Standard Designs Webinar Transcript

Jared Kwok - Welcome and Introduction

Okay. I'm assuming that everyone can see and hear me.

Could I get a few thumbs up from the audience?

Excellent.

Thank you. All right. Thanks everyone for attending.

We'll get started, Introducing Standard Designs, our webinar for today.

First of all, good afternoon everyone, and welcome.

Firstly, I'd like to thank everyone here for taking the time to join us today for the Standard Design presentation, especially during your lunch break. Hopefully you managed to grab something to eat

while listening in. For those that I haven't met or don't know me, my name's Jared Kwok. I'm a delivery team manager with School Property based in Cambridge.

I've been working with the ministry now for approximately 7 years, which has gone really quick. My background is in project management and quantity surveying, and before joining the Ministry, I worked in the private sector both in Australia and New Zealand. And over the past 18 months, I've been fortunate enough to be part of the team focused on standardization and why we're here today.

I've been working across strategy, materials, and systems, and the implementation phase.

Before we get started, I would also like to acknowledge the many people that have contributed to this work thus far. Standard Design has been shaped by input by many teams within the Ministry and from partners across the wider industry.

Too many to mention at this point, and I'm sure there'll be a lot more.

I would also like to give a special thanks to Trevor Watt from Athfields Architects, who's been heavily involved in developing standardized designs, and he'll be sharing some real-world examples later in today's session. In terms of today's agenda, I'll start by setting the scene and talking about the scale of the school property portfolio and why standardization has become an important focus for us.

Neil Wyatt will then take you through the evolution of our standard design approach before we share some practical examples of what we're seeing on projects, again, which will be presented by Trevor.

We'll keep things fairly high level today, because there's a lot to get through, but there'll be opportunities to ask questions throughout our Q&A sessions. And hopefully we'll finish by 1:30 so you can get back to what you're doing today.

Jared Kwok - Welcome and Introduction

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All right. Thanks everyone for attending. We'll get started with **Introducing Standard Designs**, our webinar for today.

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I would also like to give a special thanks to Trevor Watt from Athfields Architects, who has been heavily involved in developing standardised designs. He'll be sharing some real-world examples later in today's session.

Today's Agenda

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Neil Wyatt will then take you through the evolution of our standard design approach before we share some practical examples of what we're seeing on projects, which will be presented by Trevor Watt.

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Housekeeping

Due to the numbers, we've muted the mic function. Feel free to drop questions into the chat. We'll also have time for Q&A during some of the sections we're presenting today and a fair amount of time at the end.

Questions are very welcome. The more we have, the more we get to learn and provide you with some clarity. Please keep your comments and questions respectful and professional, which I'm sure you will.

Questions will be moderated. We have Ross Henderson and Vincent Mullens in the chat, along with other experts from the Ministry in the audience. Depending on how many questions we get today, we'll do our best to answer them. If we don't, we'll reach out at a later date.

And if you think of something that you would like to share with us or say to us later on, please send us an email at property.improvement@education.govt.nz.

So now I'd just like to hand it over to Ricky to lead us in our opening karakia.

Ricky - Opening Karakia

Kia ora tatou.

Today marks the first day of Māori Language Week, so like Jared said, your mics are muted, but I would encourage you to read along with me if you can.

Powhiri pou rama, pou a te whakairo, pou a te tangata, pou a te aroha. Te pou e here nei i a tatou, mauri ora ki a tatou. Haumi e, hui e, taiki e.

Jared Kwok - The School Property Portfolio

Thanks, Ricky.

Before we talk about standard design, we thought it would be useful to understand the scale of the portfolio we're working with for those who may not be familiar.

The Ministry is responsible for more than 2,100 state schools across New Zealand. Those schools sit on around 8,000 hectares of land and represent a portfolio worth approximately $33.5 billion. This makes it the second-largest social infrastructure portfolio in New Zealand. Across that portfolio, we manage roughly 16,000 buildings and around 37,500 classrooms.

When you look at those numbers, it's easy to see why consistency and efficiency matter. Many of our buildings were constructed between the 1950s and 1970s, and around 90% are lightweight timber-frame buildings. At the same time, our population continues to grow, particularly in our main urban centres, creating increasing demand for new learning spaces.

The challenge we face at the Ministry, and as taxpayers, is balancing investment in redevelopment and maintenance of existing schools while also delivering new capacity where it is needed most.

One of the positive outcomes we're already seeing through standardisation is a significant reduction in classroom costs of around 28%, and we anticipate those savings will continue as we progress further through the journey. That means we're able to stretch our funding further and deliver more classrooms for students and communities.

It's also encouraging to see growing uptake of standardised designs, with more than 50 projects currently using standardised designs and progressing through our new planning pathway. What these numbers really tell us is that even small improvements in how we design, create efficiencies and deliver projects can have a very large impact across a portfolio of this size. Standard designs will be applied across a large number of B26 projects, which you'll hear more about in this presentation.

Jared Kwok - Why Standardise?

So why standardise?

The biggest catalyst was the Ministerial Inquiry completed in 2024, which concluded that the current system was not fit for purpose. The inquiry identified three key challenges.

First, projects were taking too long to progress from identifying a need through planning, design and delivery. Second, costs were continuing to rise, and the system was becoming increasingly reliant on bespoke design solutions, creating project-by-project interpretation. Third, planning, procurement, funding and delivery were not always operating as a connected system.

This created inefficiencies and inconsistencies across projects around the country. While every school is unique and every site presents different challenges, we were often solving the same problems repeatedly. That created unnecessary effort, increased design time, introduced inconsistency and ultimately drove higher costs.

Standardisation is one of the ways we're responding to these challenges.

Our objectives are straightforward. We want to:

- Improve value for money.
- Increase consistency across projects.
- Reduce delivery timeframes.
- Make better use of industry and Ministry resources.

Importantly, the opportunity we're presenting through a standardised programme extends well beyond the Ministry itself. A portfolio of this scale provides greater certainty for schools, designers, contractors, manufacturers and suppliers. We're trying to create a more predictable pipeline of work, which we anticipate will support investment in industry capability and capacity. Ultimately, the downstream effect is achieving greater value from every dollar we invest in the future.

Moving to a Simpler, More Streamlined System

So what does this actually mean in practice?

At its core, we're moving away from treating every project as a standalone exercise and towards a more consistent system across our entire property portfolio. Historically, projects often followed

different pathways. Planning, design, procurement and delivery could vary depending on the project, the team or the location.

The shift we're making is to bring all these elements together through a more integrated approach. Standardisation will become the default pathway for growth projects moving forward, helping us improve consistency, reduce timeframes and achieve better value for money.

Importantly, this doesn't remove collaboration. In fact, collaboration between our partners, both internal and external, becomes even more important.

Most projects will continue to be school-led through School Property, working closely with schools, consultants and designers throughout delivery. Schools that have the capability and capacity to lead their own projects will still have that option available. They will simply be operating within the same framework, whether the project is school-led or Capital Works-led.

The key message is that we're not reducing flexibility where it's needed. We're creating a more consistent foundation so that we can focus effort and expertise where it matters most.

New Zealand School Property Agency (NZSPA)

Alongside our standardisation programme, another significant change that many of you will have heard about is the establishment of the New Zealand School Property Agency (NZSPA). This will come into effect from 1 October 2026.

For those who aren't familiar with it, NZSPA will become a dedicated Crown entity responsible for planning, building, maintaining and managing the school property portfolio.

The intent is simple. It's about creating a stronger focus on property delivery, improving accountability and transparency, and delivering better value.

For schools, designers, contractors and consultant suppliers, you shouldn't expect a dramatic shift overnight. The relationships we've built, the projects already underway and the way we work together will largely remain the same.

The biggest changes you'll see over time will be greater consistency in how we plan, document and deliver projects.

So now I'll hand it over to Neil Wyatt to talk about the evolution of standard designs. Thanks, Neil.

Neil Wyatt - Evolution of Standard Design

Yeah, thanks, Jared.

Kia ora, and thanks for joining us.

I'm going to talk about the evolution of standard design today.

As Jared mentioned, we began this journey around 18 months ago as a direct response to the Ministerial Inquiry. Today I'll walk you through the evolution of standard design, provide an overview of what we've developed, explain why we've taken this approach, what we're trying to achieve and how it supports better outcomes for schools and for the Ministry.

The focus of my presentation isn't on the technical details of individual building designs. Rather, it's about the journey we've been on, the lessons we've learned and how standard design can help us deliver school infrastructure more consistently, efficiently and effectively.

What Is Standard Design?

When people first hear the term "standard design", they sometimes assume that every school is going to receive exactly the same building, or that it's some kind of cookie-cutter approach.

That's actually not the case. Far from it.

Standard design is a collection of pre-developed building solutions covering most of the common building types seen across school environments. These designs have been developed with educators, designers, suppliers and technical experts to ensure they work effectively in real school settings. We've deliberately cast the consultation net very widely.

The key idea is that the fundamentals of the design are already resolved. Elements such as structure, safety, compliance requirements and core building systems are built into the design from the beginning. They're effectively baked into the solution.

At the same time, schools still retain flexibility. They can make choices around materials, colours, finishes and other aspects that reflect their identity, culture and local community.

So rather than removing choice, standard design aims to make decision-making easier by providing proven solutions while still allowing schools to create spaces that feel like their own.

Neil Wyatt - The Way Things Were

To understand why standard design was needed, it's worth reflecting on how projects were often delivered in the past.

Historically, many projects relied on bespoke design solutions. Each project effectively started from scratch, with different consultants, different building systems and a different delivery approach almost every time.

As a result, considerable time and effort were spent repeatedly solving the same design problems. Teams were often developing solutions for issues that had already been addressed on previous projects, rather than building on established knowledge and proven approaches.

This approach also resulted in a wide variety of building solutions, heating and ventilation systems, procurement methods and delivery approaches. Because of that variation, increasingly significant levels of design review and assurance were required across projects.

While there were certainly some excellent project outcomes, the overall process could be costly, time-consuming and, at times, inconsistent. Many decisions were effectively being made on a project-by-project basis, even when schools were experiencing very similar challenges and requirements.

Where We Wanted to Go

Our objective was to move towards a more efficient and consistent model.

We wanted designs that had already been tested and proven. We wanted buildings that were straightforward to construct and easy to maintain throughout their lifecycle. We also wanted greater equity across the portfolio, ensuring that students and staff have access to high-quality learning environments regardless of where they are located in the country.

By using repeatable building types and consistent construction details, we believe we can reduce costs and shorten delivery timeframes.

Another important point is that standard design was never intended to force solutions onto schools. Instead, the aim was to spend less time redesigning common elements and more time working with schools on the things that truly matter to them.

Ultimately, we wanted buildings that are:

- Safe
- Durable
- Adaptable
- Capable of supporting teaching and learning for many years to come.

Where We've Landed

We've landed on a series of typologies.

These include:

- Single-sided teaching and learning blocks
- Double-sided teaching and learning blocks
- Single-level options
- Multi-storey options
- Halls
- Gyms

Together, these cover the vast majority of school building requirements.

The result is a suite of design solutions that are more consistent, more affordable and more efficient to deliver.

These designs already meet Ministry design requirements and Building Code requirements while still allowing sufficient flexibility to respond to different school needs and site conditions.

For schools, this creates a smoother planning and design experience because many of the fundamental decisions have already been made, tested and validated.

For the Ministry, it allows us to focus our efforts on delivering quality outcomes rather than repeatedly reinventing common building types.

Importantly, standard design is not a final destination. It's a platform that will continue to evolve as we learn from completed projects and receive feedback from schools, consultants and the wider industry.

How Building Modules Work

One of the key features of the standard design programme is the use of modules.

You can think of these modules a little like building blocks, or perhaps like Lego.

Teaching modules provide complete teaching spaces, while amenity modules provide supporting facilities such as:

- Toilets
- Administration areas
- Staff facilities
- Resource spaces

These modules are designed around a common structural framework, meaning they can be combined in different ways to suit different schools and site conditions.

The benefit of this approach is that it achieves consistency without sacrificing flexibility.

Schools aren't expected to fit into a single building form. Instead, modules can be assembled into different configurations depending on the scale and needs of the project.

The modular approach also creates opportunities for future expansion and allows additional standard modules to be introduced over time as requirements evolve.

The Kit of Parts

This concept builds upon the modular approach.

At a high level, we've developed what we're referring to as a "kit of parts". Rather than every project requiring a unique solution, we've established a set of proven building components and systems that can be used repeatedly across different projects.

The advantage is that these components are already coordinated and understood by designers, contractors and project teams. This removes much of the uncertainty that traditionally occurs during project delivery.

You'll also notice examples of standard approaches to building services, including heating and ventilation systems.

Again, the goal isn't to eliminate all flexibility. The objective is to start from a well-tested baseline and adapt where necessary.

This provides greater confidence in:

- Building performance
- Operational consistency
- Long-term maintainability

across the entire school property portfolio.

One of the design challenges we set ourselves was moving away from difficult-to-operate and expensive-to-run mechanical systems. As a result, all of the developed typologies can operate during summer through passive ventilation.

For climate zones three to six, which broadly covers the South Island, heat recovery ventilation is also available as an option. We know that windows are not always opened effectively, particularly during colder weather, so alternative ventilation solutions need to be available.

Through extensive modelling, we now have standard solutions that we know can operate across all climatic zones in New Zealand.

Jared Kwok - What Standardisation Isn't

It's equally important to talk about what standardisation is **not**.

As we've said throughout today's presentation, standardisation is not a one-size-fits-all approach. It doesn't mean that every school gets exactly the same building, and it certainly doesn't remove the need for professional judgement, innovation or collaboration. In reality, these things become even more important under a standardised approach.

The expertise of consultants, designers, contractors and project teams remains essential. We still need strong planning, meaningful engagement with schools and communities, and a clear understanding of each site's unique circumstances and requirements.

What standardisation does provide is a much better starting point than we've often had in the past. That's been a source of frustration for many people involved in school projects over the years, and we're making a deliberate effort to become a better client by providing clearer direction and more certainty from the outset.

Key Changes

This is probably one of the areas many people in the audience are most interested in.

This slide outlines some of the practical changes you'll begin to see as standardised designs become embedded within project delivery. While the overall project lifecycle remains familiar, we're introducing new tools and processes intended to improve consistency and support better decision-making.

The common theme across all of these changes is simplification.

Historically, projects often entered the design phase with varying levels of information, a range of assumptions and differing interpretations of requirements. As a result, project teams spent significant time resolving issues that could have been addressed much earlier.

To improve this, we're introducing a new Project Summary and Planning Summary process. These documents are intended to create greater clarity up front by:

- Defining project scope
- Identifying key constraints
- Reducing assumptions before design work begins
- Providing more confidence about project outcomes

For consultants and contractors, that should mean better information at project commencement and greater certainty about what is actually being delivered.

We're also updating our Principal Requirements to better align with the standardisation programme and provide a more consistent set of expectations across projects.

Another important addition is the Project Master Document.

Think of this as the project's single source of truth. It will record:

- Approved design decisions
- Substitutions and departures from standard designs
- Major project decisions
- Key approvals and changes

All of this information will be captured in a single location and carried through into tender documentation.

You'll also see a new suite of supporting documents, including:

- Standardisation Guidelines
- Shortlisted Materials Guidance
- Systems Guidance
- Supporting technical documentation

These aren't intended to replace professional judgement. Instead, they provide clearer guardrails to help ensure good decisions are made earlier in the process.

The Traffic Light Framework

As an example of how we're approaching decision-making, we've developed a traffic light framework to provide clarity around where flexibility exists, what decisions can be made and who is responsible for making them.

At a high level there are four categories, although most people will recognise them through the familiar traffic light colours.

Red - Fixed Components

Red represents the core elements of the standardised designs.

These are the components that underpin compliance and design intent. Examples include:

- Structural systems
- Thermal envelope requirements
- Key compliance requirements
- Fundamental building performance criteria

These elements have undergone significant development, testing and validation. While we expect improvements over time, our current position is that these elements should remain fixed within projects.

The simple message is that red items protect the integrity of the standard design and should not be changed.

Amber - Managed Change

Amber recognises that there will sometimes be legitimate reasons to depart from the standardised solution.

Examples might include:

- Unique site constraints
- Project-specific requirements
- Opportunities that justify a different approach

Changes aren't prohibited, but they do require a managed approval process.

The goal isn't to stop change. Rather, it's to ensure that changes are deliberate, properly understood and evaluated against their impact on:

- Cost
- Programme
- Maintenance requirements
- Design intent

The amber category helps us ensure that decisions which may seem minor at an individual project level can still be understood and assessed across the wider portfolio.

In simple terms, amber means **justified and managed change**.

Local Context

We've spoken several times today about the fact that every school site is different.

This is where professional judgement and expertise are most important.

Areas requiring site-specific responses include:

- Foundations
- Landscaping
- Site integration
- Utility connections
- Cultural identity
- Infrastructure considerations

These elements naturally vary from project to project and require tailored solutions developed by project teams.

Green - Approved Choice

Green represents selectable options that already exist within the standard design catalogue.

These are choices that have already been assessed and approved. Schools and delivery teams can select from these options while still maintaining consistency with the broader programme. Examples include certain finishes, material selections and approved configuration options.

This allows schools to maintain their identity and preferences without requiring entirely new solutions to be developed for every project.

Schools still have choice, but those choices come from options that have already been tested, assessed and proven to work.

Striking the Balance

Ultimately, this framework is designed to strike a balance.

It protects the elements that require consistency across the portfolio, allows flexibility where it adds value and provides meaningful choice within a proven system.

We're now going to pause for questions, and I believe Ross Henderson and Vincent Mullens will help facilitate the first Q&A session.

The next section is the **First Q&A Session**, beginning with questions about sample units, cost per square metre, project volumes, standard design documentation and passive ventilation.

First Q&A Session

Ross Henderson - Opening the Q&A

Thanks, Jared.

At this stage we only have a small number of questions, one of which relates to whether sample units have been constructed.

Before we begin, I'd also like to acknowledge that some participants appear to be experiencing issues with the Q&A function. If you're unable to submit questions, please send them to property.improvement@education.govt.nz. We'll do our best to resolve those issues, and we apologise for the inconvenience.

Question: Have Any Sample Units Been Constructed?

Response - Ross Henderson

We haven't constructed sample units at this point. However, we'll be assessing the early standard design projects as they progress and will evaluate opportunities through those initial deployments.

Question: What Is the Estimated Cost per Square Metre?

Response - Neil Wyatt

We've been tracking design development and cost performance throughout the entire process with support from quantity surveyors at Maltbys.

While we can't go into the exact cost figures today, we're very confident that we're achieving the target numbers both in terms of cost per teaching space and cost per square metre. Costs have

been closely monitored throughout the development programme. If you have specific enquiries regarding cost information, please send them through to the project email address.

Question: How Many Standard Design Buildings Do You Expect to Build Each Year?

Response - David Hibberd

It's difficult to put a precise number on future delivery because the programme remains dependent on demonstrated need and future funding allocations.

However, as Jared mentioned earlier, we're already seeing approximately 50 standard design projects progressing this year. It's reasonable to expect similar numbers moving forward and potentially greater volumes over time, although that's ultimately subject to future investment decisions.

Question: Are the New Standard Design Documents Available for Download?

Response - Ross Henderson

Yes.

If you're referring to the Standard Design Guidance and Standard Layout Guidance, those documents are available through the Ministry's website.

If you search for "standardisation" on the Ministry of Education website and navigate to the standard design section, you'll find the guidance documents currently available. Additional resources will continue to be added as the programme evolves.

Question: Is There a Real-World Example Proving the Passive Ventilation Modelling?

Response - Terry (Question)

The concern is that many buildings overheat and passive ventilation alone doesn't always cope effectively, particularly where large numbers of occupants are present. Are there completed examples that validate the modelling?

Response - Neil Wyatt

At this stage, the typologies have been extensively modelled by Mesh Consulting in Auckland.

The modelling has tested each typology across multiple orientations and climatic conditions. In theory, the passive ventilation strategy performs effectively.

We have not yet constructed enough standard design buildings to fully validate those models through operational performance data. However, that validation will occur as projects are delivered.

As part of our existing process, Indoor Environment Monitoring (IEM) sensors are installed within teaching spaces. Those systems will provide real-world performance data, allowing us to assess how successful passive cross-flow ventilation is once buildings are occupied.

At this point, the approach is based on extensive modelling rather than completed operational examples.

Question: How Are Kura Being Incorporated Into the Standardisation Programme?

Response - Brooke (Question)

Can you explain how kura align with the standard design approach and what work is currently being undertaken in that area?

Response - Ricky

The core principles of the standardisation programme still apply to Kaupapa Māori education environments.

However, we've developed a separate suite of typologies specifically for Kaupapa Māori education settings. These include distinct layouts and planning approaches that recognise the requirements of those educational environments.

That material was not yet available on the Ministry website at the time of this presentation, but it was expected to be published within approximately one month.

Question: What Procurement Models Will Be Used Under NZSPA?

Response - Eric (Question)

Will future projects be procured using NZSPA-led design with NZS 3910 or NZS 3916, with contractors required to comply with standard designs, or will projects move toward a modular delivery model?

Response - Matt

The procurement approach is not fundamentally changing.

The Ministry and future NZSPA programmes will continue using established forms of contract, including NZS 3910 and NZS 3916 where appropriate. The procurement strategy selected will depend on what is considered best for the individual project.

In practice, that may include:

- Traditional construction delivery
- Design and build procurement
- Modular construction approaches

The objective is not to mandate a single delivery model, but rather to deliver greater consistency within project outcomes and delivery processes.

Question: Will Standard Designs Be Used for Design and Build (D+B) Projects?

Response - David Hibberd

Absolutely yes.

Standard design solutions will form part of future design and build projects, and we fully expect those designs to be utilised within D+B delivery models going forward.

Transition Back to the Presentation

Ross Henderson

Thank you everyone for the questions.

Please continue submitting questions through the Q&A function or by emailing property.improvement@education.govt.nz. We'll do our best to answer them as we go.

I'll now hand over to Trevor Watt, who will take us through a project case study demonstrating how standardised designs are being applied in practice.

The next section is **Trevor Watt's Case Study**, covering:

- Standardised planning
- Business case development
- Site testing and investigations
- School engagement
- Specialist teaching spaces
- Design-and-build implementation
- Lessons learned from the pilot project.

Trevor Watt - Case Study: Applying a Standardised Design

Hi everyone.

I'd like to take you through a case study that demonstrates how one of the larger standardised design typologies has been applied to a real project. We began testing this approach on a specific site in March, and the project has provided valuable feedback on how the standard designs work in practice. Many of the lessons learned have already been incorporated into subsequent iterations of the programme.

One of the key reasons for undertaking this project was to test how standardised design interacts with the Ministry's broader project processes. This included school engagement, council planning and consenting requirements, site-specific integration, contractor involvement and eventual construction feedback. The intention is that all of these learnings feed back into the design programme so that the Ministry can continuously improve future projects.

Project Overview

The project effectively progressed through three stages:

Stage 1: Standardised Planning

This phase fed directly into the business case and was led by the Ministry.

The focus was on:

- Early school engagement
- Understanding educational requirements
- Confirming space requirements
- Selecting an appropriate standard design typology
- Identifying a preliminary building location
- Undertaking initial site due diligence
- Establishing a project budget

For this project, the Ministry determined that a 14-teaching-space building was required. A preliminary site diagram showing the intended location of the building modules on the site became the starting point for the next phase.

Stage 2: Site Testing and Concept Development

The second phase focused on validating the proposed solution against the realities of the site.

The objectives included:

- Confirming the most appropriate building location
- Testing orientation and site relationships
- Finalising internal layouts
- Undertaking detailed investigations
- Refining project scope

This phase was where site-specific challenges were addressed. While the building itself was largely predetermined through the standard design process, significant effort was required to understand the site's specific conditions and requirements.

Key Site Investigations

Several investigations were undertaken to better understand project risks and constraints.

Geotechnical Investigation

Ground conditions were identified as a significant consideration. The site fell within a variable geotechnical area and required additional testing to understand the implications for foundations and structural design. This process took longer than the original seven-week programme due to the complexity of the ground conditions.

Contamination Assessment

Because the building was proposed on an area of open grass, contamination testing was undertaken to confirm the suitability of the site.

Existing Infrastructure

The project team investigated sewer capacity and condition to ensure future roll growth could be accommodated.

Planning and Transport Considerations

Transport and planning considerations were initially considered potential risks, although further investigation ultimately showed these would not significantly affect the project.

Site Survey Information

Topographical surveys and underground services investigations were also completed to ensure all design decisions were based on accurate site information.

The overall benefit of these investigations was a much clearer project scope, reducing risk for both the design team and the contractor moving into later stages.

Early Challenges

The first significant challenge emerged when we compared the selected standard design typology with the school's educational brief.

The project had been allocated a two-storey, double-loaded D2 typology with four specialist teaching spaces. However, the school identified a need for six specialist teaching spaces.

Fortunately, those specialist spaces were primarily computer suites, which required less area than some other specialist teaching environments. Working within the standardised framework, we were able to reconfigure portions of the design to accommodate the additional spaces without fundamentally changing the building structure.

This highlighted an important lesson: alignment between educational requirements, planning assumptions and chosen typologies needs to be as accurate as possible as early as possible in the process.

Working with the School

The proposed building occupied a prominent position at the front of the campus on a section of the site that had not previously been developed.

The school's initial concerns focused on two areas:

- Loss of valuable sports field space
- The visual impact of a large building within an open landscape setting

As schools grow, outdoor space becomes increasingly valuable, so preserving amenity remained an important consideration throughout the design process.

During this phase, several orientation options were tested to determine the best outcome for both the building and the wider campus environment.

Internal Layout Development

Internal layouts became one of the most collaborative parts of the project.

The requirement for six specialist computer suites led to extensive discussions with teaching staff regarding how those spaces would operate and what equipment would be accommodated within them.

One advantage of the standard structural system, particularly the two-way moment frame, was that it provided substantial flexibility inside the building envelope. Because there were no major bracing constraints within teaching areas, layouts could be adapted without affecting the primary structural framework.

The final arrangement included:

- Six computer suites
- A Makerspace
- Flexible teaching areas
- Exhibition and display opportunities along circulation routes

The Makerspace was designed to accommodate activities such as:

- Robotics
- Electronics
- Architectural studies
- Product design

This demonstrated that standardised designs could still support a wide range of educational activities while remaining within the established framework.

Ground Floor Configuration

The ground floor accommodated more general teaching spaces and therefore required fewer modifications.

One issue discussed extensively with the school was maintaining flexibility in teaching arrangements.

The school wanted to preserve the ability for:

- Individual teaching spaces
- Paired teaching environments
- Larger collaborative teaching environments

Because the structural system avoided intrusive bracing elements within the floor plate, the building could support a variety of operational arrangements while retaining the standardised structural framework.

Site Works and Infrastructure

Another key focus during this phase was defining site works and infrastructure requirements.

While the building itself was fairly well defined through the standard design programme, many project costs sit outside the building footprint itself.

These included:

- Services connections
- Infrastructure upgrades
- Site works
- Landscaping
- Relocated facilities

Capturing these items accurately was important for establishing realistic project budgets and avoiding uncertainty later in the programme.

Timing and Programme

One of the major observations from the project was that the design programme became significantly shorter than traditional school projects.

The initial concept and testing phase was completed within approximately seven weeks, including the Easter period. Although there were challenges, the programme generally worked effectively.

The project also highlighted areas where further refinement of guidance and documentation could further improve both certainty and efficiency for future projects.

The next section covers **Stage Three: Design and Build Delivery**, including the accelerated developed design phase, enabling works package, school review process and final lessons learned from implementation.

Trevor Watt - Stage Three: Design and Build Delivery

Following completion of the planning, site investigations and concept development work, the project progressed into a Design and Build (D&B) delivery model.

One of the most noticeable differences compared with traditional school projects was the compressed programme. Because much of the standardisation work had already been completed

before procurement, the design phase could move much more quickly than would normally be possible.

The programme consisted of:

- Developed Design: 4 weeks
- Review period: approximately 2 weeks
- Detailed Design: 4 weeks

These timeframes were significantly shorter than those typically experienced on comparable school projects.

Focus of the Developed Design Phase

The primary objective during developed design was to transition from the standardised solution into a fully site-specific project.

This involved:

- Confirming the exact building location
- Testing boundary setbacks and fire requirements
- Finalising internal layouts
- Confirming finishes
- Refining external works
- Finalising project scope before documentation commenced

A key objective was obtaining school agreement before entering detailed design. Experience shows that if schools are uncomfortable with major decisions after detailed design begins, programmes can quickly move backwards rather than forwards. Getting decisions resolved early was therefore critical.

The project team scheduled a formal school review at approximately 70% completion of the developed design phase, around three weeks into the programme. This provided confidence that the project remained aligned with stakeholder expectations before progressing further.

Early Contractor Involvement

One of the opportunities identified by the contractor was splitting out an enabling works package.

This approach allowed critical workstreams to commence while the remainder of the building design continued progressing.

The enabling works package included:

- Foundation design
- Below-ground services
- Hydraulic infrastructure requirements

Because the standardised design programme had already taken the building envelope and base-build design to an advanced level, these packages could begin earlier than would normally be possible.

As a result, the team was able to issue a consent package for the enabling works at the end of the four-week developed design programme. This represented a significant programme advantage compared with traditional project approaches.

School Review and Design Confidence

At the developed design review point, the team was able to demonstrate that the project still met the school's educational and operational requirements.

The review confirmed:

- The building location remained appropriate.
- School activities could continue to operate effectively.
- Sports field impacts had been minimised.
- Specialist learning requirements had been accommodated.
- Stormwater and resource consent requirements could be achieved.

One challenge involved accommodating rain gardens required to satisfy planning and stormwater requirements. The positioning of the building needed to allow sufficient space for the volume of stormwater treatment required while still meeting the school's operational needs.

Despite those challenges, there was little need to revisit internal planning decisions because the earlier consultation process had already resolved most layout issues.

Detailed Development of Specialist Spaces

As the design progressed, greater attention was given to specialist teaching environments.

Areas receiving additional design development included:

- Flexible learning spaces
- Makerspace facilities
- Computer suites
- Shared workspaces

The team worked closely with users to define service requirements such as power, technology infrastructure and equipment needs. The intention was to ensure those requirements were properly documented before detailed design documentation was completed.

By the conclusion of developed design, only relatively minor refinements remained. These typically related to operational details such as power outlet locations or final service coordination rather than major layout changes.

External Appearance and School Concerns

One of the school's primary concerns throughout the project was how the building would appear at the front of the campus.

Because the building formed part of the school's entry experience, stakeholders were concerned about:

- The visual scale of the building
- The appearance of façade treatments
- Potential blank walls facing key public areas
- Whether premium cladding upgrades would be required

Some discussions took place regarding school-funded enhancements such as timber or precast concrete cladding systems. However, neither the project team nor the Ministry were particularly keen to pursue alternative façade systems where the standardised solution could provide an acceptable outcome.

Instead, the design team worked through:

- Existing school context
- Materiality used elsewhere on campus
- Building setbacks
- Landscape screening opportunities
- Window and door placement
- Façade activation

Through a series of visual comparisons and contextual assessments, the school gained confidence that the standardised design could integrate successfully with the wider campus without requiring substantial departures from the standard specification.

As confidence grew, interest in pursuing alternative cladding solutions largely disappeared.

Documentation Quality

An interesting observation from the project was the level of design maturity achieved by the end of developed design.

Because many elements had already progressed through the standardisation programme before the project even commenced, documentation was much further advanced than is normally seen at this stage.

By the end of developed design the project team already had substantial detail relating to:

- Stair design
- Structural arrangements
- Foundation concepts
- Building envelope details
- Coordination of major systems

This meant detailed design could focus more heavily on site-specific issues and project refinement rather than resolving fundamental building design questions.

Structural Engineering Feedback

The project attracted considerable interest from structural engineers due to the use of a two-way moment frame system.

One of the major benefits identified was flexibility.

The system accommodated specialist spaces without significant modification and created fewer constraints than some alternative structural arrangements. This flexibility meant that educational requirements could be accommodated without requiring major departures from the standardised system.

The project did require minor adjustments relating to lifts and internal planning, but no significant structural redesign was necessary.

Foundation Design

Foundation design progressed relatively quickly despite challenging ground conditions.

Initial investigations considered:

- A 500 mm concrete raft foundation
- A 1.2 m gravel raft solution

Following additional geotechnical analysis, the preferred option became an 800 mm gravel raft solution.

Although the site was not ideal geotechnically, the project team completed foundation design within programme requirements and without major disruption to project delivery.

Design Refinements

A small number of refinements were made to the standard design.

These included:

- Removal of some structural posts
- Minor window adjustments
- Storage improvements
- Services coordination refinements
- Removal of a lobby door within a toilet area at the school's request

Trevor noted that these changes were relatively minor and did not fundamentally alter the standardised design. The project remained strongly aligned with the original standardisation intent.

Lessons Learned

Although the project was still progressing through detailed design at the time of the presentation, several lessons had already emerged.

Better Alignment at Business Case Stage

Closer alignment is needed between:

- Educational requirements
- Standard design typologies
- Business case assumptions
- Project budgets

This would help avoid early scope adjustments.

Greater Focus on Site-Related Costs

Future projects should place greater emphasis on identifying auxiliary costs early, including:

- Relocations
- Infrastructure upgrades

- Site works
- Associated project impacts

These often become more significant than the building itself.

Programme Flexibility for Alternative Solutions

The four-week developed design timeframe worked well for standardised designs but provided limited opportunity to properly assess major alternative systems such as SIP panel solutions and other innovations.

Additional Guidance Opportunities

There may be value in developing additional guidance covering:

- Fixed joinery
- Landscape integration
- Site treatments
- External works

to further improve consistency across future projects.

Managing Design Creep

Perhaps the most important challenge identified was maintaining discipline around standardisation itself.

As improvements, suggestions and refinements emerge, there needs to be a balance between improving the programme and preserving the consistency that generates its benefits.

The challenge will be continuing to evolve the designs while avoiding excessive departures from the core standard framework.

Closing the Case Study

That's a very quick overview of one project that's currently working its way through the standardisation process. The project remains a work in progress, and further lessons will undoubtedly emerge during construction and occupation.

I'll now hand things back to Jared Kwok and the team for the second Q&A session.

The next section is the **Major Q&A Session (approximately 20 minutes)** covering:

- Structural design maturity
- MPLD panels
- Acoustic risks and passive ventilation
- Secondary-school toilet design
- Alternative structural systems
- Fire protection strategies
- Liability and PS1/PS4 responsibilities
- HVAC validation
- Whole-of-life costs
- Warm roof requirements
- DQLS acoustic compliance.

Major Q&A Session

Ross Henderson

Thanks, Trevor.

We've still got around 20 minutes available, so we'll work through as many questions as we can. Thanks everyone for the quality of questions coming through. They're generating some really useful discussion.

Question: How Developed Are the Structural Designs?

Response - Mark

The structural designs, along with the other specialist disciplines, have been developed through to the end of Developed Design stage.

That means the standard designs already include:

- Beam and column sizing
- Floor slab thicknesses
- Foundation concepts for good ground conditions
- Structural philosophy and intent
- Design assumptions

However, when applying these designs to individual B26 projects, project teams still have the opportunity and responsibility to undertake site-specific modelling and refinement.

Going forward, the Ministry may look to progress standard designs beyond Developed Design and lock down more elements, but for now there remains some flexibility to respond to specific site conditions.

Question: What Design Panels Will Be Used?

Response - Craig (Question)

Will services continue to be procured through the existing design panels, and when might the MPLD Panel be reopened?

Response - Ministry Representative

The current MPLD Panel will continue to be utilised for traditional procurement approaches using closed competitive processes.

Where a Design and Build delivery model is selected, the main contractor will typically be responsible for engaging the design consultants directly rather than procuring them through the Ministry panel.

At this stage there is no confirmed date for reopening or refreshing the MPLD Panel. When a decision is made, industry participants will be advised well in advance.

Question: How Are Acoustic Risks Addressed?

Response - Alex (Question)

If a site is adjacent to noise sources such as busy roads, how can passive ventilation be reconciled with acoustic performance requirements? Can the design move away from passive ventilation where acoustic modelling demonstrates a risk to the learning environment?

Response - Neil Wyatt

As discussed earlier, the design programme has already considered climate and environmental performance through extensive modelling.

Where acoustic considerations warrant it, project teams can assess alternative solutions. The intent is not to compromise learning environments through rigid application of passive ventilation requirements. Site-specific circumstances still require professional judgement and technical assessment.

Question: Secondary School Toilet Design

Response - Audience Question

Are there standardised approaches for secondary school toilet design, including privacy locks, occupancy indicators, inaccessible services and vandal-resistant components?

Response - Neil Wyatt

The standard designs will continue to comply with existing Ministry design requirements for toilet and bathroom facilities.

The expectation is that commercial-grade hardware and compliant fixtures will continue to be specified. However, at this stage the programme has not standardised specific hardware selections to the point of nominating individual locksets or fixture models. Those decisions will continue to sit within project delivery processes while complying with existing Ministry requirements.

Question: Can Alternative Structural Systems Be Proposed?

Response - Chris (Question)

Can alternative structural systems be considered if they achieve the same performance outcomes?

Response - Mark

Feedback on structural systems is always welcome. However, for B26 projects alternative structural systems will generally not be accepted.

The reason is that the programme is targeting benefits at a portfolio level rather than trying to optimise each individual project independently. Standardisation creates advantages across:

- Design efficiencies
- Procurement opportunities
- Consenting pathways
- Construction processes
- Programme certainty

Those wider benefits depend on maintaining consistency across projects.

As the programme matures there may be opportunities to review and evolve structural systems, but the current intent is to maintain a repeatable and consistent structural solution across the portfolio.

Question: Fire Protection Approach

Response - Chris (Question)

Will there be options between intumescent coatings and plasterboard fire protection systems, and have losses around circular columns been accounted for?

Response - Mark

The fire protection strategy has also been developed to an advanced level.

For the multistorey buildings using two-way moment frames, concrete-filled steel columns provide the required fire resistance for the primary columns. The beams and floor systems then require supplementary protection, which can be achieved using either:

- Intumescent coatings
- Fire-rated boxing systems

depending on the detailed solution adopted.

With regard to column configurations and spatial impacts, those factors have been accounted for in the development of the structural system. Similar spatial inefficiencies occur in other structural arrangements such as braced-frame systems.

Question: Will Structural Designs Be Publicly Available?

Response - Jeremy (Question)

The layouts are published on the website. Will the detailed structural design information also be publicly available?

Response - Neil Wyatt

A substantial collection of technical information already exists behind the published guidance, including:

- Reports
- Drawings
- Technical schedules
- Supporting calculations

This information will be issued directly to project delivery teams as required.

The intention is not necessarily to publish the entire technical package publicly. Instead, delivery managers will ensure that project teams receive the information necessary to support delivery of individual projects.

Question: Who Holds Design Liability?

Response - Mike (Question)

As standardisation expands, where does design liability begin and end between the Ministry and consulting teams, particularly in relation to PS1 and PS4 responsibilities?

Response - Mark

For B26 projects, liability remains with the project team.

Consultants engaged on projects will still be responsible for satisfying themselves that:

- The design complies with the Building Code.
- Site-specific requirements have been appropriately addressed.
- The design is suitable for certification.

They will continue to hold responsibility associated with PS1 and PS4 documentation.

Additional Comment - Neil Wyatt

It's important to remember that what we're providing isn't a fully completed design.

Think of it as the ingredients rather than the finished cake.

Project teams still need to take those ingredients and apply them to their specific project, creating a complete, compliant design suited to that site. A Ministry review will occur at Preliminary Design stage to assess how the standard design has been adapted and to ensure site-specific issues have been appropriately considered.

Question: Do Whole-of-Life Costs Form Part of the Design Process?

Response - Hector (Question)

Has a whole-of-life assessment been undertaken to ensure operational and maintenance costs are considered alongside construction costs?

Response - Jared Kwok

Yes, absolutely.

Whole-of-life cost considerations were one of the key objectives from the outset of the programme.

The focus isn't simply on new buildings. The Ministry must also consider the interoperability of materials and systems with the existing portfolio. Durability, maintainability and long-term performance have all been important design considerations. Sustainability and lifecycle performance form an important part of the programme's overall approach.

Question: Warm Roofs and H1 Requirements

Response - Terry (Question)

Will warm roofs simply meet H1 insulation requirements or exceed them, and where do they sit within the traffic-light framework?

Response - Neil Wyatt

The current intent is for warm roof systems to comply with H1 requirements rather than exceed them.

Roof elements that sit outside the conditioned building envelope, such as verandas, do not necessarily require the same level of thermal treatment.

From a traffic-light perspective, the warm roof assemblies are considered red-light items. They form part of the fixed performance solution and therefore are not intended to be changed on a project-by-project basis.

Question: Are DQLS Acoustics Included?

Response - Suzanne (Question)

Will the standardised documentation incorporate DQLS acoustic requirements to assist consistency across projects?

Response - Neil Wyatt

Yes.

The standard designs have been developed to satisfy the Ministry's existing requirements, including:

- DQLS requirements
- Thermal performance standards
- Acoustic performance standards
- Other design requirements

These considerations have already been incorporated into the standard designs so they do not need to be repeatedly reinterpreted from project to project.

Question: Are There Smaller Building Typologies?

Response - Jono (Question)

Do standard designs only cover larger buildings or are there smaller options such as standalone classrooms and toilet blocks?

Response - Neil Wyatt

The programme includes a range of typologies.

These range from:

- Four-teaching-space, single-sided blocks with external circulation
- Through to larger multistorey double-sided buildings

The intention is to provide enough variety to cover the majority of teaching-space requirements across the portfolio.

The next section is the **final questions**, including HVAC validation, integrated schools, and Jared's closing remarks and concluding karakia.

Final Questions and Closing Remarks

Ross Henderson

Thanks everyone. We'll work through a few final questions before we wrap up for the day. We really appreciate the quality of discussion and feedback that has come through during the webinar.

Question: Will Standard Design Information Be Available to Integrated Schools?

Response - Jeremy (Question)

Will the detailed design information and supporting documentation also be available to integrated schools?

Response - Neil Wyatt

Yes.

The design collateral and supporting technical documentation that sits behind the standard designs will be available to project teams working on school property projects, including integrated schools.

Whether it's a state school, integrated school or another qualifying project, the intention is that delivery teams will have access to the information they need to support implementation of standard designs.

Question: Will There Be a Dedicated HVAC Briefing Session?

Response - Serena (Question)

Will there be a specific briefing session covering HVAC design elements and how those systems have been validated?

Response - Neil Wyatt

At present, there isn't a dedicated HVAC briefing session scheduled.

However, that's certainly something we can consider organising. Given the level of interest, it may be useful to hold a separate technical session focused specifically on heating, ventilation and indoor environmental quality.

If further discussion is required, we can involve our lead consultant, Mesh Consulting, who undertook much of the performance modelling work for the programme. Anyone interested is encouraged to contact the team through the project email address so we can gauge interest and arrange something appropriate.

Ross Henderson - Closing the Q&A

It looks like we've covered all of the remaining questions.

Thank you again for taking the time to ask them. They've been thoughtful questions and they've generated valuable discussion. If additional questions come to mind after today's session, please feel free to contact us at property.improvement@education.govt.nz. We would be happy to continue the conversation.

I'll now hand back to Jared Kwok to close out today's webinar.

Jared Kwok - Closing Remarks

Thanks, Ross.

And thanks everyone for your questions. It's been great to see the level of interest and engagement throughout today's session.

As we wrap up, I'd like to reinforce a few of the key messages we've tried to communicate today.

Standardisation Is a Journey

First and foremost, standardisation is a journey rather than a destination.

We recognise that we're still learning. We're continuing to refine and improve the programme, and Budget 26 represents very much a transition year as we embed new processes, documentation and ways of working.

We ask for your patience as we continue that process. It won't be perfect from day one, but we're committed to continuous improvement. Most importantly, we're committed to listening to feedback.

That isn't simply a throwaway comment. The only way this programme can evolve successfully is by listening to the people who actually deliver projects on the ground. That's a lesson we've taken seriously, and it's something we intend to actively incorporate as the programme matures.

Delivery Processes Remain Familiar

Secondly, while standardisation introduces new tools, documentation and frameworks, the core delivery process remains largely unchanged.

Projects will continue to be:

- Competitively tendered
- Delivered through established procurement pathways
- Developed in partnership with schools
- Supported by consultants and contractors

This approach will remain in place even as we transition into the New Zealand School Property Agency (NZSPA).

The objective is evolution, not disruption.

We're aiming to improve what already exists rather than create unnecessary barriers or fundamentally change successful aspects of project delivery.

Schools Remain the Focus

The establishment of NZSPA represents a significant organisational change, but our focus remains exactly the same: delivering positive outcomes for schools.

The Ministerial Inquiry and the future NZSPA Board are placing considerable emphasis on customer focus.

Our customers are:

- Schools
- Students
- Teachers
- Communities

Everyone who uses and benefits from these learning environments.

The relationships we build with schools and with industry partners remain critical to the programme's success. Those relationships are not changing. If anything, they become more important under a standardised delivery model.

We Want Your Ideas

Finally, this is not an exclusive programme.

We genuinely want to hear your ideas and innovations.

Whether you're a consultant, designer, contractor, supplier or school representative, if you have suggestions that improve the programme, we want to hear about them. If those ideas add value and benefit the wider portfolio, we'll actively consider incorporating them into future versions of the programme.

Over the past 18 months we've made significant progress, but we recognise that we're only at the beginning of the journey. Our view is that where we've arrived today represents a substantial improvement on where we started, and we're genuinely excited to continue building on that foundation.

Thank you again for your time, your interest and your participation today.

We hope this session has provided greater clarity about:

- What standardisation is
- Why it is being implemented
- Where the programme is heading
- How it will affect future projects

Most importantly, we appreciate your continued support as partners in delivering better outcomes for schools across New Zealand.

I'll now hand over to Ricky for the closing karakia.

Ricky - Closing Karakia

Kia ora tatou.

A final mihi to everyone for being here today.

This is an exciting journey for us. It's taken a long time to get to this point, and we're really pleased to have reached the implementation phase of the programme.

Ko hikitia te kaupapa, kua takoto te wero, me hoetahi i runga i te whakaaro kotahi, tiaki tou taua oranga kia kaha ai mo te tuku taonga. Kia tutuki hei nga hihe mo kahikitia. Tihei mauri ora, ki te whai ao, ki te whai oranga e.

Mauri ora. Ka kite.
