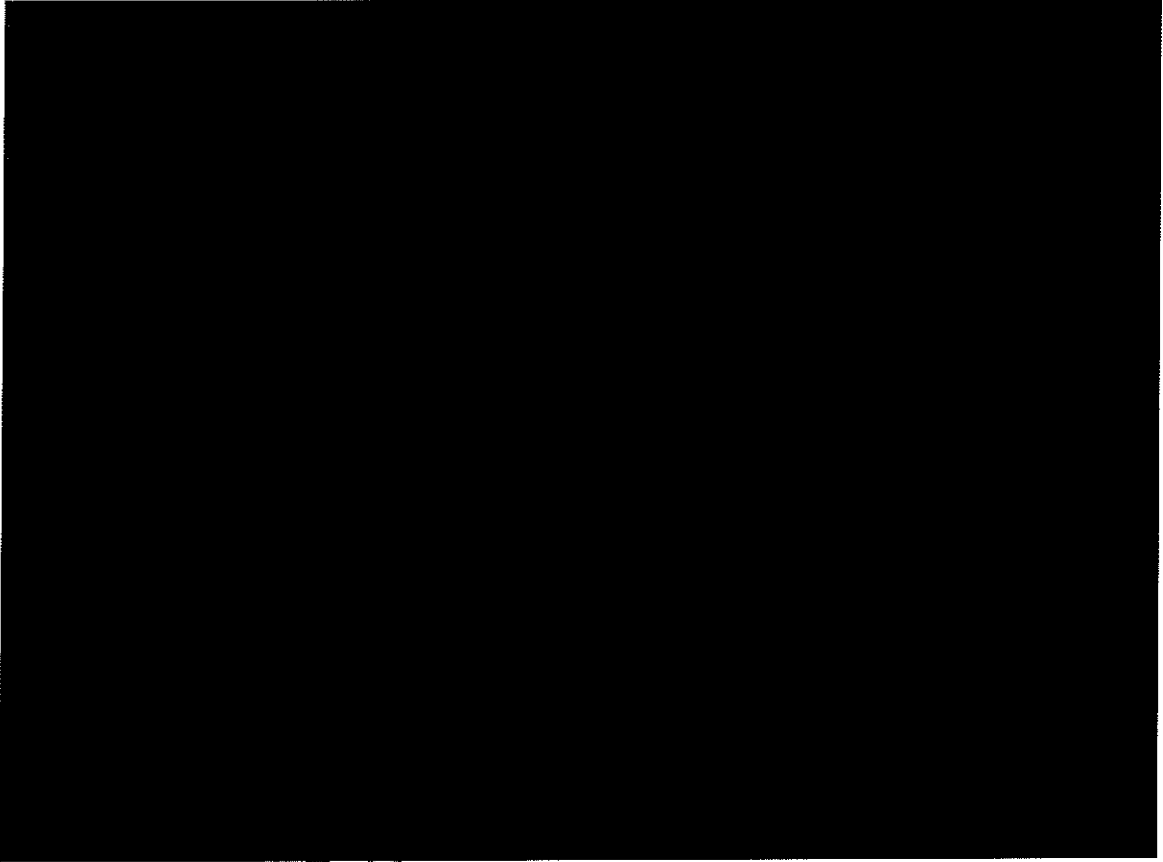
#### 3.1 Summary

The Information and Communications Technology group (ICT) manages assets totalling \$59.0m<sup>3</sup> comprising:

- Software - \$55.0m.
- Core infrastructure (hardware/desktops/laptops/mobile devices/etc) - \$4.0m.

A summary of forecast capital expenditure and proposed funding over the next 10 years to 2024/25 is set out below (refer appendix 2 for detail):

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The ICT investment plan supports the Education System Digital Strategy. The plan consists of five portfolios:

- Modern and Responsive Learning Environments.
- Efficient Administration of the Education System.
- Engaged Productive Workforce.
- Effective Corporate and Common Services.
- Core Infrastructure.

Expected benefits include:

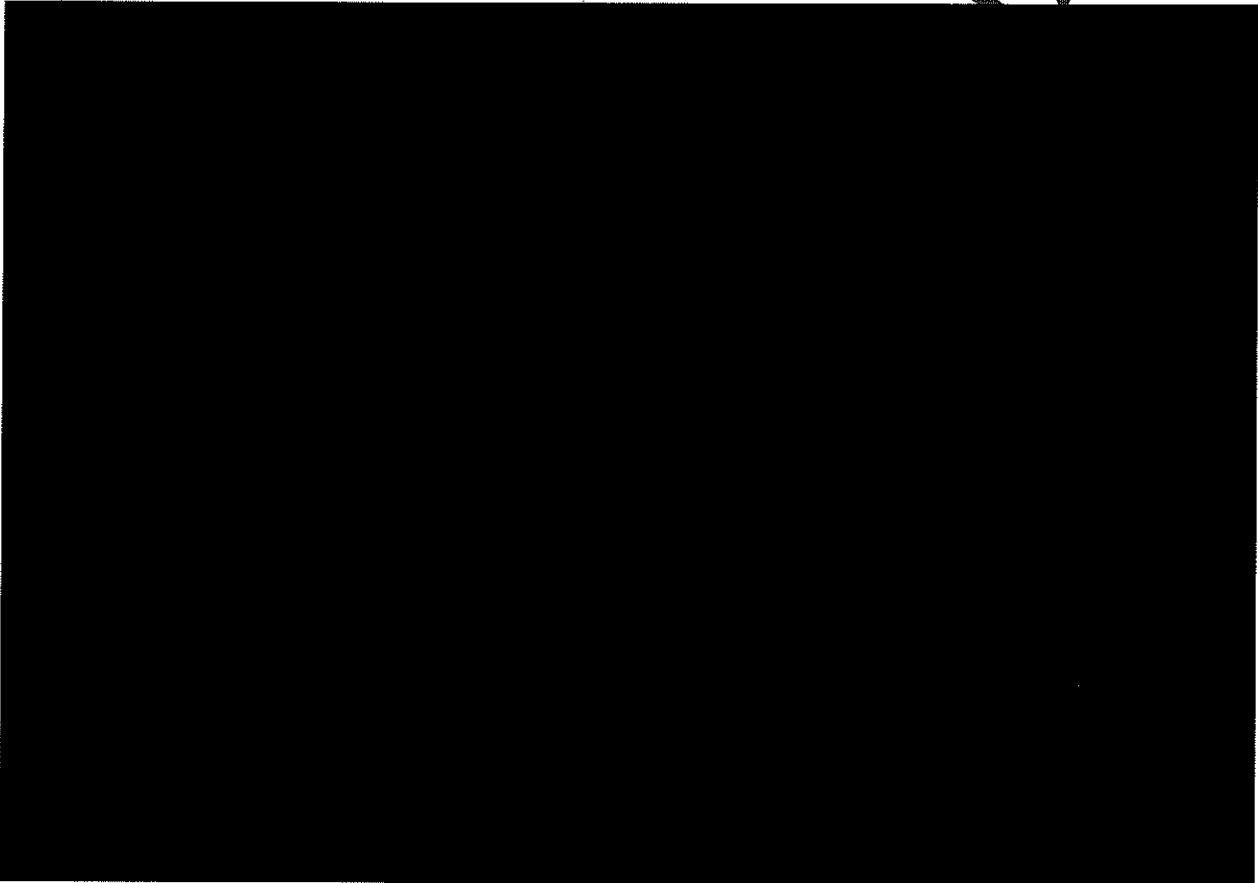
- Reduced costs as a result of consolidation and rationalisation of systems and infrastructure (Cloud based or shared services).

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<sup>3</sup> Net Book Value.

- Effective privacy and security practices which will ensure compliance with legislation as well as enable the portability of identity information across security domains.
- Improved student outcomes and increased equity as a result of improved access to quality data.
- More efficient systems and streamlined processes would allow faster changes, automation and additional collection of data with little to no additional administrative burden on end users and marginal costs to the Ministry.
- Information flows seamlessly from education provider systems, improving timeliness and reducing data management and administrative burden for providers and agencies

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As part of the overall strategic financial planning process, the Ministry is preparing an investment management strategy to explore various means of prioritising and funding the capital work programme.

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### 3.2 ICT Group

The Information Technology (ICT) group assists the Ministry (and the education sector) to plan, deliver, support, use, and maintain a range of ICT systems. ICT provides the organisation with the technology and infrastructure needed for everyday work. ICT offers teams across the Ministry expert ICT advice on risk assessment, analysis, project and programme delivery, and support for project governance. ICT also manages systems that help schools and providers, education agencies, and other sector groups to do their jobs effectively and efficiently.

The ICT group provides and maintains a diverse collection of assets and services. At a basic level, it delivers the network and desktop computing facilities for the Ministry. In addition to these core infrastructure and office productivity items, ICT manages in excess of 150 applications and 100 websites that range from core corporate and line of business applications to externally client facing systems whose functions are used across the education sector.

The Ministry has an incident management process that has determined a number of tiers for both Sites and Applications that reflect the urgency that should be applied when resolving incidents. This includes guidance on what priority and levels of service are specified given the tier and impact of the event.

For ICT, there are a number of challenges faced when planning and delivering services and systems, from:

- Rapidly changing technology – the pace of change of technology is such that any solutions will need to be designed to be able to take advantage of improvements/changes to technology.
- Diversity in the sector, both technological and staff capability – there is a wide range of technology and skills in the education sector and what services and technologies are provided will need to cater for any level of user.
- Establishing effective governance processes across agencies and providers.
- The levels of security and privacy that will need to be established/maintained as part of offering the applications and services required by the Digital Strategy.
- Establishing the various means of obtaining funding for the work programme.

As part of the ongoing work with Treasury on the Investor Confidence Rating, Long Term Investment Plan, Asset Management Maturity and the GCIO on Application Portfolio Management, the Ministry will be enhancing and further developing our asset and portfolio management practices and capability.

### 3.3 Digital Strategy

The Education System Digital Strategy was developed as a response to the vision for a digitally enabled education system for New Zealand (refer appendix 1). The Education System Digital Strategy has been approved in principle by the Chief Executives of the education agencies as the instrument to guide ICT investment over the upcoming years/next four years. The strategy aligns with the Ministry's Four Year Plan and also key business initiatives. It has linkages to government strategies and priorities such as the Better Public Service targets, Business Growth Agenda and the Government ICT Strategy and Action Plan.

Other agency costs associated with the Education Digital Strategy are additional and are funded by them. A shared governance model is being developed and adopted for ICT systems and their funding across education sector agencies and the education system, to ensure alignment to the strategy and prevent duplication of effort or expenditure not consistent with the strategy.

### 3.4 ICT Investment Plan

The Ministry currently has a fragmented systems environment with many applications which are not integrated, systems of varying ages and levels of support and a declining knowledge base. The ICT investment plan will address these issues and consider options to move to more hosted offerings to capture advantages of scalability, cost and resilience. The plan is also designed to support the Education System Digital Strategy. Use will be made of digital technologies to improve the reach of services and the quality of the user experience.

The Ministry also aims to increase the integration and automation of internal systems such as finance and procurement to more effectively support the core functions of the Ministry while improving the quality of service and reducing the cost of delivery.

The ICT investment plan consists of five portfolios:

- Modern and Responsive Learning Environments Portfolio - The education system has a strong culture that encourages innovative and considered use of ICT to improve and support education and learning outcomes. The emphasis will be on resources and tools that support teachers and learners, underpinned by a strong evidence base to inform assessment, teaching and learning practice. The intent of this target state is to ensure that the learner is central to the overall strategic vision. The initiatives all directly affect the process of teaching, learning and assessment and the learner experience of the education system.
- Efficient Administration of the Education System Portfolio - The intent of this target state is to improve the efficiency and effectiveness of education system administration. The initiatives aim to more effectively support the delivery of education, simplify and reduce the administrative workload faced by education providers and agencies, and reduce ICT costs. This includes smarter shared services options, and integrated data collection and appropriate sharing of data and information.
- Engaged Productive Workforce Portfolio - The education provider workforce will be supported by shared and common services for registration, recruitment, remuneration, and professional development and learning. Integrated data and information collection will enable improved workforce management at the provider, community of schools, regional and national levels.
- Effective Corporate and Common Services Portfolio - There will be a common infrastructure and a range of shared services to support education providers, regional and national support, and education sector agencies. This environment will be underpinned by a standards-based approach to security, privacy and identity and access management.
- Core Infrastructure - Core infrastructure consists of end user devices (Desktop PC's, Laptops, Tablets etc.), network switching and other components, servers and storage components, and office productivity technology such as video conferencing, Wi-Fi and integrated collaborative messaging, meetings and telephony.

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### 3.5 Major Projects

The forecast capital spend over the 10 years to 2024/25 based on the existing ICT work programme is [REDACTED] (refer appendix 2 for details). The major projects that support the Ministry's strategic intentions are outlined below:

#### 3.5.1 Education Resourcing System

The current funding system (the Education Management Information System, EDUMIS) is obsolete and ongoing support may not be possible as the skills required are no longer being taught, in addition to the system using obsolete hardware and software components.

The Education Resourcing System (ERS) Programme will provide a new resourcing service, underpinned by a flexible, fit-for-purpose, ICT platform that is capable of delivering resourcing to Early Childhood Education, schooling and (potentially) tertiary sectors that allows the Ministry to become a better informed steward of the New Zealand education system.

The intended lifecycle of any solution will be in excess of 10 years. The indicative costs of the ERS programme are [REDACTED]. These estimates have been based on the figures received from ROI responses from vendors and market research.

Three high-level benefits for the programme were identified through an Investment Logic Mapping (ILM) process; these are:

- Reduced costs of compliance and change.
- Better investment decisions.
- Quicker implementation and effect of policy change.

These benefits remain at the core of the ERS Programme's underpinning rationale. At this point the specific impacts on the workforce have yet to be determined. The proposed benefits include more automation of some processes which should alleviate the workarounds and manual processing currently required.

The programme is currently in its definition/procurement stage with business case approval and RFP planned for early 2016. Given the size and complexity of the deliverables, the programme has phased deliveries with the first planned for early 2017 and progressing to 2019.

The current key risks for the ERS programme centre on the ability to deliver if the requirements and/or processes are overly complex, and the availability when needed of skilled resources of various disciplines.

### **3.5.2 Education Sector Identity and Access Management (ESIAM) Programme**

The Ministry in collaboration with education sector agencies must provide a safe and secure Identity and Access Management (IAM) service for the education sector. The Government, and the Government Chief Information Office, require the Ministry to take a lead in education sector ICT. The education sector intends to invest in implementing an IAM solution that supports the workforce (teachers and administrators), students and parents.

The programme is expected to deliver the following benefits:

- Enhanced user experience.
- A connected sector.
- Enhanced security and privacy.
- Federation (enables the portability of identity information across security domains and single-sign-on).
- Less dependence on external vendors.
- Increased internal Ministry capability to support the technology and users in the sector.
- Aligns to Government Chief Information Office strategic direction for sector authentication and authorisation requirements.
- Facilitates the security arrangements arising from the implementation of the Vulnerable Children Bill.

### 3.5.3 *Integrated Education Data (iEd) and the Learner Dashboard (LD)*

The purpose of this initiative is to improve access to data and information for decision-making by strengthening the education system's data infrastructure and better positioning education to play its crucial role in the social sector investment work programme. With better data we will have the power to intervene early and more effectively across the state sector.

Our analysts will be able to focus on the higher-value added tasks of analysis, evaluation and dissemination, rather than collation, processing and quality assurance. We will be able to introduce tailored data products specifically for monitoring programmes, identifying children at risk of not achieving, data sharing with other agencies, and reporting to the public about the performance of the education system, at significantly lower cost. These will enable better targeting of education resources

By creating a one-stop-shop portal for parents and whānau that gives access to a variety of high quality, authoritative information about New Zealand schools, early learning centres and the learners that journey through them, this initiative will assist policy makers, schools, teachers and boards in supporting evidence based practices.

Initially the project will deliver data about Schools and Learners (the Learner Dashboard) for a parent audience and increase our ability to provide data to internal users of Schools and Learner information by building on the Schools Business Data Store framework.

#### 3.5.4 FMIS Replacement

The Finance group within the Ministry is tasked with supporting the Ministry's objectives by providing financial information that is timely, relevant, accurate and up to date in order to support good decision making. It also seeks to align financial management systems, practices and processes to support the Ministry in delivering its strategic outcomes.

These services are underpinned by the Ministry's Financial Management Information System (FMIS) which is currently Oracle financials. The FMIS Replacement project will replace the existing expensive financial systems suite with a single integrated financial system. Potential also exists for wider use of the FMIS as shared systems and services across the education agencies.

The key benefits of the FMIS replacement are:

- Reduced financial risk through elimination of fragmented systems and the many supporting spreadsheets with high potential for error
- More efficient processes
- Fit for purpose financial information

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A system on which wider service provision to education agencies would be based and,

The estimated cost for the FMIS replacement is \$3.1m. The project is currently in its procurement stage with a vendor selection expected in December 2015. Go live of the new system is planned for 1 July 2016.

The key risks of the project are driven around the proposed timetable and whether the interfaces can be built, or workarounds put in place, in time for a 1 July 2016 Go-live. A further major risk is adequate resource availability for the project.

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### 3.5.6 School Transport Resourcing Administration System (STRAS) Replacement

To ensure equity of access to State education the Ministry of Education provides resources to assist students to get to their nearest public school. The School Transport Resourcing and Administration System (STRAS), manages payments to school transport providers (Caregivers and Ministry contracted operators) to assist eligible students to travel to school.

STRAS is used to calculate and manage \$175m of student transport payments at the Ministry of Education. Over 170,000 payment transactions are managed annually for 8,000 transport providers and caregivers who provide services for 105,000 students. School transport will remain a core capability for the Ministry in the foreseeable future.

STRAS was developed in 2001 and the technology platform on which it was developed is now out of support. Due to the nature of the code base STRAS is unable to be simply migrated to an upgraded environment without significant investment. The platform that STRAS resides on is unreliable and there is an urgent need to replace it.

The School Transport Resourcing Administration System Replacement project is the replacement of the current STRAS system with a system of equivalent functionality that is hosted on modern supported infrastructure.

The projects objectives and benefits are:

- Accurate and timely payments are made to school transport providers of Ministry funded school transport services and to schools who are directly resourced for providing transport services.
- The solution is technically stable and in-line with current and target state Ministry architecture and standards.
- The design of the solution reduces current administration overhead.
- The solution will address audit and security concerns and current functional shortcomings.

The project is in its final implementation stages with final deployment to production in December 2015.

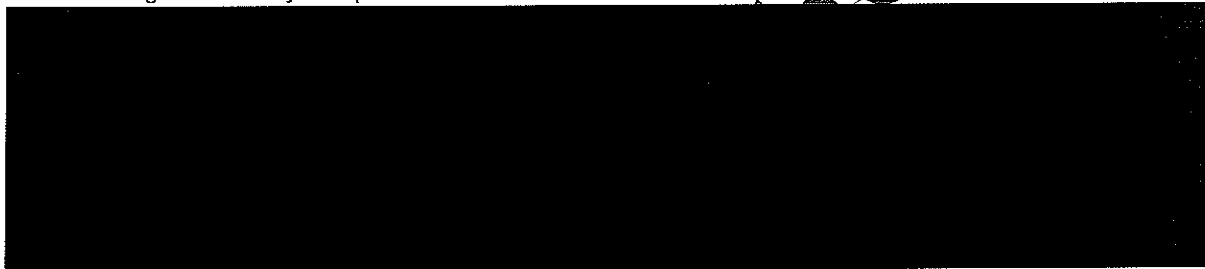
The main risks to STRAS are around delays requiring retention of contract staff and hence extra costs and the availability of resources if delays are encountered.

### 3.5.7 Education Cloud (EduCloud)

Year Plan (2015-2019), this project will support and also contribute to “more efficient administration of education” in line with the Ministry’s ICT strategy. The project will also include the physical upgrade to Windows 10.

The project is expected to deliver the following benefits:

- On-demand self-service – reduces the manual effort in creating new services.
- Versatile network access - capabilities are available over the network and can be accessed via whatever platform the business needs (e.g., mobile phones, tablets, laptops and workstations).
- Consumption based charges - pay for what you use rather than an owning the service asset.
- Resource Pooling – sharing resources will reduce costs through economies of scale.
- Rapid Elasticity – the service can be expanded or contracted as required thus only using what is required when it is required.
- Measured Service – reporting on the level of the service consumed within a required quality range.
- High availability and performance – services available 24/7.



### 3.6 Risks and Constraints

#### 3.6.1 Risks

Risk	Mitigation
1 Price increases - in accordance with Treasury requirements, the LTIP is presented in real (2015 dollar) terms and does not take into account price escalation	All significant purchases will be through all of government contracts.
2	
3	
4	

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Risk	Mitigation
5	

### 3.6.2 Assumptions, Constraints and Dependencies

The following key assumptions, constraints and dependencies underpin this LTIP:

- Capital is available. The Ministry will need to significantly scale up its project/programme delivery capacity in order to cater for this magnitude of work.
- Sufficient capability and capacity is available within the Ministry to successfully deliver the projects and programmes in the LTIP.
- The Market has the capability/capacity/products to successfully deliver the projects and programmes in the LTIP.
- Workforce and industry constraints do not limit the extent and timing of delivery of projects.
- Project and programme cost and timing estimates are reliable. Different programmes carry different assumptions, risks and uncertainties and therefore the reliability of forecasts making up the plan will vary between programmes. Generally, the forecasts in the short-term will be more reliable than those in the medium to longer term.
- No significant changes in Government priority or policy over the term of the LTIP
- The plan is based on current information and assumptions and is subject to continuous monitoring and updates. In practice, forecasts are reviewed and updated on a monthly basis, although material changes typically occur less frequently.

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## 3.7 Asset Performance

### 3.7.1 Qualitative Measures

The investment plan is based on the Education System Digital Strategy target states. The new technologies provide the means to adapt the education system to fit the learner's needs, collapsing traditional boundaries to create an integrated, seamless system characterised by:

- Personalised, self-directed, authentic learning available to all, with students' data and records of learning travelling with them.
- The means for all students to develop higher-order competencies, including digital literacy, complex problem-solving, collaboration and team-work.
- Strong, active learning relationships between learning providers, students, educators, parents, whānau, communities and business.
- Common tools and platforms providing access to secure, accurate, up-to-date information that is easy for users to find.



- Effective stewardship of the system led in collaboration with sector representative groups and central agencies.
- Targeted investments to upgrade system infrastructure as new advances in technologies provide opportunities for innovation and improvement.

### 3.7.2 Quantitative Measures

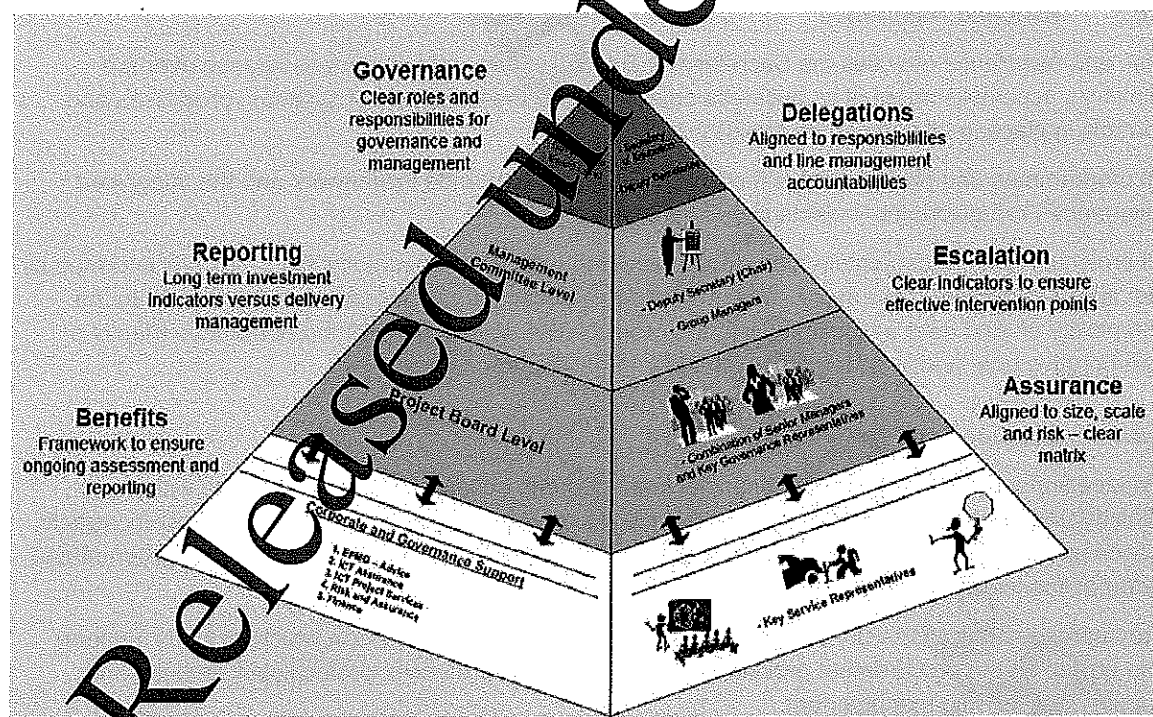
Asset performance is monitored monthly using five key measures of system availability:

	Target
Critical Applications	99.75%
Important Applications	99.75%
Other Applications	99.75%
Locations	99.75%
Voice and Data	99.75%

## 3.8 Governance

### 3.8.1 ICT Governance Structure

The Ministry has a mature Governance structure in place for its ICT programmes and operations. Governance levels range from support services and project boards to senior management. This is illustrated in the ICT Governance Framework shown below.



### 3.8.2 ICT Governance Board (ICTGB)

The ICT Governance Board (ICTGB) is the body that the Chief Executive has given the authority to recommend the strategic direction of the Ministry's investment in information systems and technology. In addition there are Portfolio, Programme and Project boards to govern the various streams of work across the Ministry.

ICTGB is responsible for evaluating directing and monitoring ICT operations, policies, assets and services owned and operated by the Ministry or utilised by the Ministry in supporting its internal operations and delivering its services, including the delivery of ICT services via All of Government or other providers

The Board is delegated the authority by the Chief Executive (CE) to:

1. Recommend the strategic direction for the Ministry's investment in information systems and technology, through the ICT Strategy.
2. Recommend the ICT Investment Plan to the Ministry Board as part of the annual planning cycle taking into account investments necessary to ensure maintenance of that service delivery which is dependent on ICT systems, whether owned and operated by the Ministry or delivered through a service provider and ensure that their investments are included in relevant Group business plans.
3. Approve Mandates/Project Briefs, Business Cases, Fund Releases and Exception Reports for projects and programmes in the approved ICT Investment Plan.
4. Review and approve significant "Go Live" readiness decisions, with the relevant sponsoring Deputy Secretary providing a briefing and recommendation to confirm "Go Live" has covered off all operational requirements, stakeholders and all change impact risks.
5. Ensure key policies and appropriate commercial arrangements are in place for the operation and delivery of ICT, and where necessary, direct their preparation and implementation, within the Ministry.
6. Monitor the progress of projects, in particular achievement of milestones, risk management and delivery of benefits.

### **3.8.3 Risk and Assurance**

Risk and Assurance provides the Secretary for Education with independent assurance over the Ministry's accomplishment of its business objectives and the adequacy of systems, processes and controls in place in all parts of the Ministry.

All programmes and projects utilise the ICT Operations Assurance Framework and the Integrated Assurance Framework for Projects and Programmes.

All projects create and maintain their own costed and resourced Assurance Plan; which is informed by the "lines of defence" that ensures that the various sources for assurance are proportionate to the complexity of, and risks associated with, the project. The development of the Assurance Plan is a collaborative one, and is undertaken with the internal assurance functions.

### **3.8.4 Finance and Procurement**

Finance supports ICT by providing financial management, accountability and reporting within the Ministry and to external stakeholders. This includes managing significant central purchase contracts, advice and support, paying the bills, managing the annual education budget process and internal and external financial reporting.

Procurement services are provided by the Corporate Procurement function which includes support and advice on the procurement processes, ICT contracts, recruitment, professional services and supplier relationship management.

### **3.8.5 Enterprise Portfolio Management Office (EPMO)**

The Enterprise Portfolio Management Office supports the Ministry to deliver the right projects and programmes to achieve its strategic priorities and targets within the agreed timeframes and cost.

The EPMO acts as a central point of control and oversight for Ministry programmes, projects, initiatives and governance. As well as capturing activity and ensuring projects and programmes are co-ordinated and prioritised, the EPMO provides advice, training, and best practice tools.

### **3.8.6 Policy**

The Education System Policy (ESP) group in the Ministry provides policy advice to Ministers on early childhood education, schooling, and Māori education. They have a focus on providing policy advice on the education system's performance and longer term strategic issues.

ICT Strategy, Planning, and Architecture (SPA) work with these groups to ensure clear alignment and connection between policy, business strategy, ICT strategy, and ICT architecture.

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## 4. Office Accommodation & Other

### 4.1 Summary

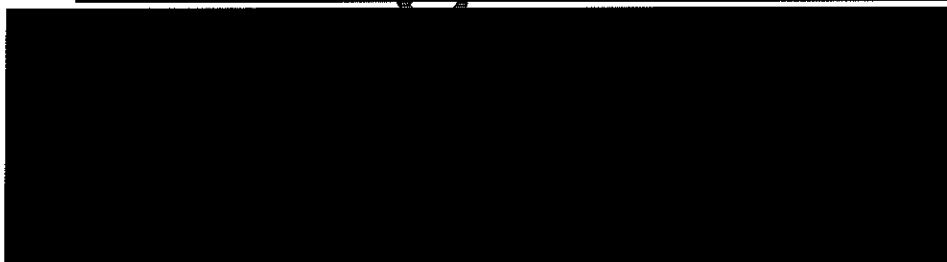
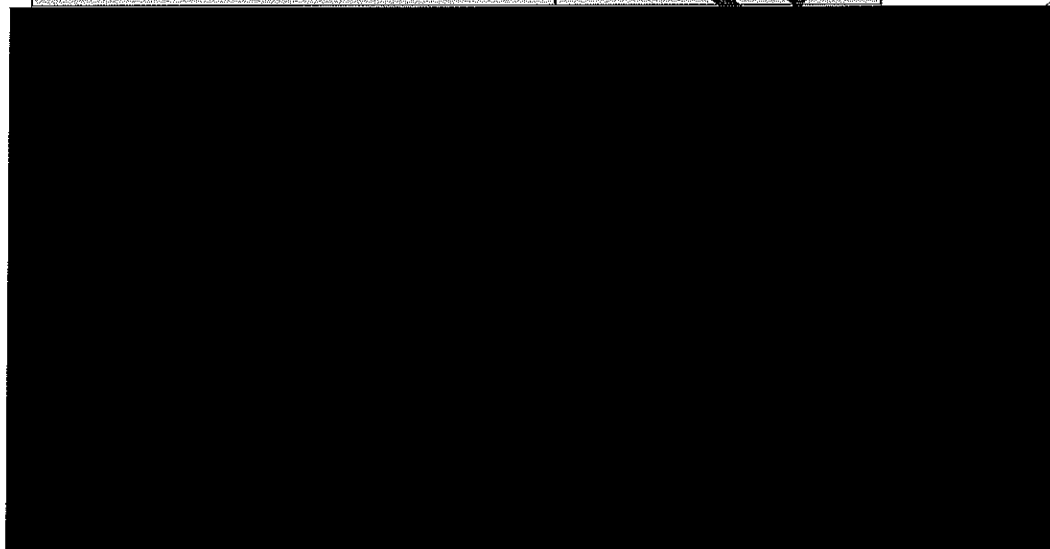
The Office Accommodation & Other portfolio covers three areas:

1. *Accommodation* - 47 office properties and 17 other sites or leases. All properties are leased but office fit-outs, furniture and equipment is owned by the Ministry. Management of the leases and facilities is outsourced.
2. *Vehicles* – 580 vehicles are owned by the Ministry. Fleet management is outsourced and vehicles are scheduled for replacement after 4 years or 100,000km.
3. *Other* – purchase of small items such as office equipment, furniture and fittings.

A summary of forecast capital expenditure and proposed funding over the next 10 years to 2024/25 is set out below:

	Total Over 10 Years \$millions
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## **4.2 Accommodation**

### **4.2.1 Overview**

The office network currently managed by the Ministry comprises 64 sites as follows:

- 36 leased commercial sites
- 11 school sites
- 17 other sites or leases for storage and car parking

Ministry of Education offices are usually located in standard office buildings that have low profile and presence. The premises are generally in good condition. The Ministry has a contract with Colliers International to manage the leases and facilities of the office network. ICT equipment is managed separately by the Information Technology Group. As leases have expired the Ministry has taken the opportunity to:

- Consider co-location options with other government agencies, such as in Rotorua with Inland Revenue (IR), and in Gisborne with IR and Department of Internal Affairs (DIA); and
- Re-plan and refurbish each site to provide open plan and flexible spaces.

In many cases offices or facilities for specialist services such as speech clinics located on school sites (either within underutilised school facilities or within prefabricated type buildings) are sub-optimal and

may require significant reinvestment. Almost 90% of the offices are for special education services and need to be easily accessible and family friendly. The balance of sites are leased for storage or car parking and have evolved over time. The on-going need for these spaces will be reviewed.

The main assets on Ministry properties are internal fit-outs, furniture, equipment and information technology (including telephony). Accommodation capital expenditure is planned based on lease expiry, condition of premises, business requirements and other Government agency plans. The replacement cycle is built into the Ministry ten year capital plan and property operational plan. A detailed log is maintained of all maintenance issues for each site and this is used to assess the condition of premises. An annual maintenance programme budget is approved for office accommodation.

A key challenge for the Ministry will be the funding of leasehold property projects which are mandated by the Property Management Centre of Expertise (PMCoE), the functional lead for government property. These projects are currently the Wellington Accommodation Project phase two (WAP 2) and the relocation of the Christchurch office to the central business district. Both of these projects are co-locations with other agencies that provide additional challenges, including the funding model and how the Ministry works with the others in sharing facilities. There are also other large scale office reorganisations being considered by PMCoE which may impact the Ministry.

#### **4.2.2 Property Strategy**

A property strategy for office accommodation was updated in 2015 and approved by the Leadership Team on 25 August 2015. The strategy aligns with Government's vision for its office accommodation and public interface portfolio:

*"A government property portfolio that is responsive, affordable sustainable and safe, leveraging property as a tool to support organisational culture and assist in the delivery of services".*

The Ministry's property strategy also aligns with PMCoE's strategy and categorises office accommodation and public interface facilities into three types:

- National Head Office: may include some public interface and service delivery
- Standard Office: likely to include public interface and service delivery
- Service Delivery: dedicated service delivery

The Ministry is working to an Operational Property Plan (Nov 2014) which predates the property strategy and sets out the planned initiatives for each site in respect to likely lease renewals and potential relocations. This plan indicates little change in the portfolio with most leases to be renewed, although co-location opportunities will be explored with other government agencies.

The property strategy proposes to update the Operational Property Plan by reviewing each site as leases come up for renewal. The requirements for each site will be tested against the planning framework in the property strategy. This may result in:

- Existing sites being retained but upgraded to fit with the new 'concept';
- Some existing sites being relinquished at lease expiry and alternative premises acquired which better match the 'concept'; and
- Additional sites being acquired, either as Ministry specific facilities or as shared sites with other agencies.

As part of this process the Ministry will also determine whether additional geographical coverage is needed compared to those locations where territorial authorities are represented. As part of this analysis we will consider:

- Which locations can be serviced from nearby locations where the Ministry already has a presence e.g. moving some staff to special education offices such as Invercargill, New Plymouth and Tauranga;
- Where we can work from a school or with a partner/another agency to provide appropriate coverage;
- Facilities that our communities would find useful within our premises;
- Location of regional hubs; and
- Opportunities to create "education hubs" where we are co-located with other education agencies.

This LTIP is based on the existing Operational Property Plan but changes will need to be made over time based on the review process. Changes to the portfolio will be funded from within the Ministry's capital building replacement programme.

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#### 4.2.3 Forecast Spend and Major Projects

##### **Bowen Street**

The Ministry of Education currently leases in excess of 22,000m<sup>2</sup> of Wellington office space in four buildings. The new Wellington location will reduce the total space leased to 17,000m<sup>2</sup> within two buildings.

Cabinet approved this building consolidation in November 2012, on the basis of the Single Stage Business Case Wellington Accommodation Strategy, completed by the Property Management Centre of Excellence (PMCoE).

The new building is designed to provide a different way of working for the Ministry. It will be fully open plan, with activity based work settings available to all staff, along with areas for collaboration both within the Ministry and across the education sector. There is a significant cultural change for the Ministry and will be driven by the Chief Executive. It is supported by the new Ministry vision and behaviours which have recently been created.

The project is on track to be completed by 31 January 2016 and within a total budget of \$23m. Of this, \$19.9m will be spent in 10 year LTIP planning horizon.

##### **Christchurch**

Following the Canterbury earthquakes in 2010 and 2011 the Government working with the Christchurch Central Recovery Authority made a decision to restore confidence to the CBD by relocating central and local government offices into the city centre. As a consequence, twenty participating agencies (including the Ministry of Education) will occupy accommodation within the Christchurch core CBD.

The Ministry of Education is relocating 255 staff to the CBD in a new building from April 2017, co-locating with Housing New Zealand and the Ministry of Health.

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### **Mount Eden**

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The lease for the main office in Auckland expires in 2021 and capital has been allocated to either totally refurbish the premises or re-locate to another site. The timing of the refurbishment is based on the existing fitout and furniture being at the end of its useful life. The forecast includes a full fitout of the office, replacement of furniture and upgrade of Information Technology and devices.

Approximately two years prior to the lease expiry a business case will be prepared that will review the business requirements and standard of the building to make a recommendation to proceed or not with this project or renew the lease for a further term.

### **Wellington Accommodation Project phase 2 (WAP 2)**

PMCoE are undertaking a project that incorporates 24 agencies, including the Ministry of Education, that have office accommodation leases in the Wellington Central Business District that expire between 2016 and 2019. A business case was agreed by Cabinet in xxxxx and PMCoE are co-ordinating a procurement process for these agencies to identify and secure suitable accommodation.

#### **4.2.4 Proposed Funding**

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In some locations the Ministry is the lead agency with other agencies sharing premises. These co-location arrangements are dependent on the other agencies contributing to the cost of the fit-out of the new premises as well as meeting their share of the standard operating costs.

#### **4.2.5 Options**

Options to reduce the level of expenditure required for Office Accommodation include:

- *Co-location* - the Ministry will continue to work closely with the Property Management Centre of Expertise to identify co-location opportunities with other agencies including the Education Sector. Co-location provides the opportunity for sharing of facilities such as meeting rooms and reception reducing foot print and duplication of cost
- *MoE in the Community* - the Strategy proposes a concept of Ministry of Education "in the Community", transitioning from "administrative convenience" to "education centric" supported by 6 principles, accessible, collaborative, enabling education, welcoming, agile and choice. This will remove the perceived ownership of each office to ensure all locations and premises are available for all Ministry staff to work as and when required.

### 4.3 Motor Vehicles

#### 4.3.1 Overview

The Ministry owns a fleet of 580 vehicles that are all pooled and located throughout New Zealand. Fleet management is outsourced to Fleetwise which provides a booking system, vehicle fleet administration and management, regular reporting and advice on optimal fleet management and utilisation. Motor vehicles are managed in line with the Ministry motor vehicle policy to ensure they are used fairly, effectively and efficiently and that their use contributes to the delivery of the Ministry's education outcomes.

Motor vehicles are replaced in line with the vehicle policy, either when in use for more than four years or 100,000km, whichever comes first.

#### 4.3.2 Vehicle Replacement Strategy

A review of the motor vehicle fleet was undertaken in the 2014/15 year. The review noted that with careful management, the number of vehicles could be significantly reduced. It is planned to reduce the number of vehicles by 10% to 540 as part of a phased 2-3 year replacement programme.

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#### 4.3.3 Forecast Spend and Proposed Funding



#### 4.3.4 Options to reduce the size of capital spend

Opportunities currently being considered to reduce the size of the forecast capital spend include:

- Rationalising the Motor Vehicle fleet.
- Leasing vehicles.
- Increased use of Taxis.

Decisions will be reflected in the next version of the LTIP.

### 4.4 Other

#### 4.4.1 Overview

There is a small unspecified budget held for the purchase of office equipment, furniture and fittings and small accommodation projects that may arise during the year. This enables decisions to be made on small purchases without requiring an amended capital plan.

#### 4.4.2 Forecast Spend and Proposed Funding



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## 4.5 Risks and Constraints

### 4.5.1 Risks

Risk	Mitigation
1 Price increases - in accordance with Treasury requirements, the LTIP is presented in real (2015 dollar) terms and does not take into account price escalation.	All significant purchases will be through all of government contracts.
2 [REDACTED]	[REDACTED]
3 Site Availability – meeting business needs (particularly in the regions) depends on the availability of sites.	All large property projects will go through GETs to identify properties, with most of the implementation (fit-outs) sourced through all-of-government contracts and Ministry supply contracts
4 PMCoE decisions (particularly WAP2) may impact MoE Plans.	Regular communication with PMCoE.
5 Changing demands – business requirements might change requiring changes in leased accommodation	Regular review and planning.
6 [REDACTED]	[REDACTED]
7 Co-location arrangements - are dependent on the other agencies contributing to the cost of the fit-out of the new premises as well as meeting their share of the standard operating costs.	Set clear expectations at the start of the project. PMCoE to set agreed funding model.

### 4.5.2 Assumptions, Constraints and Dependencies

The following key assumptions, constraints and dependencies underpin this LTIP:

- Sufficient capability and capacity.
- Project and programme cost and timing estimates are reliable. Different programmes carry different assumptions, risks and uncertainties and therefore the reliability of forecasts making up the plan will vary between programmes. Generally, the forecasts in the short-term will be more reliable than those in the medium to longer term.
- Workforce and industry constraints do not limit the extent and timing of delivery of projects.
- Sites are available.
- No significant changes in Government priority or policy over the term of the LTIP

## 4.6 Asset Performance

### 4.6.1 Accommodation

Asset performance is monitored in the Quarterly Property Report using four key measures:

	MoE	Total agencies (average) *
Square metres per person	17.7	19.2
Square metres per work station	16	16.7
Cost per square metre	\$336	\$346
Cost per person (rent)	\$5,935	\$6,668

\* The statistics are provided by the Property Management Centre of Expertise (PMCoE) as at 30 June 2014.

Progress is also tracked against the following targets:

	30 June 2015	Target for 30 June 2015
Towns and Cities	41	41
Offices		
Commercial buildings	34	32
School sites	13	13
	47	45
Leased space (square metres)		
Wellington accommodation	22,400	16,600*
Regional accommodation	34,700	34,700
	57,100	51,300
Annual rent 2015/16 (\$millions)		
Wellington accommodation	10.2	7.1
Regional accommodation	9.7	9.7
	19.9M	16.8M
Vacant space	Nil	Nil
Co-locations with other agencies (3)	Greymouth (IR) Hawera (MSD) Rotorua (IR)	Greymouth (IR) Hawera (MSD) Rotorua (IR) Gisborne (DIA, IR & MSD)

\*The reduction in space in Wellington reflects the consolidation of staff into 33 Bowen and the Justice Centre.

Investment in office accommodation aims to realise the following benefits:

- Acc
- Safety & Security
- Reduced cost
- Consolidated presence through co-location

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#### **4.6.2 Motor Vehicles**

Asset performance is monitored by:

- Cost per km
- Crashes/injuries
- Age/mileage of fleet

Investment in Motor Vehicles aims to realise the following benefits:

- Supporting delivery of services
- Increased safety of newer motor vehicles
- Reduced maintenance and therefore whole-of-life costs

#### **4.7 Governance**

In the past there have been two Governance Boards covering separate parts of the portfolio: ICTGB and Property & Other. In recent months the mandate of ICTGB has been widened to cover all asset classes other than school property (i.e. ICT, Ministry accommodation and motor vehicles).

Key functions of the ICTGB include; consideration of proposed initiatives, allocation of current year funding, approval of the capital plan and monitoring of projects. The ICTGB meets monthly to consider project delivery, spend, achievement of milestones and progress against the capital plan.

Approval of the Capital Plan (excluding School Property) occurs on a yearly basis and is reviewed and updated quarterly.

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Ministry of Education  
Long Term Investment Plan  
December 2015

Section 2: Education Infrastructure

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## 2. The School Infrastructure Long Term Investment Plan

### 2.1 Introduction

The Long Term Investment Plan (LTIP) for school infrastructure sets out the plan to invest around \$7.5 billion over the next 10 years (2015/16 to 2024/25) in accordance with the requirements and intentions established via legislation, Government policies and strategic priorities.

The LTIP describes a 10-year investment portfolio aimed at:

- Creating new capacity to meet significantly changing demand, including through the acquisition of land and the construction of new schools and buildings.
- Managing normal lifecycle capital maintenance and renewal of existing assets within the school infrastructure asset portfolio.
- Addressing in-service assets in poor condition due to specific issues and events including *leaky buildings* and the effects of the Christchurch earthquakes, along with other examples of poor condition due to inadequate past maintenance.
- Progressive improvements to the functionality of the school infrastructure asset portfolio to increase the proportion of classrooms compliant with flexible learning spaces standards as part of providing innovative learning environments (ILE).
- Further improvements to functionality ensuring schools are able to benefit from connection to ultra-fast broadband and are earthquake resilient. Also, where required, by providing environments supporting Maori to enjoy and achieve education success as Maori and for learners with special needs to enable them to participate and achieve within mainstream schooling.

The LTIP also describes the programme of disinvestment required including in order to remove surplus buildings.

#### 2.1.1 Scope

The scope of the LTIP covers investment in the school infrastructure portfolio, which accounts for approximately 84% of school-age education provision in New Zealand.

This first version of the LTIP excludes investment in the following non Crown-owned providers:

- Independent (i.e. private) schools
- Partnership schools, and
- State-integrated schools

#### 2.1.2 School Infrastructure

The school infrastructure portfolio comprises around 2,080 schools, 7,700 hectares of land and 29,300 buildings primarily supporting the delivery of school-level education. As at 30 June 2015 the book value of the school infrastructure portfolio was \$11.6 billion, with a replacement cost of \$23.6 billion, making it one of the Crown's largest social asset portfolios.

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<sup>1</sup> The Ministry contributes around \$60 million per annum to support capital maintenance and expansion of state-integrated schools. Appropriate use of these funds is controlled through schools' Integration Agreements. The Ministry has recently initiated assurance activities to check schools are complying with these agreements.

### 2.1.3 Education Infrastructure Services

The organising framework for the Education system is based on the four categories of parents, performance, the profession and platform. *Platform* incorporates all aspects of education infrastructure needed to support education delivery – including the provision of land, buildings, school ICT infrastructure and network services, school transport assistance and schools' payroll services. Within the Ministry these services are provided by the Education Infrastructure Service (EIS).

The Ministry is focussed on moving to an integrated system approach for all education investments in support of better educational outcomes. EIS must ensure that school infrastructure and related investments are clearly aligned with student achievement.

EIS is responsible for:

- efficient and effective investment management,
- stewardship of the school infrastructure portfolio,
- good practice asset management, including providing enabling services to schools, and
- ensuring efficient and timely divestment of surplus and end-of-life assets.

Capital investment is broadly grouped into three categories:

- expanding capacity to meet increased demand through delivery of new schools and buildings;
- improving existing capacity via Ministry-led tactical investment to improve the condition and fitness for purpose of prioritised schools and buildings under the Christchurch schools' renewal, defective (leaky) buildings, and redevelopment investment programmes;
- maintaining existing capacity, which is mainly delivered via school-led projects.

The majority of the school-led investment is delivered using Five-Year Agreement (5YA) funding allocated to schools to progressively maintain and renew their assets on a five-yearly cycle. This expenditure must be made in accordance with Ministry approved 10 Year Property Plans and guidelines to ensure high priority property issues are addressed.

Asset divestment includes:

- replacement as part of capital works,
- rationalisation of surplus buildings, and
- sale disposal of surplus land and houses.

The organisational structure, capacity, capability and maturity of school infrastructure services performed by EIS are described in detail in Section 2.9.

## 2.2 Strategic Context

The Ministry's Four Year Plan notes the school infrastructure portfolio is a key enabler of the education system and of the Ministry's strategic intentions. The Ministry also strives to ensure that the portfolio and associated investment programme meets the current Government's priorities and policy settings.

The following is a list of significant drivers, constraints and other factors associated with this strategic context that strongly influence the LTIP or are emerging and may influence future updates.

- The Ministry is required under the *Education Act 1989* to provide access to education, which is mostly achieved by supplying and maintaining facilities nearby to student demand.
- The Ministry responds to changes in demand by allocating resources linked to the Government's *teacher/pupil ratio policy*. Generally, the Ministry strives to manage capacity to stay within tolerance of these ratios.
- Changes in demand are driven by demographic forces including birth rates, immigration and internal migration. At a local level they are also driven by the Government's policy of *Parental Choice*, which results in higher requirements for investment and disinvestment than would otherwise be required.
- The Government has made a range of commitments that require significant levels of investment over the next 10 years. These include:
  - *rebuilding Christchurch* (Government priority)
  - *investing in areas of growth*, particularly in Auckland (*Eight-Point Plan* and other commitments), and
  - *investing in schools with significant infrastructure issues* (*Eight-Point Plan*)
- Other Government objectives, notably in relation to *delivering better public services* to improve educational outcomes, result in differentiated investments to meet different user needs, which in the examples of kura and special education, drive higher volumes and unit costs of investment.
- In pursuit of better educational outcomes, the Ministry is seeking to progressively modernise teaching facilities in line with Innovative Learning Environment (ILE) guidelines.
- The *Cabinet Circular CO(15)5 Investment Management and Asset Performance* sets out a series of expectations on the Ministry, including improving its capability and maturity across the management of investments and assets.
- Further expectations are established in the Government's *Eight Point Plan to transform school property services*, which is a major driver behind the broadening and strengthening of services offered by the Ministry.
- The Ministry is also actively engaged in treaty settlement redress over school land with iwi, in accordance with the Government's priority to settle historical *Treaty of Waitangi* claims.
- The *Building Act 2004* sets out base standards for design and construction of buildings that the Ministry supplements with its own standards relevant to the end use of the buildings.
- The *Health and Safety at Work Act 2015* may emerge impact the LTIP through increasing requirements, including the management of asbestos and other hazardous substances.
- The Ministry's *School Property Strategy 2011-2021* requires schools to be fit for purpose and for the school infrastructure portfolio to be high-performing and well managed. This is consistent with the various objectives and policy settings referred to above. It also recognises there are significant issues that have impacted the current condition of the school infrastructure portfolio, including the Christchurch earthquakes, weather-tightness defects and poor prior maintenance practice at some

schools. These represent significant investment drivers in the LTIP to ensure schools are fit for purpose.

- The Ministry is monitoring the emergence of alternative means of delivering education through ICT and through innovations to improve asset utilisation, such as “double-bunking”. Such innovations may have longer term implications for the level of investment required to maintain and renew the school property portfolio. For the duration of this LTIP these alternatives are assumed not to apply.
- The Government has committed to *Investing in Education Success*, which seeks, amongst other things, to foster greater collaboration between schools by establishing Communities of Learning (COL).

- The scale of the Ministry’s LTIP means it supports the Government’s priority of building a more competitive and productive economy through national job creation, with infrastructure projects representing about one-third of all Government Electronic Tenders Service (GETS) activity.

The following table elaborates on these key objectives and requirements stipulated by legislation, policies and strategies. It also provides further detail about their relevance to school infrastructure investment, as described in this LTIP.

s 9(2)(f)(iv) OIA, s 9(2)(g)(i) OIA

Strategic Context	Relevance to the LTIP
<b>Legislation: The Education Act 1989</b>  Guarantees New Zealanders aged between 5 and 19 the right to free education.	The Ministry is required to provide access to education. Mostly this is achieved by providing school capacity in the required location at the right time, combined with alternative provision via technology and correspondence schooling and use of demand management.
<b>Legislation: Building Act 2004</b>  Prescribes minimum standards for building owners to meet	The Act includes base standards for design and construction of buildings, requirements for seismic strength, and requirements for maintenance of various safety systems. The Ministry needs to meet the minimum standards set out by the Act. In some cases, the Ministry elects to exceed the legislative standards in order to better meet the requirements of education provision.
<b>Legislation: Health and Safety at Work Act 2015 (effective April 2016)</b>  This new legislation will replace the Health and Safety in Employment Act 1992, which remains in effect at the date of this LTIP	The Act provides the regulatory framework for managing health and safety on school sites as they are workplaces.  Relevant requirements include asbestos management, storage of hazardous substances, fencing, as well as an overall duty of care covering the delivery of projects and the day to day management of sites and their facilities.

Strategic Context	Relevance to the LTIP
<p><b>Treaty of Waitangi</b></p> <p>The Government has made it a priority to settle historical Treaty of Waitangi claims.</p> <p>s 9(2)(f)(iv) OIA, s 9(2)(g)(i) OIA</p>	<p>The Ministry contributes to this by working with the Office of Treaty Settlements and iwi to develop Treaty settlement redress over school land. The types of redress generally available are sale and lease-back or deferred sale and lease-back in relation to operational school sites, and the right of first refusal mechanism which covers surplus Crown land. The Ministry has leased increasing numbers of school sites as a result of the Treaty settlements programme since 1999. The Ministry's contribution may eventually result in the sale and lease-back of up to 20% of the state school land portfolio.</p>
<p><b>Government Priorities: Building a more competitive and productive economy</b></p> <p>Helping businesses invest, grow and create jobs</p>	<p>The Ministry directly contributes to the priority of extending the ultra-fast broadband networks via the School Network Upgrade Programme (SNUP).</p> <p>In addition, the Ministry plays an important role in national and local job creation through its extensive capital works programme. For example, school infrastructure projects (run by the Ministry and school Boards of Trustees) represent around one-third of all New Zealand Government Electronic Tenders Service (GETS) activity, i.e. around 1,000 GETS opportunities advertised every year.</p>
<p><b>Government Priorities: Rebuilding Christchurch</b></p> <p>"Rebuilding our second biggest city is the largest economic undertaking in New Zealand's history."</p>	<p>The Christchurch Schools Rebuild programme is an explicit component of this priority. The Government has committed \$1.137 billion towards the programme funded by a combination of depreciation, insurance proceeds and capital injection. The capital injection component (\$417 million<sup>2</sup>) is yet to be drawn on.</p>

<sup>2</sup> This value includes the new school equivalent cost of two schools currently being considered as potential public private partnerships (PPPs). Where schools are procured as PPPs the funding profile shifts from predominantly up-front capital injection, to a mix of capital and operating funding over the term of the contract.

Strategic Context	Relevance to the LTIP
<p><b>Government Priorities:</b>  <b>Delivering Better Public Services</b></p> <p>Result Area 5: Increase the proportion of 18-year olds with NCEA-level 2 or equivalent qualification</p>	<p>This priority includes specific focus on lifting the educational performance of priority learners. A number of strategic frameworks have been put in place, i.e. Ka Hikitea (for Maori), the Pasifika Strategy, and Success for All (which seeks for all schools to demonstrate inclusive practice for learners with special needs).</p> <p>Infrastructure implications include higher costs per student for Maori Medium Education due to lower class sizes; increased provision of satellite facilities connected to special education schools; and increased investment to meet greater diversity of need at mainstream schools.</p>
<p><b>Government Objectives:</b>  <b>Auckland Growth</b></p> <p>Fast growth of demand in Auckland has led to commitments by the Government to invest in new capacity</p>	<p>The Government made announcements in August 2014 and again as part of its 2014 election manifesto commitments to invest in new capacity in Auckland.</p> <p>Commitments include that at least \$250 million will be invested over the next four years in an effort to get ahead of growth in Auckland. Part of this investment was made through Budget 2015.</p>
<p><b>Government Objectives: Eight-Point Plan to transform school property services</b></p> <p>Following a review of school property management in 2013, the Government made a commitment to transform school property services</p>	<p>The Eight-Point Plan includes commitments to invest in:</p> <ul style="list-style-type: none"> <li>• areas of growth (Point 1), and</li> <li>• schools with significant infrastructure issues (2).</li> </ul> <p>It also announced commitments to extend services, including:</p> <ul style="list-style-type: none"> <li>• helping schools resolve property issues faster (3)</li> <li>• providing schools with access to better services including facilities management (4)</li> <li>• offering support to schools for major property works (5)</li> <li>• better procurement to enable faster delivery (6)</li> <li>• providing schools with incentives to collaborate and develop innovative approaches to property developments (7), and</li> <li>• providing greater transparency about the costs and condition of school property (8).</li> </ul> <p>The Eight-Point Plan has been instrumental in driving the direction of infrastructure services including via growth of the investment programme, development of the school infrastructure operating model, and by raising expectations from schools.</p>
<p><b>Government Objectives:</b>  <b>Investing in Educational Success (IES)</b></p> <p>Commitments made by the Government in support of improved educational performance</p>	<p>IES seeks to foster greater collaboration between schools by creating Communities of Learning and providing funding for roles that can support teaching and learning across a community.</p> <p>As the Communities of Learning model matures it may lead to infrastructure funding being provided at a community level, and see school infrastructure planning increasingly taking into account the requirements of the community.</p>



Strategic Context	Relevance to the LTIP
<p><b>Government Policy: Parental Choice</b></p> <p>By empowering customers to choose where to enrol, this policy drives competition between schools and seeks to incentivise high performance</p>	<p>Parental choice results in spare capacity being maintained across school networks. This spare capacity allows parents to exercise choice on a timely basis and minimises the need to reactively invest in new capacity and rationalise surplus capacity for what may be short term changes in enrolment patterns.</p> <p>The Ministry retains some ability to manage demand through the use of enrolment zones. Funding models can further incentivise schools to limit out of zone enrolments. However, these measures are only partially effective and are in tension with the Government's policy.</p>
<p><b>Government Policy: Investment Management &amp; Asset Performance (Cabinet Circular CO(15)5)</b></p> <p>This circular from mid-2015 updated the investment management, asset performance and baseline management expectations across State Services</p>	<p>Requirements under CO(15)5 include:</p> <ul style="list-style-type: none"> <li>• Development and maintenance of a LTIP</li> <li>• Assessment under a new Investment Confidence Rating framework, with the results characterising the confidence investors have in an agency successfully realising a promised investment result. Component indicators include asset, project/programme/portfolio and change management maturity assessments, along with asset and investment performance assessments</li> <li>• Accumulation of sufficient depreciation funding within existing balance sheets to provide for assets needed to underpin future service needs</li> <li>• For any significant investment, evaluation of all procurement options, including public private partnerships (PPP).</li> </ul>
<p><b>Government Policy: Teacher/Pupil Ratios</b></p> <p>This is a resource allocation mechanism based around class size guidelines</p>	<p>The Ministry uses teacher/pupil ratios to determine schools' entitlement to capacity and property funding. Roll size is therefore a primary determinant of investment, both in terms of funding to maintain and renew existing infrastructure and to provide new capacity or to rationalise surplus capacity.</p>
<p><b>Ministry Objectives: Innovative Learning Environments</b></p> <p>Learning environments that seek to optimally support teaching and learning</p>	<p>The Ministry is seeking to ensure that the school infrastructure portfolio supports a range of teaching and learning practices and is adaptable over time to meet changes in these practices. The aim is to support teaching and learning and minimise infrastructure whole of life costs.</p>
<p><b>School Property Strategy: School Property is Well Managed</b></p> <p>The Ministry represents the Crown's ownership interest, is recognised as a good property manager and works cohesively with Boards of trustees</p>	<p>The operating model for the Ministry has shifted from its previous role as primarily a funder to schools, towards that of an asset manager across the school infrastructure portfolio. Significant progress has been made, although the transformation is ongoing and requires an injection of operational funding to maintain recent improvements and further improve the Ministry's asset management maturity.</p>



Strategic Context	Relevance to the LTIP
<p><b>School Property Strategy: Schools are Fit for Purpose</b></p> <p>Schools support teaching and learning, are safe and in good condition and retain their education value</p>	<p>Various issues (deferred maintenance and weather-tightness) and events (e.g. Christchurch earthquakes) have adversely impacted the condition of assets across the school infrastructure portfolio. In order to restore an appropriate level of condition requires a disproportionately large investment over the term of the LTIP and results in significant trade-offs, for example limiting the Ministry's capacity to modernise assets to ILE standards, or to build working capital in advance of longer-term renewal requirements.</p>
<p><b>School Property Strategy: High Performing Portfolio of Schools</b></p> <p>The school infrastructure portfolio is efficiently run and well utilised and is responsive to increases and decreases in student numbers</p>	<p>Changes in demand across New Zealand are expected to drive significant surplus capacity (in areas of declining demand) and capacity deficiencies (in areas of growth). Non-property solutions may help mitigate the effect of these changes; however, it is likely there will be a requirement for increased levels of capital and operational funding to support investment in new capacity and rationalisation of surplus capacity. In the event that funding is rationalised as a consequence of the Government's fiscal strategy, this may result in reduced portfolio efficiency over the term of the LTIP.</p>

The diagram below provides additional detail about the Ministry's School Property Strategy.

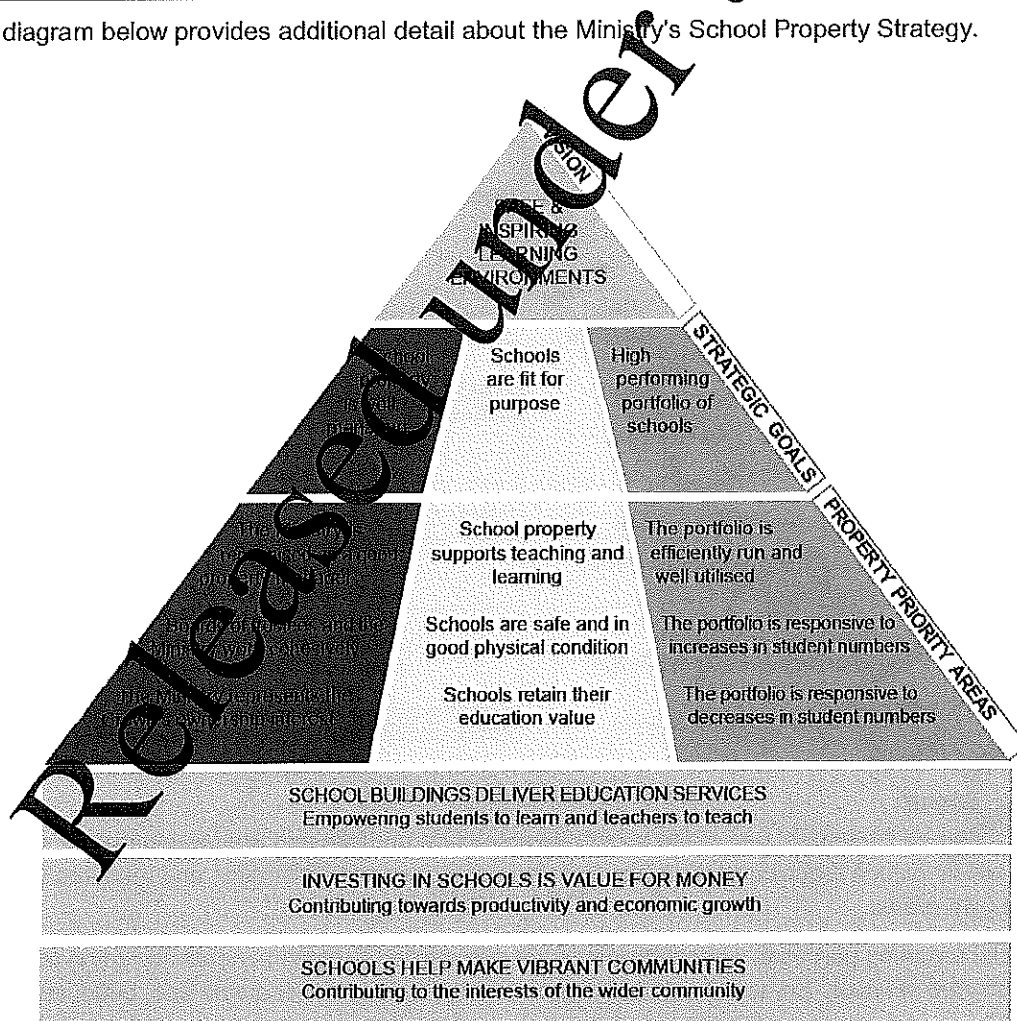


Figure 1: School Property Strategy

## 2.3 The School Infrastructure Asset Portfolio

### Asset Components and Values

The school infrastructure portfolio had a total net carrying value<sup>3</sup> of \$11.6 billion as at 30 June 2015, with a corresponding replacement cost of \$23.6 billion, as shown in the figure below.

Ministry of Education School Infrastructure Balance Sheet (extract)	Carrying Values As at 30 June 2015 \$ millions	Replacement Values As at 30 June 2015 \$ millions
<b>Non-current assets</b>		
<b>Land &amp; Buildings</b>		
<i>Land</i>		
Schools	3,223	
Playcentres	21	
Kindergartens	54	
Houses	36	
Service Concession Land		
<b>Subtotal Land</b>	<b>3,334</b>	
<i>Buildings</i>		
Fabric	2,761	
Fitout	2,043	
Roof	14	
Services	1,864	
Relocatables	-	
Site Improvements	1,271	
Swimming Pools	86	
Other school assets	149	
Playcentres	8	
Kindergartens	45	
Houses	81	
Service Concession Buildings	82	
<b>Subtotal Buildings</b>	<b>9,006</b>	
<b>Total Land &amp; Buildings</b>	<b>12,340</b>	
<b>Less: Assets held for sale</b>		
Land & Buildings	(28)	
Houses	(4)	
<b>Subtotal Assets held for sale</b>	<b>(32)</b>	
<b>Less: Impairment Provision</b>		
Weather tightness	(676)	
Canterbury Earthquake	(18)	
<b>Subtotal Impairment Provision</b>	<b>(694)</b>	
<b>Total Non-current assets</b>	<b>11,620</b>	

Figure 2: Asset Components & Values

Buildings make up the largest part of the school infrastructure portfolio and are predominantly school buildings which include teaching spaces (i.e. classrooms), library, administration and resource areas, halls, and gym areas.

For financial reporting purposes, school buildings are sub-divided into components, including fabric, fit-out, roofs and services. Some school buildings are designed to be re-locatable and, because of this

<sup>3</sup> Carrying value represents the optimised depreciated replacement cost for buildings and the market value for land and houses.

different functionality, they are valued as separate components. Other building categories include ancillary buildings (such as boiler rooms and toilets), swimming pools and improvements made to the site, such as below-ground infrastructure.

As a result of significant weather-tightness failures across the school infrastructure portfolio and to a lesser extent due to the damage to property from the Christchurch earthquakes, an impairment provision of \$0.7 billion was recognised against buildings as at 30 June 2015. This impairment is being progressively reduced in-line with the restoration of the affected assets.

### Types of Facilities

Within the state school system there are a variety of different types of school, as described below:

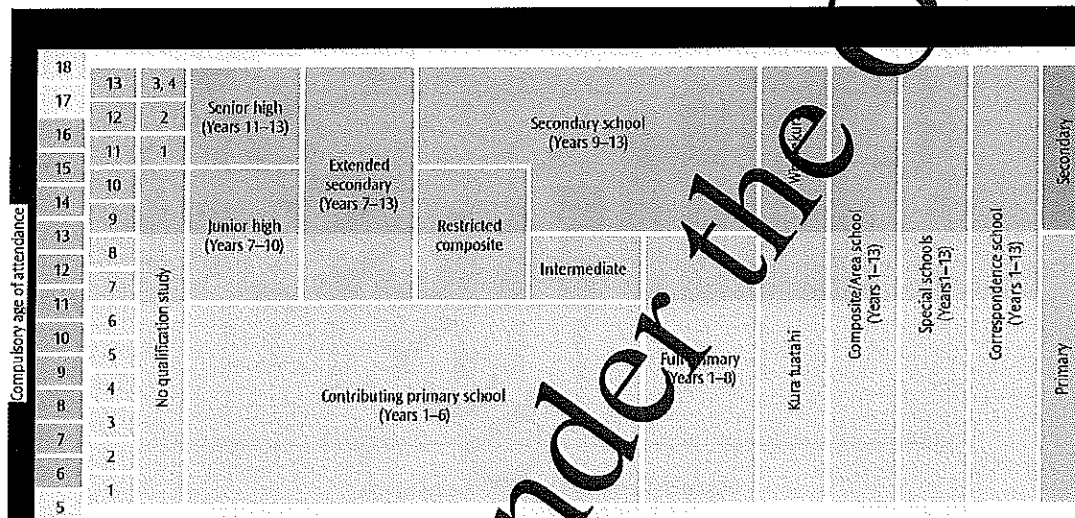


Figure 3: Summary of school types

Although primary schools cater for 62% of the pupils attending state schools currently, these facilities account for 83% of all state schools by number of schools. This is because primary schools tend to be smaller than secondary schools.

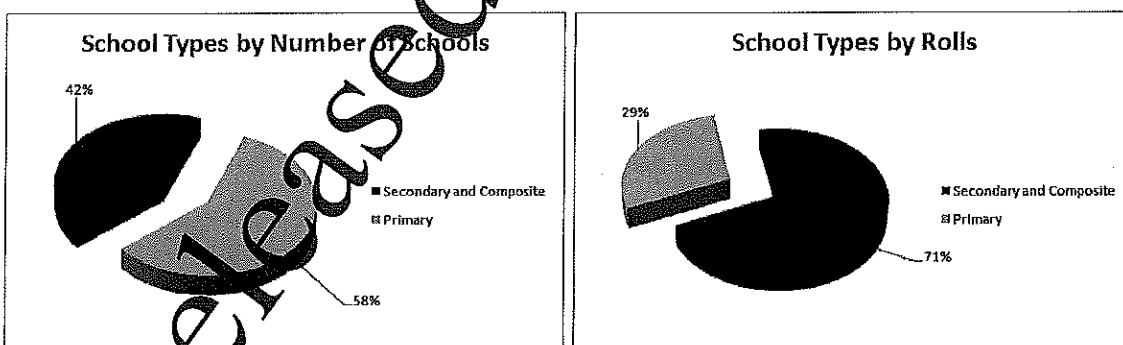


Figure 4: Proportion of primary vs. secondary schools

In addition to the approximately 2,080 state schools, the school infrastructure portfolio includes a number of other facilities that support the education system, including Ministry-owned houses, play centres, kindergartens, teen-parent units, activity centres, manual training centres and health camps.

### School Size

The school infrastructure portfolio is characterised by high numbers of small schools. More than a quarter of schools have a roll of less than 100 and close to half have a roll of less than 200 yet comprise only 14% of total roll across all schools. Conversely, 4% of schools have rolls greater than 1000 students making up 20% of the total roll across all schools. The chart below further illustrates.

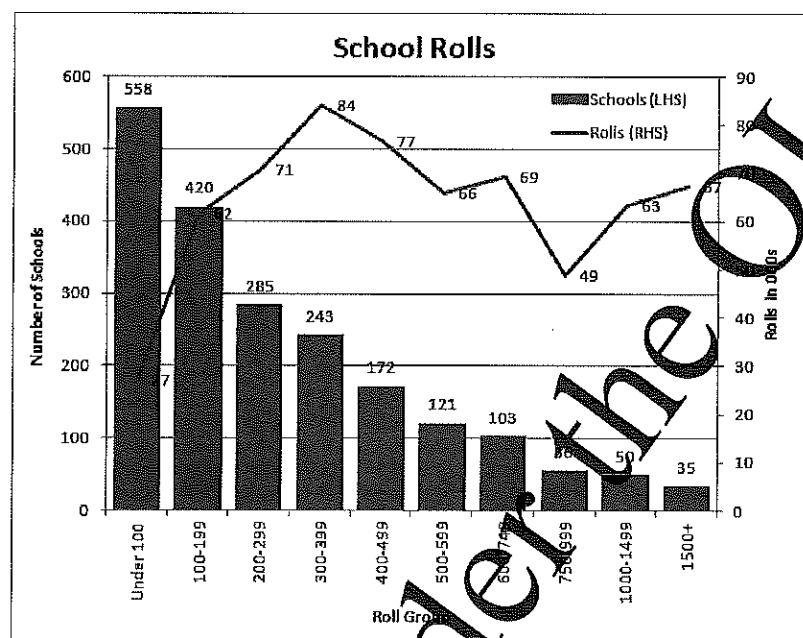


Figure 5: Distribution of school size by roll

This profile of school sizes across the school infrastructure portfolio contributes to a range of asset and investment management challenges for the Ministry including:

- Smaller schools are less likely to have the resources needed to effectively manage their assets and investments, requiring greater Ministry support,
- Smaller schools do not have the scale to maximise procurement benefits, unless they bundle projects with other schools, or take advantage of Ministry procurement services. Collaboration between schools does not currently happen to a significant extent, although the emerging Communities of Learning objective may help change this in time,
- Smaller schools are less well utilised than larger schools. Partly this reflects the need to hold higher proportions of surplus capacity to mitigate the cost of short-term roll increases driven by parental choice.

## Building Age

Nearly half of all school buildings are 40 years or older. Around 29% are less than 20 years old and therefore relatively modern and more likely to be compatible with Innovative Learning Environment guidelines<sup>4</sup>.

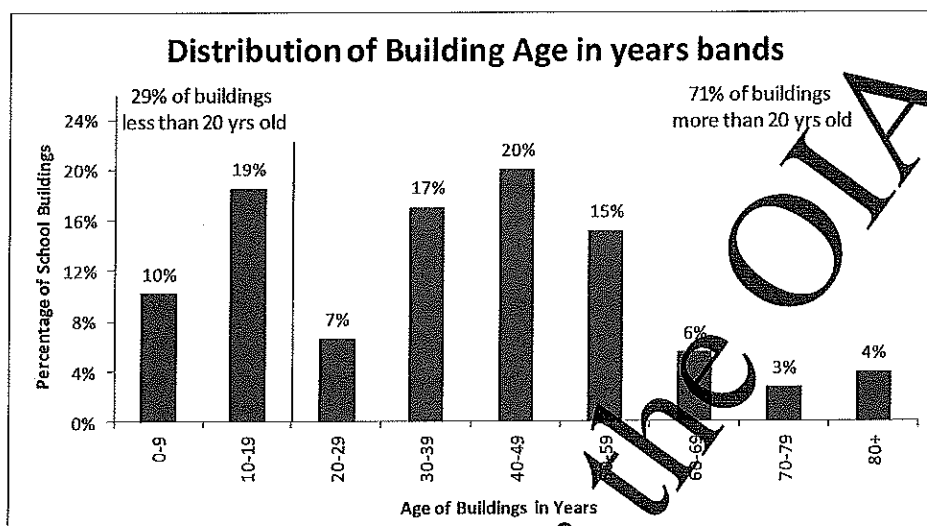


Figure 6: distribution of building age

The Ministry's asset management approach is to maintain schools into perpetuity. This recognises that the majority of school buildings are relatively inexpensive to maintain and, that through targeted maintenance, modernisation and lifecycle renewal of components, the assets' useful lives can be extended more efficiently than, say, the alternative of running the assets down and replacing them.

There are, however, risks and limitations with this asset management approach. Maintenance costs do increase gradually with the age of the buildings, and therefore there are natural limits to the policy of maintaining into perpetuity.

More significantly, the portfolio faces the emerging risk of functional obsolescence to the extent pedagogical practices require changes to the functionality of school buildings that cannot be met with the older buildings. In response, the Ministry is proactively striving to increase the proportion of buildings that are compliant with innovative learning environments through ensuring new buildings are fully compliant, and supporting schools through Five Year Agreement funding to modernise their old buildings.

s 9(2)(g)(i) OIA

<sup>4</sup> An innovative learning environment is one that is capable of evolving and adapting as educational practices evolve and change, thus remaining future focused.

#### Ministry-Owned Land

The Ministry owns land used mainly to situate school buildings.

The Ministry acquires new sites in anticipation of forecast demand when it is determined that a new school will be required. This process is described briefly below.

In general, once schooling demand is forecasted, the Ministry considers an appropriate response. A new school property solution is the last resort as this is usually the most expensive option. Therefore before a new school property solution is recommended, the Ministry will typically have considered a combination of non-property and other property solutions to support schooling networks. This may include adjustments to school enrolment schemes and school transport entitlement zones. However, at some point it becomes more cost effective to build a new school rather than adding capacity at existing schools.

Land is acquired using the Ministry's working capital. The acquisition is then reimbursed through the Budget process. This arrangement allows a more timely acquisition process, and because land tends to hold or increase in value, it presents a low risk to the Crown.

The Ministry also disposes of surplus land, and the proceeds from sales are used as a source of funds to reinvest in the school infrastructure portfolio.

The Ministry also disposes of land, and leases it back, as part of the Government's priority to settle historical Treaty of Waitangi claims.

Released under the OIA

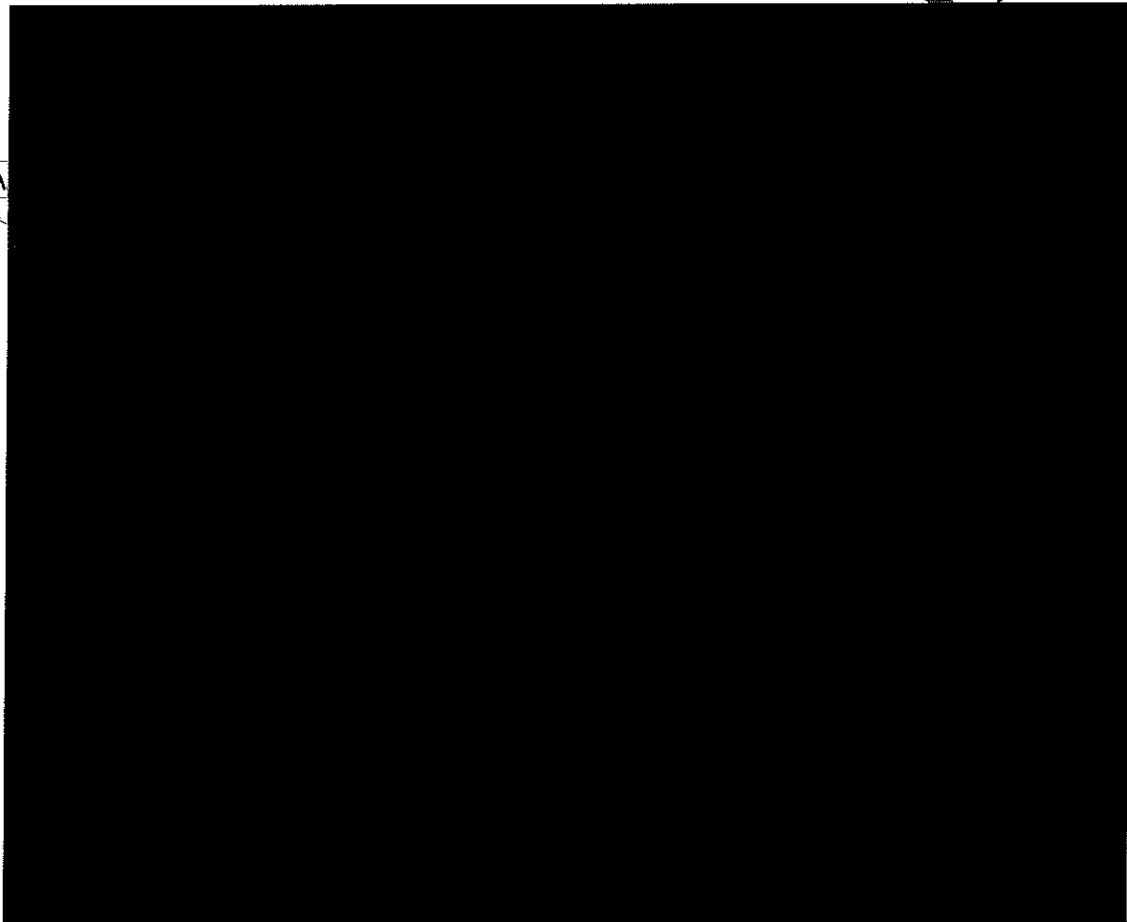
## 2.4 School Infrastructure Asset Performance

This section describes the current performance of assets in the school infrastructure portfolio and introduces some of the challenges being addressed within the LTIP.

### 2.4.1 Condition

There is significant variability in the condition of school infrastructure across the portfolio. Whilst the majority of the school infrastructure portfolio has been reasonably well maintained and in good overall condition, a significant minority is not. Reasons for the sub-standard condition of buildings at some schools include:

- 



- The school infrastructure portfolio has suffered a high-incidence of weather-tightness defects. This has principally affected buildings constructed in the 1990s and 2000s arising from poor design, workmanship and product manufacture during a period of building standard deregulation. More than 500 schools are estimated to have been affected to varying degrees, with such buildings requiring remediation or replacement early in their lifecycle, without being fully funded by depreciation. This relies on using funds generated from other assets in the portfolio, with a consequential risk that future renewal requirements for those assets will be under-funded.
- The Canterbury earthquakes had a major impact on asset condition and utilisation in the region and gave rise to the Christchurch Schools Rebuild Programme at an estimated cost of \$1.137 billion. The earthquakes also led to a revision of building code standards, which has led to the need to strengthen buildings deemed to be "prone" or "at risk" in other parts of the country.

s 9(2)(g)(i) OIA



EIS has implemented a national condition assessment programme, which has identified forward maintenance liabilities for schools. Condition assessments are now updated every five years as part of updates to schools' 10 Year Property Plans and provide an ongoing picture of condition across the school infrastructure portfolio. More detailed assessments have also been undertaken for over 90% of buildings 'at risk' of weather-tightness issues.

Where significant condition issues have been identified from these assessments that cannot be funded out of a school's 5YA funding allocation, these schools are brought into scope for the Redevelopments investment programme, which may lead to further detailed assessments to support master planning of solutions.

#### Portfolio assessment

The result of this assessment and planning activity is that EIS now has a reasonably comprehensive view of the forward liability of the majority of the school infrastructure portfolio. Comparing a school's 10 year liability to its replacement cost provides a normalised benchmark for the relative condition of the school that can be compared against other schools in the portfolio.

s 9(2)(g)(i) OIA

As schools are designed to have a useful life (based on a weighted average of their components) of around 50 years, a 10 year cost to replacement value ratio of 0.2 or less suggests the cost to maintain it is in line with standard useful life expectations and is reflective of fair to good overall condition. Conversely, a ratio greater than 0.2 suggests the overall condition is poor.

Significantly improving the condition of the worst condition schools will support a more sustainable education platform and enable school competition and collaboration to occur on a more equitable basis.

Changes introduced to the service model for EIS including the provision of better support to schools and improved school property planning will help to sustain this improved level of condition across the school infrastructure portfolio.



#### 2.4.2 Fitness for Purpose (Functionality)

Functionality of facilities refers to their fitness for purpose to support teaching and learning and hence provide the appropriate platforms for educational achievement. The design and quality of the school infrastructure portfolio can provide a direct and important contribution to the interaction of pedagogical elements. It can facilitate engagement, assist in collaboration, provide flexibility to accommodate individual differences and affect the motivation of teachers and learners.

The aging school infrastructure portfolio means the significant majority of teaching spaces do not fully meet modern teaching and learning practices. Most buildings were designed and built more than 20 years ago. They were built with a traditional pedagogical approach in mind and will ultimately require modification or replacement to support 21<sup>st</sup> century practices.

Part of the modernisation is to bring teaching spaces in line with Design Quality Learning Space (DQLS) standards. These cover environmental factors within teaching spaces that are important for effective teaching and learning, i.e. lighting, air quality, acoustics and temperature.

Flexible Learning spaces standards have been introduced by EIS to enable environments to be created aligning the following components:

- The physical space, its flexibility, configurability, and relationship to other spaces
- The environment within the space, i.e. DQLS
- Furniture and equipment, including ICT configurability

New and replacement teaching spaces supplied as part of this LTIP will be ILE compliant. This includes classrooms provided under the New Schools, Roll Growth, Building Improvement (leaky buildings), Christchurch Schools Rebuild, 5YA and Redevelopments programmes. In addition, schools with sufficient 5YA funding remaining after meeting their health and safety and essential infrastructure requirements should prioritise remaining funds towards modernising their teaching spaces.

s 9(2)(g)(i) OIA

EIS has proto-typed ILE assessments to enable measurement of the current level of ILE compliance. These assessments are, in future, to be undertaken as part of schools' 10 year property planning process. These assessments will enable a baseline and forecast to be set, against which functionality performance can be monitored and reported. This information will start to inform the next iteration of the LTIP, provided sufficient resources are available to implement and maintain the assessments.

In addition to ILE there are other aspects of asset functionality performance with relevance to investment programmes in the LTIP, as follows:

- Connection of schools to the ultra-fast broadband (UFB) network – the School Network Upgrade Programme is planned to finish the connection of all schools to the UFB during 2015/16. Ongoing maintenance of the assets will be required.

s 9(2)(g)(i) OIA

- Earthquake resilience - the Earthquake Resilience programme is due to complete assessment of all school buildings by June 2016. All deficient buildings will be strengthened over the course of this LTIP to ensure compliance with building codes.

- Kura – the Ministry provides specialised facilities to support the strategic objectives of Maori enjoying and achieving education success as Maori.
- Special Needs – the Ministry invests in new assets and modifications to existing assets to meet the requirements of special needs learners enrolling in mainstream state schools under the policy of inclusivity. The demand for special needs investment has doubled over the past two years with increased volumes of enrolments.

### 2.4.3 Utilisation and efficiency

This section describes current and forecast future demand over the term of the LTIP. It outlines the measures of efficiency the Ministry uses in assessing how well capacity meets this demand. It describes the current levels of efficiency and what they would be in the future based on the demand projections before any intervention via investment in new capacity or rationalisation of surplus capacity. Finally it outlines the cost of inefficiency and proposes optimum levels of utilisation.

#### Demand Forecasts

Statistics NZ census figures indicate an overall State school demand growth of around 3.8% over the term of the LTIP. This is expected to be lower at primary schools and higher at secondary schools. As well as this underlying growth rate, the school infrastructure portfolio is expected to face strong opposing demographic drivers over the next 10 years:

- Areas of significant population growth combined with land shortages that are driving up demand, space deficiency and cost for new capacity, particularly in Auckland and some other urban areas.
- Areas of significant spare capacity and roll decline that are driving down utilisation, particularly in rural areas.

The following chart from Statistics NZ data reflects these regional drivers over a longer time frame to 2043. It shows the trends by region, with most areas in decline, but with Auckland and Canterbury growing strongly.

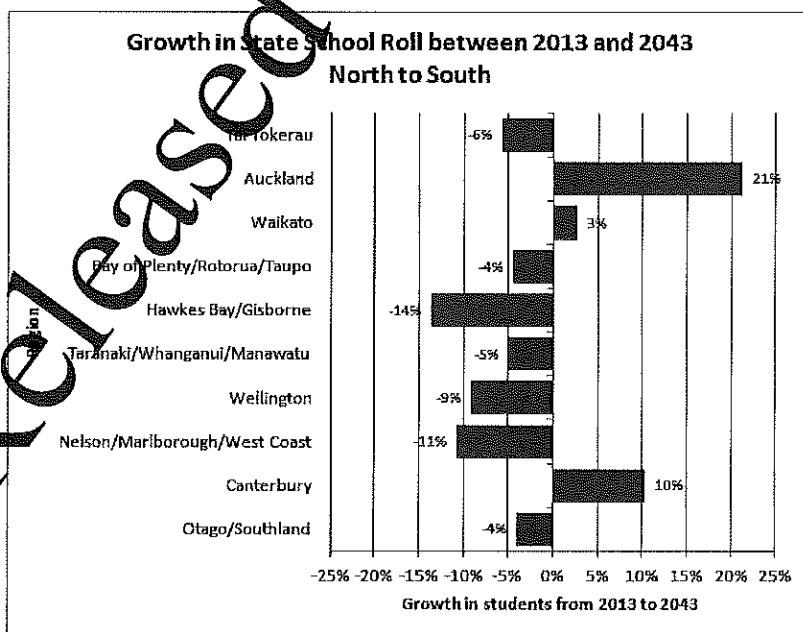


Figure 9: 30 year forecast regional demographic trends

### Forecast Accuracy

Statistics New Zealand changed their methodology in 2011 to one of providing quartile population estimates. Consequently, we have only tested the forecast accuracy over the period since the change in basis.

Below is the forecast error in relation to school size over a one and two year period. It shows that forecast error increases the smaller the school size and the longer the term of the forecast.

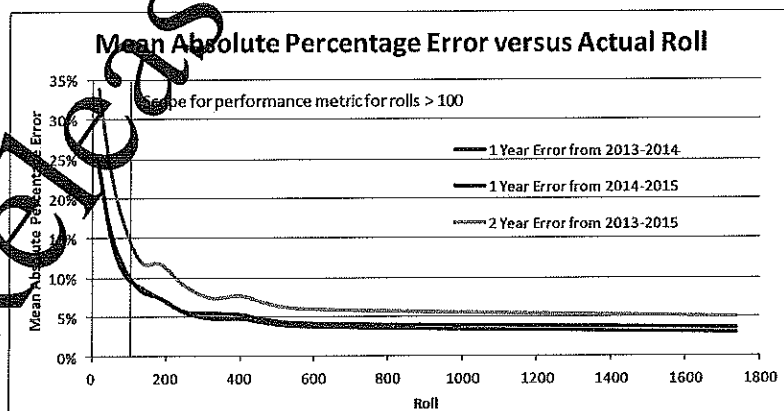


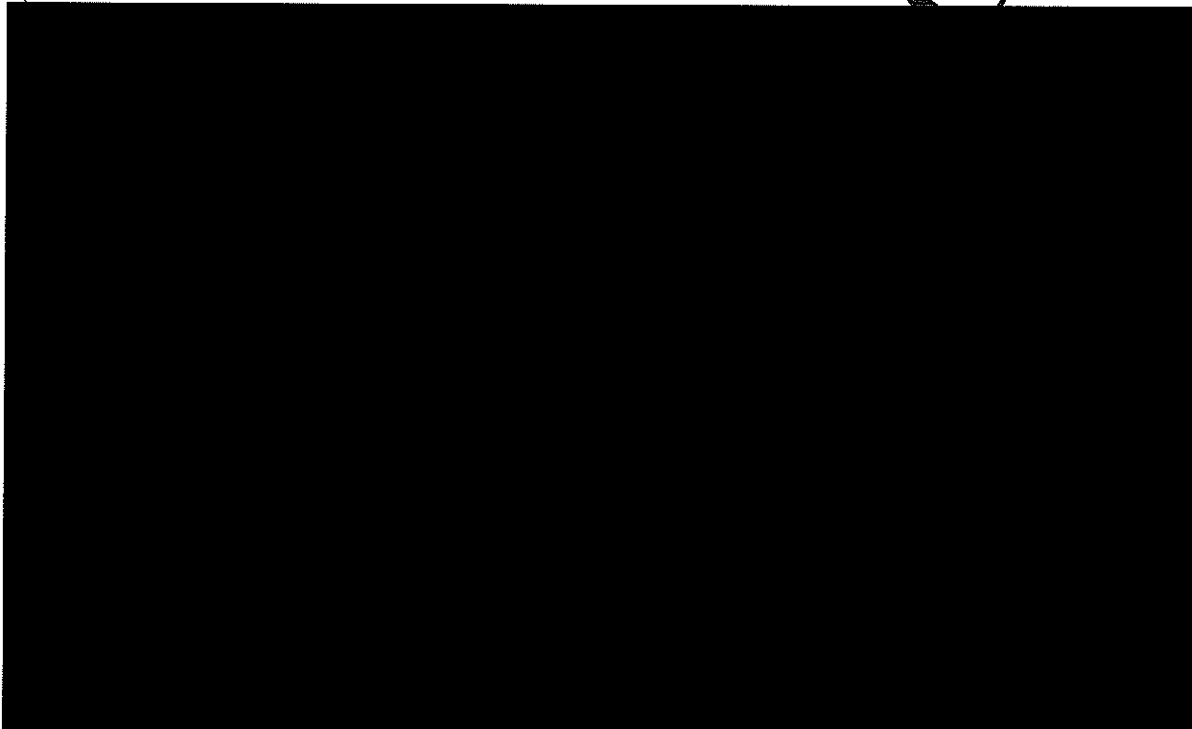
Figure 11: Demand forecast error rates by school size over one and two years

### Utilisation and Efficiency Performance

Two performance measures are used to monitor the extent to which the supply of school infrastructure matches the demand from student enrolments. The measures are applied to individual schools and to a wider network or to the portfolio as a whole:

- Utilisation<sup>6</sup> – this is the ratio between total roll entitlement (i.e. the theoretical capacity required to accommodate the current school roll based on teacher/student ratio policy settings) and the actual capacity of the school. A measure less than 100% signifies under-utilisation and means there is surplus capacity. A measure above 100% reflects over-utilisation and means there is a deficiency in space.
- Efficiency<sup>7</sup> – recognises that both over-utilisation and under-utilisation are examples of inefficiency and uses a calculation that avoids the risk of one netting-off the other to obscure the underlying efficiency of a network or portfolio<sup>8</sup>.

s 9(2)(g)(i) OIA



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<sup>6</sup> 1 - (net surplus ÷ total actual classrooms)

<sup>7</sup> 1 - (total surplus classrooms + total deficit classrooms) ÷ total actual classrooms

<sup>8</sup> Consider a network of two identically sized schools where one was 90% utilised and the other 110% utilised. Together this would result in overall network utilisation of 100%, signalling there is enough capacity in the network to meet the demand. However, as not all of the existing capacity is in the right place, the efficiency of the network would be measured at 90%.

Optimal Utilisation

Striving for 100% utilisation at each school would drive a high frequency of expensive roll growth and rationalisation interventions to maintain that target level. It is more economic to accept a level of surplus capacity across the portfolio to allow for short-term demand fluctuations driven by parental choice or cyclical demand patterns. This recognises that removal of surplus property is cheaper than the supply of new classrooms and, therefore, it is more economic (up to a point) to accept a level of surplus than to rationalise too aggressively with the risk of having to invest in classrooms that had previously been rationalised.

The estimated optimal utilisation rate for schools is around 87%, although this can vary depending on size, location and demographic projections. The Ministry is striving to increase the proportion of schools with utilisation of between 75% and 105%, being an acceptable tolerance range.

s 9(2)(g)(i) OIA

Summary Implications

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## 2.5 The School Infrastructure Investment Portfolio

The Ministry oversees an investment portfolio comprising a large and wide range of projects organised into 17 programmes and meeting different service needs. At any one time there can be over 6,000 active capital projects.

The following chart shows the distribution of projects completed over the past two years by value.

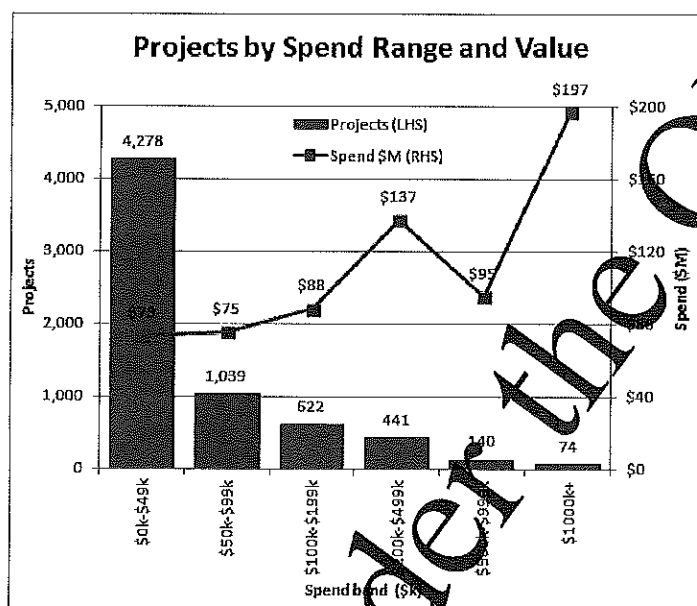


Figure 14: Completed projects July 2013 to June 2015 (source: Property Management Information System)

The chart shows that the smallest 65% of projects (under \$50,000) completed comprised 1% of the total investment, whereas the largest 1% of projects (over \$1,000,000) comprised 30%.

### 2.5.1 Programme Categories

The various investment programmes can be broadly grouped into the following three categories:

- Expanding capacity – this covers investment in new capacity to meet increased demand delivered via new schools, new buildings, and other new infrastructure.
- Ministry tactical investment – this covers investment in existing infrastructure under large Ministry-run programmes of work, notably, Christchurch Schools Renewal, Building Improvement (leaky buildings), and Redevelopments, where the whole or a significant part of a school is rebuilt.
- School entitlement – this covers funding programmes that are available to schools under different entitlement models to allow schools to fulfil their asset management responsibilities. The largest part of this category is the Five-Year Agreement (5YA), which is designed to enable schools to progressively maintain and renew their assets on a five-yearly funding cycle in accordance with Ministry approved school 10 Year Property Plans.

## Budget Sensitive

The chart below shows the actual past and planned future investment spend by year broken down into these three categories.

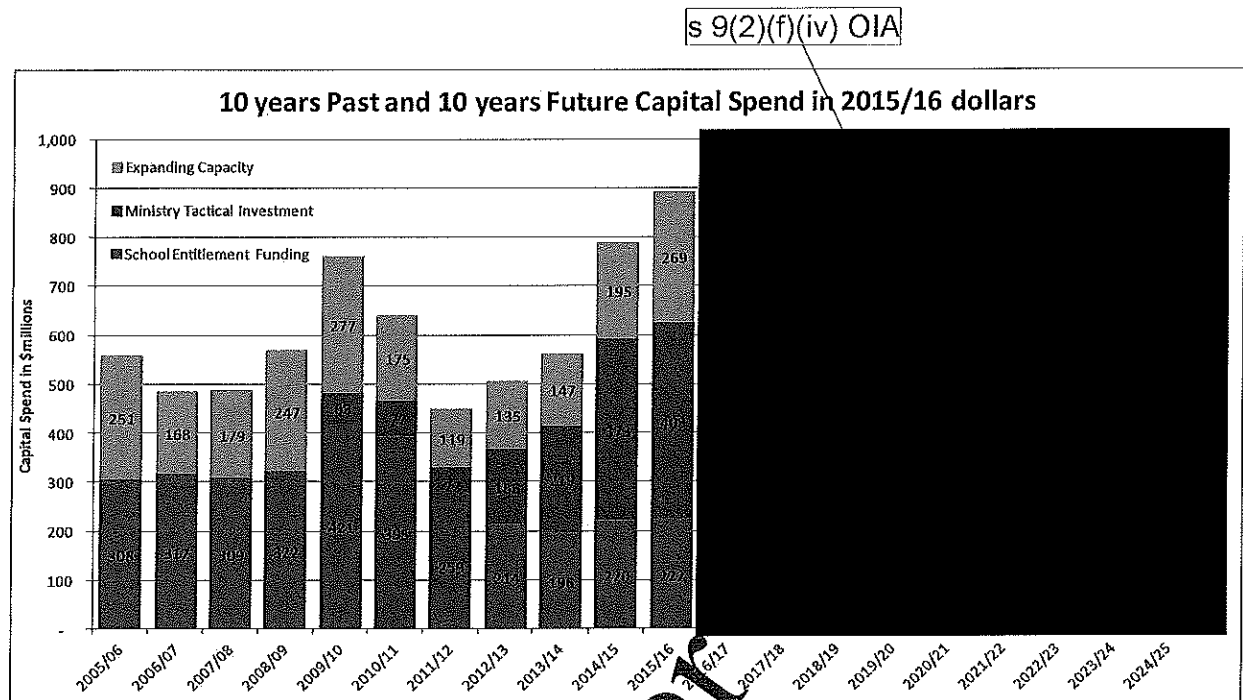
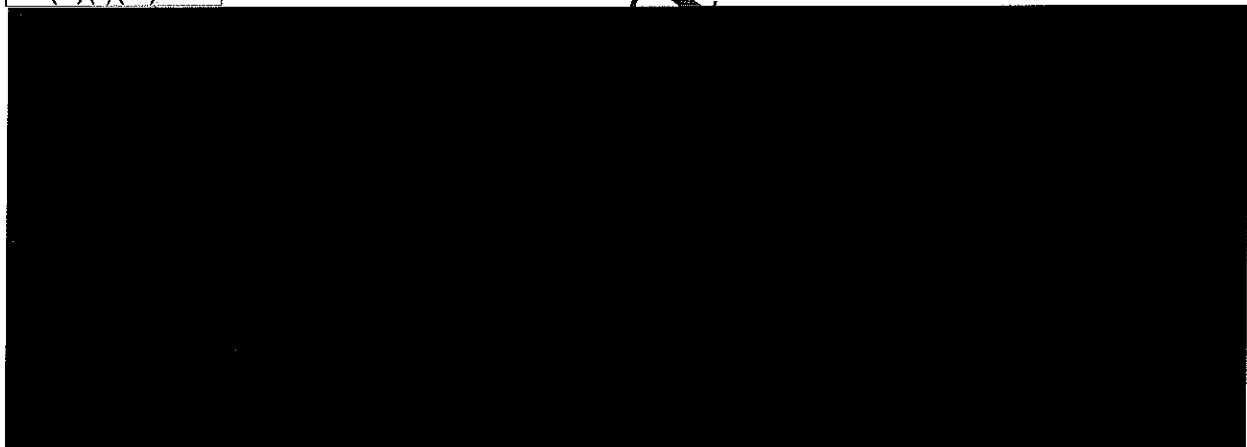


Figure 15: Capital Spend by Programme Category, past and future

s 9(2)(f)(iv) OIA



Released

## 2.5.2 Investment Management

In recent years there have been significant changes in the way investments are managed. Investment management was historically largely led by schools at a project level. The Ministry now plays a much greater role in the management of investments at a project, programme and portfolio level. This is reflected in the chart below that shows the Ministry now leading over 60% of investment activity, reversing the position from before 2012/13. This shift is expected to be sustained throughout the term of this LTIP.

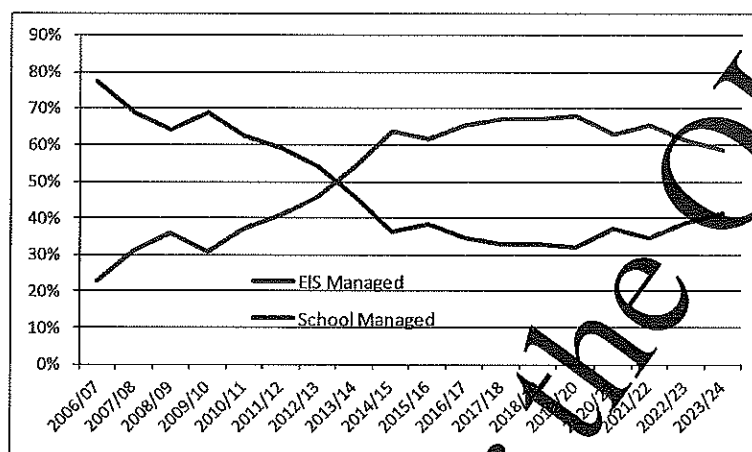


Figure 16: Proportion of Ministry and School Managed projects (by value) over time

In association with this shift in management, the Ministry has been progressively developing its capability to drive efficiency and better outcomes across the total investment portfolio, for example:

- A greater focus on school property planning achieved through better information, processes and support to schools is now improving the quality of 10 Year Property Plans and ensuring that infrastructure needs are being consistently and reliably identified.
- Greater centralised procurement support has included the establishment of panels to assist schools and Ministry staff to procure more efficiently and with greater confidence.
- Similarly, the supply agreement for standardised modular transportable buildings has started to improve the efficiency and reduce the risk associated with construction delivery.

## 2.5.3 Investment Lifecycle

### Portfolio Lifecycle

In general, the investment portfolio is being run into perpetuity on the assumption that the current legislative and policy requirements continue to support access to and provision of state-owned educational facilities based around physical property.

This requires that the existing assets are maintained and replaced (or rationalised, if no longer needed) across their lifecycle through a mixture of operational expenditure and capital investment. This investment must also ensure the facilities remain fit for purpose, which means the investment plan also allows for modernisation or modification of existing assets during and/or at the end of their lifecycles.



### Programme Lifecycles

Most of the investment programmes are enduring and are expected to extend well beyond the term of the LTIP (for example, Five Year Agreement, Roll Growth, New Schools). The following programmes are expected to be time-limited:

- Redevelopments – to be substantially completed within 10 years
- Defective Buildings – to be substantially completed within 10 years
- Christchurch Schools Rebuild – completed within 8 years
- Schools Network Upgrade Programme – roll-out due to be completed this year

### Project Lifecycles

Within the school infrastructure investment portfolio are projects with very different levels of complexity and duration. Some of the larger construction projects have a lifecycle spanning three to five years, or even longer, from planning and consenting to the completion of construction; whereas smaller, typically school-led projects may only last a matter of months, or even weeks.

#### 2.5.4 Emerging and Future Trends

Other factors or trends may have implications on the investments within the current LTIP. For example, alternative ownership models for school infrastructure provision could see part of the planned investment being met by the private sector through leasing arrangements. Under current assumptions this is expected to remain a minor contributor of supply due to the limited stock of leased accommodation suitable for schooling in the current rental market.

The Ministry is further exploring alternative procurement approaches to the delivery of the investment portfolio.

s 9(2)(f)(iv) OIA

## 2.6 Investment Challenges

The Ministry faces a series of challenges in relation to its LTIP for school infrastructure.

Challenge	Response
	
<p><b>Scale, composition and diversity of portfolio</b></p> <p>The school infrastructure portfolio is large and diverse requiring the Ministry to deal with over 2,000 different customers each with unique, and in some cases, competing requirements.</p> <p>The change in EIS's operating model requires an increase in the range and quality of information supporting asset management processes; however, the scale of the portfolio means establishing new information systems and improving existing data quality is a time consuming and costly undertaking.</p> <p>Furthermore, front-line staffing levels and enabling services are heavily constrained by operational budgets and human resource caps.</p> 	<p>The Ministry has sought to improve information to provide greater transparency of investment needs across the portfolio and to support prioritisation and optimisation of planned solutions.</p> <p>The Ministry has built increased capability to support key asset and investment management processes, including school property planning services and the establishment of an investment pipeline and portfolio management office under an investment governance framework.</p> 

s 9(2)(f)(iv) OIA

s 9(2)(g)(i) OIA

Challenge

Response

**Creating Innovative Learning Environments**

Changes to teaching and learning practices over the last 20 years are influencing the functionality requirements for teaching spaces.

The majority of existing teaching spaces were constructed before this time and do not meet, and cannot be easily converted to meet, the new Flexible Learning Spaces (FLS) standards.

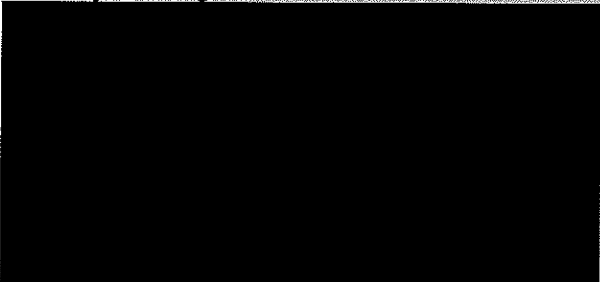
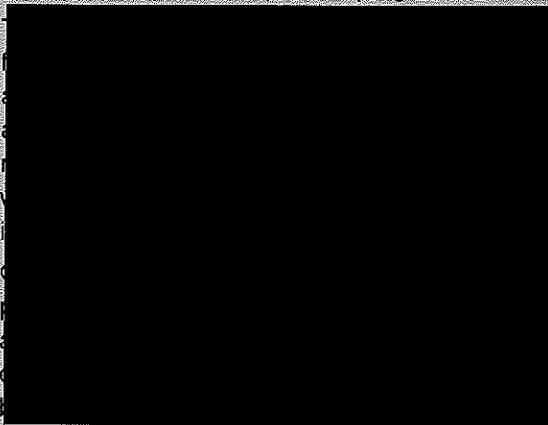
The Ministry is ensuring that all new facilities, including replacements or redevelopments of existing facilities meet FLS standards. Funding is also made available to schools through their 5 Year Agreement to modernise existing facilities provided that urgent health and safety and essential infrastructure requirements are resolved first.

s 9(2)(g)(i) OIA

s 9(2)(g)(i) OIA

Challenge	Response
<p><b>Limited land availability</b></p> <p>Roll growth is tending to be concentrated in densely populated urban areas, with land availability an increasing challenge.</p> <p>Land shortages are driving up the cost of new land parcels.</p> <p>Intensification is increasingly requiring reconfiguration of schools on existing sites to enable better use of land, for example through multi-storey development. As a result, average unit costs of development are increasing.</p>	<p>The Ministry's modular transportable building programme will provide easier access to constrained sites and price certainty around development costs. The modular buildings are able to be configured flexibly and are stackable (double-storey).</p> <p>Increased use of office-style accommodation through the private rental market is also emerging as a solution where land shortages prevent new site development or expansion on existing sites.</p>
<p><b>An aging school infrastructure portfolio</b></p> <p>Nearly half of school buildings are at least 40 years old. The Ministry has a good view of renewal requirements over the term of this LTIP; however, as the buildings continue to age, the rate of renewal may increase. One of the outcomes of the Ministry's progression from funder to asset manager will be a better understanding of asset lifecycles and identifying opportunities to optimise whole of life costs. To realise these benefits fully, will require investment in capability and information that is not currently funded.</p>	<p>[Redacted]</p> <p>s 2(2)(f)(iv) OIA</p> <p>s 2(2)(f)(iv) OIA</p>
<p><b>Special needs accessibility</b></p> <p>Increasing enrolments of special needs students at mainstream State schools requires new assets or modifications to existing assets to ensure the facilities are accessible and fit for purpose.</p>	<p>[Redacted]</p>
<p><b>Canterbury earthquakes</b></p> <p>The earthquakes of 2010 and 2011 caused extensive damage to land and infrastructure and resulted in a significant shift in demand across parts of the city.</p>	<p>This is being addressed by the \$1.137 billion Christchurch Schools Rebuild programme, which is expected to take a further eight years to complete.</p> <p>The Ministry was successful in an insurance claim of \$200 million (GST inclusive), which has helped partly fund the programme.</p>

Challenge	Response
<p><b>Seismic resilience</b></p> <p>Changes to the building code following the 2010 and 2011 Canterbury earthquakes have resulted in the need to strengthen buildings assessed to be below code as either "prone" or "at risk", or which otherwise pose an unacceptable seismic safety risk.</p> <p>There is substantial effort and cost associated with identifying and strengthening buildings nationally.</p>	<p>This is being addressed by the earthquake resilience programme, which is due to complete its assessment of buildings across the school infrastructure portfolio by the end of 2015/16.</p> <p>The Ministry previously was successful in demonstrating the resilience of a large proportion of the portfolio comprising single-storey, timber framed buildings. This initiative was successful in substantially reducing the extent of seismic strengthening investment that would otherwise have been required.</p> <p>Where remaining buildings are assessed to be in need of strengthening they enter the school's 10 Year Property Plan and are funded through the Five Year Agreement. Where this funding is insufficient, the Ministry provides additional funding via the Earthquake Resilience or Redevelopment programmes.</p>
<p><b>Hazards</b></p> <p>There is a growing awareness of long-term hazards present within some school properties. Most notably these include:</p> <ul style="list-style-type: none"> <li>• Asbestos, a commonly used building material in the 1950's through to the 1980's</li> <li>• Contaminated land issues associated with landfills and other industrial sites</li> </ul> <p>The Health and Safety at Work Act 2015 will place an increased duty of care over the Ministry to work with schools to safeguard sites from hazards of this nature</p> <p>Safe removal of asbestos is emerging as a significant cost driver in some projects within the Redevelopment and Defective Buildings programmes.</p>	<p>The Ministry has improved processes involving the identification and management of hazards. These processes extend to training of schools about their obligations, and competency requirements for contractors involved in maintenance and construction projects.</p>

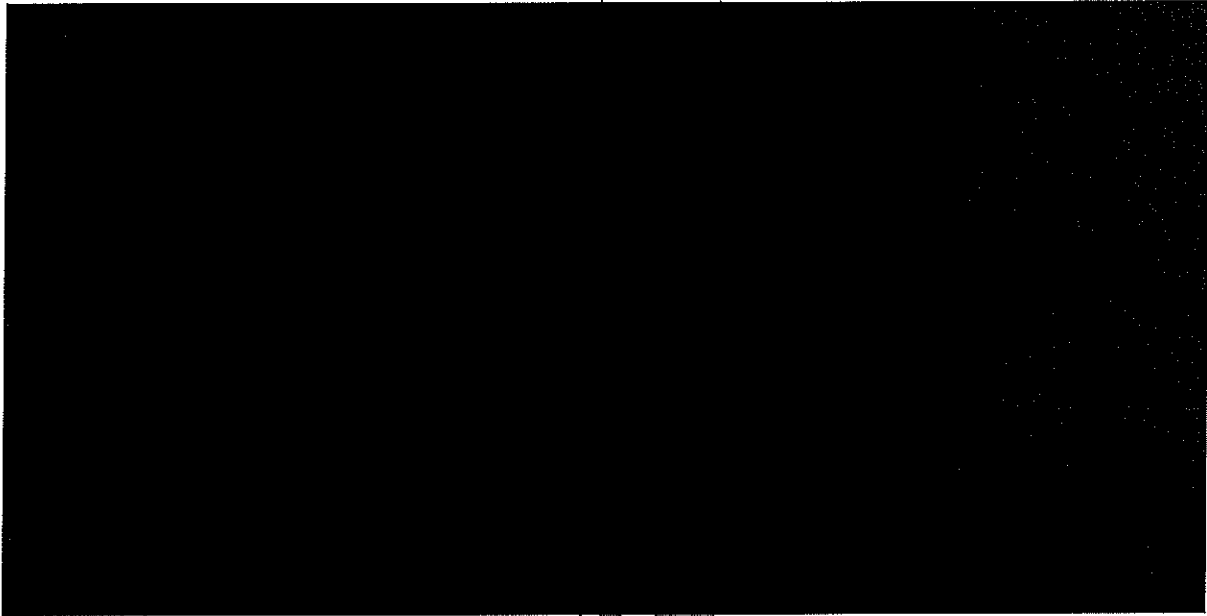
Challenge	Response
<p><b>Leaky buildings</b></p> <p>To date, weather-tightness failure of buildings following a period of building code deregulation has resulted in more than 500 schools having one or more defective buildings that require remediation, replacement or rationalisation. There are buildings still to be tested, so the final number is likely to be higher.</p>	<p>The capital remediation is being addressed by the Defective Buildings programme and in some cases via the Redevelopments programme.</p>
	
<p>s 9(2)(f)(iv) OIA</p>	<p>The Ministry has introduced standards to ensure new building construction does not lead to future leaky building recurrence.</p> <p>The Ministry continues to pursue product suppliers, and parties involved in design and construction of leaky buildings, in order to seek partial recourse for costs associated with remediation. This is also a tactical initiative to ensure third-parties adjust their processes to include quality systems to prevent future recurrence of problems.</p>

Released under the Official Information Act

2.7 School Infrastructure Long Term Investment Plan

2.7.1 Overview of the Plan s 9(2)(f)(iv) OIA

The LTIP for school infrastructure presents a base case intention to invest nearly [REDACTED] over the next 10 years (from 2015/16 to 2024/25). [REDACTED]



The planned capital expenditure shows a significant peak in investment required in the first five years of the LTIP. This is driven by increased investment to expand the school infrastructure portfolio in response to demand growth, and to improve the portfolio in response to the number of assets in poor condition. Investment in maintaining the rest of the portfolio is expected to remain steady over the term of the LTIP. The decline in expenditure in the last two years is expected as the leaky building and redevelopment programmes come to an end.

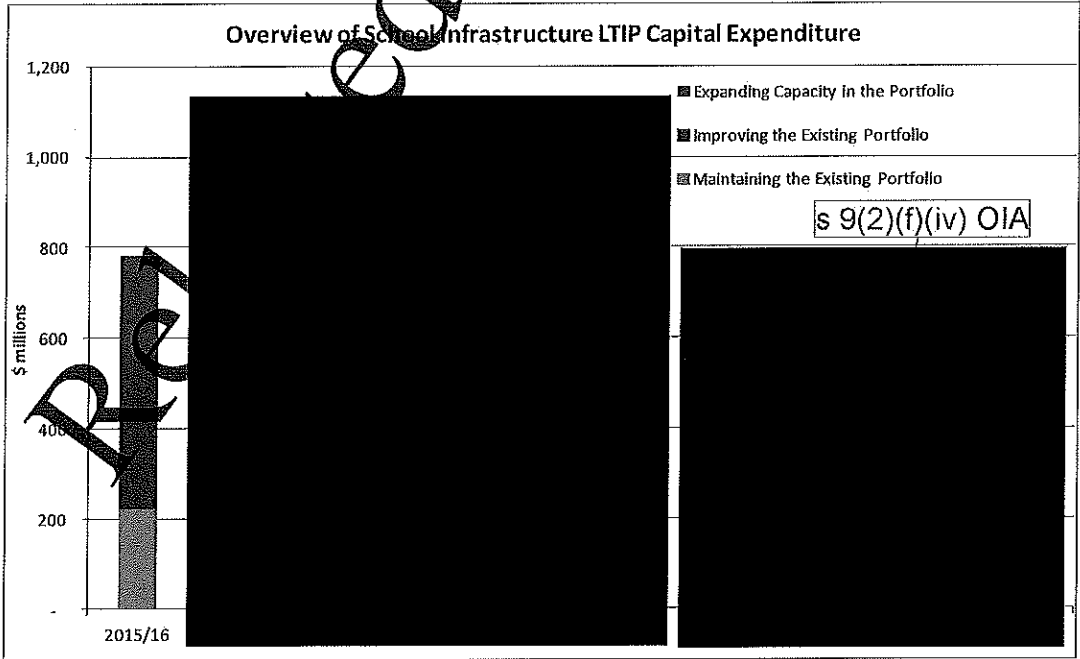


Figure 18: Overview of capital investment forecast in the school infrastructure LTIP (2015/16 to 2024/25)

Capital Expenditure by Region

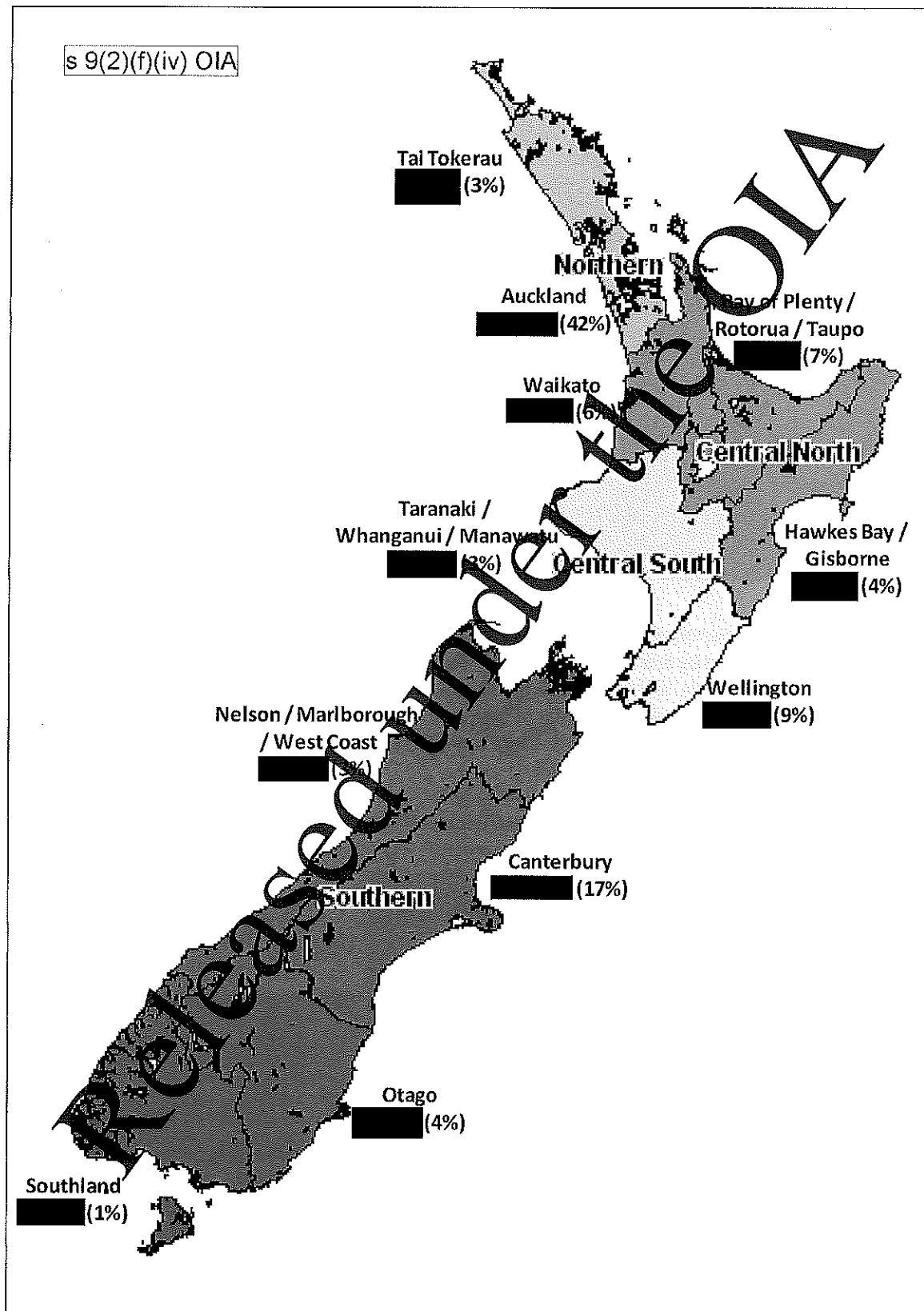


Figure 19: 10 year investment by region



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Programme (\$millions, 10 years) <sup>22</sup>	Description	Funded by	Benefits
s 9(2)(f)(iv) OIA <b>Five Year Agreement (5YA)</b> [REDACTED]	Capital allocation calculated by area, paid to schools every five years to cover capital maintenance, renewals and modernisation according to approved school property plans informed by condition assessments and Ministry prioritisation.	Depreciation	Condition Fitness for Purpose Lifecycle extension
s 9(2)(f)(iv) OIA <b>Earthquake Resilience (EQR)</b> [REDACTED]	The EQR programme manages evaluation of school buildings to determine if seismic strengthening is required. EQR tops-up 5YA if it is insufficient.	Depreciation	Legal compliance Health & Safety Fitness for Purpose
s 9(2)(f)(iv) OIA <b>Property Initiatives</b> [REDACTED]	Range of targeted programmes including: fire alarm upgrades; capital maintenance for housing; and provision of facilities for a range of specialised uses, including social workers in schools, resource teacher learning and behaviour staff, early childhood education and teen parent units.	Depreciation	Fitness for Purpose Availability
s 9(2)(f)(iv) OIA <b>Unforeseen</b> [REDACTED]	Tops up 5YA where urgent unforeseen capital works are needed to preserve building fabric, protect health and safety and/or keep the school operational.	Depreciation	Condition Availability Health & Safety
s 9(2)(f)(iv) OIA <b>Special Needs Modifications</b> [REDACTED]	Funds new assets or modifications to existing assets to enable students with special needs to enrol at mainstream schools. Examples of assets include ramps, lifts, toilets, fences, etc.	Depreciation Injections	Fitness for Purpose Inclusivity
s 9(2)(f)(iv) OIA <b>Risk Management</b> [REDACTED]	Funds repair and restoration following insurable events (e.g. fire). The Ministry covers up to the first \$12.5 million of events (in aggregate, per annum) under its insurance policies.	Depreciation	Condition Availability
s 9(2)(f)(iv) OIA <b>Redevelopments</b> [REDACTED]	Ministry run programme where schools have significant infrastructure issues that cannot be funded from 5YA. May cover issues such as leaky buildings, seismic strengthening, poor condition, lifecycle renewal, site issues, modernisation, and to a limited extent, roll growth. Contingency is included in the LTIP as identification of schools is continuing.	Depreciation	Condition Fitness for Purpose Utilisation Health & Safety

<sup>22</sup> Costs include increases to depreciation and capital charge, but exclude non-capitalised management and support costs.

s 9(2)(f)(iv) OIA

Programme (\$millions, 10 years) <sup>22</sup>	Description	Funded by	Benefits
Defective Buildings (i.e. Leaky Buildings)		Depreciation	Condition Fitness for Purpose Health & Safety
Christchurch Schools Rebuild (CSR)	CSR is the most comprehensive, whole of city, education infrastructure renewal programme ever undertaken in New Zealand. It repairs and replaces assets damaged by the earthquakes, meets the changes in demographics and seeks to improve the network to best meet the community's needs.	Depreciation Insurance Injections	Condition Availability Fitness for Purpose Utilisation
Technology in Schools	The School Network Upgrade Programme (SNUP) subsidises and manages high quality upgrades of schools' internal cabling and associated infrastructure, connecting to the ultra fast broadband network	Injections Depreciation	Fitness for Purpose
Public Private Partnerships (PPP)	Private partners design, build, finance and maintain school property for the term of the contract (usually 25 years). The Government retains ownership throughout the life of the contract.	Injection	Utilisation Fitness for Purpose Condition (where a redevelopment)
Roll Growth	Funds new teaching spaces (including classrooms and gymnasiums) and new non-teaching spaces (e.g. library, administration and resource areas) according to entitlement policies. May also include replacement of existing buildings for example on congested sites or otherwise to optimise the expansion solution.	Injection	Utilisation Fitness for Purpose Condition (where it includes replacement)
New Sites	Acquisition of new sites and extensions to existing sites to support the planned construction of new schools or roll expansion at existing schools.	Baseline but reimbursed via Injection	Utilisation
New Schools & New Kura	Design and construction of new schools to ensure the network has enough capacity to meet growing demand, including kura to meet demand for Māori medium schooling. Projects are detailed in the Programme Business Case	Injection	Utilisation Fitness for Purpose

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#### 2.7.4 Asset Performance



This section describes the predicted impact of the planned investments on future asset performance across the school infrastructure portfolio.

##### Condition

The LTIP anticipates resolving most of the systemic issues affecting condition across the school infrastructure portfolio over the next 10 years, including in relation to the Redevelopments, weather-tightness and Christchurch Schools Rebuild programmes. Therefore, it expects a significant increase in the overall condition of schools across the portfolio.

The Ministry has modelled the likely effect of the ten year investment programme against assumed life-cycle degradations, using condition ratings based on the relationship between forecast investment cost and replacement value, giving rise to the following planned improvements to asset performance:

s 9(2)(f)(iv) OIA, s 9(2)(g)(i) OIA



Significantly lifting the condition of the worst condition schools will support a more sustainable education platform and enable competition and collaboration to occur on a more equitable basis.

s 9(2)(g)(i) OIA

Changes introduced to the service model for the Ministry, including the provision of better support to schools and improved school property planning, will help to sustain this improved level of condition across the school infrastructure portfolio.

### **Fitness for Purpose (Functionality)**

Measurement and reporting of asset functionality performance still needs to be implemented. So far, standards have been developed that establish service levels for different aspects of functionality, and include:

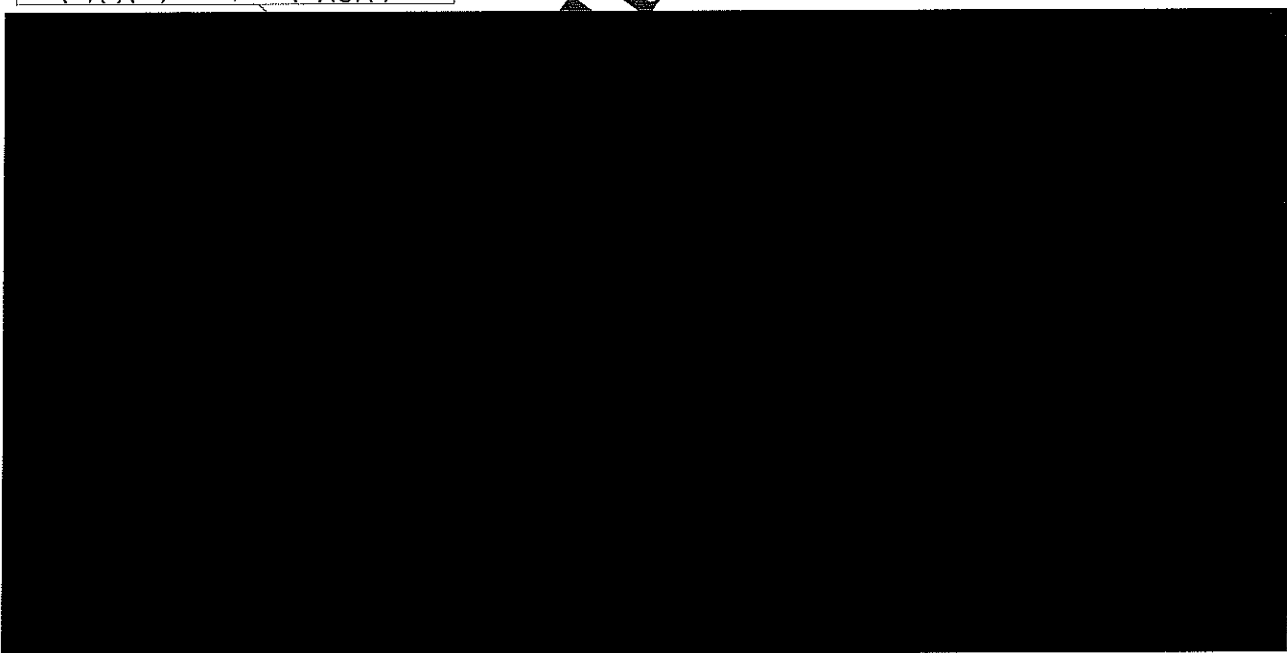
- Design quality learning standards (DQLS), i.e. air quality, temperature, lighting, acoustics
- Other aspects of flexible learning spaces (e.g. ability to use a range of teaching practices in the physical spaces provided)
- Earthquake resilience standards
- Connection to ultra-fast broadband

Assessment of performance against these standards will be conducted through future 10 year property planning processes. Until then, current and target performance cannot be quantified.

In qualitative terms, the following improvements to asset functionality are planned as a result of investments over the term of the LTIP:

- Completion of the School Network Upgrade Programme ensuring all schools are connected to the national ultra-fast broadband network.
- Completion of seismic assessments to determine which buildings require seismic strengthening, and investment to ensure there are no remaining buildings assessed to be earthquake prone.
- Increase in the overall number and proportion of teaching spaces that are compliant with DQLS and flexible learning space standards.

s 9(2)(f)(iv) OIA, s 9(2)(g)(i) OIA

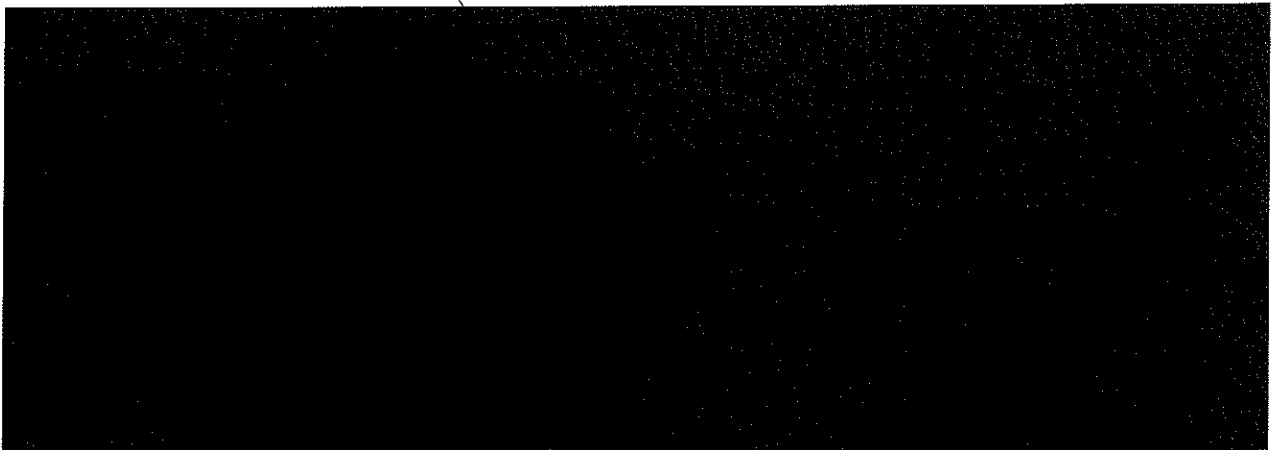


REDACTED



Budget Sensitive


s 9(2)(f)(iv) OIA



#### New School Investment

s 9(2)(f)(iv) OIA

Investment in new schools is a proactive solution for mid to long-term demand growth. It generally takes a number of years from when the school is opened to when it becomes well utilised. This is partly because new schools are built in anticipation of future growth and partly because enrolment zones are enforced to minimise the impact on existing neighbouring schools.



s 9(2)(f)(iv) & 9(2)(g)(i) OIA

REDACTED

### 2.7.5 Key Opportunities

Opportunities exist to improve capital efficiency and value for money from the investments assumed in the LTIP. These include:

- Better information and reporting – in terms of the condition and functionality of school infrastructure and supporting better planning and investment governance.
- Better planning – both in terms of the quality of school level planning aimed at optimising in-school solutions to issues, and programme and portfolio level planning aimed at prioritising investments to maximise outputs and outcomes and supporting better procurement.
- Better investment governance – through a fully mature portfolio management office, improved reliability of forecasts, better business cases and robust decision making processes.
- Better procurement – including better use of Ministry purchasing power to negotiate national and regional contracts; promotion of project and network bundling to enhance local level economies of scale; improved vendor management to drive performance; greater consideration of alternative delivery options, including public private partnerships, leasing and financing.
- Better project delivery capability – including through better alignment and training of resources to the scale and complexity of the project portfolio. Better support through the construction professional services panels.
- Faster and less risky delivery – including through extension of the Modular Transportable Buildings contract.
- Improved incentives - including as part of funding and governance frameworks, to promote behaviours aligned with increased value for money outcomes. s 9(2)(g)(i) OIA
- [REDACTED]
- Increasing alternative funding sources, including through more efficient and effective asset disposal processes, successful claims against defective products and workmanship contributing to issues of weather-tightness, [REDACTED] s 9(2)(g)(i) OIA
- Greater flexibility of the school infrastructure portfolio – through better overall utilisation and increasing volumes of modular transportable buildings.
- Cost avoidance - via better utilisation of existing assets through demand and supply management enabling deferral or avoidance of some new school or building projects.

These opportunities are starting to be realised through improvements made over the past couple of years. Improvements to date have, for example, improved assurance of design quality and the quality of planning information and processes. However, the majority of benefits are still to be realised.

For more details of the plan to realise these opportunities refer to the Improvement Plan in section 2.11.

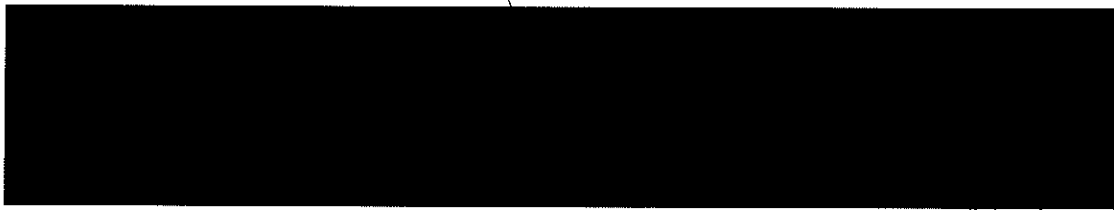
Realising the opportunities would help drive capital efficiency, which would enable:

- Lower levels of capital injection, reducing the LTIP funding gap,
  - Accelerated improvements to the condition of school infrastructure achieved through reduced cost of baseline funding improvement capital programmes,
  - Increased levels of working capital able to be reserved from depreciation funding.
- [REDACTED]

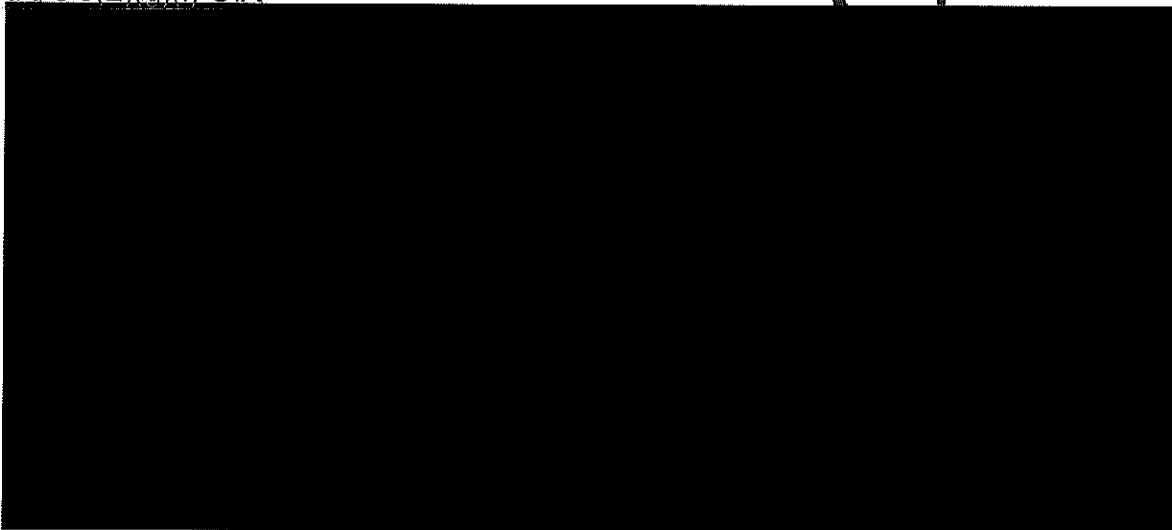
#### 2.7.6 Key Risks

s 9(2)(f)(iv) OIA

Key risks relating to this LTIP include:

- 
- Reliability of forecasts – the Ministry has sought to improve the quality of its project and programme forecasting, however, this capability is still maturing and the significant increase in planned investment activity will expose any bias in the underlying timing and cost assumptions.

s 9(2)(f)(iv) OIA s 9(2)(a)(i) OIA

- 
- Legislation – the new Health and Safety at Work Act 2015 will come into effect in 2016 and is expected to increase the obligations on the Ministry, schools and suppliers, which may lead to increased costs.
- Price escalation – in accordance with Treasury requirements, the LTIP is presented in real (2015 dollar) terms and does not take price escalation into account. To the extent prices do increase, depreciation forms a partial hedge in that price escalation will also drive up annual revaluations, and in turn, increase the level of depreciation funding.

For baseline funded investments, the Ministry could reduce the extent it reserves funds as working capital. It could also draw down part of its working capital balance.

To the extent the net of key opportunities described above are able to be realised, these will further mitigate any price escalation.

To the extent these various measures do not offset increased prices the Ministry would need to slow baseline funded investment programmes. In relation to capital injection funded investment programmes, any residual funding gap arising from price escalation would need to be covered by additional injections.

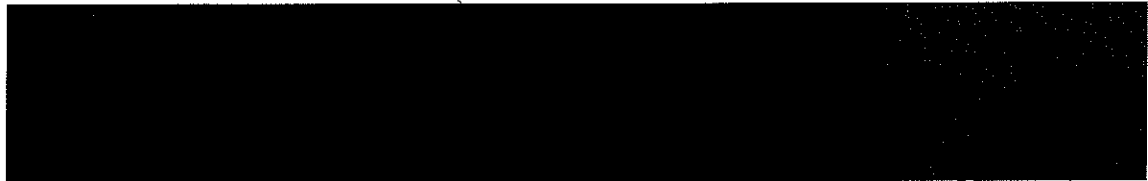
There is also the possibility that prices may reduce, although the current high level of demand across the construction industry along with historical trend lines suggest this is unlikely over the term of the LTIP.

s 9(2)(f)(iv) OIA

### 2.7.7 Key Assumptions, Constraints and Dependencies

The following is a list of the key assumptions, constraints and dependencies underpinning this LTIP

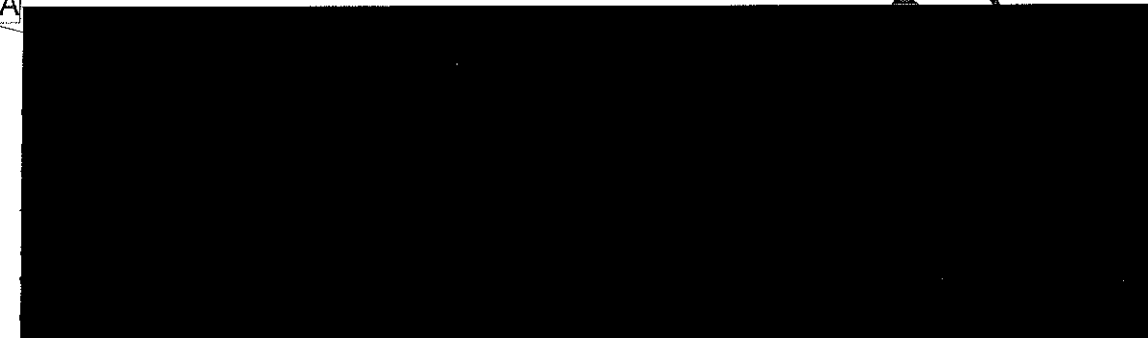
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- No significant changes in Government priority or policy over the term of the LTIP

s 9(2)(f)(iv) OIA

- 



- Workforce and industry constraints do not limit the extent and timing of delivery of the LTIP
- Currently available information regarding the extent of condition based issues affecting the school infrastructure portfolio is materially complete and reliable; and as yet unidentified further requirements for redevelopment or weather-tightness remediation are able to be funded within the 10% programme contingency included within the LTIP.
- Demand forecasts are materially accurate at the median level of Statistics NZ projections. (As noted previously, the growth in demand in Auckland is the most significant area of uncertainty).
- Project and programme cost and timing estimates are reliable. Different programmes carry different assumptions, risks and uncertainties and therefore the reliability of forecasts making up the plan will vary between programmes. Generally, the forecasts in the short-term will be more reliable than those in the medium to longer term.
- The LTIP is expressed in current (2015) dollars. No assumptions regarding future price escalation have been made, including in relation to construction costs and the annual revaluation of the school infrastructure portfolio. For more information refer to the discussion of price escalation risk above. Refer also to section 2.10 Market Capacity, Capability and Maturity.
- Project contingencies are generally around 10%. In addition the LTIP includes an explicit programme contingency for the Redevelopments and Defective Building programmes of \$200 million (about 10%) to allow for new projects yet to be identified from continuing assessments and school property planning processes to enter the programmes.

s 9(2)(f)(iv) OIA

### 2.7.8 Updating the LTIP

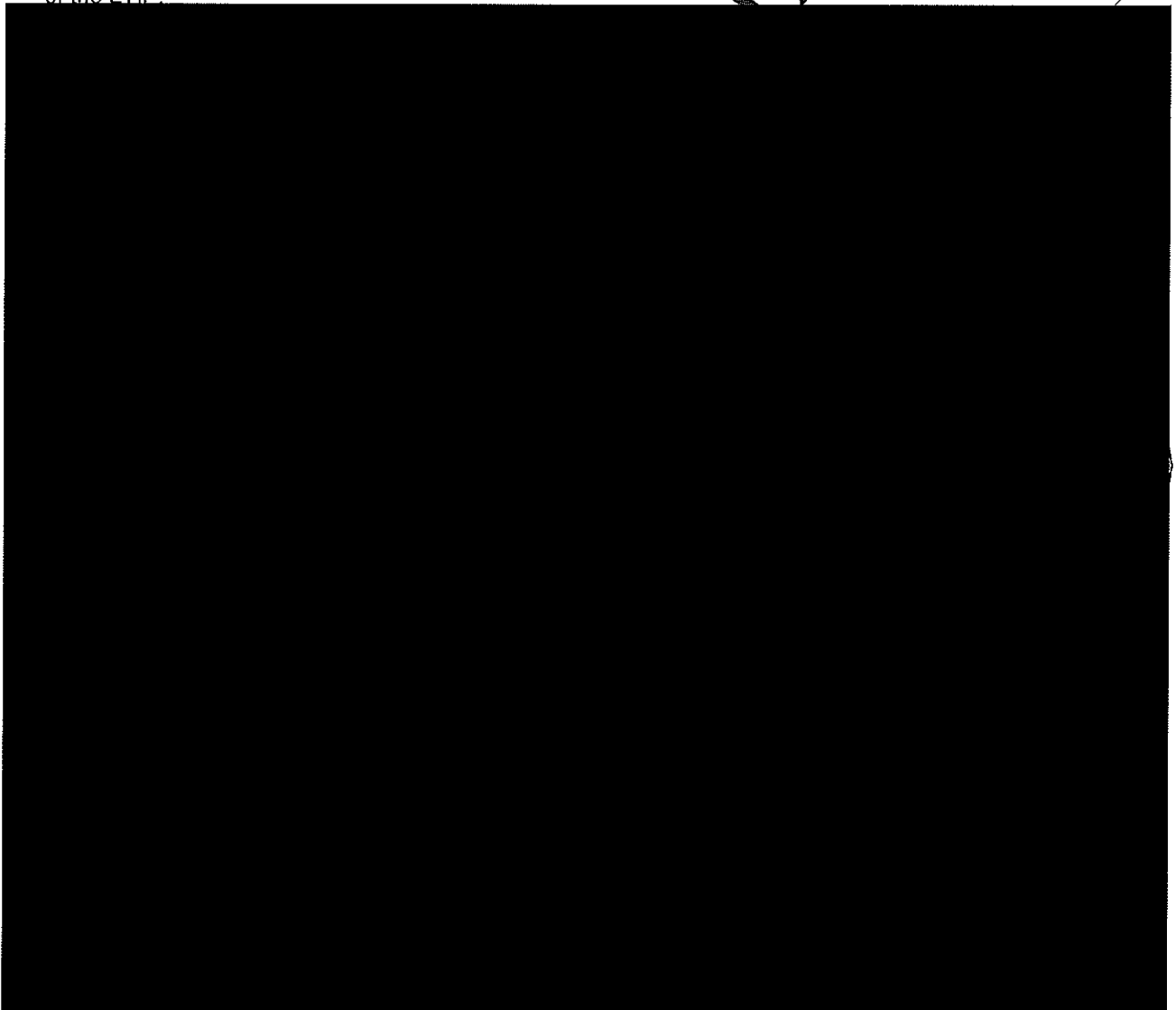
The plan is based on current information and assumptions and is subject to continuous monitoring and updates. In practice, forecasts are reviewed and updated on a monthly basis, although material change is likely to occur less frequently.

The Cabinet Circular CO(15)5 and the supporting Treasury Guidance for Developing and Maintaining a Long Term Investment Plan require LTIPs to be updated at least once every three years. The school infrastructure LTIP is heavily dependent on short-term policy and resourcing decisions. It is also sensitive to demand forecasts and continuously emerging information about the condition of the portfolio. Consequently, it is anticipated that the LTIP will be updated again around 30 June 2016 to reflect outcomes and developments.

It is expected that it will need further updating again following the preparation of the planned Auckland Programme Business Case during 2016/17. This means, potentially, the LTIP may be updated three times within twelve months. This reflects the current level of uncertainty and risk and the criticality of key resource dependencies on the reliability of the LTIP planning horizon.

The figure below illustrates some of the key milestones likely to affect the update of future LTIPs. The **red stars** indicate key short-term dependencies and their relationship to planned near-future updates of the LTIP.

§ 9(2)(f)(iv) OIA



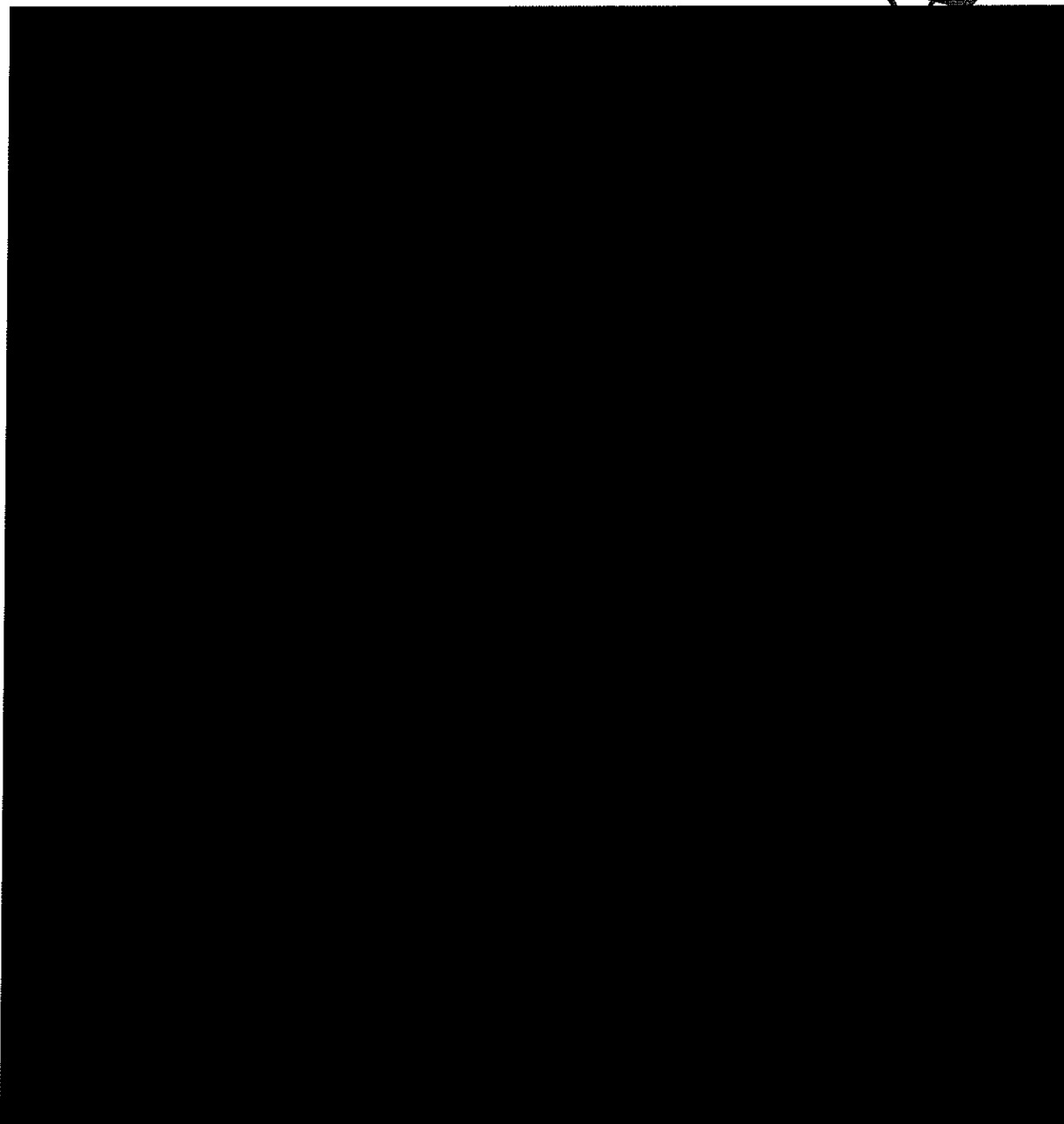
## 2.8 Investment Options and Trade-Offs

This section describes the principal options available in relation to revising the levels and timing of investment in the LTIP. It presents a number of scenarios, and outlines the resulting trade-offs.

### 2.8.1 Significant Government Policy and Priority Levers

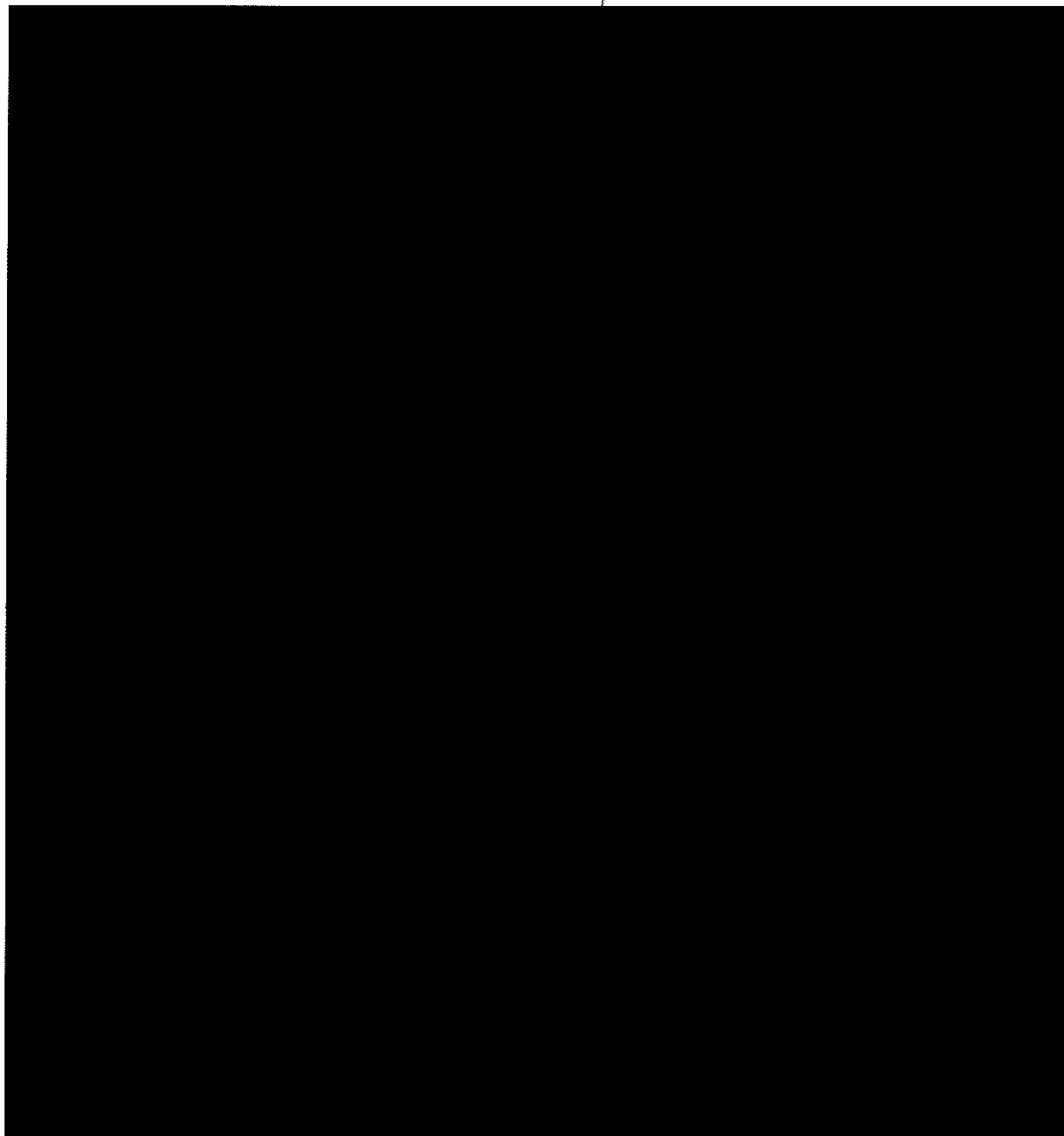
s 9(2)(g)(i) OIA

The LTIP is, in part, a response to the Government's priorities, objectives and policy settings, as described in section 2.2. Changes to these settings could reduce the level of investment planned.



### 2.8.2 Investment Options Targeting Utilisation & Efficiency

The volume of investment in new capacity and rationalisation of surplus property in the LTIP are based on the Ministry's assumptions, analysis and subsequent recommendations. The volumes planned are, however, subject to Budget bids and are scalable. The degree to which volumes are scaled will directly impact the resulting portfolio utilisation, as illustrated below.





## 2.9 School Infrastructure Capacity, Capability and Maturity

The Ministry's school infrastructure portfolio is managed by the Education Infrastructure Service (EIS). EIS was established in late 2013 as part of a response to recommendations from an independent review of the former school property function.

This section describes the organisational structure, capacity, capability and maturity of school infrastructure services performed by EIS.

### 2.9.1 Organisational Structure

The figure below shows the current organisational structure for EIS.

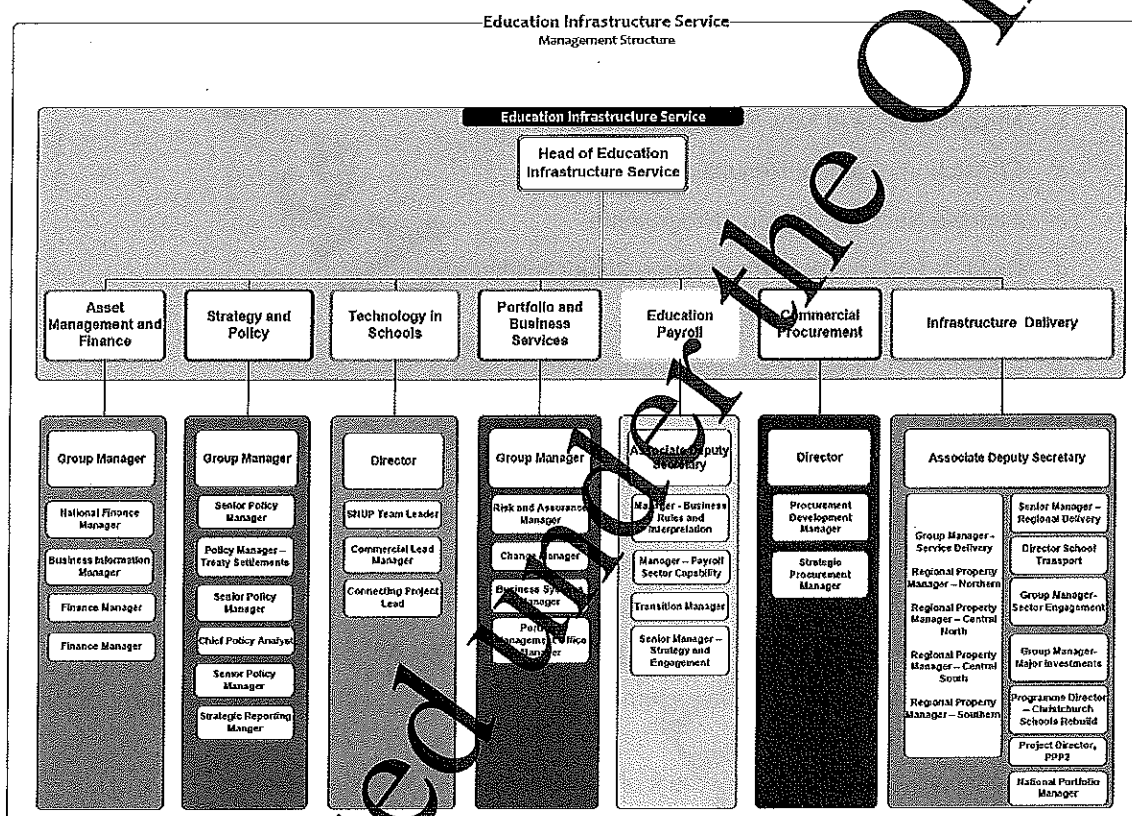


Figure 4.1: Education Infrastructure Service organisational structure

### 2.9.2 Services

The following is a list of the main services performed by EIS.

#### Front-line services

- School 10-year property plans (frameworks, support, funding of planning, review, approval)
- Funding and project approvals
- Monitoring of 10-year property plan performance
- Advice and support to schools
- Relationship management, including consultation and regular forums
- Issues resolution
- Emergency response, such as in the event of a fire, flood, etc.

## Budget Sensitive

- Business continuity planning
- Operational policy with process and guidance instructions for schools
- Training for project managers, planners and Boards of trustees
- Condition assessments
- Maintenance of property management information system data

### Project and programme delivery services

- Land acquisitions, including designations
- Project and programme management, including procurement, design and construction services for:
  - New Schools and New Kura programmes
  - Christchurch School Rebuild programme
  - Schools Network Upgrade Programme
  - Building Improvement Programme (leaky buildings)
  - Redevelopments Programme
  - Classroom Delivery Programme (Auckland, including Roll Growth)
- Contract management, including:
  - Public private partnerships
  - National Modular Transportable Buildings programme

### Other platform services

- Payroll, including management of the relationship and contract with Education Payroll Limited
- Technology in Schools, including management of the relationship and contract with Network for Learning Limited
- School Transport, including management of contracts with transport providers

### Other direct asset management services

- Insurance for the school infrastructure portfolio
- National building warrants of fitness
- Maintenance of housing, closed school sites and vacant land
- Negotiation, management and funding of rental agreements
- Management of Treaty settlements
- Rationalisation of surplus school buildings
- Disposal of land and non-core houses

### Enabling and other services

- Procurement, including supplier management, panel provision, negotiation, development of facilities management and other outsourced service offerings
- Information systems, including property management information, data warehouse, project management and transport systems
- Information management, including data analytics and data quality
- School infrastructure portfolio management office
- Ministerial servicing
- Official Information Act and media requests, parliamentary questions and rapid responses
- Strategic and tactical business and asset management planning
- Demand forecasting (in conjunction with Ministry Network team)
- Policy and standards
- Design reviews and post-occupancy evaluations
- Risk management
- Assurance
- Change management
- Financial management
- Investment management
- Business cases for investments requiring Ministerial or Cabinet approval
- New PPP developments
- Legal support, including in relation to weather tightness claims
- Stewardship and governance (see below).

#### 2.9.3 Stewardship and Governance

Stewardship of the school infrastructure portfolio and governance of the investment portfolio are critical capabilities for the Ministry given the capital and investment intensive nature of school infrastructure operations.

The Ministry runs a comprehensive governance framework which oversees school infrastructure activities as follows.

- Ministry Performance Board, oversees performance across the Ministry, including EIS
- Ministry and EIS Risk Committees, which oversee risks and management responses, including for EIS
- Infrastructure Governance Board, monitors the performance and advises in relation to EIS's development
- ICT Governance Board, monitors ICT projects, including EIS's project to replace its property management information system
- EIS Investments Board, provides gateway review for large investment projects and oversees investment programme performance

## Budget Sensitive

- Various EIS Project and Programme Boards, provide oversight and advice relating to large projects and programmes.

In addition, EIS is subject to numerous internal and external reviews, including:

- Internal audit
- External audits
- Independent quality assurance reviews
- Gateway reviews for large projects or programmes
- [REDACTED]

s 9(2)(f)(iv) OIA

EIS is also closely monitored by the Treasury.

## Project and Portfolio Governance

EIS's portfolio management office (PMO) has introduced a project governance framework designed to ensure a more stringent process approval involving centralised validation of investment decisions, prioritisation and to help maximise efficiency and effectiveness across the investment portfolio, with an increased focus on options analysis, reliable forecasting and benefits realisation, amongst other things.

Projects are subject to the project governance framework where whole of life costs exceed \$3.0 million, or require land acquisition, or carry significant reputational, legislative, financial or operational risk.

An investment pipeline has been developed and is being maintained which allows visibility of the project portfolio, including upstream prospective projects. This enables the Investments Board to prioritise and monitor projects and programmes across the portfolio considering principles including strategic alignment, affordability, value for money, and risk.

Projects that are subject to the project governance framework must seek and receive approval to pass through the gateways at each stage of the project lifecycle (see right).

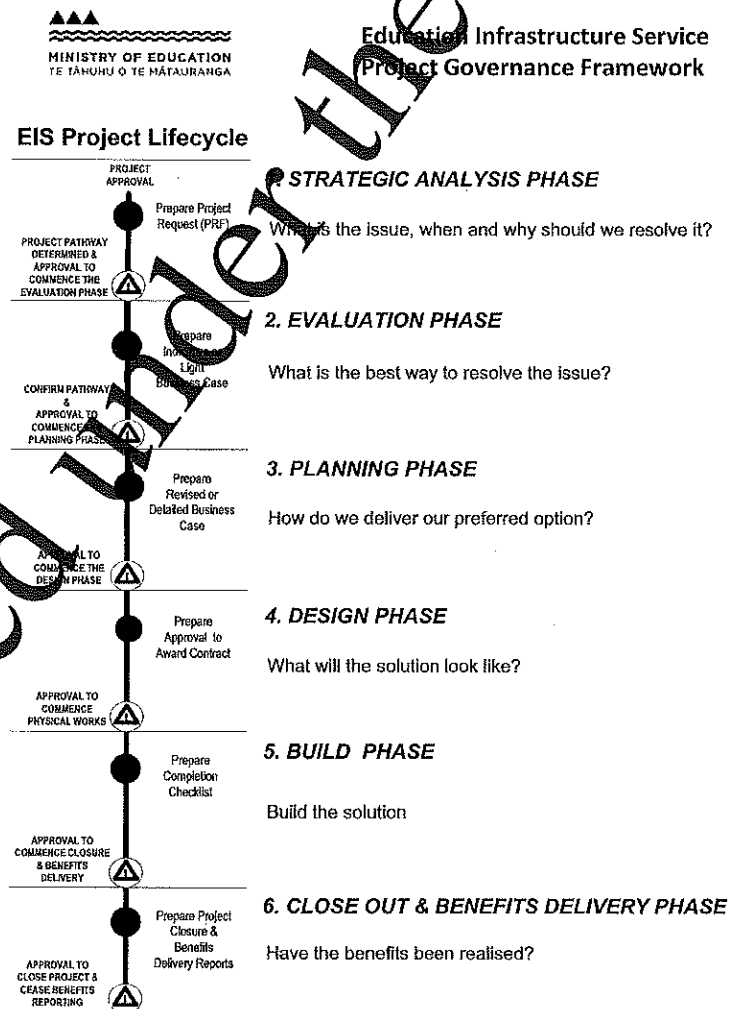
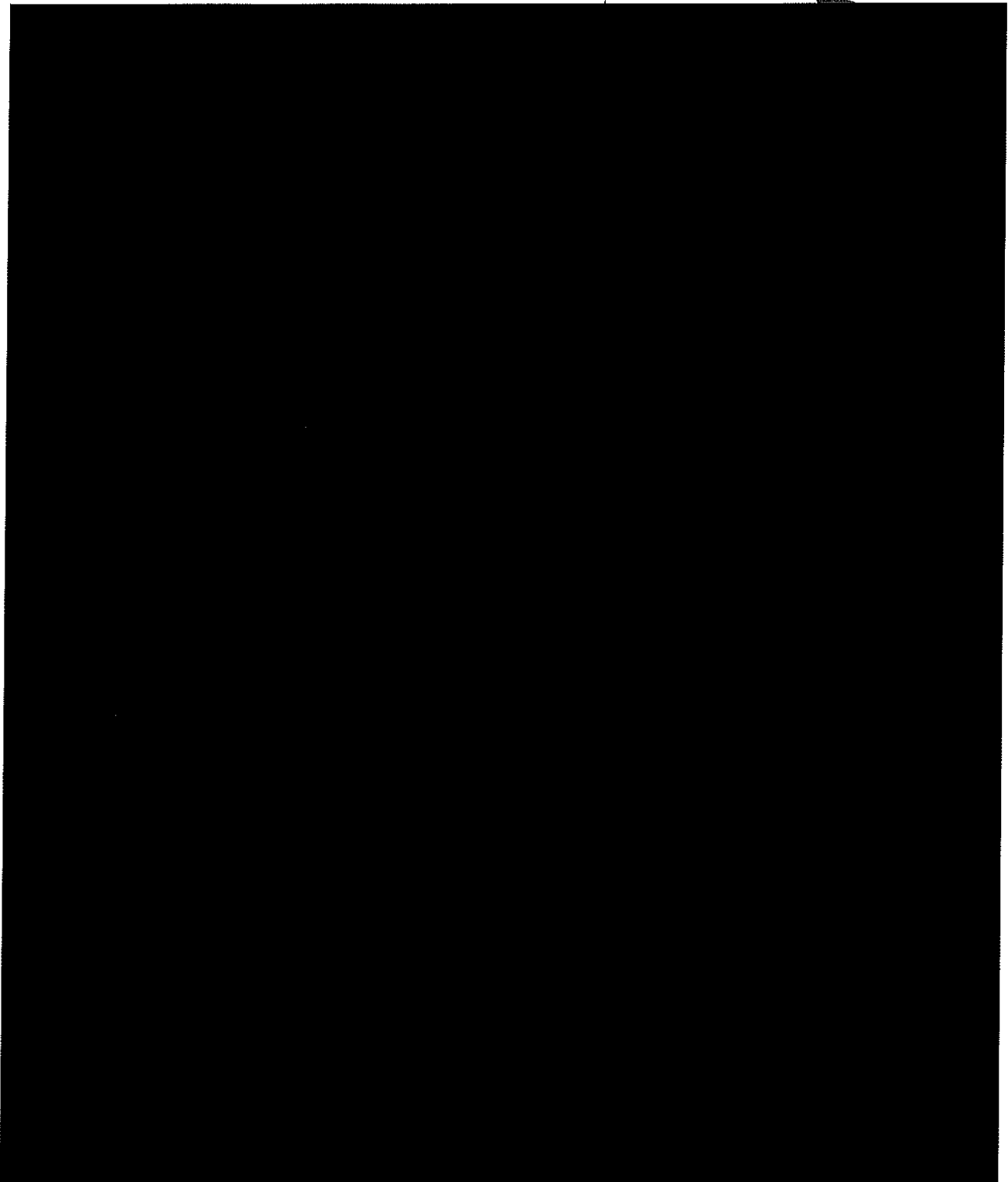


Figure 41: EIS Project Governance Framework

#### **2.9.4 Capability and Capacity**

EIS is transitioning from the operating model in place prior to its formation in 2013. Many of the services and frameworks listed above have been expanded or strengthened in recent years, as evidenced by improvements in asset management maturity (see 2.9.6), but most still require further development to fully embed. Improvement plans are in place for individual initiatives and a summary of the main areas of focus is provided in section 2.11 of this plan.



**REDACTED**

REDIRECTED

### 2.9.5 P3M3 Maturity

Portfolio, programme and project management are core capabilities for EIS in managing investments. The implementation of the Investor Confidence Rating requires assessment of portfolio, programme and project management (P3M3) maturity. This has been independently assessed by Outcome Insights and the results are summarised below, prior to any final moderation.

Target levels have been recommended, as part of the assessment, at Level 3 within two years. Refer to section 2.11 *Improvement Plan* for some of the initiatives aimed at achieving this target.

#### Portfolio Management – Level 1.83 (against a target of 3)

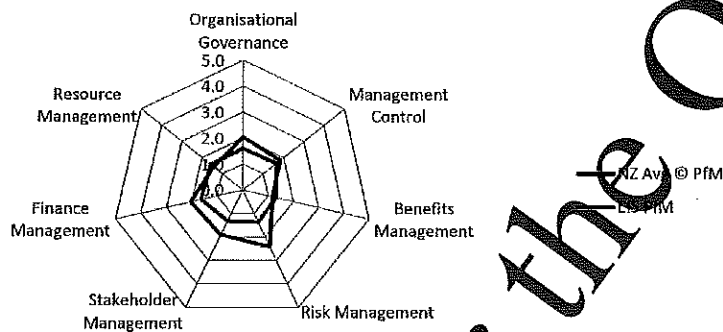


Figure 43: Portfolio management maturity

#### Programme Management – Level 1.92 (against a target of 3)

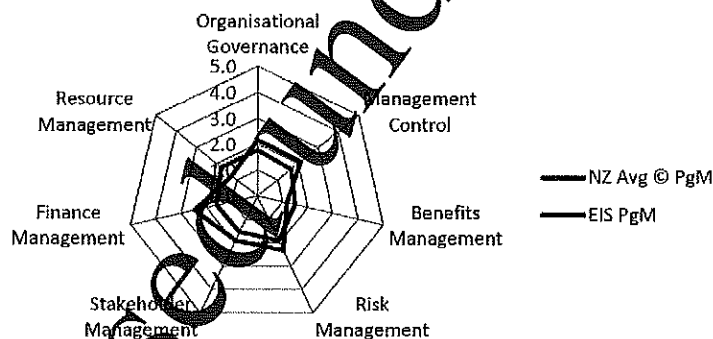


Figure 44: Programme management maturity

#### Project Management – Level 1.76 (against a target of 3)

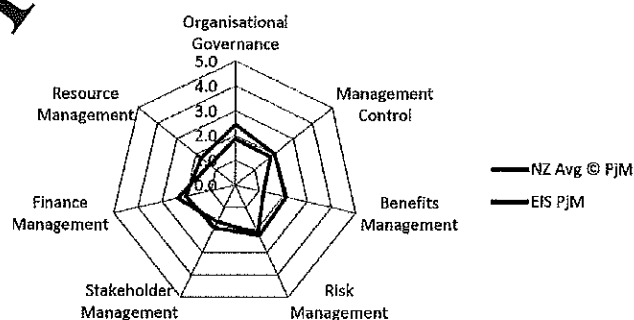


Figure 45: Project management maturity



### 2.9.6 Asset Management Maturity

Asset management maturity is a benchmark that assesses the level of asset management capability and processes undertaken in an organisation. It is derived from the International Infrastructure Management Manual and was first adopted by the Treasury in 2011 and since refreshed to be part of the Investor Confidence Rating (ICR) framework within Cabinet Circular CO(15)5 Investment Management and Asset Performance.

Since 2011, EIS has continued to assess its asset management maturity every year as a key performance indicator (KPI) within the Ministry's performance framework. The asset management maturity KPI has helped EIS track its evolution from funder to asset manager in line with the strategic objectives of the Ministry and the Government's priorities, for example as described in the Eight-Point Plan for transforming school property services.

The initial (October 2011) assessment was reviewed independently by GHD, engineering consultants. Since then, EIS has self-assessed its progress three times, at June 2013, June 2014 and June 2015. For each of these self-assessments they have been reviewed and, where appropriate, moderated by Kathy Dever Tod, an independent Director on the Infrastructure Governance Board, and an asset management expert experienced in the creation of the maturity framework and review of organisational maturity.

The latest (June 2015) assessment is subject to further external review by Just Add Lime, management consultants, as a formal part of the initial implementation of the ICR.

EIS has made good progress in its asset management maturity since 2011, progressing from *upper-core* to *lower-advanced* maturity over that time. This is reflected in a significant shift in the operating model of the Service, having undertaken substantial improvements to data, systems, processes, structure, capacity and capability.

EIS has assessed its target maturity to be *advanced* and has an improvement plan to achieve this, but

The chart below shows how the Ministry's self-assessment of its asset management maturity has evolved since 2011. Note: this is before the independent assessment currently underway.

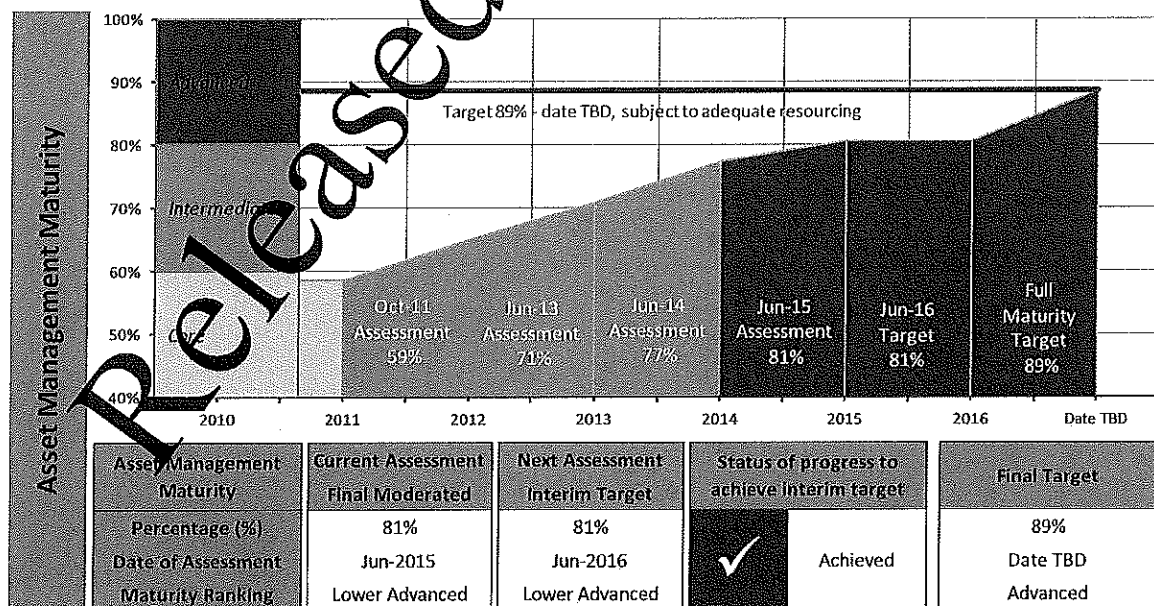


Figure 46: Asset management maturity, before independent assessment by Just Add Lime

### 2.9.7 Change Management Maturity

Change management is one of the enabling services undertaken within EIS. Change support is provided for large EIS transformational projects such as the replacement of the property management information system and the Infrastructure Delivery Service Design. Change support is also provided to schools through training of new processes and requirements, for example in relation to school property planning and condition assessments.

The implementation of the Investor Confidence Rating requires assessment of change management maturity. EIS has self-assessed its change management maturity, which is summarised below. This remains subject to possible review and moderation by the Treasury.

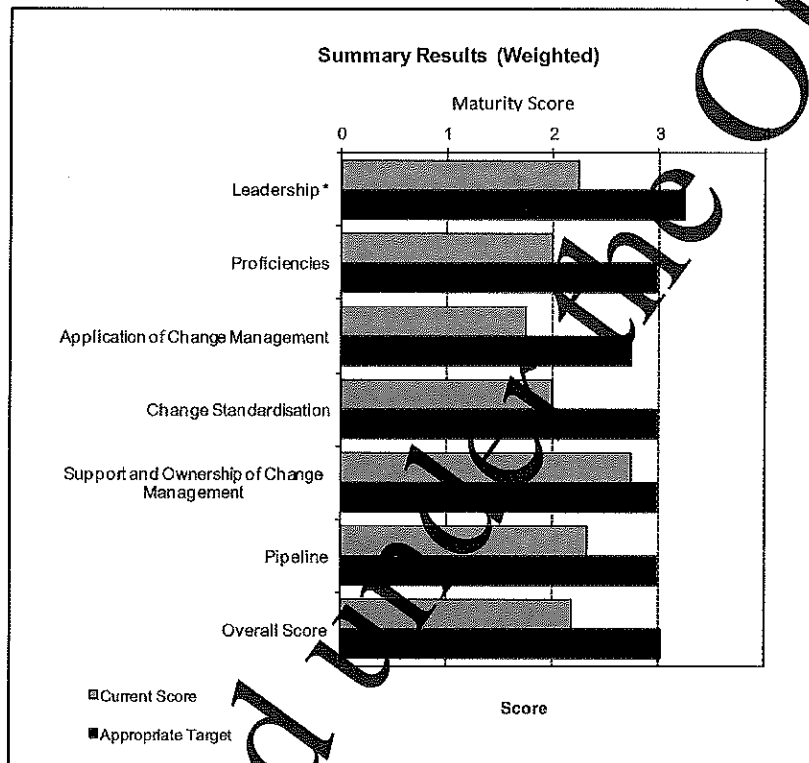


Figure 47: Provisional change management maturity assessment for EIS

## 2.10 Market Capacity, Capability & Maturity

### 2.10.1 The New Zealand Supplier Market

The construction sector represents approximately 6% of New Zealand's GDP with one in 12 jobs, or 194,000 people employed<sup>30</sup>.

Employment in construction is strongly linked to population patterns. Almost two thirds of total employment in the sector is located in Auckland, Canterbury, Wellington and Waikato<sup>31</sup>.

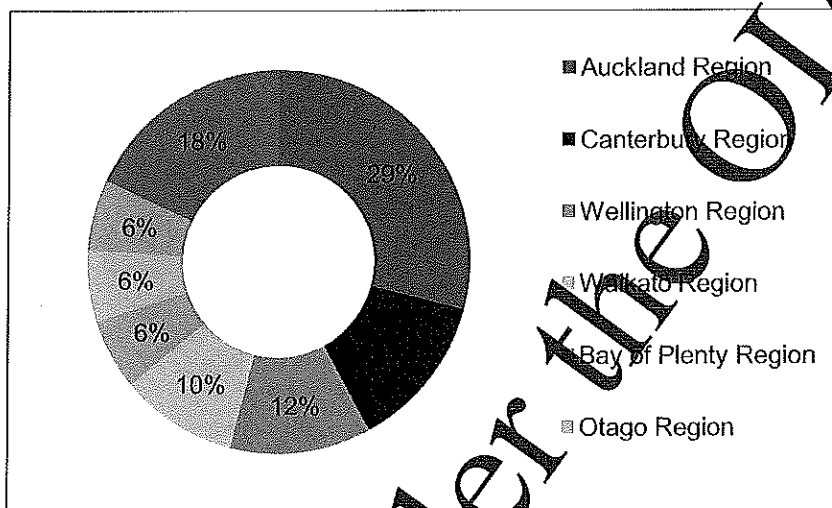


Figure 48: Employment in the construction sector by region

The sector consists predominantly of small businesses with almost 70% of firms employing fewer than 10 people. Figure [x] breaks down the non-residential building firms by number of employees<sup>32</sup>.

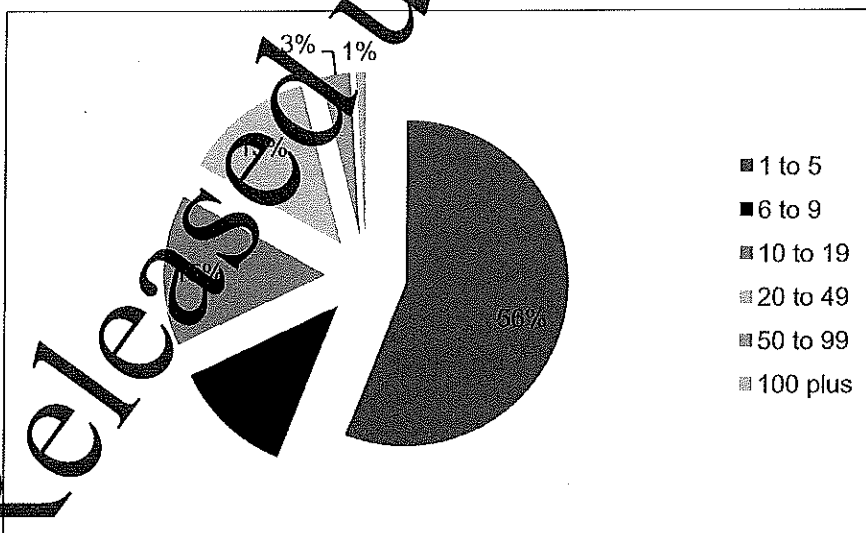


Figure 49: Proportion of non-residential construction firms by employee number

<sup>30</sup> Construction in New Zealand Factsheet, MBIE

<sup>31</sup> Valuing the role of construction in the New Zealand Economy, October 2011, PWC

<sup>32</sup> Construction Sector Report - 2013, MBIE

## 2.10.2 Construction Sector Trends

The sector is impacted significantly by the overall state of the economy, as investment in private and public infrastructure increases or decreases in line with overall economic activity and confidence. The sector is much more volatile, in terms of employment or proportion of GDP, than other sectors. The employed workforce was 30% larger in 2012 than it was in 2002<sup>33</sup>.

This volatility means that the industry is unable to build and maintain capacity, shedding jobs during downturns and struggling to respond during any upswing. As a result, the sector is prone to price inflation during expansionary phases. Refer further to sections 2.7.6 Key Risks and 2.7.7 Key Assumptions, Constraints and Dependencies.

The sector is anticipated to grow further over the next few years with both residential and non-residential construction activity increasing rapidly.

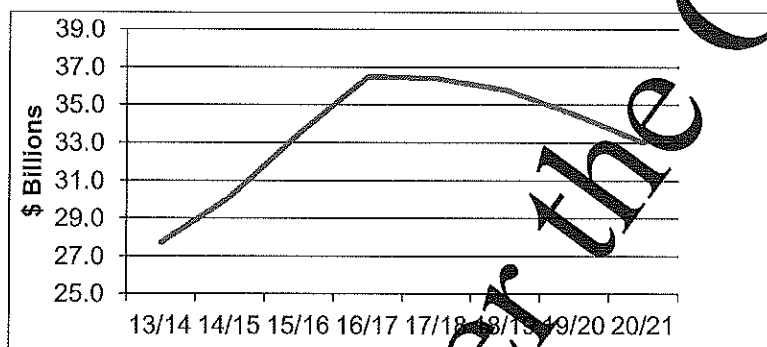


Figure 50: Forecast national construction activity<sup>34</sup>

Overall expenditure in construction is expected to rise by 19% from 2013 to 2020<sup>35</sup> with a peak in Financial Year 2016/17 and 17/18.

The forecast increases in construction activity are most pronounced in the Auckland region with other areas relatively flat and construction activity in Canterbury falling away sharply. By 2020/21 Auckland is anticipated to represent over 40% of the national construction market.

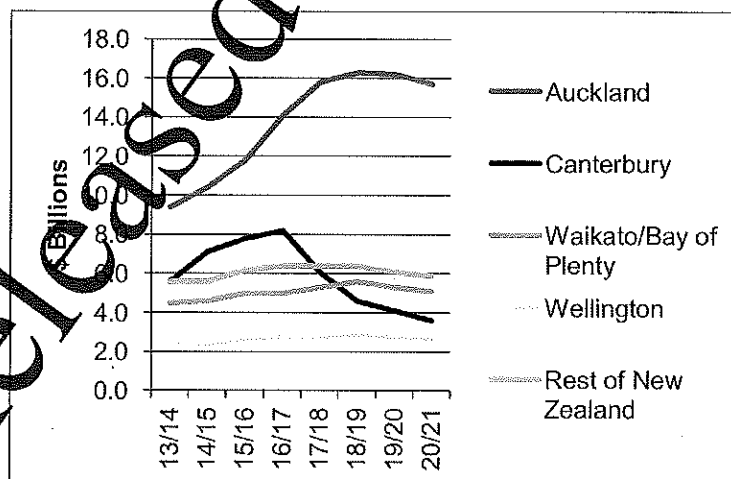


Figure 51: Forecast regional construction activity<sup>36</sup>

<sup>33</sup> New Zealand Housing and Construction Quarterly, March 2015, MBIE

<sup>34</sup> 3<sup>rd</sup> National Construction Pipeline Report - 2015

<sup>35</sup> 3<sup>rd</sup> National Construction Pipeline Factsheet - 2015

The Auckland construction market is driven largely by residential investment but there are also substantial increases in non-residential investment. Figure 52 shows the relative split between these sectors within Auckland<sup>37</sup>.

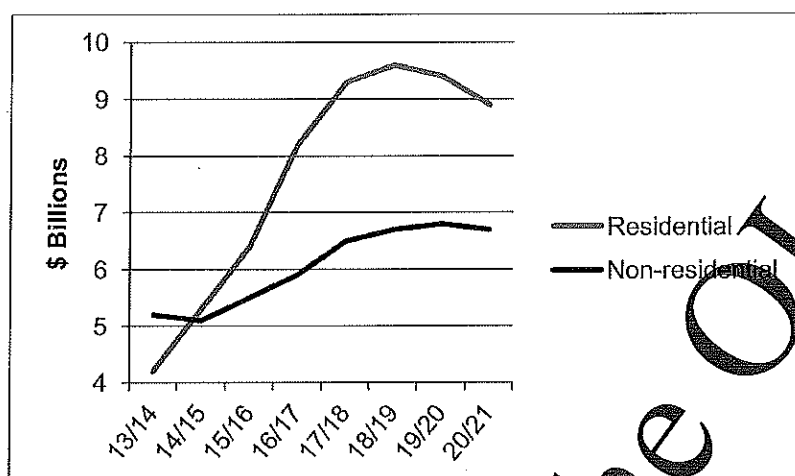


Figure 52: Residential and non-residential construction growth in Auckland

### 2.10.3 Capability and Productivity

The NZ construction sector is categorised as having low labour productivity and has seen this productivity decline over time compared with other sectors and construction industries in other countries<sup>38</sup>. This can be partly explained by the small business nature of the sector, as there is not the breadth or depth of finances to invest in capital or human resource development<sup>39</sup>. The need for longer term certainty of construction pipeline to support investment in skills and innovation was recognised in the 2014 Briefing for the Incoming Minister.

Currently, industry feedback would suggest that outside of the few larger suppliers, there is little capability or appetite for 'innovative' construction practices or technologies (e.g. Design and Build, Prefabrication/Modularisation, Building Information Modelling) that could increase productivity.

A pattern of reduced quality and client satisfaction has been identified in 'boom' construction periods as demand for services outstrips supply side capacity and capability.<sup>40</sup>

<sup>36</sup> 3<sup>rd</sup> National Construction Pipeline Report - 2015

<sup>37</sup> 3<sup>rd</sup> National Construction Pipeline Report - 2015

<sup>38</sup> Building a better New Zealand, BRANZ

<sup>39</sup> Valuing the role of construction in the New Zealand Economy, October 2011, PWC

<sup>40</sup> The effects of boom bust on National Construction Industry Performance, Construction Clients Group

#### 2.10.4 Contractor View

The 2015 Construction Contractor Forum reflected that the construction market is buoyant and expected that it would become more so, particularly in Auckland. Although this buoyancy results in positive opportunities most still saw the Ministry as a key part of their overall future work as a result of the low risk and secure nature of the work.

The key challenge the forum identified, as a result of the rising market, was their ability to procure and retain high quality subcontractors and suppliers.

Due to the high demand for their services, subcontractors have significant choice in regard to the works they take, may be overcommitted, are more difficult to manage and are more able to negotiate high prices due to a lack of available alternatives. As such, even with contractor good will to competitively tender for and carry out works on behalf of the Ministry, they may be deterred from doing so as a result of their supply chain.

Without longer term commitments to Main Contractors they are unable to make longer term arrangements with subcontractors to secure their services. More onerous procurement and delivery requirements would exacerbate these market challenges.

The Ministry relies on a relatively small number of contractors to manage a large proportion of the total national investment spend, as shown in the chart below.

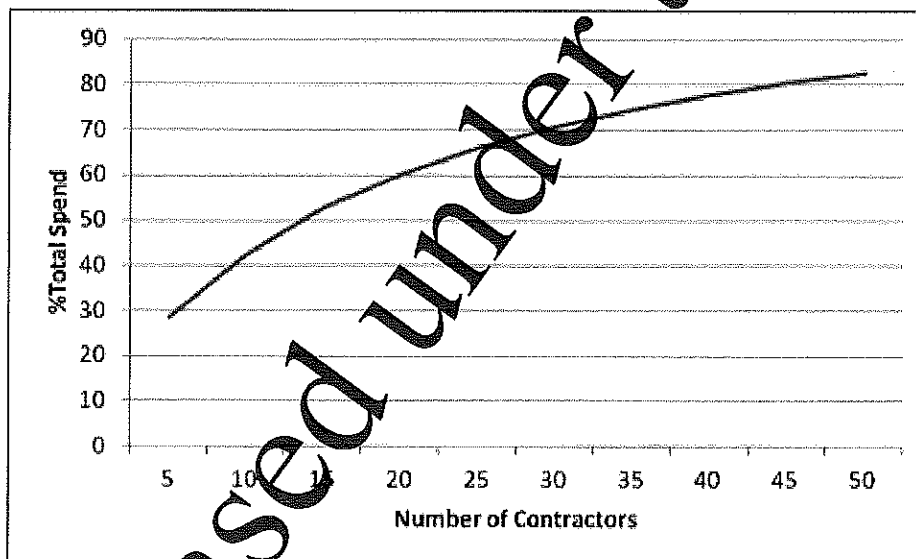


Figure 53: number of contractors by proportion of total spend, school infrastructure