



**Ministry of Education**

# **Catalogue of Standard School Building Types**

**August 2013**

# 1.Document Control Records

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## Revision History

Revision No.	Prepared By	Description	Date
0	Deane McNulty Malcolm McClurg	Draft for Feedback.	26 Mar 13
1	Deane McNulty Malcolm McClurg	Added construction periods and aerial photograph of some block types.  Renamed "Unknown" Block to "Woolston" Block.	4 Sept 2013

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## 2. Catalogue Origin, Purpose, and Use

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This catalogue has been born from the need to focus structural engineers working on Detailed Engineering Evaluations on school buildings in Canterbury following the earthquake sequence of 2010 and 2011. Many school buildings have been constructed using standard designs. The quality of records kept for school buildings is variable. There are many efficiency gains to be made from placing buildings into standard categories, including being able to develop standardised seismic performance evaluation processes and documentation, & standard structural strengthening solutions.

This catalogue identifies standard building types within the Christchurch City, Selwyn District, and Waimakariri District boundaries. The catalogue user is expected to be a school personnel, Ministry property managers, and external property professionals. This catalogue does not require structural engineering expertise for the document to be used.

This document is only current when viewed online.

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## 3. Catalogue Layout

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The catalogue is split into:

- **Group** by single storey or two storey building.
- **Section** inside each group for building form (permanent classroom, relocatable classroom, and other functions (gymnasias, halls, library, Boiler House, Administration, etc).
- *(Possible future change) catalogue volume by region through New Zealand.*

Determining the building being inspected involves considering the above criteria to establish the specific standard building type. Guidance is provided under the section for each standard building to allow identification and differentiation between building types.

Each standard building description provides:

- The building type name;
- General photographs;
- Construction form and materials;
- Common variants to the form and materials that still fit with the building type;
- Key identifying features;
- Other buildings it could be confused with; and
- Additional detail photographs (including foundations and ceiling/roof space);
- Floor plan and cross section for each level.

*(Possible future change) Separate volumes (one for each standard building type) contain detailed technical information. These separate documents to contain:*

- *Standard building structural engineering drawings;*
- *Standard structural engineering calculations;*
- *Standard seismic strengthening drawings (and possibly specification);*
- *IEP (Initial Evaluation Procedure) report;*
- *Design features report;*
- *Accessibility report; and*
- *Fire engineering report.*

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## 4. Index of Standard Building Photographs



Canterbury Block



Canterbury Intermediate Block



Dominion Block



Nelson Single Storey Block



Open Plan Block



Open Air Veranda Block



S68 Block



Whanau Block



No photograph

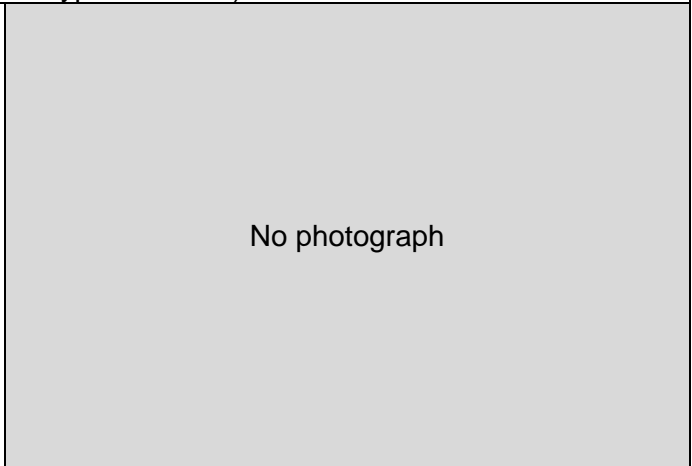
1950s Single Storey Block



Aranui Block



CEBUS Block (several types detailed)



Laing's Block



Nayland Block



Opus Modular Classroom Block



Otago Education Board (1, 2, and 3) Block



Paul Wilkin Design Block



Portacom Block



UNIT Block



S68 Administration Buildings

S68 Technology Block



S68 Arts and Craft Block



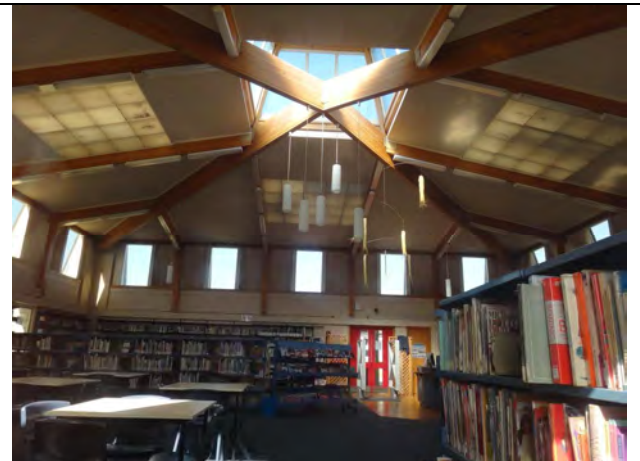
S68 Gymnasias

No photograph

No photograph

S68 Halls

S68 Boiler Houses



S68 Libraries



Nelson Block Libraries



Primary School Halls with Basements



Hammersley Park school



Linwood North School

Primary School Halls without Basements





Nelson Two Storey Block



Nelson Two Storey 8 Classroom Block



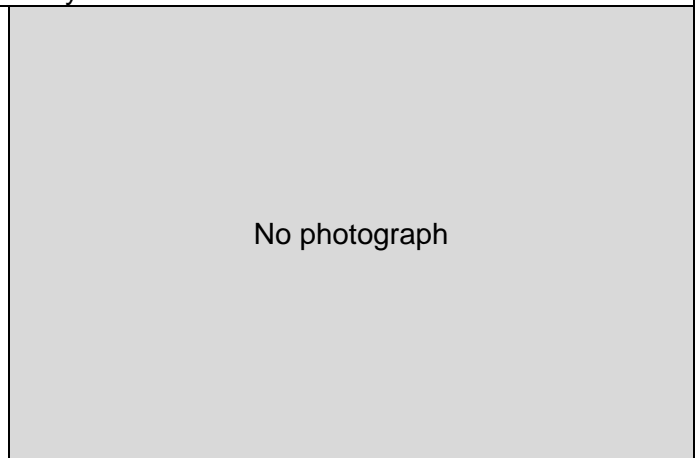
Nelson Two Storey 1970s Block



12 Classroom Two Storey Block



1950s Two Storey Block



Woolston Block

## 5. Single Storey Group

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## Permanent Classrooms


Buildings in this section are defined as structures that are not readily moved. They are likely to have concrete ring beam foundations, be multi storey, have heavy or continuous cladding/veneer such as red brick, and be continuous inside so not readily split for transport).

Standard buildings scheduled are:

- Canterbury Block;
- Canterbury Intermediate Block;
- Dominion Block;
- Nelson Single Storey Block;
- Open Plan Block;
- Open Air Veranda Block;
- S68 Classroom Block;
- Whanau Block;
- 1950s Single Storey Block.

PMIS codes in **red** are not already in the database and have been proposed to reconcile conflicts and/or a range of codes that appear to cover standard blocks.

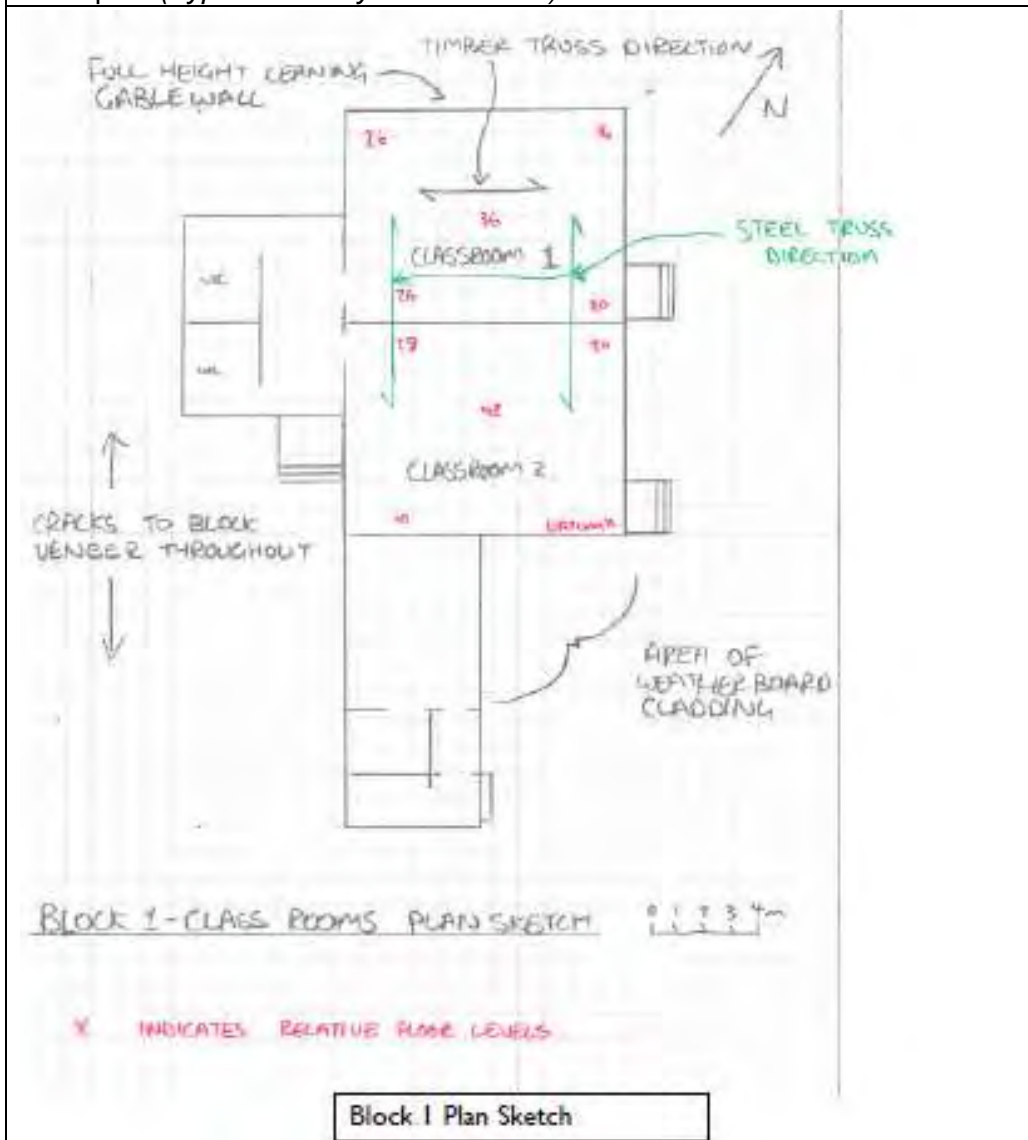
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Building / Block Name:		Canterbury Block
PMIS code:		CANTY
Overview front oblique ( <i>Wainoni School Block 3</i> )		Overview rear oblique ( <i>Aranui Primary</i> )
		
Building description		Variants within standard design
Roof	Ridged centrally along the building length. Corrugated steel roofing supported on timber trusses spanning across the building, with a pair of steel trusses along the length of the building.	Roof pitch over toilets varies with older blocks with low pitch and newer blocks at same pitch as classrooms. Some ceilings below trusses eg Aranui
Walls and cladding	Light timber framing. Cladding may be Summerhill Stone, clay brick, or masonry concrete block (Aranui Primary photo in CPG DEE report shows some weatherboard area).	Summerhill stone: Russley and Sumner Schools Concrete Block veneer: Hoon Hay and Thorrlington Brick veneer: Cobham Intermediate
Floor and foundations	Concrete slab on grade (Mt Pleasant).	Suspended timber floor with concrete perimeter foundations including across building under load bearing walls (Sumner and Hoon Hay Schools)
Constructed	From 1959 to 1965	( <i>approximate date range only</i> )
Key identifying features	Centrally ridged rectangular building with attached toilet blocks to rear between pair of classrooms. Usually in pairs of classrooms or blocks of four classrooms plus admin block. Interior classrooms have pair of steel open web trusses along length. Large glazed walls to north.	Classrooms 9m deep x 7.2m wide but in some schools classrooms are 9m x9m such as middle classroom at Sumner School Intermediate Blocks with mono pitch roof.
<b>Looks similar to the following</b> Canterbury Intermediate Block (details on separate sheet)		
<b>General description</b> Classroom block in pairs with a cloak room and a toilet at the rear of the building. Large glazed walls to the north and a large south window next to the toilets. Pair of central steel trusses. Ceilings acoustic tile on sloping section and Gib Board between trusses.		
<b>MLE Compliance</b> Large classrooms with good natural cross ventilation and high level windows. Significant solar gain from large north facing windows. Reasonable acoustics with Pinex ceiling tiles. Buildings not insulated.		


<p>Additional photographs and block drawings</p>	
<p>Front view of outside (<i>Wainoni School Block</i>)</p> 	<p>Front view of outside (<i>Shirley Intermediate</i>)</p> 
<p>Toilet block (<i>Aranui Primary</i>)</p> 	<p>Rear view of toilet block (<i>Shirley Intermediate</i>)</p> 
<p>Foundations (<i>Wainoni School Block 3</i>)</p> 	<p>Alternative Roof space (<i>Aranui Primary</i>)</p> 
<p>Typical roof structure/ceiling arrangement (<i>Wainoni</i>)</p> 	<p>Alternative Ceiling (<i>Aranui</i>)</p> 
<p>Summerhill stone (<i>Sumner School</i>)</p> 	<p>Block Veneer (<i>Hoon Hay School</i>)</p> 



Floor plan (Typical Primary School Block)

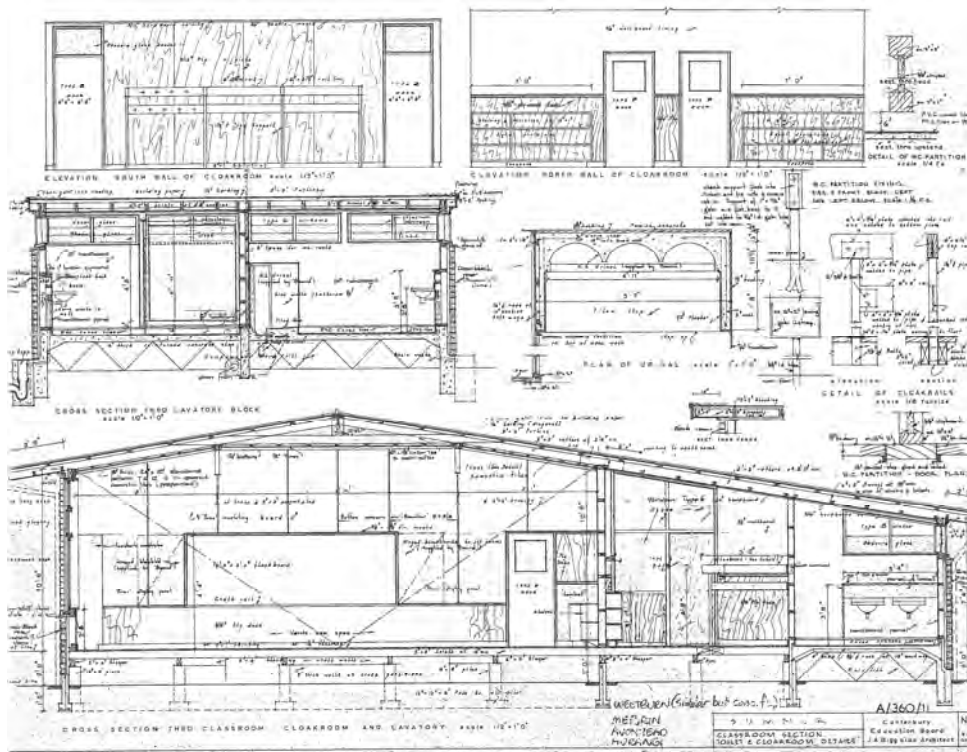
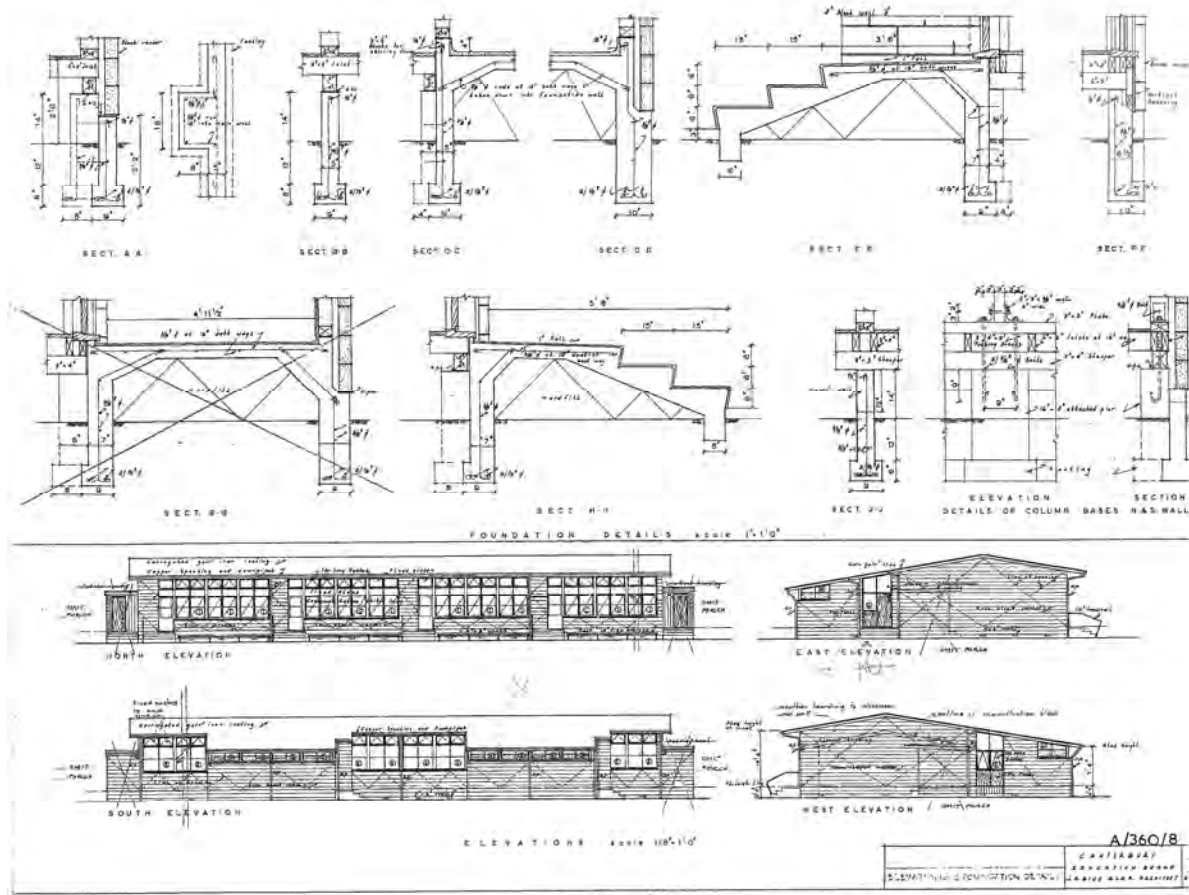




FULL HEIGHT CEILING GABLE WALL  
 TIMBER TRUSS DIRECTION  
 STEEL TRUSS DIRECTION  
 CLASSROOM 1  
 CLASSROOM 2  
 CRACKS TO BLOCK VENER THROUGHOUT  
 AREA OF WEATHER BOARD CLADDING  
 BLOCK 1 - CLASS ROOMS PLAN SKETCH 0 1 2 3 4m  
 X INDICATES RELATIVE FLOOR LEVELS  
 Block 1 Plan Sketch



Canterbury Blocks

Cross section Summer School



<b>Building / Block Name:</b>		<b>Canterbury “Intermediate” Block</b>
<b>PMIS code:</b>		<b>CANTINT</b>
Overview front oblique ( <i>Casebrook</i> )		Overview rear oblique ( <i>Casebrook</i> )
		
<b>Building description</b>		<b>Variants within standard design</b>
Roof	Mono pitch roof with metal trough section roofing supported on timber rafter, with a pair of steel trusses along the length of the building.	Technology blocks similar but steel trusses spanning across building.
Walls and cladding	Light timber framing. Cladding timber weather boards with clay brick.	
Floor and foundations	Concrete slab on grade.	
Constructed	From 1963 to 1966	<i>(approximate date range only)</i>
Key identifying features	Mono pitch rectangular building with attached toilet blocks to rear between pair of classrooms. Usually in pairs of classrooms or blocks of 4 classrooms. Interior classrooms have pair of steel open web trusses along length. Large glazed walls to north and south.	Floor plan very similar to the Canterbury Blocks with central ridge
<b>Looks similar to the following</b>		
Canterbury Block floor plan but with mono pitch roof design (refer to Canterbury Block details on separate sheet). Technology Blocks similar in appearance with mono pitch roof, and same cladding.		
<b>General description</b>		
Classroom block in pairs with a cloak room and a toilet at the rear of the building. Large glazed walls to the north and a large south window next to the toilets. Pair of central steel trusses. Acoustic tiles on ceiling and end walls. Large windows to north and south elevations.		
Technology Blocks similar to classrooms and built as pair of classrooms with middle section containing resource rooms with lower roof. Steel trusses run across building in opposite direction to classrooms.		
<b>MLE Compliance</b>		
Large classrooms with good natural cross ventilation and high level windows. Solar gain from north facing windows reduced with large over hanging eave. Reasonable acoustics with Pinex ceiling and wall tiles. Minimum or no insulation.		

<p>Additional photographs and block drawings</p> <p>Two classroom Block Front view of outside (Cobham intermediate)</p> 	<p>Rear view of outside (Cobham intermediate)</p> 
<p>Four classroom Block Front view of outside (Cobham intermediate)</p> 	<p>Four classroom Block rear view of outside (Cobham intermediate)</p> 
<p>Interior View North(Cobham)</p> 	<p>Interior view South (Cobham)</p> 

**Technology block Front (Casebrook Intermediate)**



**Technology block rear (Casebrook Intermediate)**

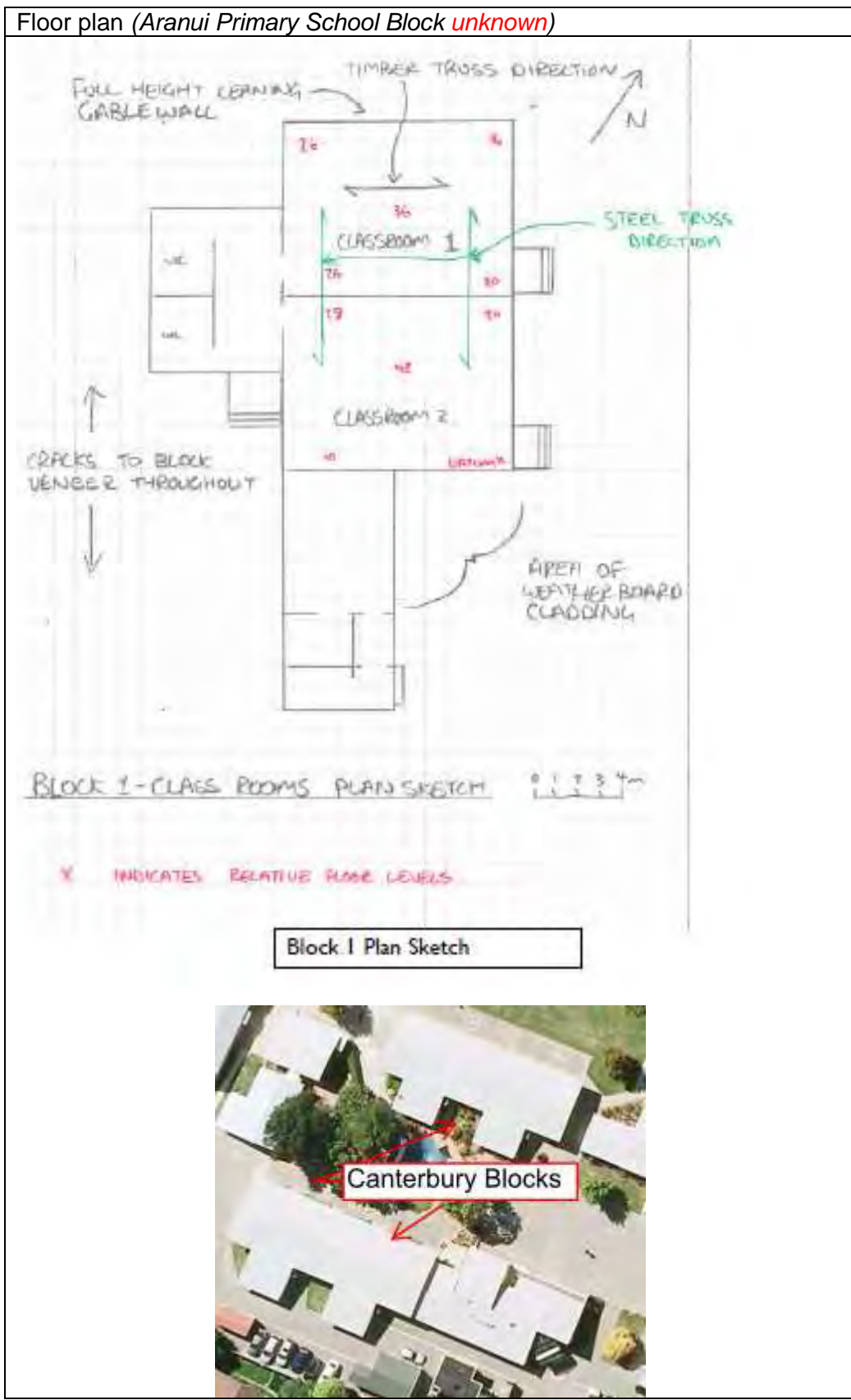




**Technology block interior (Cobham Intermediate)**




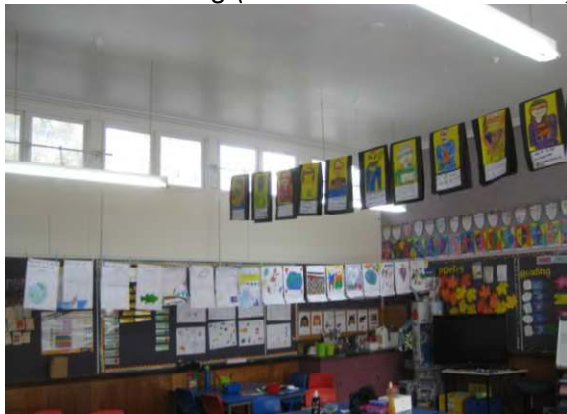






**Aerial photograph of "Canterbury" Block**



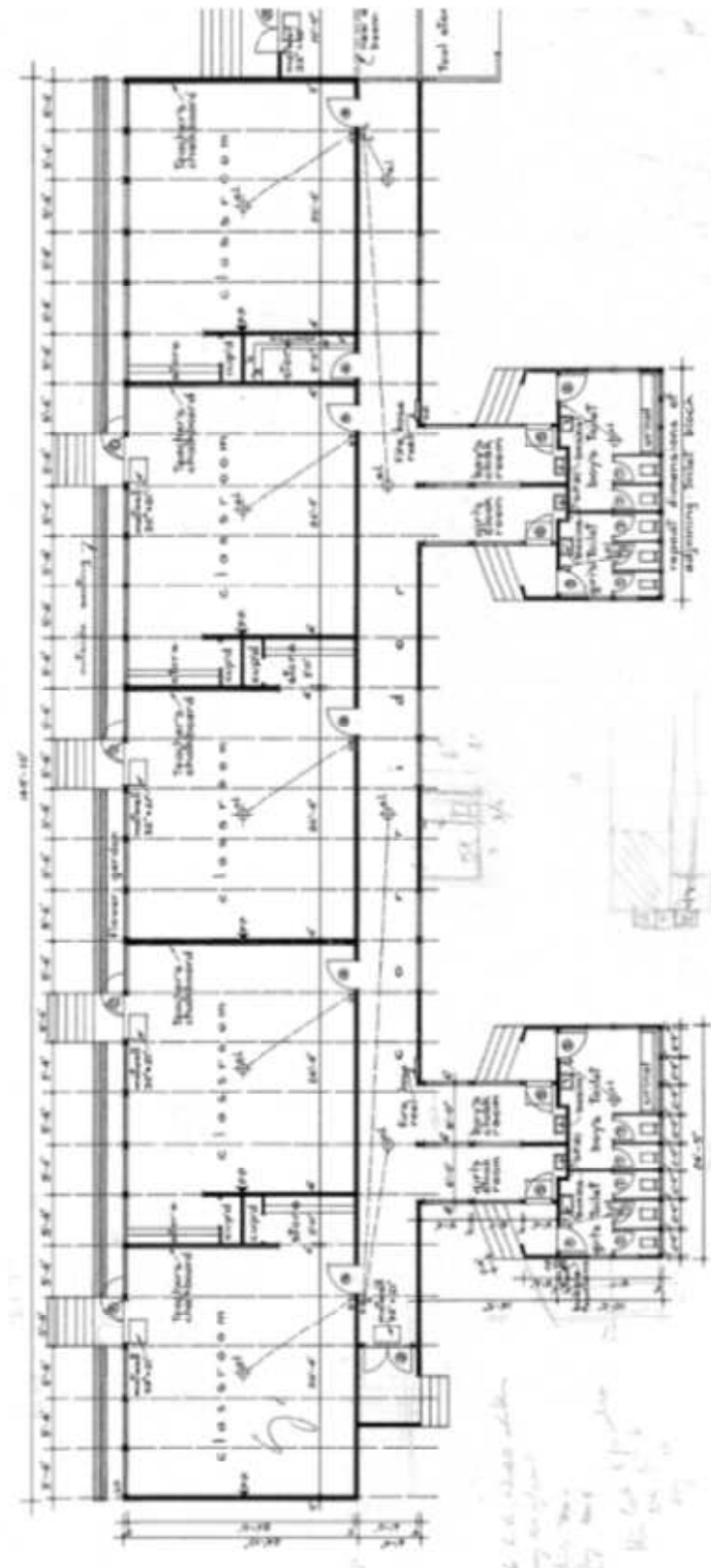


Building / Block Name:		Dominion Block	
PMIS code:		DOM	
Overview front oblique ( <i>Banks Ave School Block 1</i> )		Overview rear oblique ( <i>Burnham School Block 1</i> )	
			
Building description		Variants within standard design	
Roof	Timber trusses ridged centrally along the building length above the classrooms. Original roof heavy tile, but often replaced with corrugated steel.	Lincoln High School – no direct entrances to classrooms from front of building.	
Walls and cladding	Light timber framing. Cladding clay brick veneer. Timber weather boards on gable ends.	Continuous	
Floor and foundations	Suspended timber floor with concrete perimeter foundation walls	Unknown	
Constructed	From 1952 to 1955	<i>(approximate date range only)</i>	
Key identifying features	Fully glazed front façade to classrooms with a corridor at rear with separate toilet blocks off corridor.	Unknown	
Looks similar to the following			
Unknown			
General description			
Timber framed building with brick veneer cladding to the walls with weather boards at gable ends and light weight corrugated steel cladding to the roof. Building is supported on concrete piles and a concrete perimeter ring beam. Buildings have second eave between lower and upper clerestory windows on north facades. Narrow resource rooms between classrooms.			
MLE Compliance			
Small classrooms, good natural cross ventilation with high level clerestory windows, Acoustics dependant on ceiling finishes with most classrooms with poor acoustics due to Gib Board ceilings. No Insulation.			

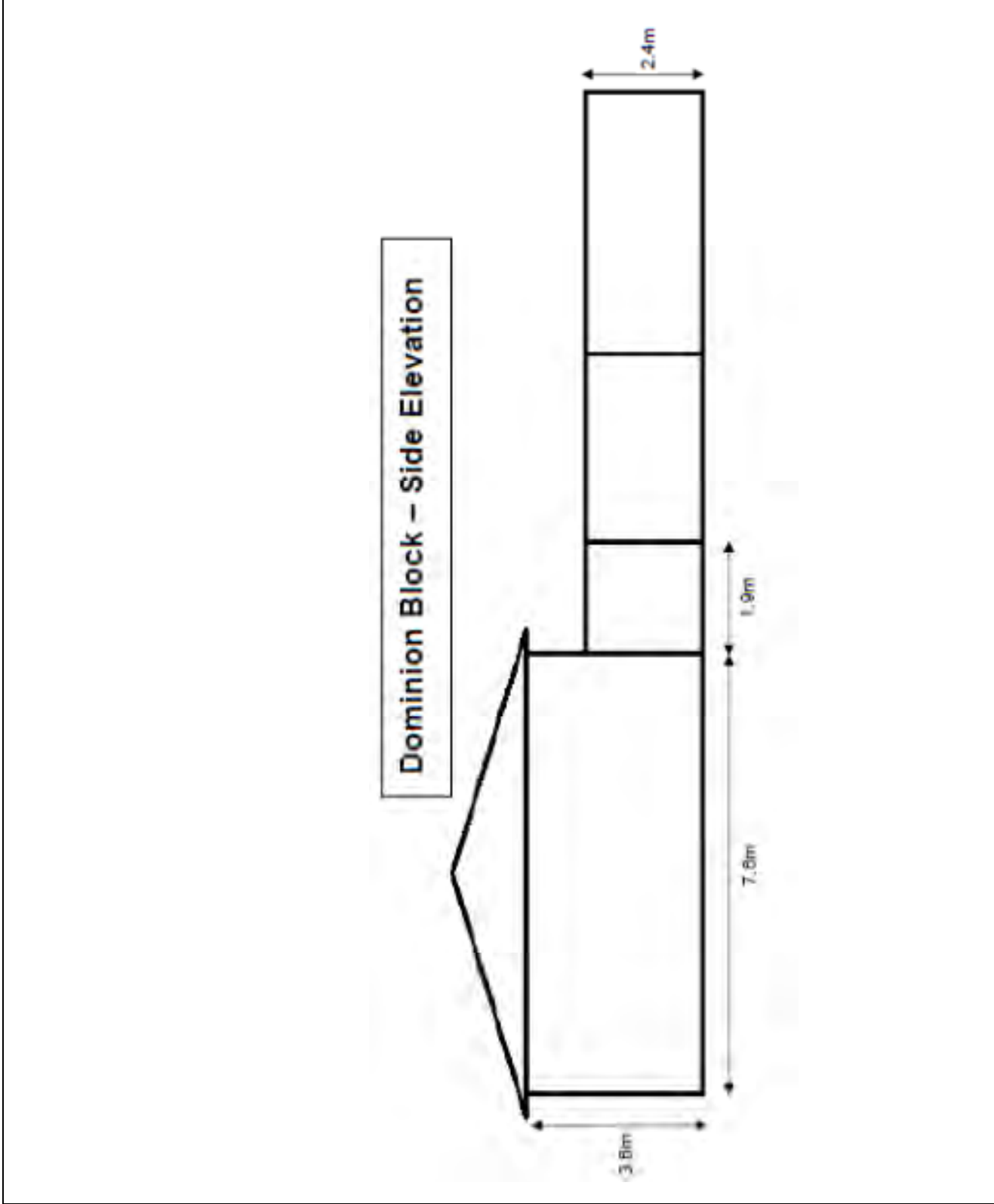
<p>Additional photographs and block drawings</p>	
<p>Front view of outside (<i>Alternative plan with no front entrances to classrooms Lincoln High School</i>)</p> 	<p>End view of outside (<i>Lincoln High School</i>)</p> 
<p>Foundations (<i>Burnham School Block 1</i>)</p> 	<p>Inside view of ceiling (<i>Burnham School Block 1</i>)</p> 
<p>Toilet block (<i>Burnham School Block 1</i>)</p> 	<p>Roof space (<i>Burnham School Block 1</i>)</p> 
<p>Aerial photograph of Dominion Block</p> 	<p>End view of building exterior (<i>Burnham School Block 1</i>)</p> 





Floor plan (*Unknown School Block unknown*)



Cross section (unknown school and block from Aurecon standard seismic strengthening calcs)



Building / Block Name:		Nelson Single Storey	
PMIS code:		<b>NEL1</b>	
Overview front oblique ( <i>unknown school and block photo from Aurecon standard buildings project</i> )		Overview rear oblique ( <i>Shirley Boys High School</i> )	
			
Aerial photograph of Nelson Single Storey Block			
No photograph		No photograph	
Building description		Variants within standard design	
Roof	Corrugated Metal roofing with timber framed or trusses. (Lincoln High School)	Steel web beams (SBHS)	
Walls and cladding	Timber frame with weather board or asbestos fibre cement cladding.	Unknown	
Floor and foundations	Timber suspended floors with perimeter concrete foundations (Lincoln High School)	Concrete slab on grade (SBHS)	
Constructed	From 1959 to 1967	<i>(approximate date range only)</i>	
Key identifying features	H Shaped floor plan with toilet block across back of middle section. Large glazed walls to side walls and solid gable ends.	SBHS and Lincoln High School differ in construction and layout and may not be exactly alike	
Looks similar to the following			
Similar to single storey 1950's Block at Rangiora HS B Block which has central ridge and large glazed windows on side and solid gable ends. These blocks are not H shape and have corridor along rear.			
General description			
H Shape floor plan with central ridge along each block. Large glazed walls along sides and solid gable end walls. Toilets along back of middle section and corridor between toilets and classrooms. (These have been converted to resource areas in most schools. Lincoln HS is standard classrooms and SBHS is the technology block. These two examples demonstrate different construction methods and therefore buildings need to be considered variants. <i>(More examples may need to be obtained which could indicate these are different types of buildings)</i> )			
MLE Compliance:			
Unknown			

Additional photographs and block drawings

Front view (*Lincoln High School*)



Rear view (*Lincoln High School*) Toilets at rear redeveloped



Rear view (*SBHS*)



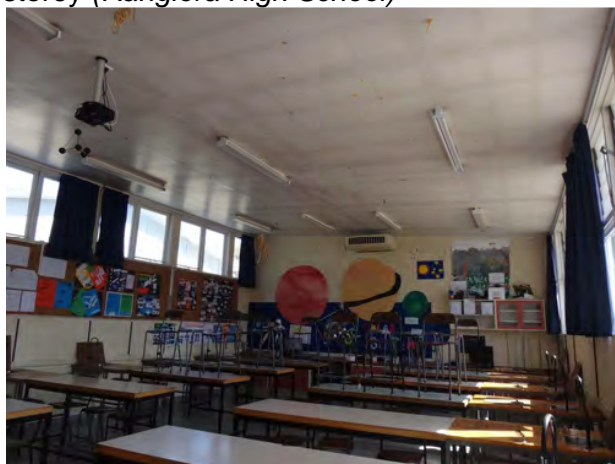
Side View (*SBHS*)

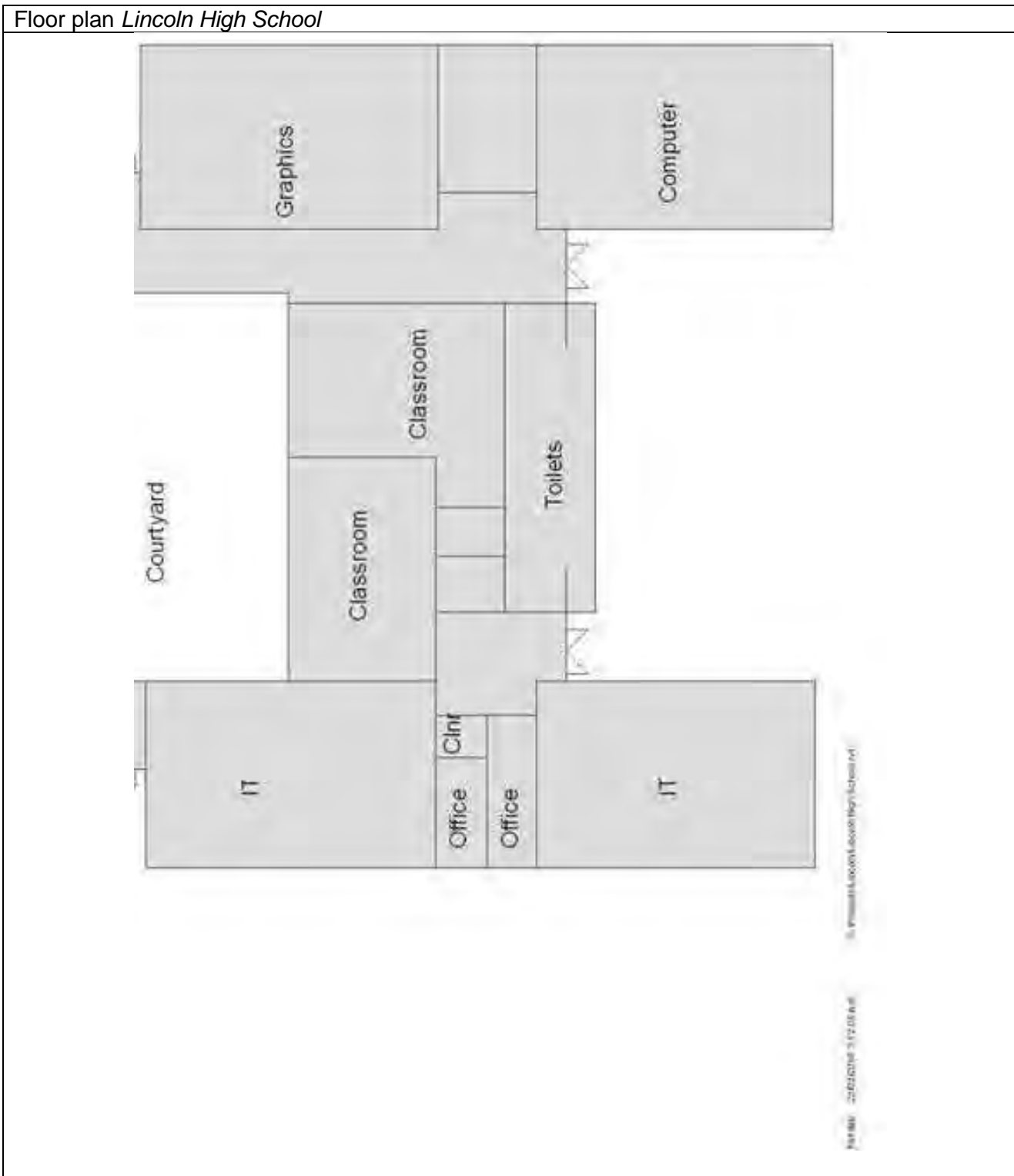


Similar appearance but based on 1950's block single storey (*Rangiora High School*)



Similar interior but based on 1950's block single storey (*Rangiora High School*)





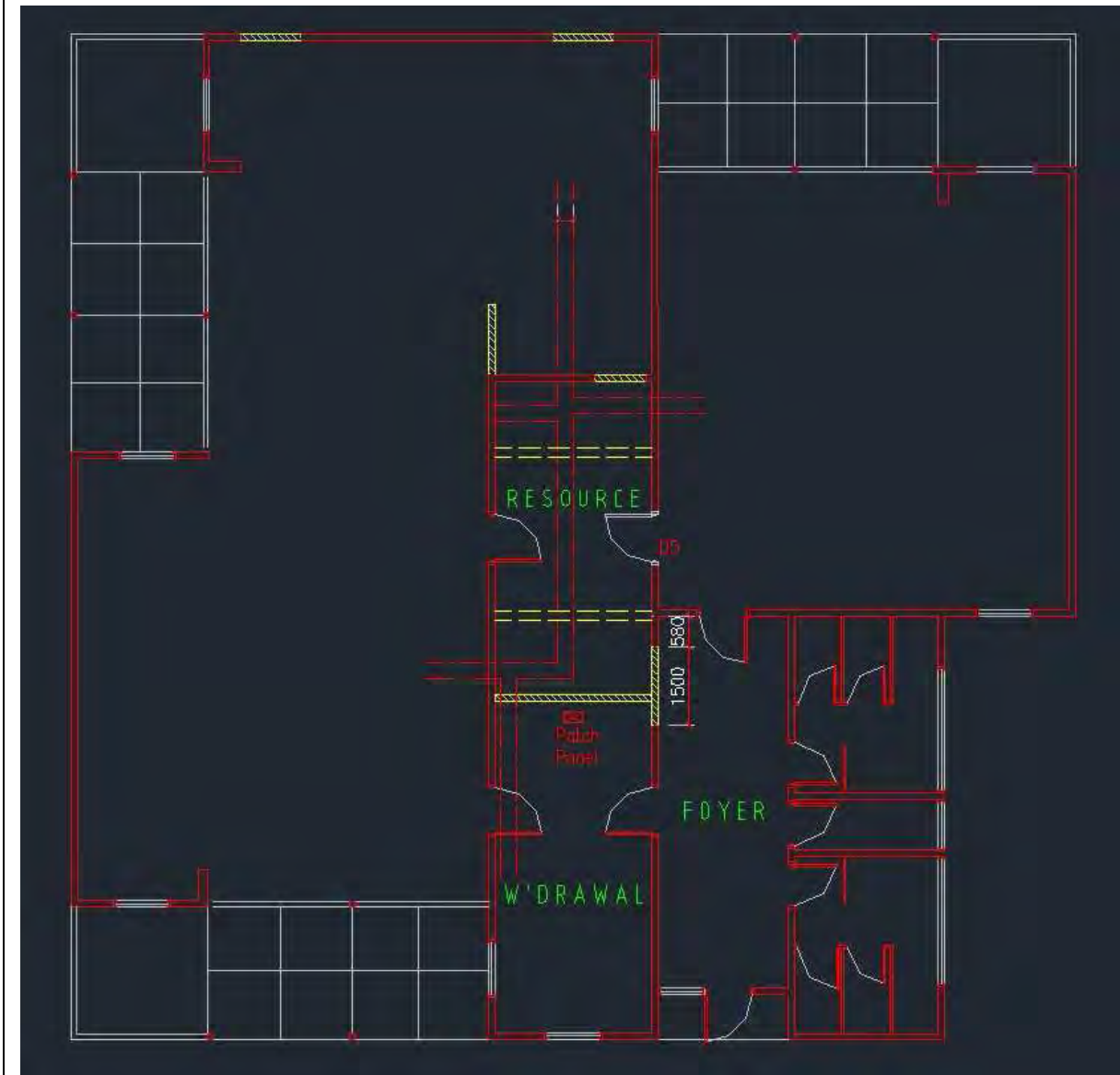
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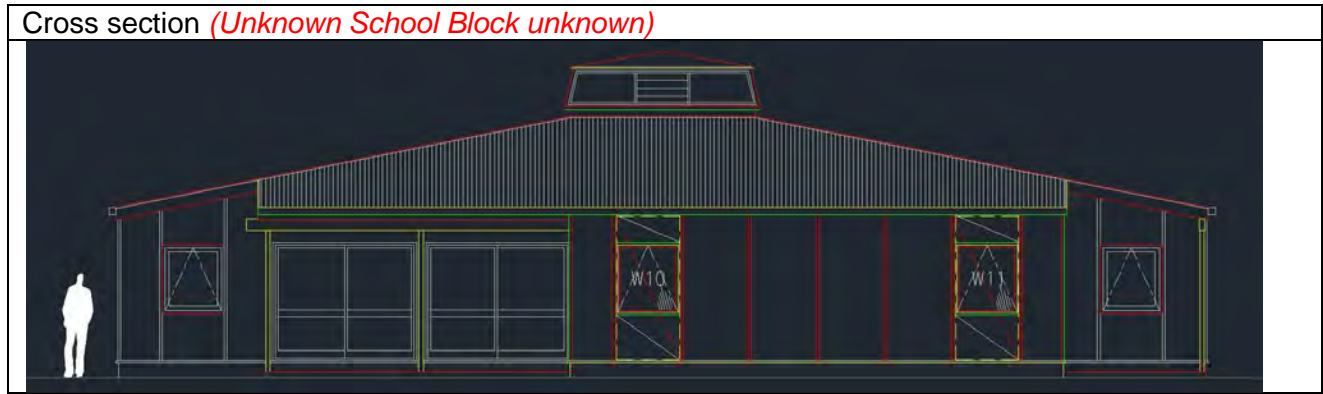
Building / Block Name:		Open Plan Block
PMIS code:		OPAIR
Overview front oblique ( <i>Shirley School block 1</i> )		Overview rear oblique ( <i>Central New Brighton</i> )
		
Building description		Variants within standard design
Roof	Pyramidal roof (with central roof lantern)	Unknown
Walls and cladding	Timber framed with fibre cement sheet	Unknown
Floor and foundations	Concrete slab on grade with perimeter edge thickenings	Unknown
Constructed	From 1977 to 1979	<i>(approximate date range only)</i>
Key identifying features	Internal timber trusses, truncated pyramidal roof. Three classrooms around central resource room and open out onto small verandas	Unknown
Looks similar to the following		
Unknown		
General description		
<p>Three classroom block with central roof lantern. Main entrance through cloak bay and toilets to two classrooms. Classrooms have large bi-folding doors between rooms and high level glazing to roof lantern for borrowed light to middle of rooms. Sloping ceilings with exposed large beams. Classrooms access small veranda areas.</p>		
MLE Compliance		
<p>Original open plan design but doors were always closed. Good ventilation through roof lanterns and good acoustics due to Pinex ceiling tiles. Minimum insulation.</p>		



<b>Additional photographs and block drawings</b>	
<b>Front view of outside Central New Brighton</b> 	<b>Rear view of outside Central New Brighton</b> 
<b>Inside view</b> 	<b>Inside view of ceiling</b> 
<b>Building Shirley Primary School</b> 	







Floor plan (Shirley Primary School)

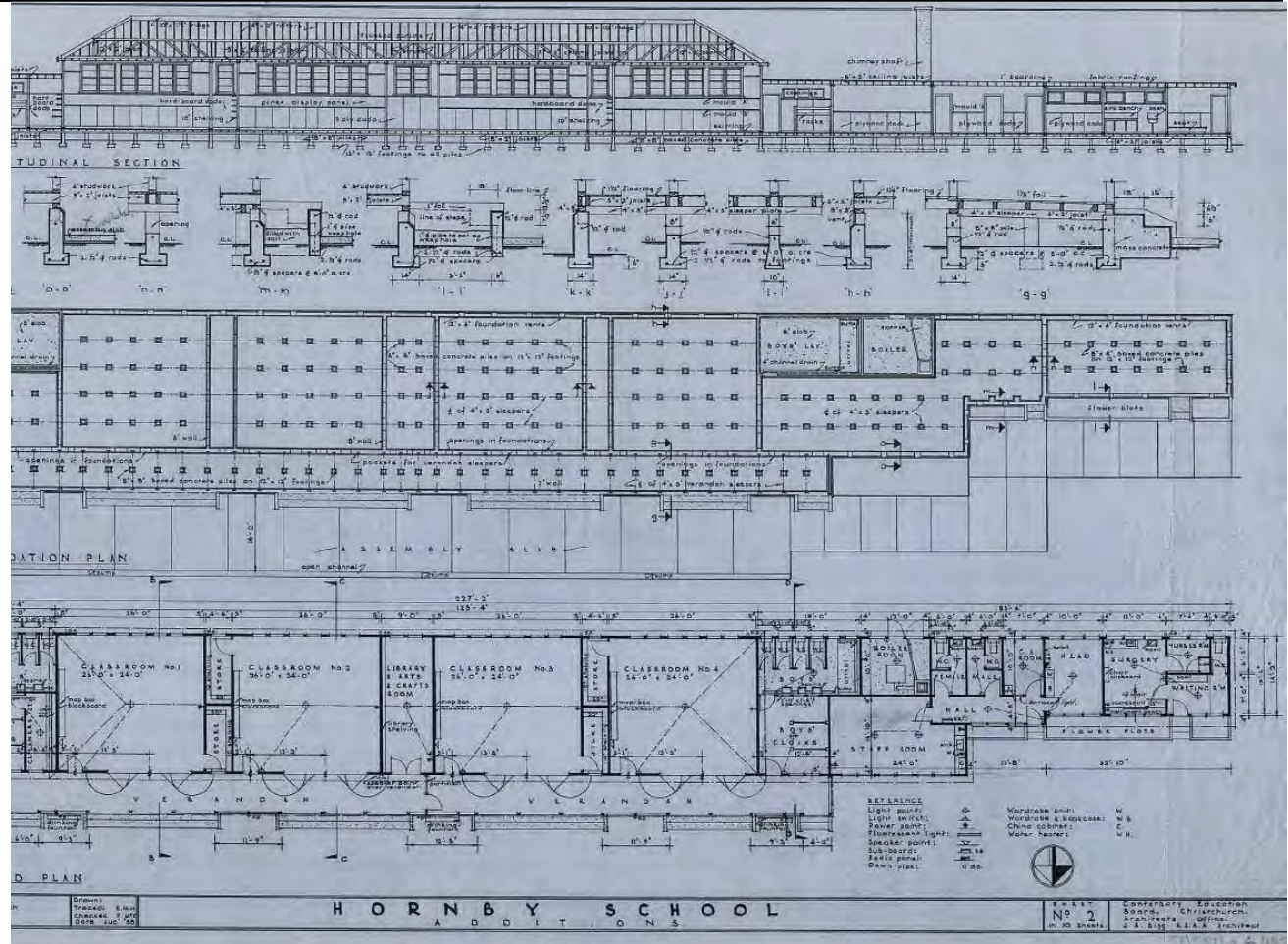




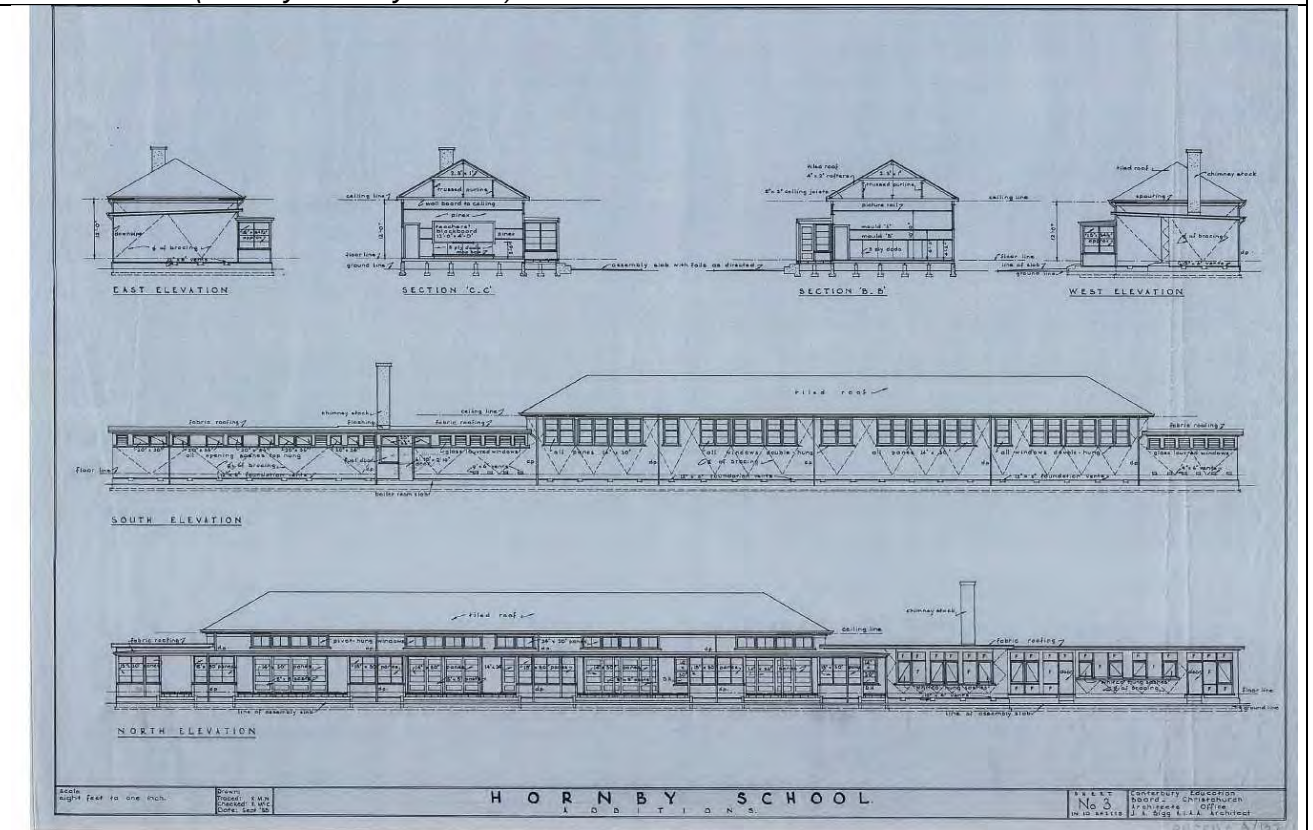
Building / Block Name:		Open Air Veranda
PMIS code:		VRNDA
Overview front oblique ( <i>Shirley Intermediate</i> )		Overview rear oblique ( <i>Wairakei Rd School</i> )
		
Building description		Variants within standard design
Roof	Corrugated steel has replaced original concrete tile roofing	Unknown
Walls and cladding	Timber weatherboard on timber framing	Unknown
Floor and foundations	Suspended timber flooring on piles and continuous concrete perimeter foundations.	Unknown
Constructed	From 1934 to 1964	<i>(approximate date range only)</i>
Key identifying features	Verandas along north elevations with large sliding doors to classrooms.	Large sliding doors may have been replaced with windows or new sliding doors. Some classroom blocks have cloak bays between classrooms with toilet block at rear (Opawa Primary School) others have toilet blocks at end or perpendicular to classroom blocks linking between classroom blocks. (Wairakei )
Looks similar to the following		
Variant with toilet out back can be confused with Dominion or Canterbury Blocks.		
General description		
Weather board light timber framed building with large verandas along north walls and large sliding doors.		
MLE Compliance		
Classrooms small (55m <sup>2</sup> ). Good natural cross ventilation with sliding doors and high clerestory windows. Excellent solar control with verandas. Acoustic dependant on ceiling finish with poor acoustics in rooms with Gib Board ceilings.		

<p>Additional photographs and block drawings</p>	
<p>Front view Many schools have a two storey administration Block at end of classrooms (Wairakei Rd)</p> 	<p>Rear view (Wairakei Rd)</p> 
<p>Foundations (Hornby)</p> 	<p>Inside view of ceiling (Hornby)</p> 
<p>Roof Space (Hornby)</p> 	<p>Aerial photograph of Open Air Veranda Block</p> 



Floor plan (Hornby Primary School)



Cross section (Hornby Primary School)



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<b>Building / Block Name:</b>		<b>S68 Generic Block</b>
<b>PMIS code:</b>		<b>S68Generic</b>
<p>Overview front oblique (<i>unknown school and block photo from Opus post-EQ structural review</i>)</p> 		<p>Overview rear oblique (<i>unknown school and block photo from Aurecon standard buildings project</i>)</p> 
<b>Building description</b>		<b>Variants within standard design</b>
Roof	Flat roof – Originally trough section roofing but most schools reroofed with butynol. Laminated timber rafters with timber ceiling.	Timber rafters may be replaced with steel trusses.
Walls and cladding	Double single masonry block with block or brick veneer and reinforced concrete block structure.	Brick veneer in lieu of Block.
Floor and foundations	Concrete slab floor	Unknown
Constructed	From 1968 to 1974	( <i>approximate date range only</i> )
Key identifying features	Flat roofs with exposed rafter windows between block piers. Buildings in groups with long corridors between classrooms and central court yards in middle of blocks.	Blocks vary between Arts and Craft block with large hall, technology blocks with longer classroom spaces, science block and teaching block with large room with dividing wall. Other specialist S68 buildings noted elsewhere include the boiler house, library, gym and admin blocks.
<b>Looks similar to the following</b>		
<p><b>General description</b>          Building plan typically 'H' shape with corridors opening into large courtyards. Various blocks with arts and craft, science, and technology classrooms. Some blocks have large hall in lieu of classrooms at one end.          Other S68 standard buildings include the Admin block, Library building, Gymnasium and boiler house (refer photos below).</p>		
<p><b>MLE Compliance</b>          Construction limits flexibility but redevelopment at Porirua College demonstrates how these buildings can be converted to MLE. Generally poor acoustics due to timber ceilings. Excellent cross ventilation and natural ventilation intake around panel heaters below windows. Excellent solar control.          Minimum insulation. South facing clerestory glazing provide excellent natural lighting but difficult to blackout.</p>		

<p>Additional photographs and block drawings</p>	
<p>Front view of outside Kaiapoi High School</p> 	<p>Rear view of outside Kaiapoi High School</p> 
<p>Inside view of ceiling Kaiapoi High School Technology Block with timber sarking</p> 	<p>Inside view of ceiling with acoustic tiles</p> 
<p>Example of MLE redevelopment Porirua College</p>  <p>Porirua College - Wellington</p>	<p>Example of MLE redevelopment Porirua College</p> 



Arts and craft block court yard and hall (Kaiapoi High School)



Arts and craft block hall Rear view (Kaiapoi High School)



S68 Gym (Kaiapoi High School)



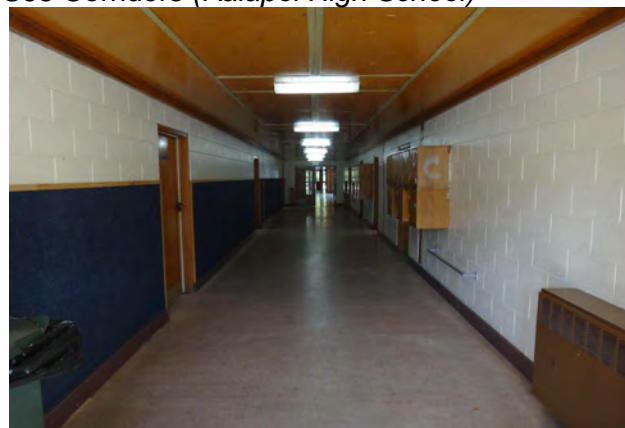
S68 Gym (Kaiapoi High School)



S68 Admin (Kaiapoi High School)



S68 Corridors (Kaiapoi High School)

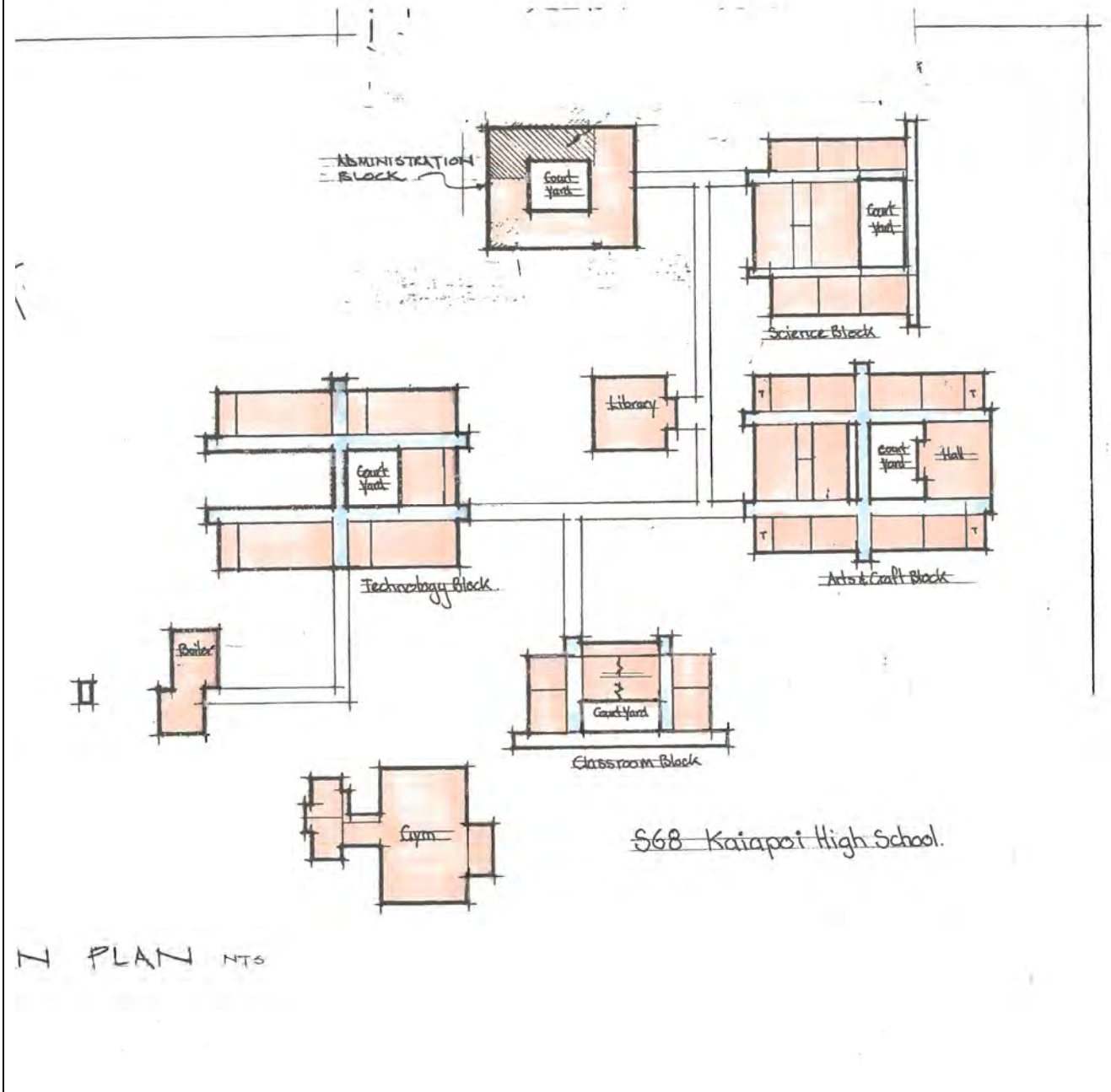


Aerial photograph of S68 Generic Block



No photograph

Floor plan (Kaiapoi High School)



**Building / Block Name:** **Whanau Block**

**PMIS code:** **Whanau**

Overview front oblique (Rangiora High School)



Overview rear oblique (Rangiora High School)



Building description		Variants within standard design
Roof	Corrugated metal roofing on gang nail trusses exposed on interior.	Unknown
Walls and cladding	Timber weatherboard on timber framing	Unknown
Floor and foundations	Suspended timber flooring on piles and continuous concrete perimeter foundations.	Unknown
Constructed	<i>Age range unknown</i>	
Key identifying features	Large common area (if not subdivided) surround by teaching spaces. Verandas along the side elevations to classrooms. Exposed gang nail trusses in classrooms.	Unknown

**Looks similar to the following**

Unknown

**General description**

Designed by Works and Development Christchurch Office in 1980s and built at Ellesmere College, Mountain View, Darfield and Rangiora High Schools. Building timber frame with suspended timber floor. Main design feature was the large central common room with classrooms wrapped around with covered veranda and classrooms extending away from common room. Many common rooms now subdivided into teaching spaces.

**MLE Compliance**

Good natural cross ventilation with high clerestory windows but subdivided spaces have reduced this air movement. Excellent solar control with verandas. Acoustic dependant on ceiling finish with poor acoustics in rooms with Gib Board ceilings. Original design with common area that provided MLE space but not if subdivided.

Additional photographs and block drawings

Inside view of sub divided common room (Rangiora)



Inside view of sub divided common room (Rangiora)



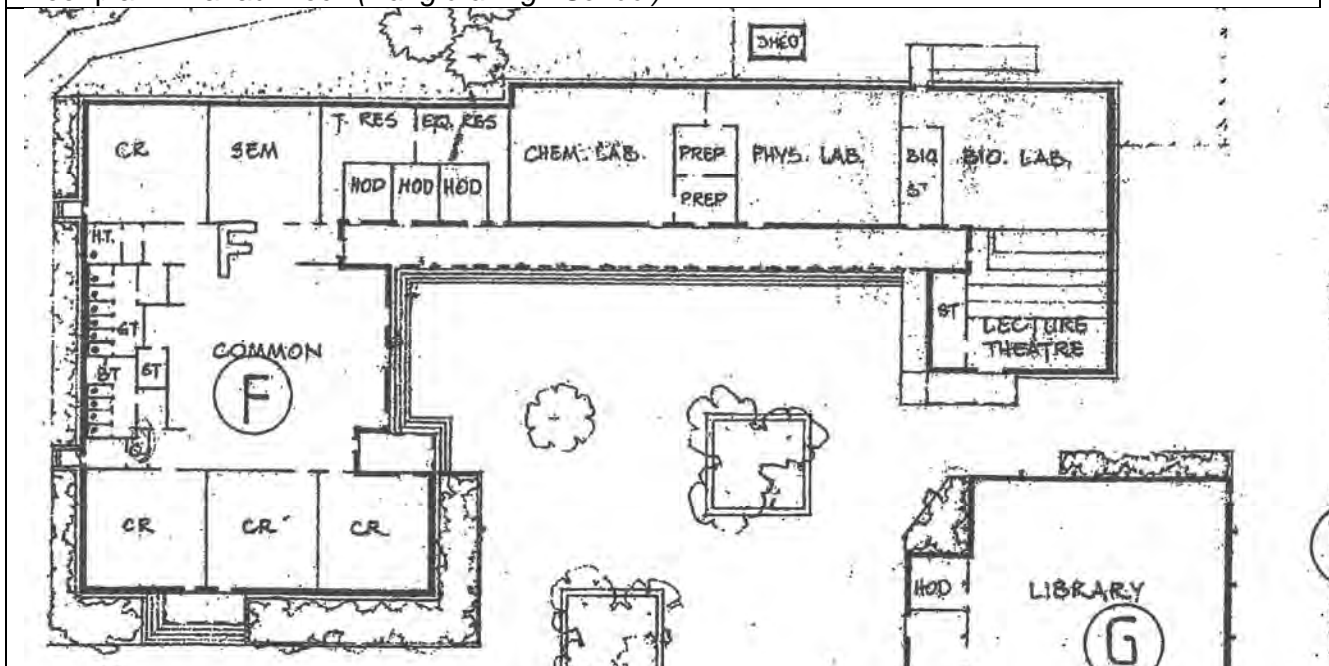
Aerial photograph of Whanau Block (Rangiora High school)



Inside view of ceiling (Rangiora)

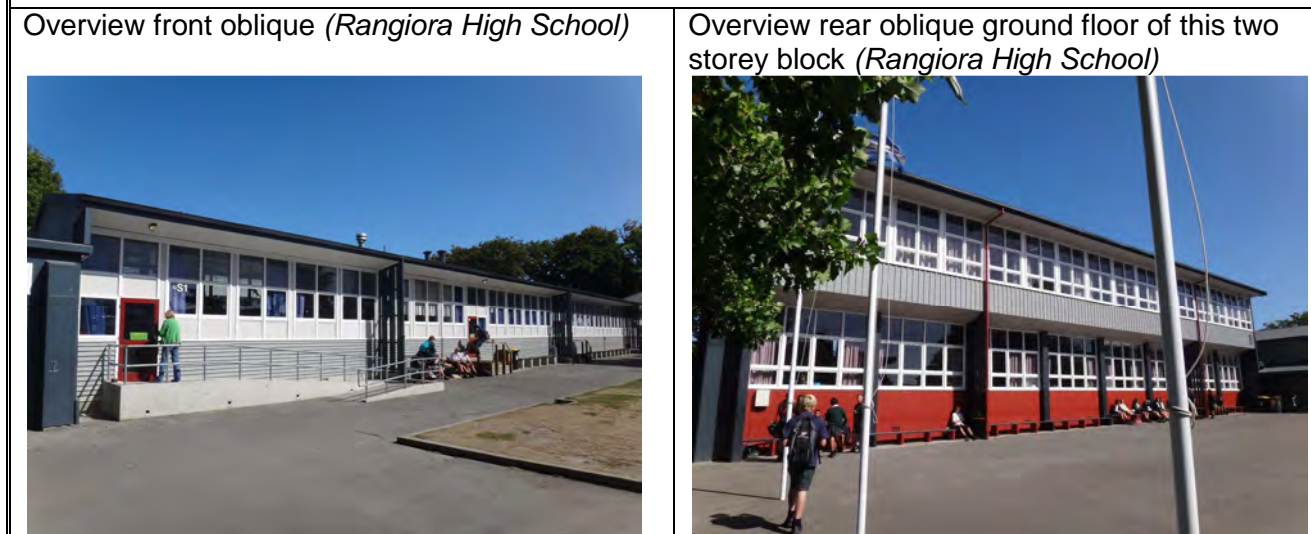


Floor plan Whanau Block (Rangiora High School)



**Building / Block Name: 1950's Single Storey Block**

**PMIS code: 150**


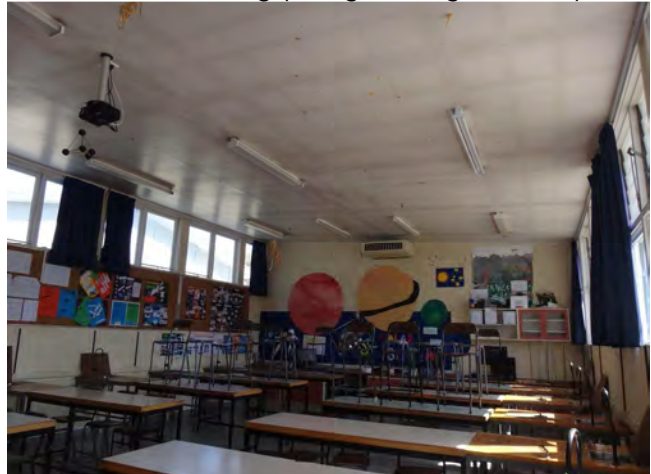


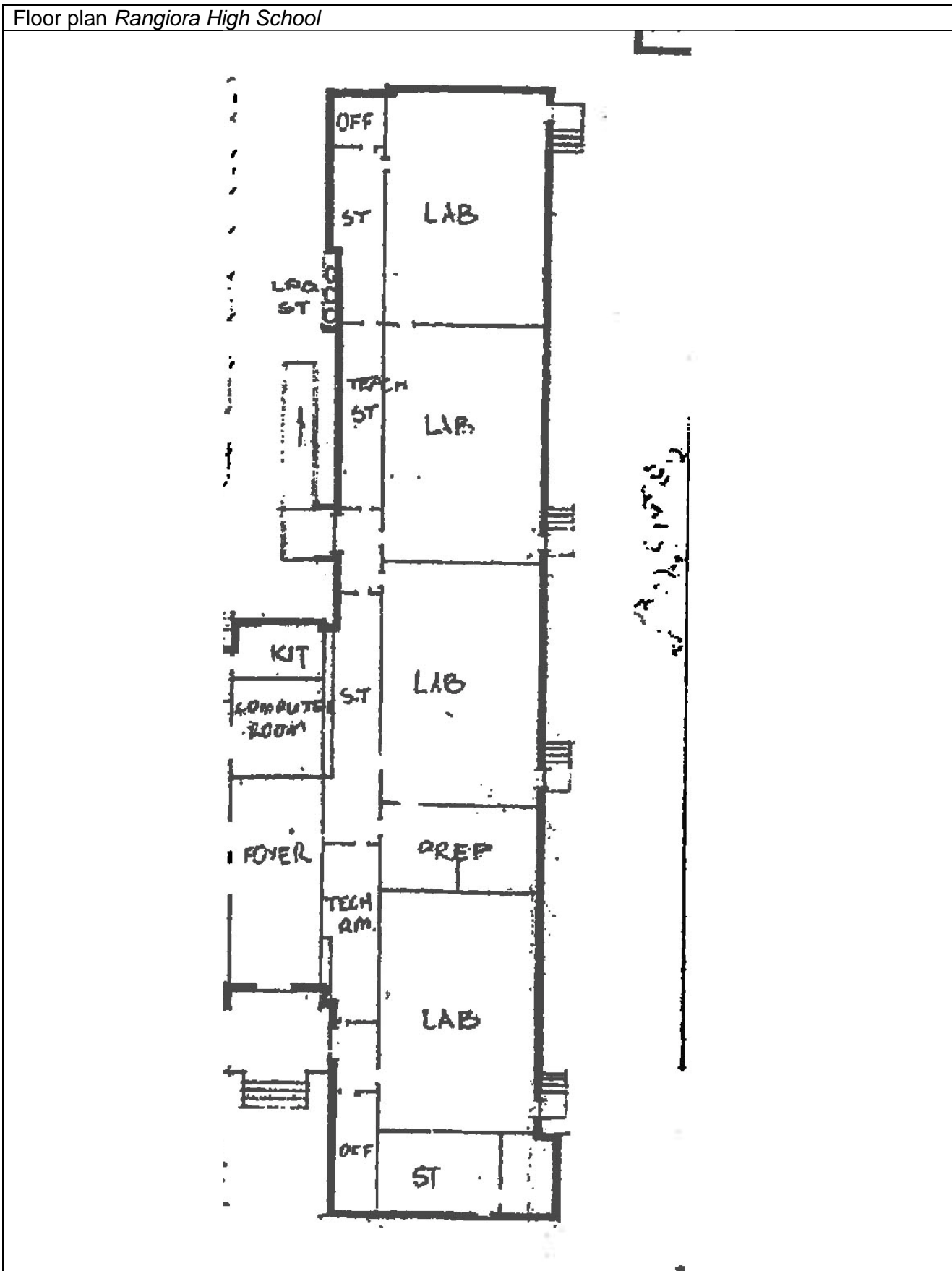
Building description		Variants within standard design
Roof	Corrugated Metal roofing with timber framed or trusses.	Unknown
Walls and cladding	Timber frame with weather board or asbestos fibre cement cladding.	Unknown
Floor and foundations	Timber suspended floors with perimeter concrete foundations	Unknown
Constructed	From 1951 to 1955	<i>(approximate date range only)</i>
Key identifying features	Straight floor plan with corridor along back of classrooms. Large glazed walls to north and solid gable ends. Vertical timber screens on north wall similar to two storey blocks. Entrances along front of classrooms as well as corridor.	Two storey blocks Rangiora High School

**Looks similar to the following**  
 Similar to single storey Nelson Block at Lincoln High School C Block which has central ridge and large glazed windows on side and solid gable ends. 1950's blocks are straight and not H shape.

**General description**  
 Four classrooms in row with central ridge along each block. Large glazed walls along front and solid gable end walls. Corridor along back of classrooms. (These have been converted to resource areas in Rangiora HS. *(more examples may need to be obtained to support this type of building)*)

**MLE Compliance**  
 Large classrooms with good natural cross ventilation but suffer from over -heating from solar gains. Poor acoustics in classrooms with Gib Board ceilings. No insulation.

Additional photographs and block drawings	
<p>Vertical screens single storey 1950's Block</p> 	<p>Vertical screens two storey 1950's Block</p> 
<p>Foundations</p> <p>No photograph</p>	<p>Inside view of ceiling (<i>Rangiora High School</i>)</p> 
<p>Aerial photograph of 1950s Single Storey Block</p> <p>No photograph</p>	<p>No photograph</p>



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## Relocatable Classrooms



Buildings in this section are defined as designed and built to be able to move from one site to another. They are likely to be on piles, and have clearly defined structural elements that can be dismantled and reconfigured.

Standard buildings scheduled are:



- Aranui Block;
- CEBUS (Canterbury Education Board Unit System) (1, 2, 3, and 4) *with up to 600 mm clearance to ground from the floor substructure;*
- Laing's Block;
- Nayland Block;
- Opus Modular Classroom Block;
- Otago Education Board (1, 2, and 3);
- Paul Wilkin Design Block;
- Portacom Block;
- UNIT Block;
- Woolston Block.



PMIS codes in **red** are not already in the database and have been proposed to reconcile conflicts and/or a range of codes that appear to cover standard blocks.

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<b>Building / Block Name:</b>		<b>Aranui (Actual type uncertain)</b>
<b>PMIS code:</b>		<b>Aranui</b>
Overview front ( <i>Woolston</i> )		Overview rear oblique ( <i>Woolston</i> )
		
<b>Building description</b>		<b>Variants within standard design</b>
Roof	Corrugated metal with central ridge beam	Unknown
Walls and cladding	Asbestos fibre cement	Weatherboard
Floor and foundations	Timber suspended floor with folded metal "Scott web" bearers Toilet block bearers are in opposite direction to classrooms	Unknown
Constructed	<i>Age range unknown</i>	
Key identifying features	Buildings in three sections with two single classrooms and toilet block	Porch sometimes built-in eg AGHS C Block or Classrooms and toilet blocks separated with toilet block as a stand-alone building between classrooms eg AGHS P Block
<b>Looks similar to the following</b>		
Unknown		
<b>General description</b>		
Classrooms 7.5 x 10m. Classrooms have large glazed windows both sides with excellent cross ventilation. Ceilings are Pinex acoustic tiles providing good acoustics. No insulation to walls or ceilings.		
<b>MLE Compliance</b>		
Unknown		

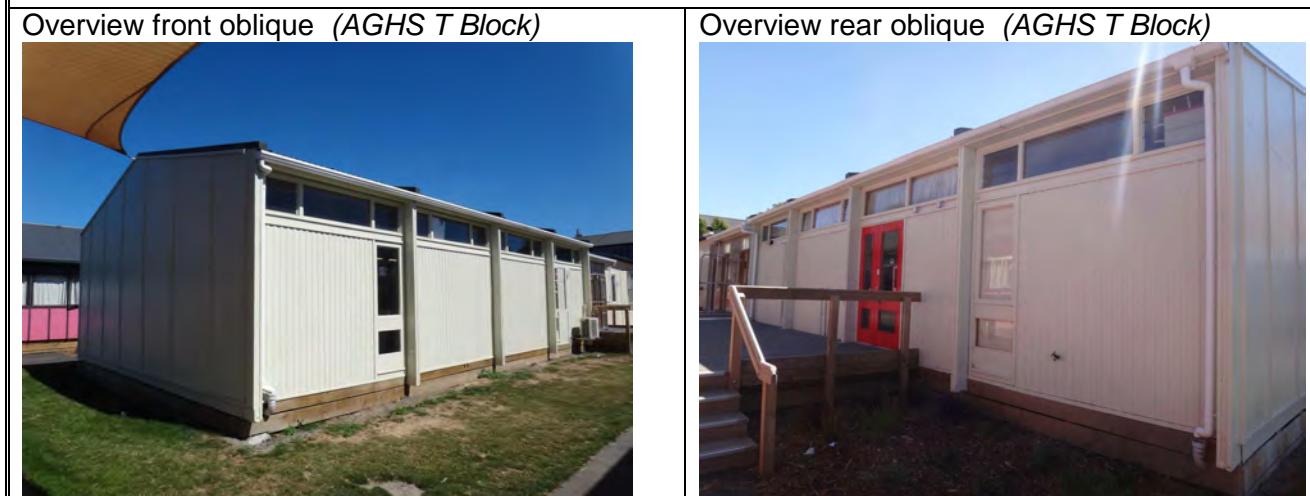
Additional photographs and block drawings	
<p>Front view (AGHS C Block)</p> 	<p>Rear view (AGHS C Block)</p> 
<p>Foundations Woolston</p> 	<p>Inside view of ceiling Woolston</p> 
<p>End View Woolston</p> 	<p>Aerial photograph of Aranui Block</p> <p style="text-align: center;">No photograph</p>
<p>AGHS P Block (note standalone toilet block)</p> 	<p>Interior view AGHS P Block</p> 

Building / Block Name:		CEBUS 1
PMIS code:		CEB1
Overview front oblique (AGHS T Block)		Overview rear oblique (AGHS T Block)
		
Building description		Variants within standard design
Roof	Corrugated metal. Central ridge beam with rafters at 3m centre	Unknown
Walls and cladding	Asbestos Fibre cement	Unknown
Floor and foundations	Suspended timber floor on five bearers running length of building	Some blocks have corner concrete foundations
Constructed	From 1968 to 1968	( <i>approximate date range only</i> )
Key identifying features	Recessed entrance, central ridge beam, not externally exposed frames	Sinks by door if primary school classroom use.
Looks similar to the following		
CEBUS 2 but without external portals along sides.		
General description		
Original CEBUS (Canterbury Education Board Unit System) standard single classrooms 8m x 9.2m.		
MLE Compliance		
Good cross ventilation. Pinex ceiling tiles good acoustic. No insulation. Solar gain depending on orientation.		

Additional photographs and block drawings	
Foundations <i>(school name)</i>  No photograph	Inside view of ceiling AGHS T Block 
Aerial photograph of CEBUS Block 	

**Building / Block Name: CEBUS 2 (Mk I & Mk II)**

**PMIS code: CEB2**


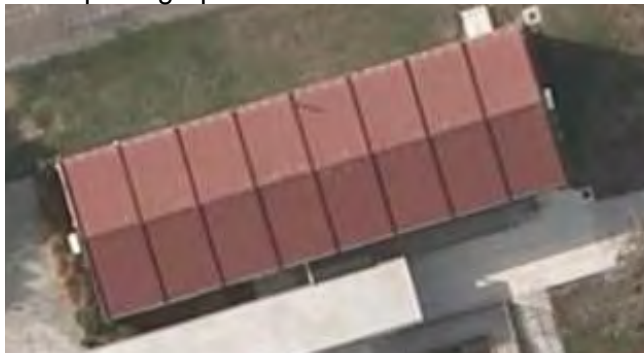


Building description		Variants within standard design
Roof	Corrugated metal roofing. Gang nail timber portal frames at 3m or 2.9m centres with metal cappings	Unknown
Walls and cladding	Walls built in panels between portals. Asbestos Fibre cement	Varying panel layouts with different window units.
Floor and foundations	Suspended timber floor with piles under portal frames and joists spanning between portals	Older blocks may have corner concrete foundations
Constructed	From 1969 to 1985	<i>(approximate date range only)</i>
Key identifying features	External Portals can be seen on roof and along walls, Cover battens internally at portals to allow separation. Portals frames and nail plates exposed along outside walls. Can found as single or double classrooms with toilets in middle. Other layouts may include longer blocks of up to 10 bays with large open classrooms for technology rooms etc.	Some portals have bolted connections Older CEBUS classrooms are 8m wide including portals and 3m bays. Newer classrooms identical but 7.5m wide and 2.9m between portals

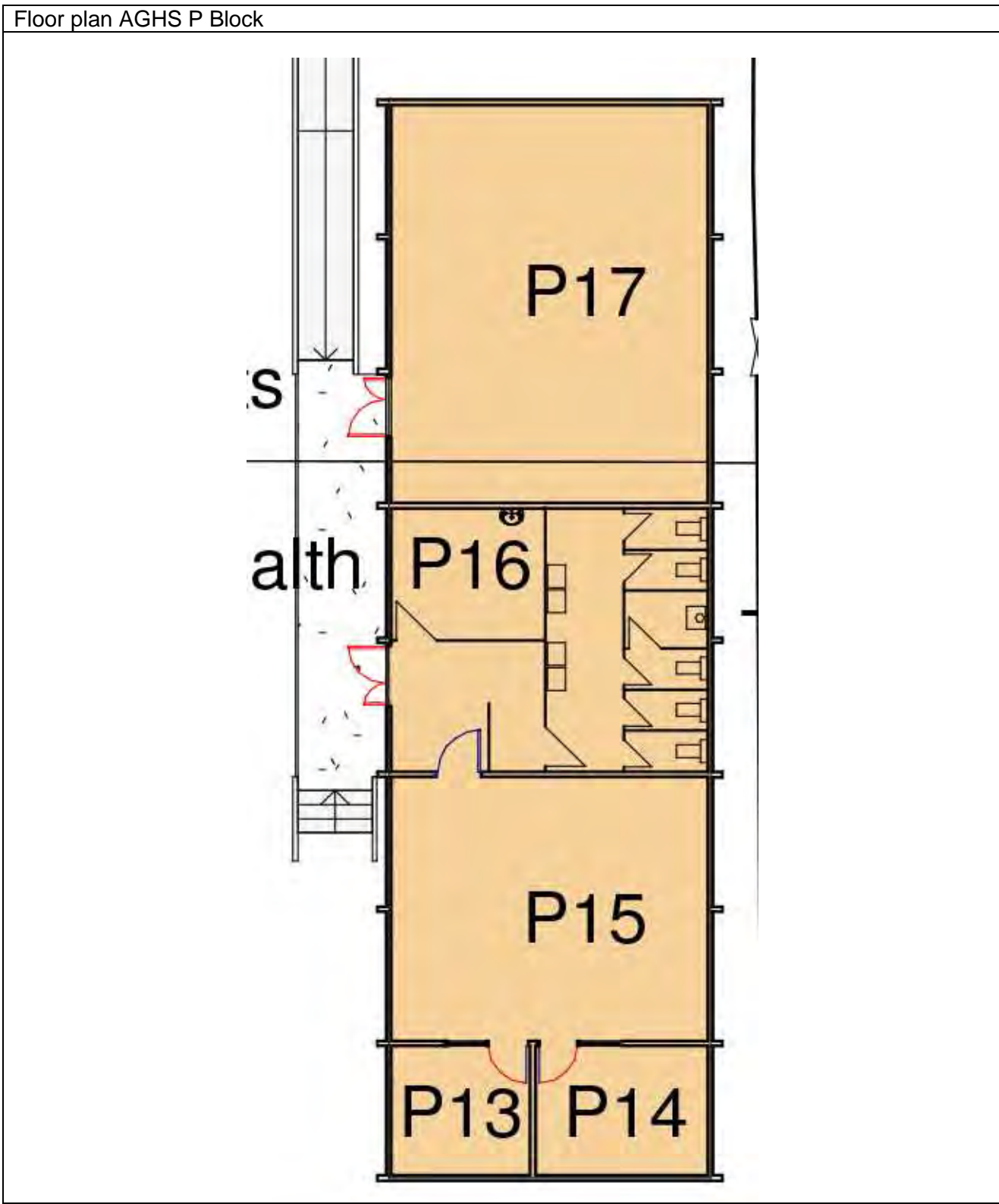
**Looks similar to the following**  
CEBUS 1 and CEBUS 3

**General description**  
Originally described as Mark I and II CEBUS (Canterbury Education Board Unit System) standard single classrooms and double classrooms with toilet block. Mark I classrooms 8 x 9.2m, with buildings constructed in 3m bays. Mark II classrooms reduced in size to 7.5m wide with 2.9m bays to comply with road transport regulations. Portal design allows multiple bays that can be subdivided into single bays or long open plan classrooms. Buildings can be split between portals to allow extra bays to be removed or inserted. Internal cover battens along portals allow removal and separation.



**MLE Compliance**  
Good cross ventilation. Pinex ceiling tiles good acoustic. No insulation. Solar gain depending on window arrangement and orientation.




Additional photographs and block drawings	
<p>Portals Exposed bolted plates (<i>Woolston</i>)</p> 	<p>Portals Exposed Gang nail plates (<i>Woolston</i>)</p> 
<p>Foundations (<i>school name</i>)</p> <p>No photograph</p>	<p>Inside view of ceiling (<i>AGHS T Block</i>)</p> 
<p>Other Schools: (<i>Woolston</i>)</p> 	<p>Other photo caption (<i>Banks Ave</i>)</p> 
<p>Aerial photograph of CEBUS Block</p> 	<p>No photograph</p>





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<b>Building / Block Name:</b>		<b>CEBUS 3</b>
<b>PMIS code:</b>		<b>CEB3</b>
Overview front oblique (AGHS P Block)		Overview rear oblique (AGHS P Block)
		
<b>Building description</b>		<b>Variants within standard design</b>
Roof	Corrugated metal roofing. Gang nail timber portal frames at 2.9m centres with metal cappings	
Walls and cladding	Walls built in panels between portals. Fibre cement cladding	Varying panel layouts with different window units. Some units may still have asbestos cement cladding.
Floor and foundations	Suspended timber floor with piles under portal frames and joists spanning between portals	Some blocks may have corner concrete foundations
Constructed	From 1985 to 1985	<i>(approximate date range only)</i>
Key identifying features	External Portals with capping over vertical legs. No internal cover panels internally at portals to allow separation. Aluminium windows.	Nail plates in lieu of gang nail plate connections
<b>Looks similar to the following</b>		
CEBUS 2 and CEBUS 4 which both have external portals but differ in interior to CEBUS 2 (no portal battens or acoustic tile ceilings) and exterior window panels are different to CEBUS 4 with separation between lower and upper windows in CEBUS 3.		
<b>General description</b>		
Originally Mark 3 CEBUS (Canterbury Education Board Unit System) standard single classrooms and double classrooms with toilet block. Classrooms 7.5 (across portals) x 8.9m, buildings constructed in 2.9m bays but classrooms constructed as one unit and cannot be split between portals like CEBUS 2 as there are no internal cover battens along portals to allow removal and separation. Classrooms have Gib Board ceilings with no acoustic tiles (some classrooms may have had these installed at a later date). Building width reduced to allow transport on roads without special approval. Aluminium windows instead of timber used in CEBUS 2 classrooms.		
<b>MLE Compliance</b>		
Good cross ventilation. Poor acoustics due to Gib Board ceiling. Insulated. Solar gain depending on window arrangement and orientation.		

Additional photographs and block drawings	
<p>Portals: Exposed nail plates and capping around end of portals. (AGHS P Block)</p> 	<p>Aerial photograph of CEBUS Block</p> 
<p>Foundations (school name)</p> <p>No photograph</p>	<p>Inside view of ceiling (AGHS T Block) note full Gib Board ceiling and no cover battens on portal lines.</p> 

**Building / Block Name:** **CEBUS 4**

**PMIS code:** **CEB4**



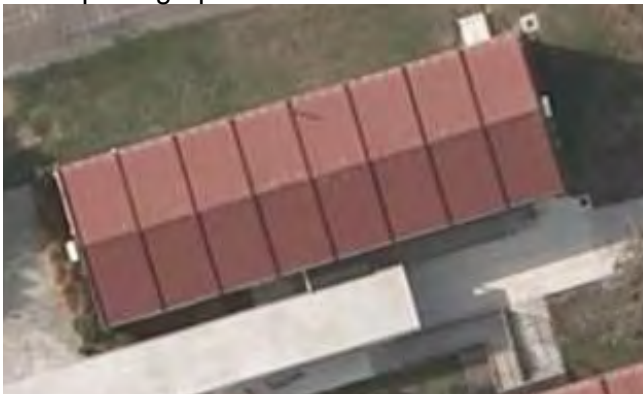


Building description		Variants within standard design
Roof	Corrugated metal roofing. Gang nail timber portal frames at 2.9m centres with metal cappings	Unknown
Walls and cladding	Walls built in panels between portals. Fibre cement cladding. Aluminium powder coated windows. Windows do not have separate upper window but all in one unit.	Windows vary with some top hung and others sliding.
Floor and foundations	Suspended timber floor with piles under portal frames and joists spanning between portals	Some blocks may have corner concrete foundations
Constructed	From 1998 to 2000	<i>(approximate date range only)</i>
Key identifying features	External portals are fully clad with fibre cement and cover flashing. No internal cover panels internally at portals to allow separation. Large windows with upper and lower windows combined in one unit.	Lobbies may include resource or toilet facilities.

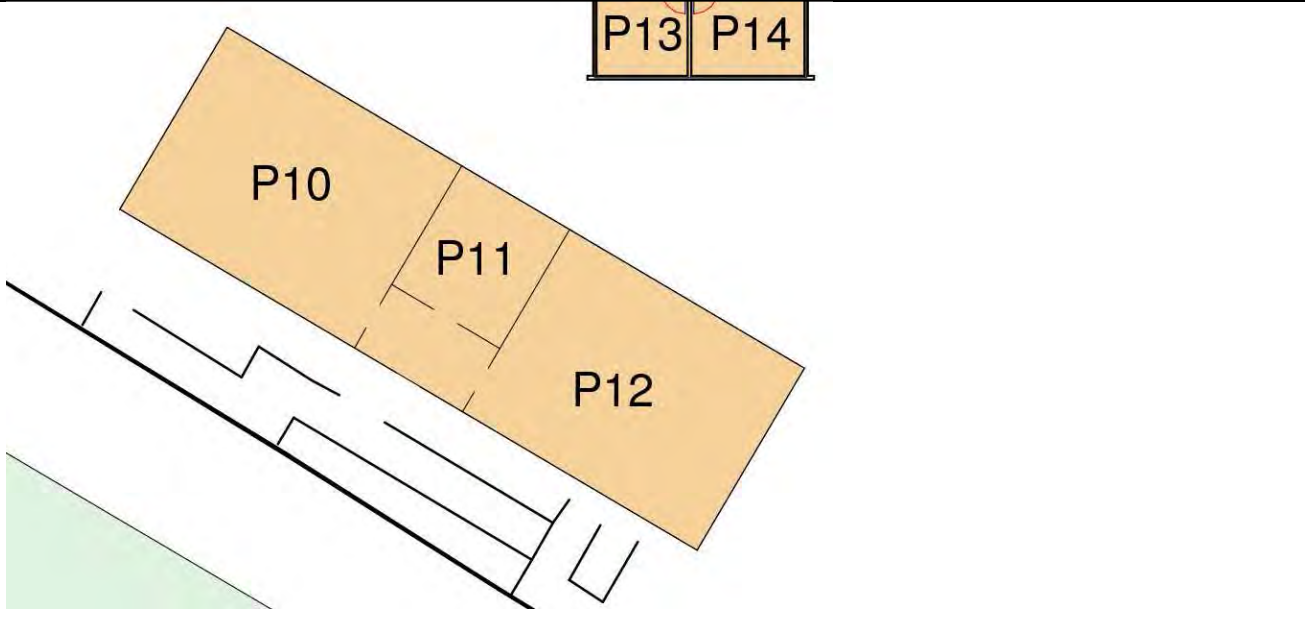
**Looks similar to the following**  
CEBUS 2 and 3 but differs in the window design with no division between upper and lower windows.

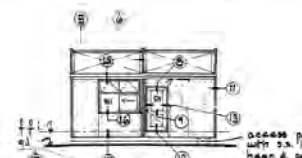
**General description**  
Mark 4 CEBUS (or CEBUS 1998 or 2000) (Canterbury Education Board Unit System) standard single classrooms with lobby and resource room or toilets. Classrooms 7.5 x 8.9m, Buildings constructed in 2.9m bays but classrooms can only be split at end portals. Gib Board ceilings with no internal cover battens along portals to allow removal and separation. Building width reduced to allow transport on roads without special approval.

**MLE Compliance**  
Good cross ventilation but high level windows difficult to open and few lower opening windows. Poor acoustics due to Gib-board ceiling. Insulated. Solar gain depending on window arrangement and orientation.

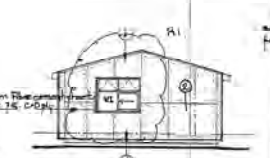
<b>Additional photographs and block drawings</b>	
<b>Portals - All portals fully clad (AGHS P Block)</b> 	<b>Inside view of ceiling (AGHS T Block)</b> 
<b>Aerial photograph of CEBUS Block</b> 	No photograph

Floor plan AGHS P Block

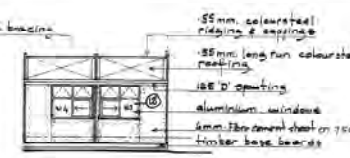




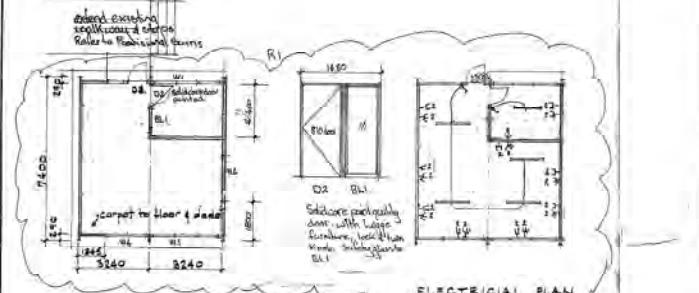
TYPICAL FRONT ELEVATION



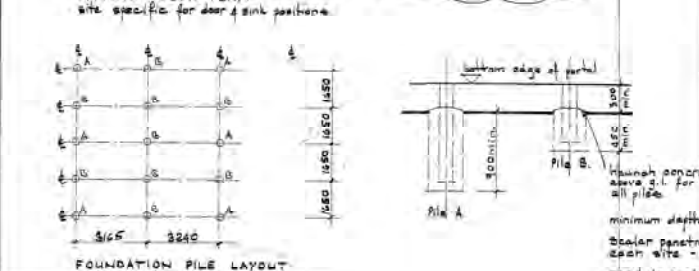
TYPICAL END ELEVATION




TYPICAL REAR ELEVATION



TYPICAL FLOOR PLAN  
site specific for door & sink positions



ELECTRICAL PLAN



FOUNDATION PILE LAYOUT  
refer sheet P1

see sheet for canopy details

roof basins

- 55 mm coloursteel ridding & eapings
- 55 mm long run coloursteel racking
- 100 D' spacing
- aluminium windows
- 6mm fibre cement sheet on 750 D' timber base boards

**NOMENCLATURE** Services - Refer to Positional Sums

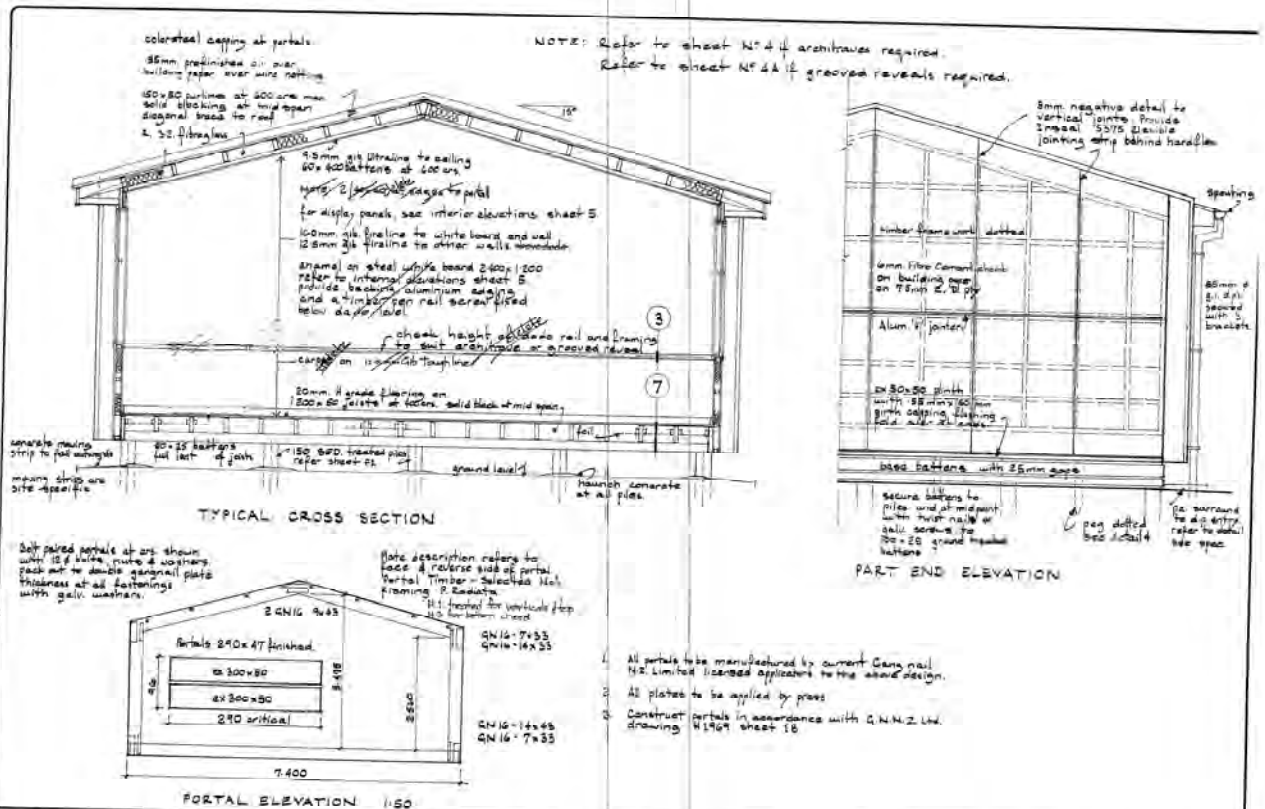
- Distribution Board
- CB Socket outlets, double, 1 phase, 30mA RCD
- Fluorescent Light Fitting
- Fluorescent Light Fitting with angle reflector 65w mount central on room 300 above top of board
- Exterior Bulkhead Light
- Light switch
- Alarm/Class change bell (voltage to suit) switch: break glass type 'Guardian' in double flush box
- Daylight switch
- EnergySaver ES 20 to ceiling or equal Panel (specify type/colour/size) Fin: matching wall. (Specify ceiling when panel)
- Isolating switch: Ceiling mount PDL, 30V, 30A, 2000 heavy duty with heat resistant high temperature glass fibreglass case
- Wall thermostat 'setback' TLM 2458 with tamper proof cover. Mount 1.050 above floor
- Computer timer: 6 hour, drill for and mount the timer on 100mm blank flush plate 100mm above floor. Fit 30V 30A with 30mA red indicator light above timer to show timer in operation.
- Intercom - check position on site
- Contactor - Fit Double pole contactor mounted on DB for thermostat and timer in Classroom only on 10 amp NZI MCS.

see sheet 1 for actual (check specific) door positions for windows.

CEBUS 2000

Foundation Plan Floor Plan Electrical Plan & Elevations		2
DATE: 15.09.00	SCALE: 1:100	NO. OF SHEETS: 11/11

Cross section






R1. Delete carpet and m.u. door rail

**CEBUS 2000**

Section, End Elevation & Portal Frame				3
DATE	REV	ISSUE	SCALE	
24/		18.01.03	1:25	





<b>Building / Block Name:</b>		<b>Laing's Relocatable</b>
<b>PMIS code:</b>		<b>LAING</b>
Overview front oblique ( <i>Shirley Primary Block</i> )		No photograph
		
<b>Building description</b>		<b>Variants within standard design</b>
Roof	Corrugated metal roofing with metal cappings over portals. Gang nail timber portal frames at 2.9m centres with eave over side walls	Unknown
Walls and cladding	Fibre cement with corrugated metal below windows. Aluminium powder coated windows. Windows do not have separate upper window but all in one unit.	Unknown
Floor and foundations	Suspended timber floor with piles under portal frames and joists spanning between portals	Some blocks are on concrete slab on ground eg Halswell Primary School
Constructed	<i>Age range unknown</i>	
Key identifying features	External Portals are fully clad with fibre cement and cover flashing. Corrugated panels under windows.	May be built on concrete slabs.
<b>Looks similar to the following</b>		
CEBUS 4 but have wider eaves extending beyond portals and corrugated metal cladding below windows.		
<b>General description</b>		
Laing's Building Removals designed and build relocatable classrooms based on the Mark 4 CEBUS. Standard single classrooms with lobby and resource room or toilets. Classrooms 7.5 x 8.9m, Buildings constructed in 2.9m bays but classrooms can only be split at end portals. Gib Board ceilings with no internal cover battens along portals to allow separation of bays within classroom.		
<b>MLE Compliance</b>		
Good cross ventilation. Poor acoustics due to Gib Board ceiling. Insulated. Solar gain reduced with eaves but depend on window arrangement and orientation.		

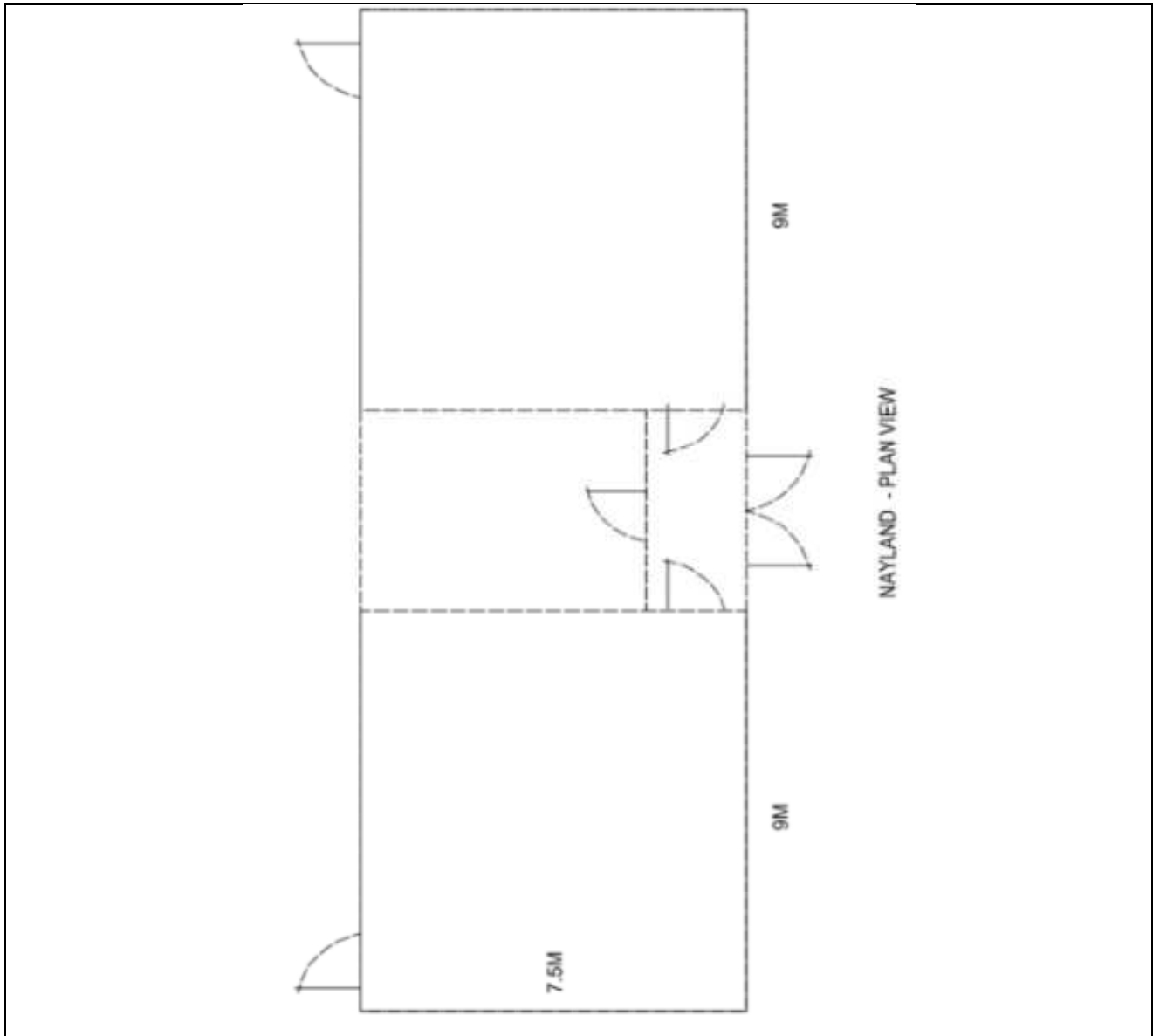
<p>Additional photographs and block drawings</p>	
<p>Portals-All portals fully clad and eaves extended beyond portals. (<i>Shirley Primary</i>)</p>	<p>Inside view of ceiling (<i>Shirley Primary Block</i>)</p>
	

Aerial view (*Shirley Primary School*)



<b>Building / Block Name:</b>		<b>Nayland Block</b>
<b>PMIS code:</b>		<b>NAYL</b>
Overview front oblique (AGHS E Block)		Overview rear oblique (AGHS E Block)
		
<b>Building description</b>		<b>Variants within standard design</b>
Roof	Timber trusses ridged centre along the building length above the classrooms. Corrugated steel roof. Truncated gable ends	Unknown
Walls and cladding	Light timber framing. Cladding fibre cement cladding	Unknown
Floor and foundations	Suspended timber floor on 4 rows of bearers along length of building	Unknown
Constructed	<i>Age range unknown</i>	
Key identifying features	Double classrooms with a central resource room. Truncated gable end roof. Flat ceilings	Can be built in longer classroom blocks as at AGHS
<b>Looks similar to the following</b>		
Unknown		
<b>General description</b>		
Nelson Education Board design. Timber framed building with fibre cement cladding to the walls and light weight corrugated steel cladding to the roof. Flat ceilings. Classrooms 7.5 x 9. M.		
<b>MLE Compliance</b>		
Adequate cross ventilation but no high level windows. Poor acoustics with flat Gib Board ceilings. Insulated.		

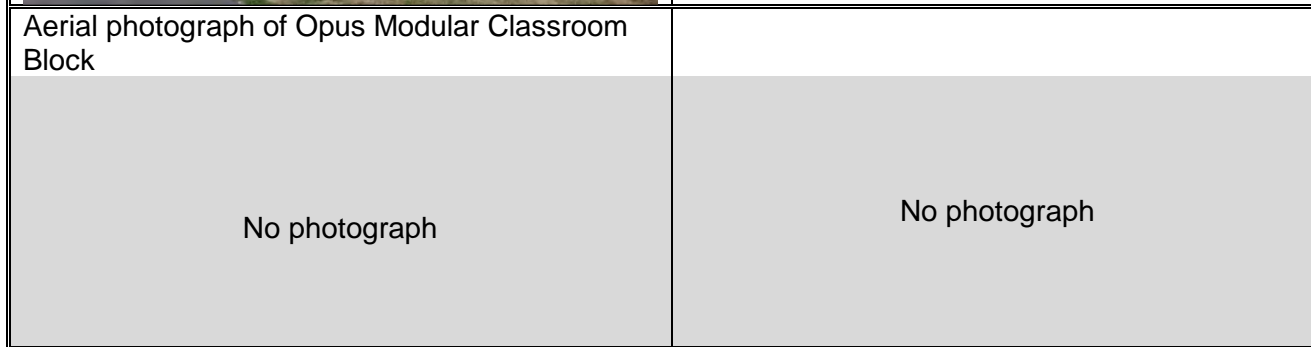
<p>Additional photographs and block drawings</p>	
<p>Front view of outside Discovery</p> 	<p>Rear view of outside Queenstown</p> 
<p>Foundations Discovery</p> 	<p>Inside view of ceiling Discovery</p> 
<p>Aerial photograph of Nayland Block</p> <p style="text-align: center;">No photograph</p>	<p>No photograph</p>



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**Building / Block Name: Opus Modular Classroom**

**PMIS code:** **Opus**



<b>Building description</b>		<b>Variants within standard design</b>
Roof	Light weight colour steel. Timber trusses. Plywood ceiling diaphragm with acoustic tiles.	Unknown
Walls and cladding	Timber frame with corrugated colour steel and fibre cement	Unknown
Floor and foundations	Suspended timber floor with timber piles in concrete footings	Unknown
Constructed	<i>Age range unknown</i>	
Key identifying features	10 x 7.6m modules with 3.8 x 10m half modules clad in colour steel around corners and fibre cement panel in middle.	Unknown

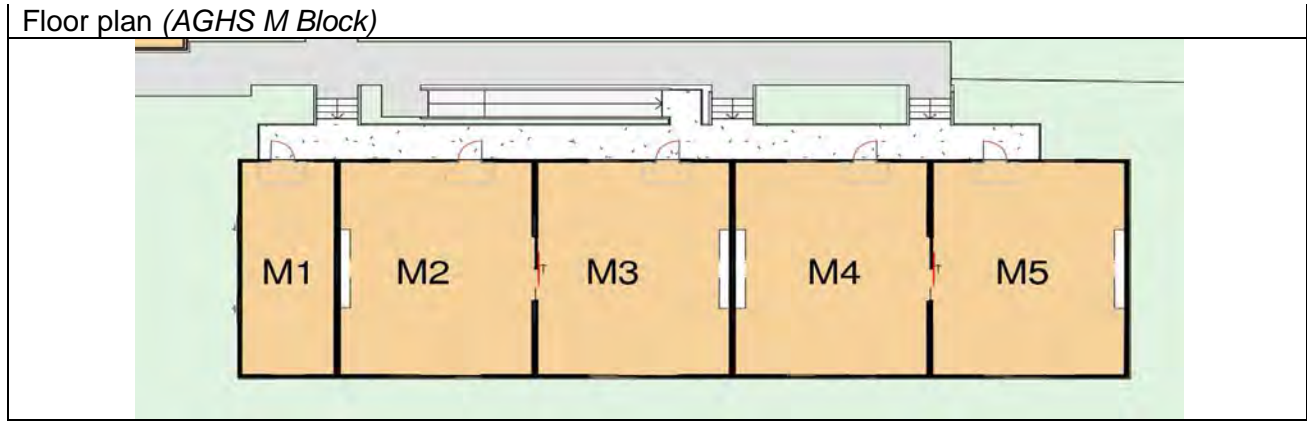
**Looks similar to the following**  
Unknown

**General description**  
Modular classroom designed following EQs to provide multi purpose buildings for general classrooms or specialist rooms. 2.6m stud height with flat ceiling with acoustic tiles. Buildings designed to allow removal of middle wall panels to change external openings or create up to 5m wide openings into adjacent rooms. Building connected with sacrificial flashings. Block in two sizes 10 x 7.6 and 10 x 3.8m. Verandas can be added.

**MLE Compliance**  
Good natural cross ventilation in classrooms but limited in specialist rooms. Good acoustic with ceiling tiles. Fully equipped with data and power outlets. Double glazed and insulated. Flexibility to open up teaching spaces.

<b>Additional photographs and block drawings</b>	
<b>Front view</b> 	<b>End View (St Bede's)</b> 
<b>Foundations (AGHS Science)</b> 	<b>Inside view of ceiling (St Bede's)</b> 
<b>Inside view of ceiling (AGHS Library)</b> 	<b>St Bede's College Half module</b> 





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**Building / Block Name: Otago Education Board 1**

**PMIS code: OEB1**

Overview front oblique (AGHS E Block)



Overview rear oblique (AGHS E Block)



Building description		Variants within standard design
Roof	Lightweight steel roof supported on steel trusses	Unknown
Walls and cladding	Clad with asbestos fibre cement	Hardiflex panels on some buildings or asbestos flat sheet.
Floor and foundations	Suspended timber floor on 5 rows of bearers along length of building	Unknown
Constructed	<i>Age range unknown</i>	
Key identifying features	Flat external walls with no eaves, large silver anodised aluminium windows and pair of steel trusses inside along length of room. Some classrooms have recessed entrance with separate resource room or toilets.	

**Looks similar to the following**




Unit classrooms or Prefabs but differ in roof structure with steel beams instead of timber portals.

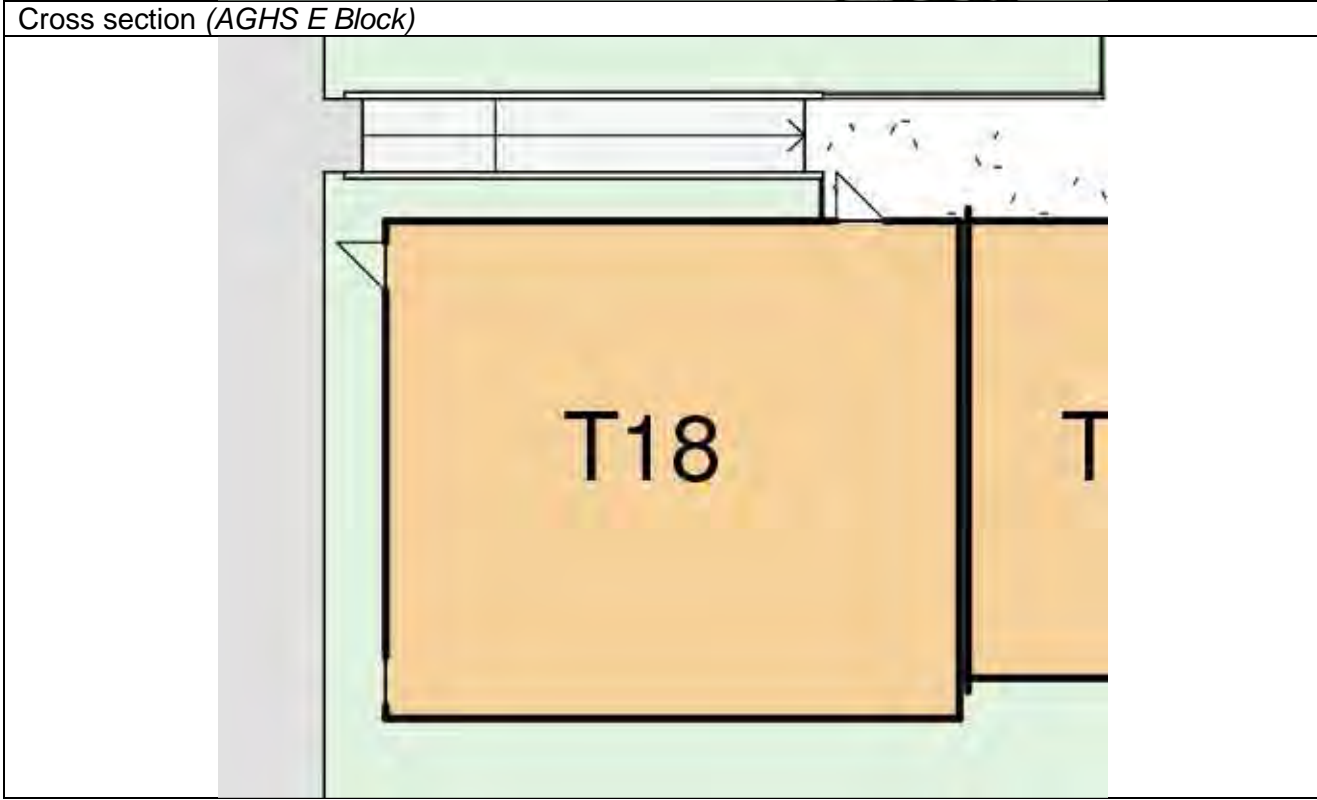
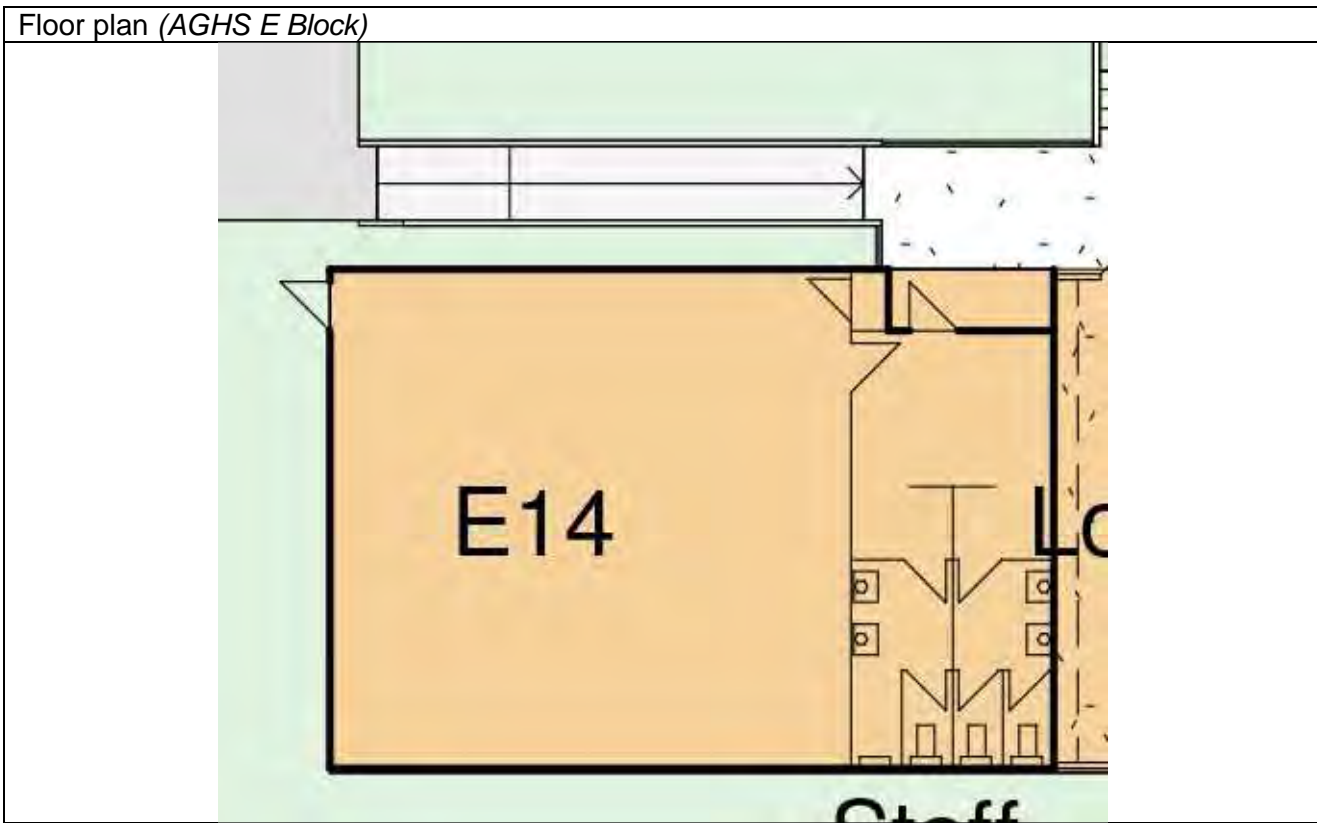
**General description**

Single storey timber structure with lightweight iron roofing and plasterboard to the timber framed walls. Suspended timber floor is supported by concrete or timber piles on concrete footings. Buildings may be in group of two classrooms with toilet block or resource room between or stand alone classroom.. 8.13 x 8.6m classrooms with 3.2m toilet or resource room at end. Flat external walls with no eaves, large silver anodised aluminium windows and pair of steel trusses inside along length of room. Some classrooms have recessed entrance with separate resource room or toilets.


**MLE Compliance**


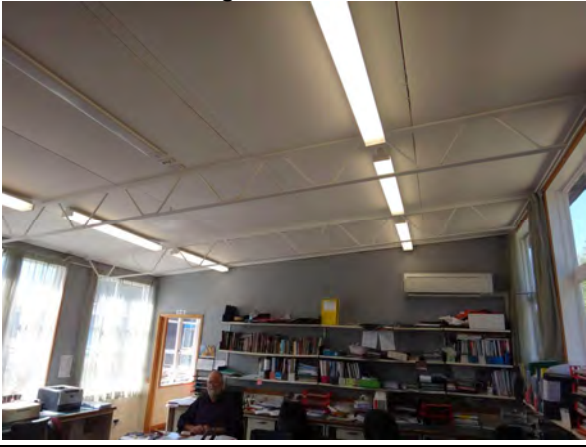
Pinex ceiling offers some acoustic control. Significant solar gains due to no eaves and orientation. Good cross natural ventilation. No insulation.

<p>Additional photographs and block drawings</p>	
<p>Front view (AGHS E Block)</p> 	<p>Rear view (AGHS E Block)</p> 
<p>Inside Views (AGHS E Block)</p> 	<p>Inside view of ceiling (AGHS E Block)</p> 
<p>Aerial photograph of Otago Education Board 1 Block</p> <p style="text-align: center;">No photograph</p>	<p style="text-align: center;">No photograph</p>



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<b>Building / Block Name:</b>		<b>Otago Education Board 2</b>	
<b>PMIS code:</b>		<b>OEB2</b>	
Overview front oblique		Overview rear oblique	
		<p style="text-align: center;">No photograph</p>	
<b>Building description</b>		<b>Variants within standard design</b>	
Roof	Lightweight steel roof on timber purlins supported by steel web trusses across building	Unknown	
Walls and cladding	Timber framed walls with asbestos or plywood cladding	Unknown	
Floor and foundations	Suspended timber floor on timber piles with 4 rows of bearers along building	Unknown	
Constructed	<i>Age range unknown</i>		
Key identifying features	Mono pitch roof no eaves	Unknown	
<b>Looks similar to the following</b>			
Unknown			
<b>General description</b>			
Single storey mono pitched roof structure with lightweight iron roofing and plasterboard to the timber framed walls. Suspended timber floor is supported by concrete or timber piles on concrete footings. Building came from Logan Park Dunedin. No known similar buildings in Canterbury. Long narrow classrooms 6.25m x 10m.			
<b>MLE Compliance</b>			
Unknown			

Additional photographs and block drawings	
<p>Foundations</p> 	<p>Inside view of ceiling</p> 
<p>Aerial photograph of Otago Education Board 2 Block</p> <p>No photograph</p>	<p>No photograph</p>



**Building / Block Name: Otago Education Board 3**

**PMIS code: OEB3**



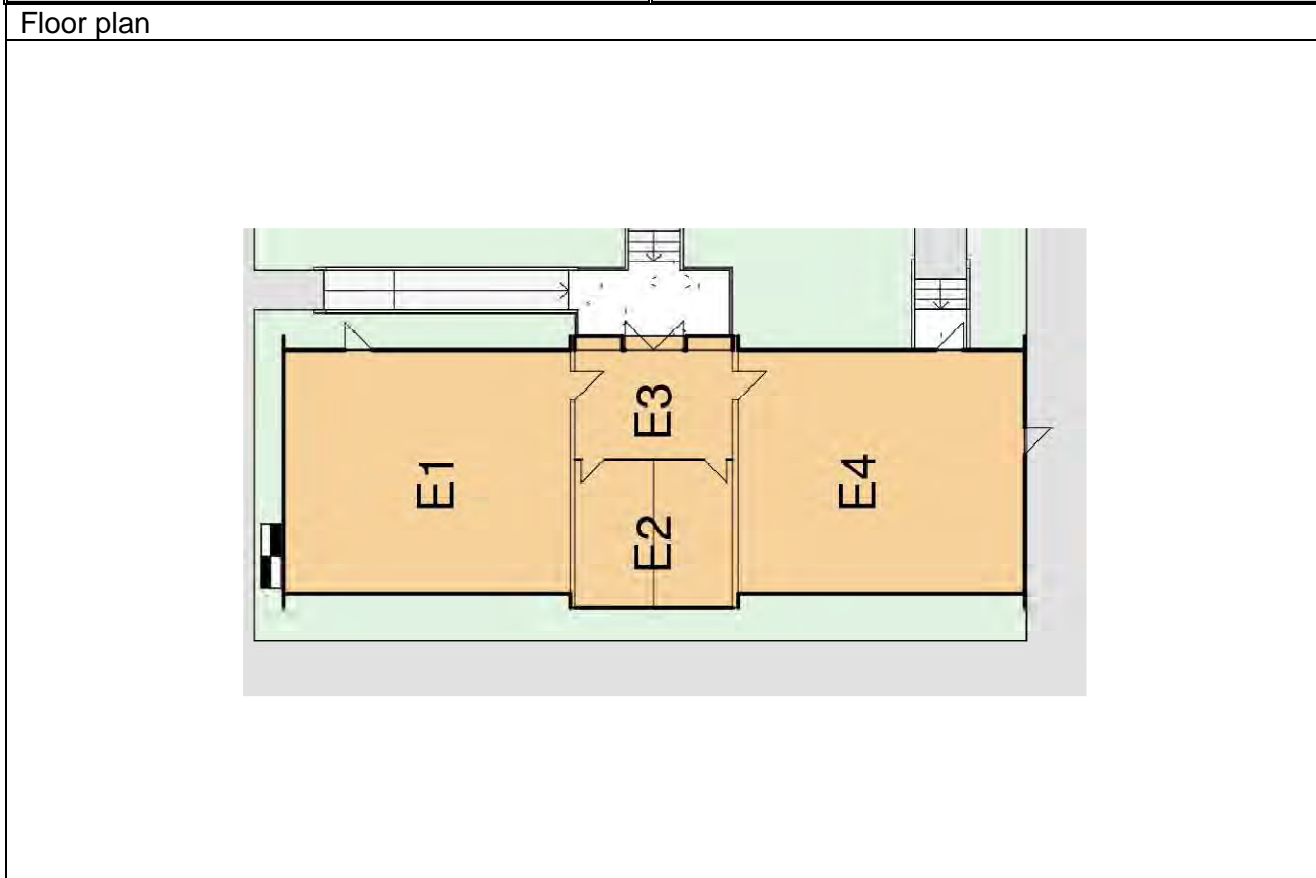
Building description		Variants within standard design
Roof	Lightweight steel roof supported timber on timber portals at 3m centres	Unknown
Walls and cladding	Timber framed walls clad with timber weather boards	Unknown
Floor and foundations	Suspended timber floor on 5 rows of bearers along length of building	Unknown
Constructed	<i>Age range unknown</i>	
Key identifying features	Pair of classrooms with central toilet or resource room with middle section flush with eaves. End walls extend out flush with eaves.	Unknown

**Looks similar to the following**  
Unit Prefab

**General description**  
9 x 7.5m classrooms with 5m wide toilet or resource room in middle with cloak bay. Middle section extended to be flush with eaves with storage cupboards beside main entrance.

**MLE Compliance**  
Pinex ceiling offers some acoustic control. Solar gains reduced slightly with eaves over classrooms. Good cross natural ventilation. No insulation.

<b>Additional photographs and block drawings</b>	
<p><b>Front view (Queenstown)</b></p> 	<p><b>Inside Views</b></p> 
<p><b>Aerial photograph of Otago Education Board 3 Block</b></p> <p style="text-align: center;">No photograph</p>	<p style="text-align: center;">No photograph</p>



**Building / Block Name: Paul Wilkin Design Block**

PMIS code:

**WSW**

Overview front oblique (West Spreydon)



Overview rear oblique (West Spreydon)



Building description		Variants within standard design
Roof	Timber trusses ridged centrally along the building length above the classrooms. Corrugated steel roof.	Unknown
Walls and cladding	Light timber framing. Cladding steel or fibre cement weatherboard-type	Unknown
Floor and foundations	Suspended timber floor on timber piles and concrete footings	Unknown
Constructed	<i>Age range unknown</i>	
Key identifying features	Toilet or resource room in the block	Unknown

**Looks similar to the following**

CEBUS – which has external portal frame

Laing – similar to CEBUS 4




Nayland – which has truncated gable ends, double classrooms with a central resource room, and fibre cement cladding



**General description**


Timber framed building with fibre cement weather board cladding to the walls and light weight corrugated steel cladding to the roof. Building is placed on timber piles.

**MLE**





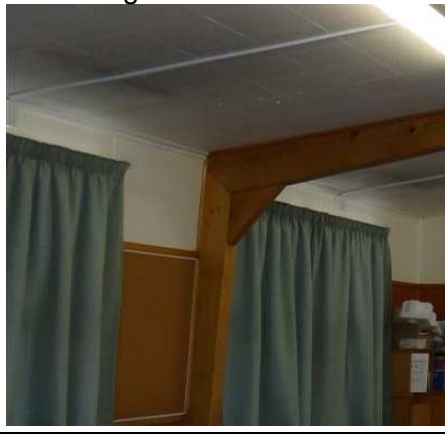
Unknown

Additional photographs and block drawings	
<p>Foundation <i>(school and block name)</i></p> <p>No photograph</p>	<p>Inside view of ceiling <i>(Oaklands School Block 7)</i></p> 
<p>Front view of outside <i>(Sumner School)</i></p> 	<p>Interior View <i>(Sumner School)</i></p> 
<p>Aerial photograph of Paul Wilkin Design Block</p> <p>No photograph</p>	<p>No photograph</p>

Building / Block Name:		Portacom
PMIS code:		Portacom
Overview front oblique ( <i>Hoon Hay School</i> )		Overview rear oblique ( <i>AGHS T Block</i> )
		
Building description		Variants within standard design
Roof	Colour steel Insulated roof panels on steel portal frames.	Other buildings may include centre ridge beam
Walls and cladding	Colour steel Insulated roof panels on steel portal frames	Unknown
Floor and foundations	Suspended timber floor with piles under portal frames and joists spanning between portals	May have insulated panel floors. Some others have steel purlins along length of building
Constructed	<i>Age range unknown</i>	
Key identifying features	Insulated panel construction. Buildings can be split along centre to allow relocation.	
Looks similar to the following		
None identified		
General description		
Insulated panel buildings up to 12m long.		
MLE Compliance		
Good natural cross ventilation possible if adequate number of windows. Poor acoustics due to reflective metal ceiling and rain noise through panels. Insulated. Solar gain depending on window arrangement and orientation.		

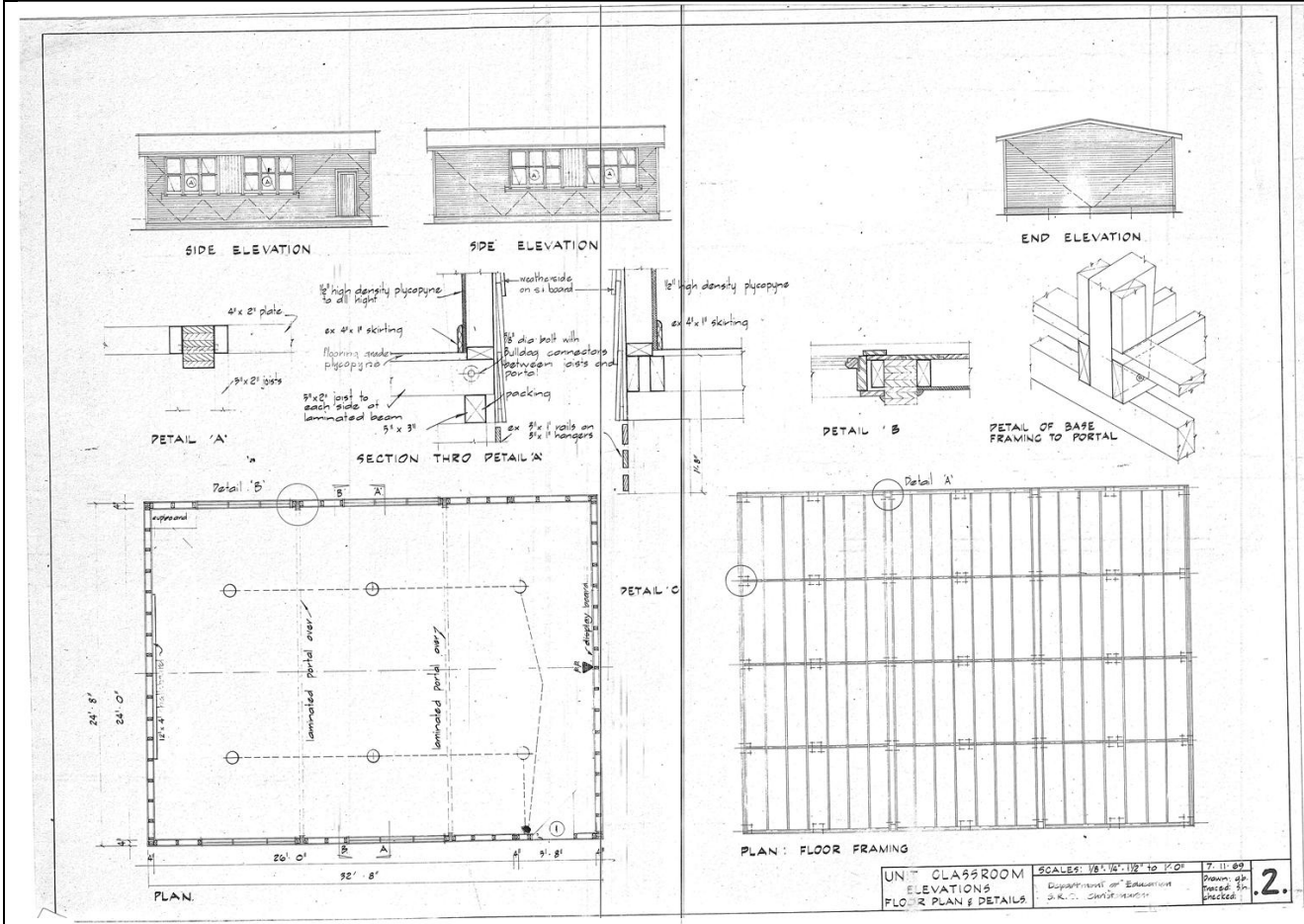
Additional photographs and block drawings	
Aerial photograph of Portacom Block	Inside view of ceiling ( <i>Hoon Hay</i> )
No photograph	

Building / Block Name:		Unit Classroom
PMIS code:		UNIT
Overview front oblique (AGHS T Block)		Overview rear oblique (AGHS P Block)
		
Building description		Variants within standard design
Roof	Corrugated metal roofing with timber portals at 3.2m centres	Various laminated trusses
Walls and cladding	Timber framed walls with NZ Forest Products Weathersider. Hardboard weather boards.	Asbestos fibre cement
Floor and foundations	Suspended timber floor on five rows of bearers along building on timber piles and concrete footings	Unknown
Constructed	<i>Age range unknown</i>	
Key identifying features	Basic classrooms blocks with small entry lobby and resource room in some Timber portals some with small timber gusset at knee of portal	Portals may differ with some without gusset and similar to Otago 3 Some Unit classrooms have flat ceilings with trusses (refer plans below).
Looks similar to the following		
Otago 3 and CEB Unit Classroom with flat ceilings		
General description		
Oldest and most original relocatable classroom. Basic classrooms blocks 10m x 7.5m with small entry lobby and resource room in some. Timber portals. Most have hardboard weather boards that were condemned by manufacturer but most building still retain this cladding. Some classrooms have flat ceilings and roof trusses.		
MLE Compliance		
Good natural cross ventilation but no high level windows. Eaves provide some shading, Pinex ceilings provide good acoustic. No insulation.		

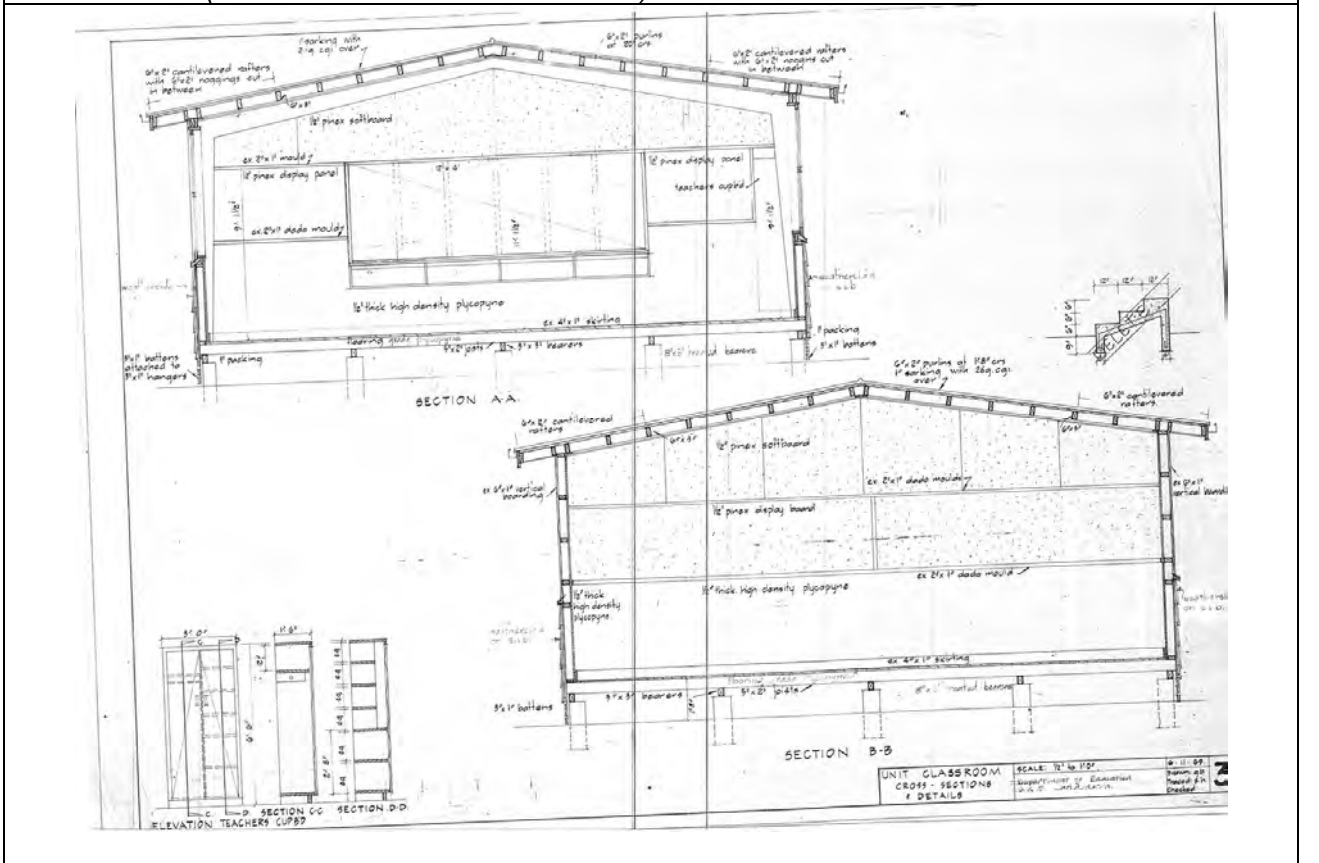
Additional photographs and block drawings	
<p>Front view Winton</p> 	<p>Rear view Winton</p> 
<p>Inside view of ceiling Discovery portals without gusset</p> 	<p>Inside view of ceiling AGHS T Block Portals with gusset</p> 
<p>Portal detail without gusset</p> 	<p>Portal detail with gusset</p> 
<p>Aerial photograph of UNIT Prefab Block (AGHS T5)</p> 	<p>No photograph</p>

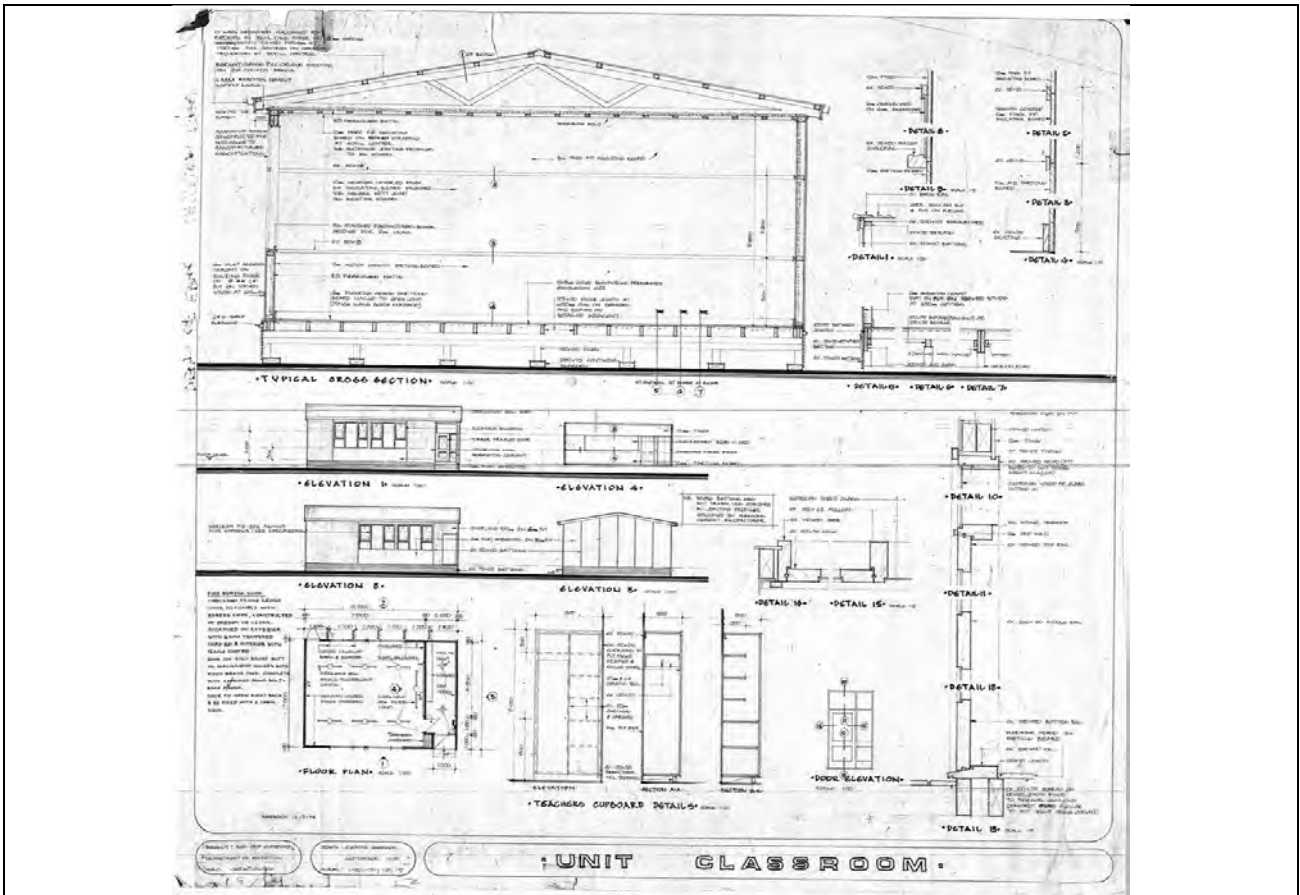



Floor plan (Unknown School Block unknown)






Cross section (Unknown School Block unknown)





<b>Building / Block Name:</b>		<b>Woolston</b>
<b>PMIS code:</b>		<b>Woolston</b>
Overview front oblique ( <i>Woolston school</i> )		
		No photograph
<b>Building description</b>		<b>Variants within standard design</b>
Roof	Corrugated metal roof support by pair of steel trusses along length of building	Unknown
Walls and cladding	Timber frame with fibre cement cladding and concrete block gable ends.	Unknown
Floor and foundations	Concrete slab	Unknown
Constructed	From 1950 to 1953	<i>(approximate date range only)</i>
Key identifying features	Large glazed window front and rear with concrete block gable ends. Pair of classrooms with toilet block in middle similar to CEBUS double classroom layout.	Unknown
<b>Looks similar to the following CEBUS</b>		
<b>General description</b>		
Double classroom block at Woolston School with toilet block in middle similar to double classroom CEBUS layout. Office/admin at one end. Concrete block gable ends. This type of building may be a standard design but this is the only example found at this stage.		
<b>MLE Compliance</b>		
Unknown		

Additional photographs and block drawings	
<p>Front view (<i>Woolston</i>)</p>	<p>Rear view (school and block names)</p>
	<p>No photograph</p>
<p>Aerial photograph of Unknown Block</p>	<p>Inside view of ceiling (<i>Woolston school</i>)</p>
<p>No photograph</p>	
<p>No photograph</p>	<p>Cloak room (<i>Woolston school</i>)</p> 

## Buildings With Other Functions

Buildings in this section are defined as structures other than those that fall under the categories in the previous permanent or relocatable classrooms sections.

Standard buildings scheduled are:

- S68 Administration Buildings (see S68 Classroom Block Sheet);
- S68 Arts and Craft/Technology Block (see S68 Classroom Block Sheet);
- S68 Boiler Houses (no information);
- S68 Gymnasias (see S68 Classroom Block Sheet);
- S68 Halls (no information);
- S68 Libraries;
- Nelson Block Libraries;
- Primary School Halls with Basements;
- Primary School Halls without Basements.

PMIS codes in **red** are not already in the database and have been proposed to reconcile conflicts and/or a range of codes that appear to cover standard blocks.

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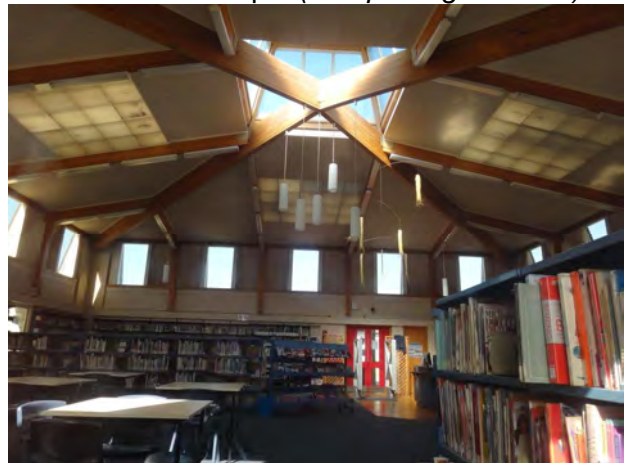
**Building / Block Name:** **S68 Library**

**PMIS code:** **S68LIB**

Overview front oblique (*Kaiapoi High School*)



Overview rear oblique (*Kaiapoi High School*)



Aerial photograph of S68 Library



No photograph

Building description		Variants within standard design
Roof	Unknown	Unknown
Walls and cladding	Concrete block veneer	Unknown
Floor and foundations	Concrete slab	Unknown
Constructed	<i>Age range unknown</i>	
Key identifying features	Concrete block base with concrete block piers beside windows and central roof lantern.	Unknown



**Looks similar to the following**  
Unknown

**General description**  
Large square block with concrete block base and sloping mansard roof and central roof lantern at top.

**MLE Compliance**  
Unknown

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<b>Building / Block Name:</b>		<b>Nelson Library</b>
<b>PMIS code:</b>		<b>NELIB</b>
Overview front oblique ( <i>Rangiora High School</i> )		Overview rear oblique ( <i>Mairehau High School</i> )
		
<b>Building description</b>		<b>Variants within standard design</b>
Roof	Trough section roofing	Unknown
Walls and cladding	Asbestos cement	Unknown
Floor and foundations	Concrete slab	Unknown
Constructed	<i>Age range unknown</i>	
Key identifying features	Vertical asbestos panels around base with few windows. Large wide band of flat asbestos sheets at upper level and clerestory window above. Small lobby extending out at front of building	Some libraries have had a number of additions added to the sides of the building.
<b>Looks similar to the following</b>		
Unknown		
<b>General description</b>		
Large square block with middle band of flat sheet and clerestory window above.		
<b>MLE Compliance</b>		
Unknown		

Additional photographs and block drawings

Interior view Library without Mezzanine  
(Mairehau HS)



Interior view Library with Mezzanine (Rangiora HS)



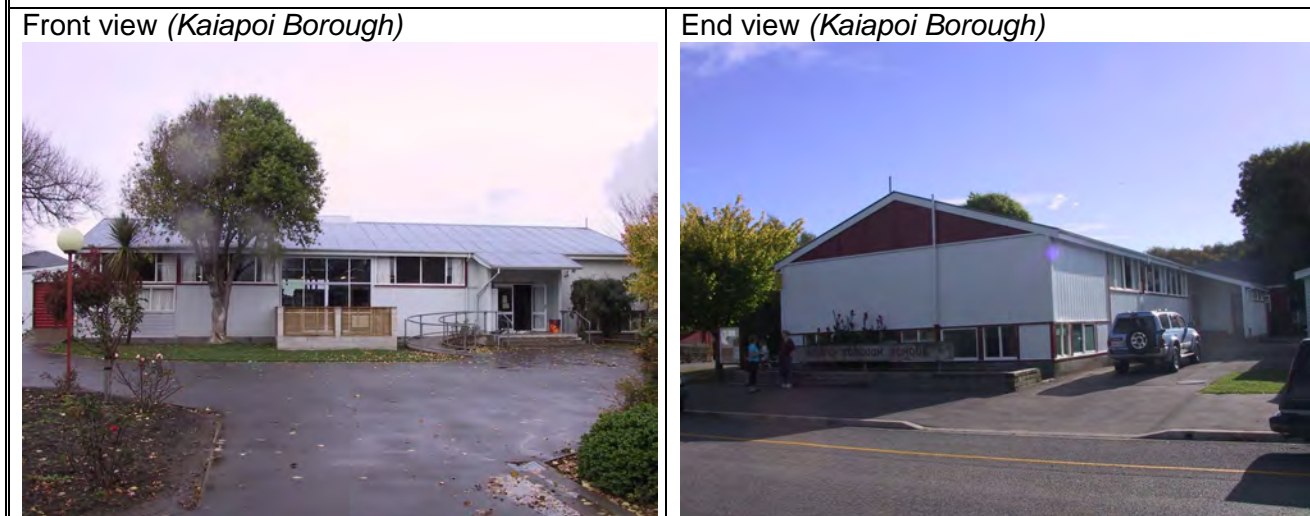
Aerial photograph of Nelson Library Block  
(Mairehau High School)



No photograph

**Building / Block Name: Halls Primary With Basement**

**PMIS code: PrimHallBase**



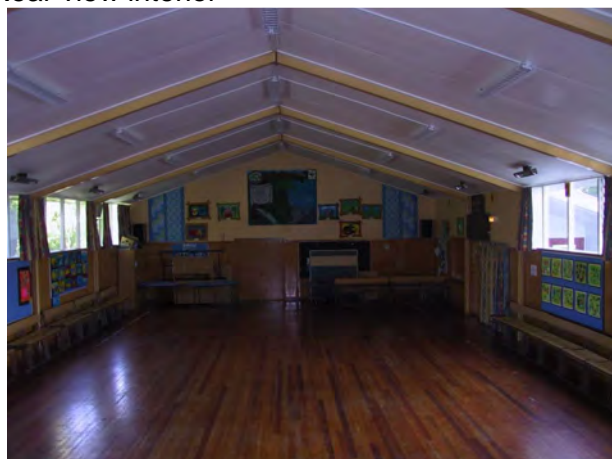
Building description		Variants within standard design
Roof	Ridged centrally along the building. Clad in lightweight corrugated steel roofing	Unknown
Walls and cladding	Weather Board and Asbestos Fibre Cement.	Unknown
Floor and foundations	Suspended timber floor and concrete perimeter foundations and concrete floor toilets.	Unknown
Constructed	<i>Age range unknown</i>	
Key identifying features	Unknown	Unknown
<b>Looks similar to the following</b>		
Primary school halls without basement		
<b>General description</b>		
Unknown		
<b>MLE Compliance</b>		
Unknown		

Additional photographs and block drawings

Front view interior



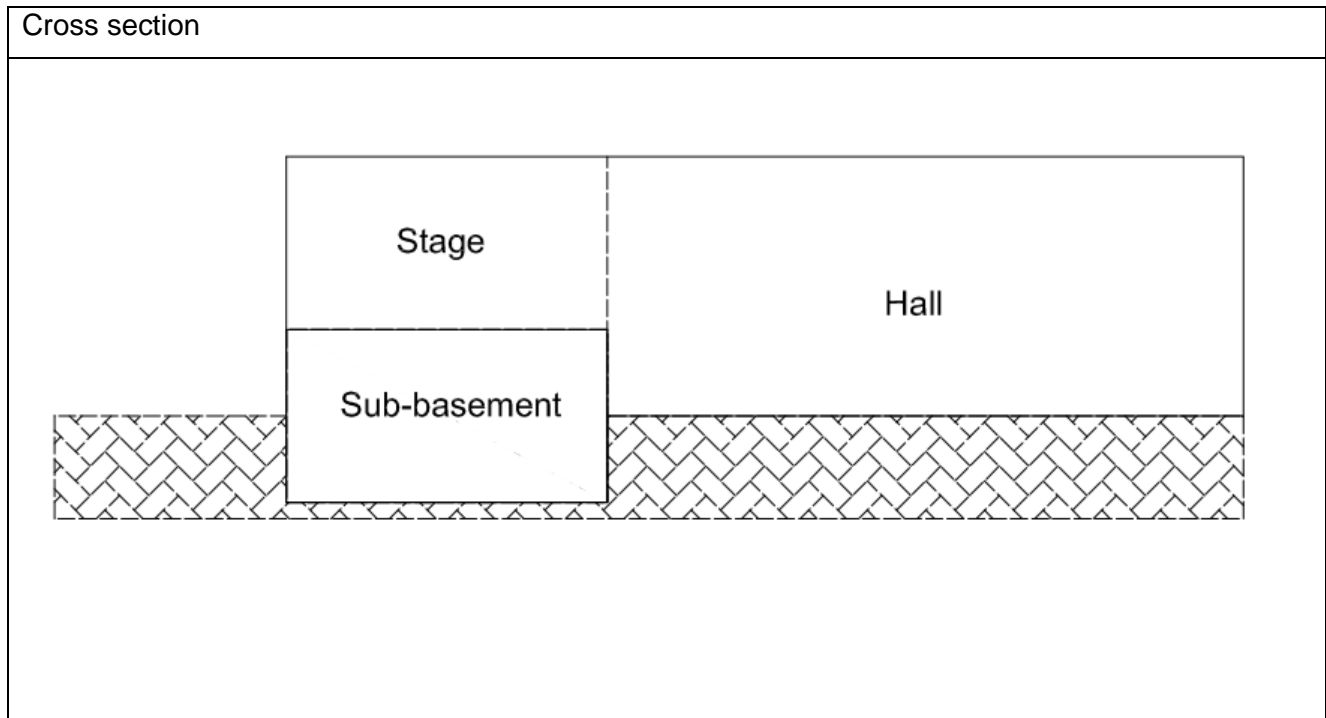
Rear view interior






Aerial photograph of Primary School Hall With Basement (Kaiapoi Borough School former Hall (now library))



No photograph



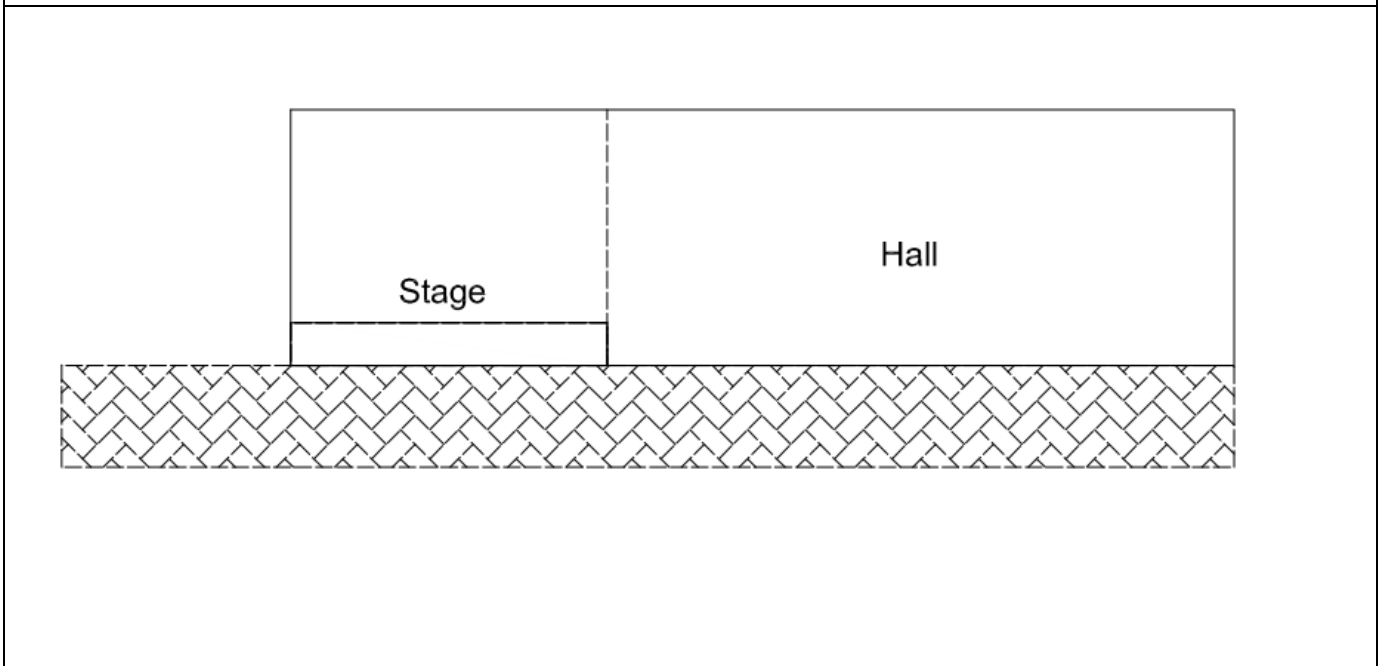
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Building / Block Name: <b>Halls Primary Without Basement</b>		
PMIS code: <b>PrimHallNoBase</b>		
<p>Overview front oblique</p>   <p>Hammersley Park school</p>	<p>Overview rear oblique</p>  <p>Linwood North School</p>	
Building description		Variants within standard design
Roof	Ridged centrally along of the building. Clad in lightweight corrugated steel roofing	Unknown
Walls and cladding	Weather Board and Asbestos Fibre Cement. (Wairakei)	Concrete block veneer (Linwood North Primary School) Clay brick veneer (Hammersley Park)
Floor and foundations	Suspended timber floor and concrete perimeter foundations and concrete floor toilets.	Unknown
Constructed	<i>Age range unknown</i>	
Key identifying features	Unknown	Unknown
<b>Looks similar to the following</b>		
Primary school halls with basement.		
<b>General description</b>		
Unknown		
<b>MLE Compliance</b>		
Unknown		

<p>Additional photographs and block drawings</p>	
<p>Front view (<i>Hammersley Park</i>)</p> 	<p>Side view (<i>Wairakei Rd</i>)</p> 
<p>Inside view of rear wall (<i>Wairakei Rd</i>)</p> 	<p>Inside view of stage end (<i>Wairakei Rd</i>)</p> 
<p>Aerial photograph of Primary School Hall Without Basement (<i>Linwood North School</i>)</p> 	<p>Side view (<i>Wairakei Rd</i>)</p> 



Cross section (*Unknown School Block unknown*)



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## 6. Two Storey Group

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## Permanent Classrooms

Buildings in this section are defined as all two storey standard buildings.

Standard buildings scheduled are:

- Nelson Two Storey H Plan Block;
- Nelson Two Storey 8 Classroom Block;
- Nelson Two Storey 1970s Block;
- 12 Classroom Two Storey Block;
- 1950s Two Storey Block.

PMIS codes in **red** are not already in the database and have been proposed to reconcile conflicts and/or a range of codes that appear to cover standard blocks.

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**Building / Block Name:** **Nelson Two Storey H Plan**

**PMIS code:** **NEL2H**

Overview front oblique (Tawa College Block C photo from Aurecon standard buildings project)



Overview rear oblique (Tawa College Block C photo from Aurecon standard buildings project)



Building description		Variants within standard design
Roof	Ridged centrally along the two lines of the building. Clad in lightweight corrugated steel roofing	Unknown
Walls and cladding	Weather Board and Asbestos Fibre Cement.	Unknown
Floor and foundations	Suspended timber floor and concrete perimeter foundations and concrete floor toilets.	Unknown
Constructed	From 1959 to 1967	(approximate date range only)
Key identifying features	H shape with stair wells at each end of Block and large single toilet and cloak bay area at rear.	Unknown

**Looks similar to the following**  
Unknown

**General description**  
Nelson Block built in 1960's and included a number of variations as well as a single storey option and Library (refer other data sheets). Classroom blocks arranged in H shape with 2 classrooms at either end on each level and two in the middle. Stairs at either end accessing 3 classrooms on upper level. Large toilet and cloak area at rear. Some blocks have been modified and toilets replaced with teaching or resource areas eg Auckland Westlake Girls College.

**MLE Compliance:** Unknown

Additional photographs and block drawings

Front view ( *Westlake Girls Auckland redeveloped Nelson Block* )



Rear view ( *Mairehau HS* )



Front view ( *Sir Edmond Hilary College Auckland redeveloped Nelson Block* )



Other photo caption ( *Linwood College demolished 2012* )



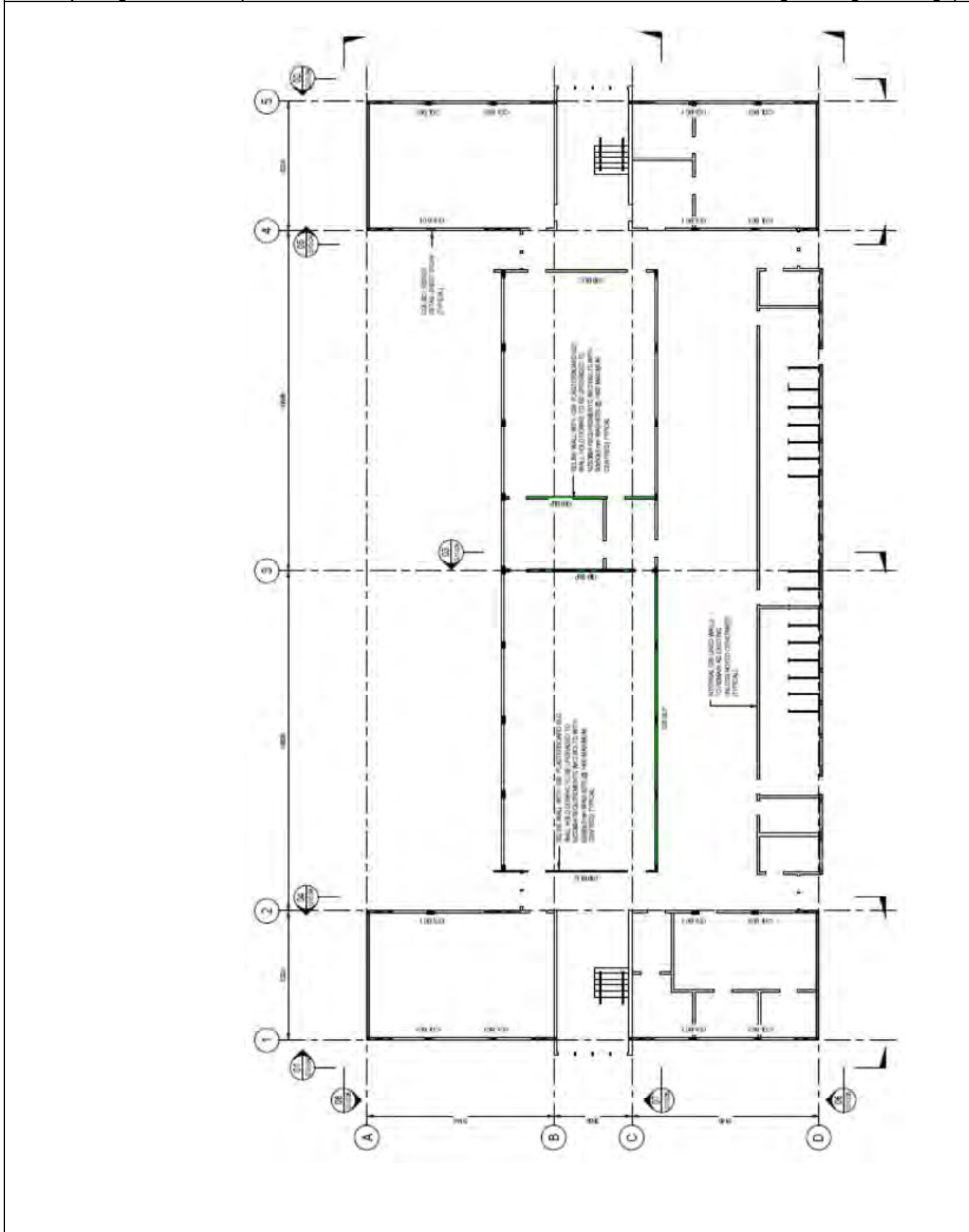
Aerial photograph Two Storey Nelson H Block

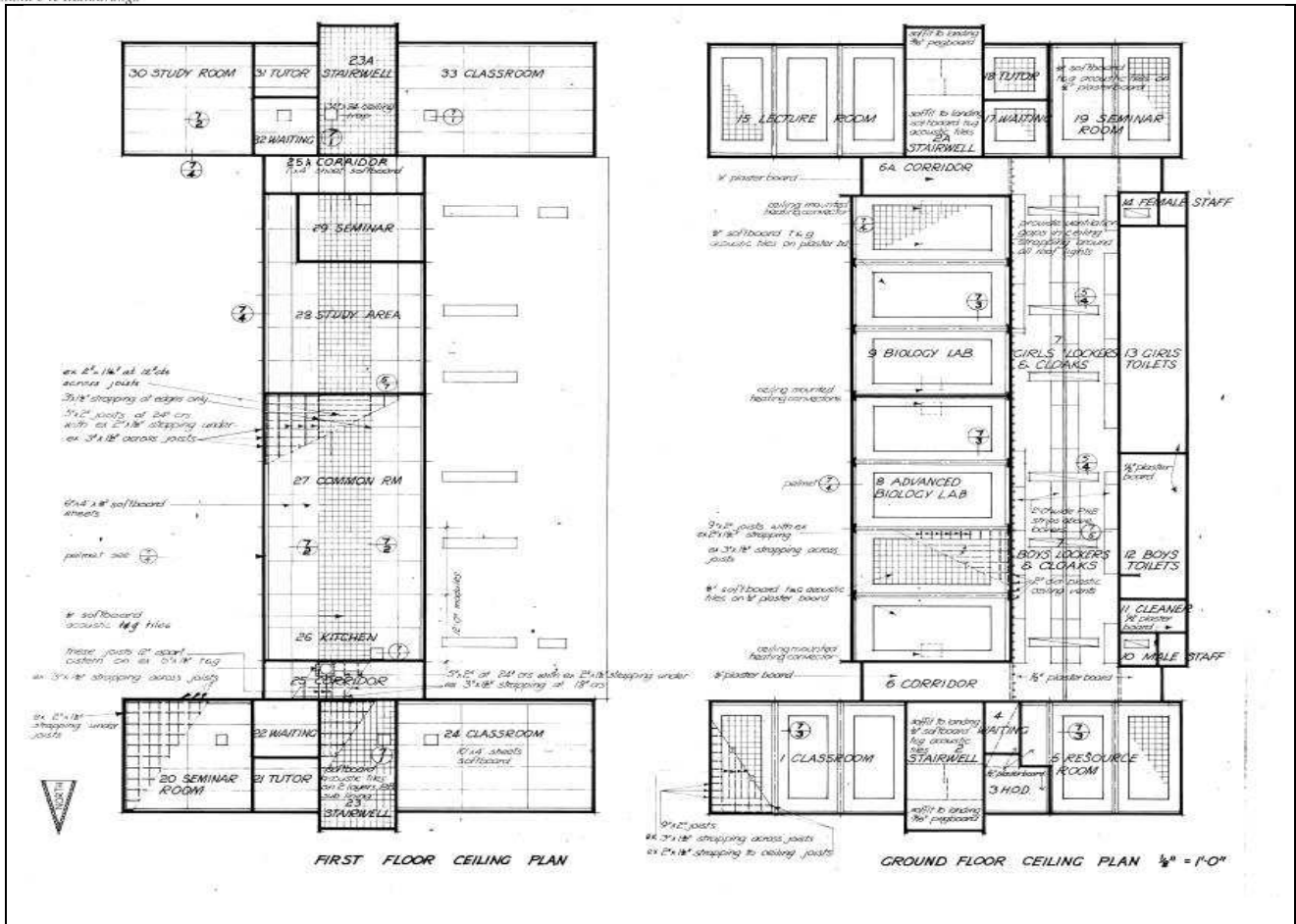


No photograph

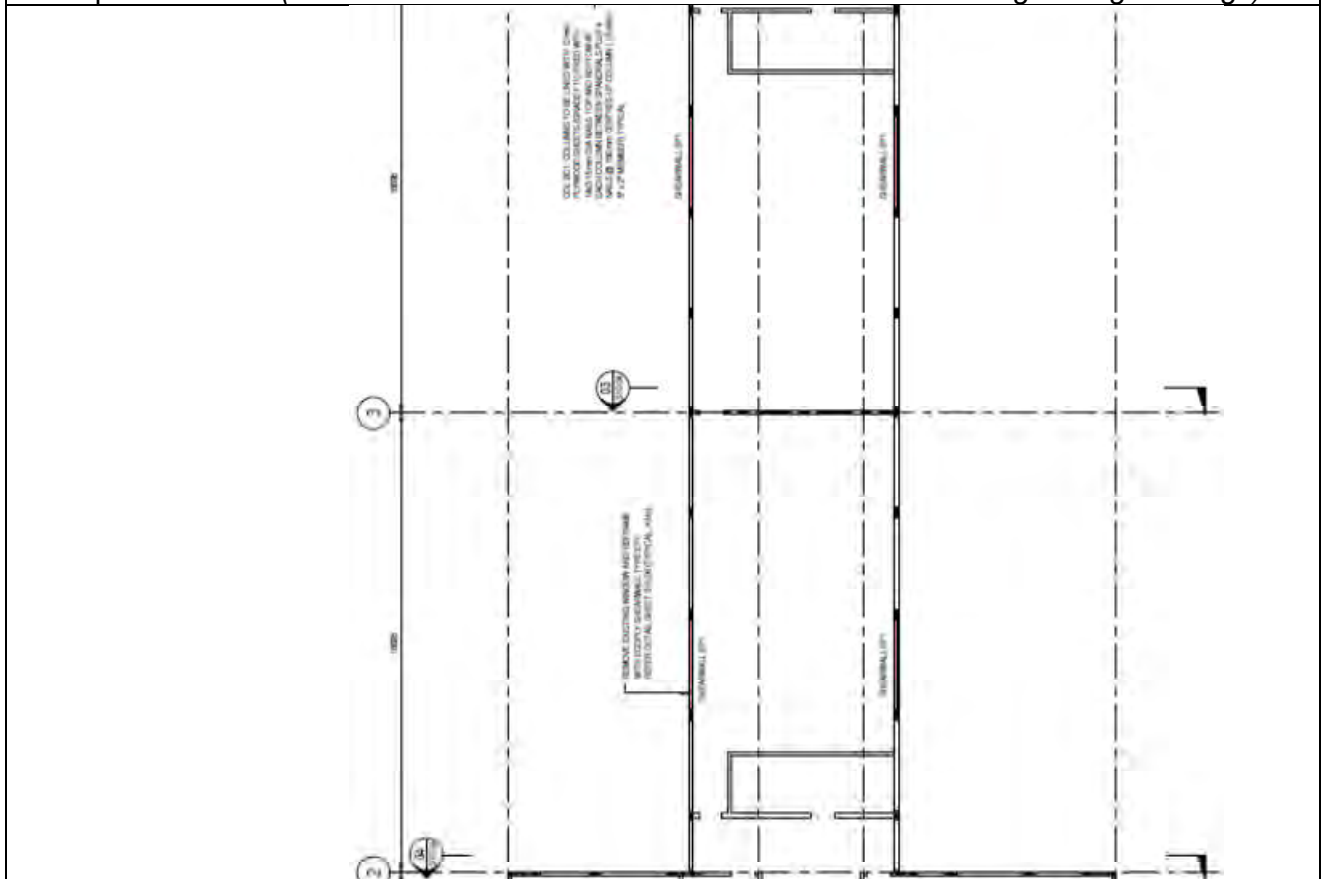


Floor plan ground floor (*unknown school and block from Aurecon standard strengthening drawings*)





Floor plan first floor (unknown school and block from Aurecon standard strengthening drawings)



**Building / Block Name: Nelson Two Storey 8 Classroom Plan**

**PMIS code: NEL28**

Overview front oblique (*Gresson Block AGHS*)



Overview rear oblique (*Gresson Block AGHS*)



Aerial photograph of Nelson Two Storey 8 Class Block (*Block F – Plimsol at Papanui High School*)



No photograph

Building description		Variants within standard design
Roof	Ridged centrally along the two lines of the building. Clad in lightweight corrugated steel roofing	Unknown
Walls and cladding	Weather Board and Asbestos Fibre Cement. Concrete stair well walls.	Clay brick
Floor and foundations	Suspended timber floor and concrete perimeter foundations and concrete floor to toilets. Stair wells concrete.	Unknown
Constructed	<i>Age range unknown</i>	
Key identifying features	Straight block of 4 classrooms on each level with stair wells at rear each end of Block accessing two classrooms each on level 2. Large single level toilet area at rear.	Unknown

**Looks similar to the following**

Unknown

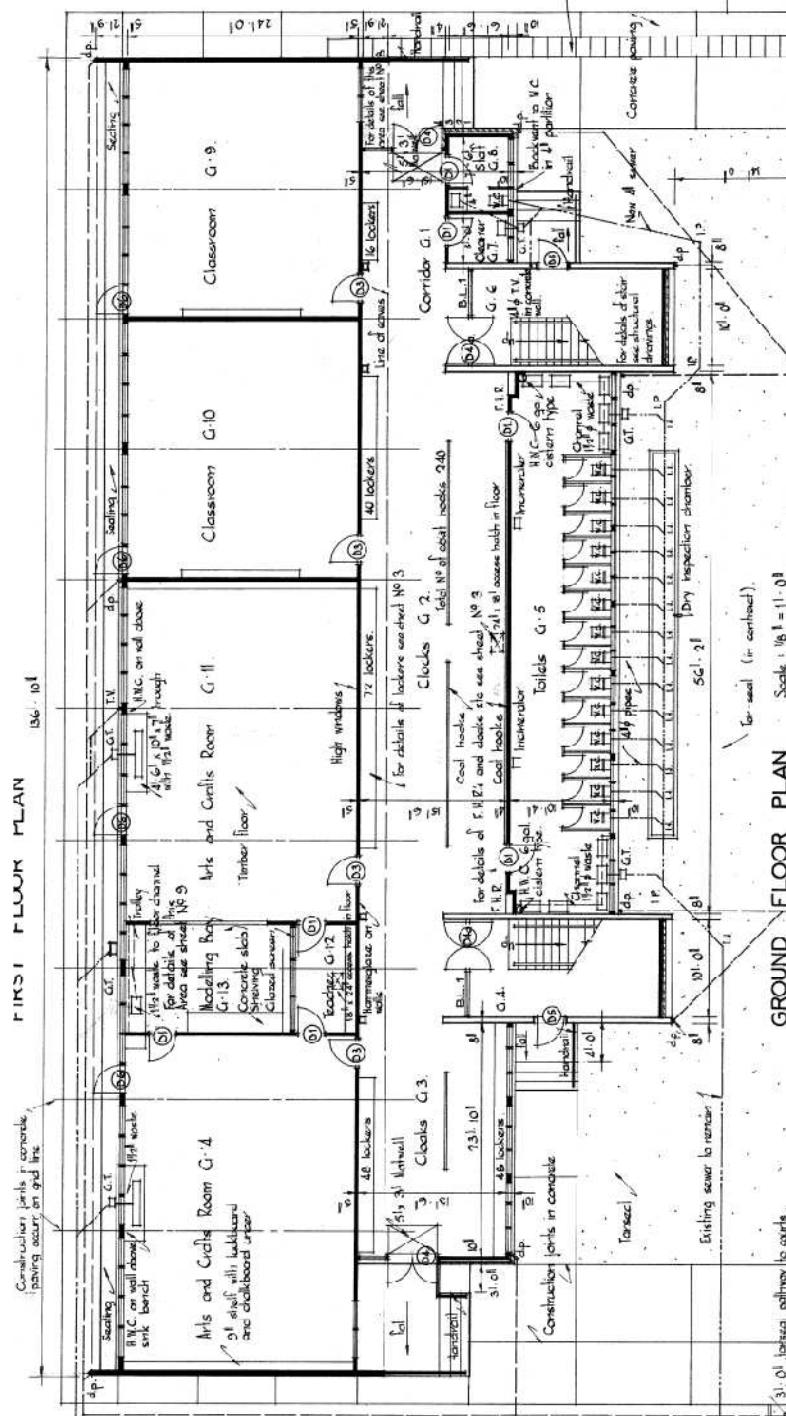
**General description**

Nelson Block built in 1960's and included a number of variations as well as a single storey option and Library (refer other data sheets). Classroom blocks arranged in with four classrooms in line on each level with two concrete stair wells at rear accessing two classrooms on upper level. Large toilet area at rear.

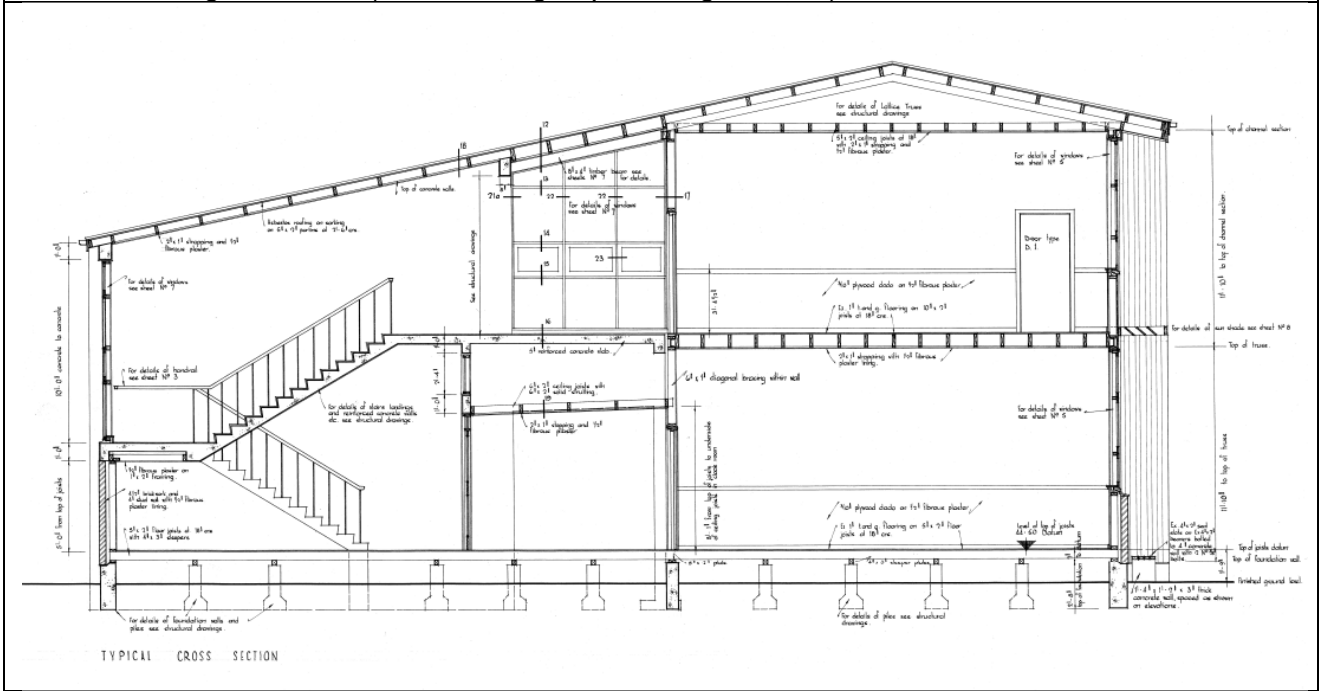
**MLE Compliance**

Unknown



Floor plan ground floor (unknown school and block from Aurecon standard strengthening drawings)






Cross section ground floor (Plimsol Wing Papanui High School)



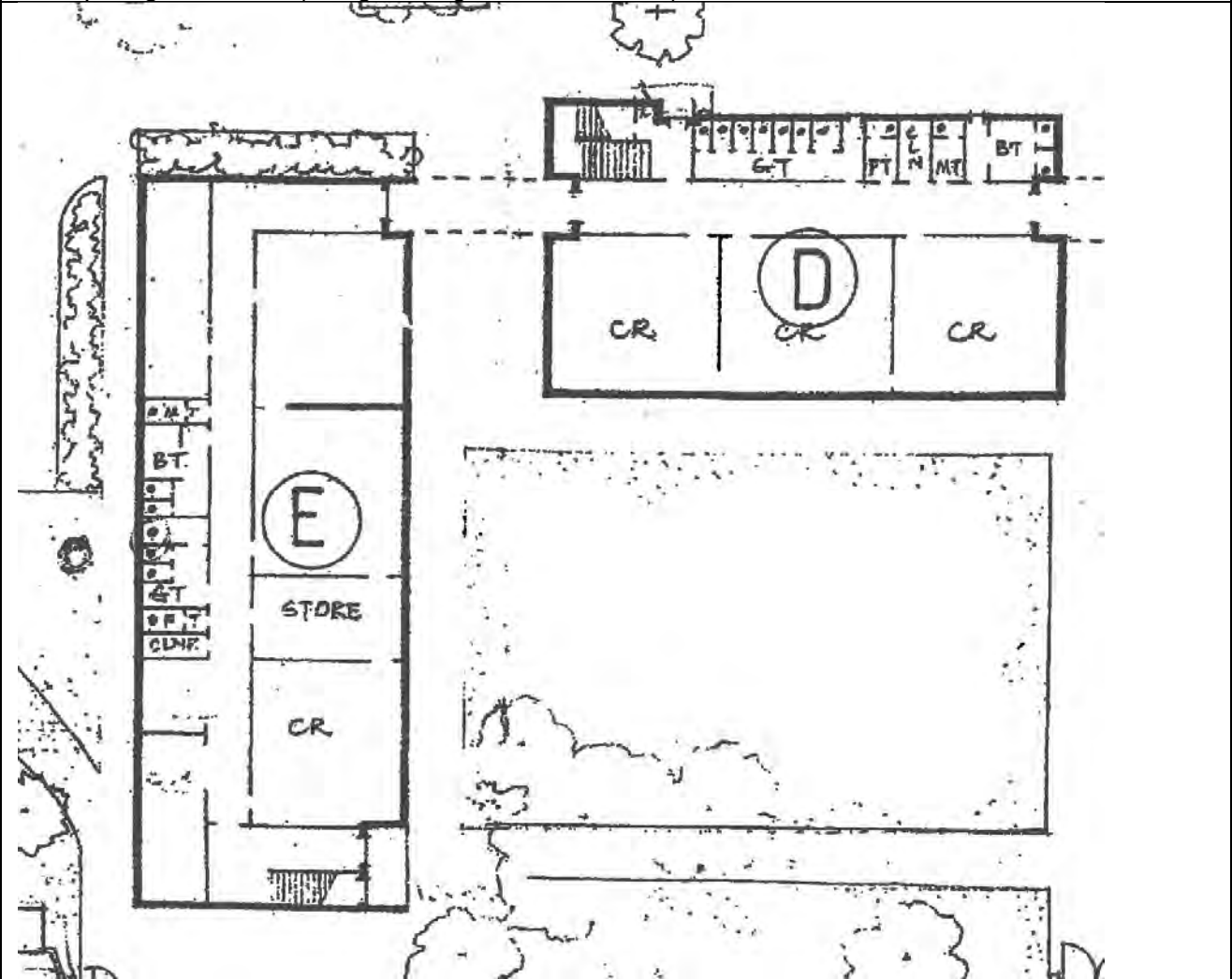
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<b>Building / Block Name:</b> Nelson Two Storey 1970's Block	
<b>PMIS code:</b> NEL270	
Overview front oblique ( <i>Rangiora High School E Block</i> )	Overview rear oblique ( <i>Rangiora High School E Block</i> )
	
Aerial photograph of Nelson Two Storey 1970s Block	
No photograph	No photograph
<b>Building description</b>	
<b>Roof</b>	Ridged centrally along the building. Clad in lightweight corrugated steel roofing
<b>Walls and cladding</b>	Vertical weatherboard, concrete, clay brick and Asbestos Fibre Cement.
<b>Floor and foundations</b>	Suspended timber floor level 1 with concrete perimeter foundations and concrete floor to toilets. Concrete upper floor (to be confirmed)
<b>Constructed</b>	<i>Age range unknown</i>
<b>Key identifying features</b>	Straight shape with stair wells at each end of Block.
<b>Variants within standard design</b>	
	Unknown
	Unknown
	Unknown
	Unknown
<b>Looks similar to the following</b>	
Nelson Block 8 classroom block but has corridors at rear.	
<b>General description</b>	
1970's building with concrete end walls and large glazed north walls. Roof extends over upper corridor and toilet block lean-too at rear. Horizontal sun shades may have been added to building.	
<b>MLE Compliance</b>	
Unknown	

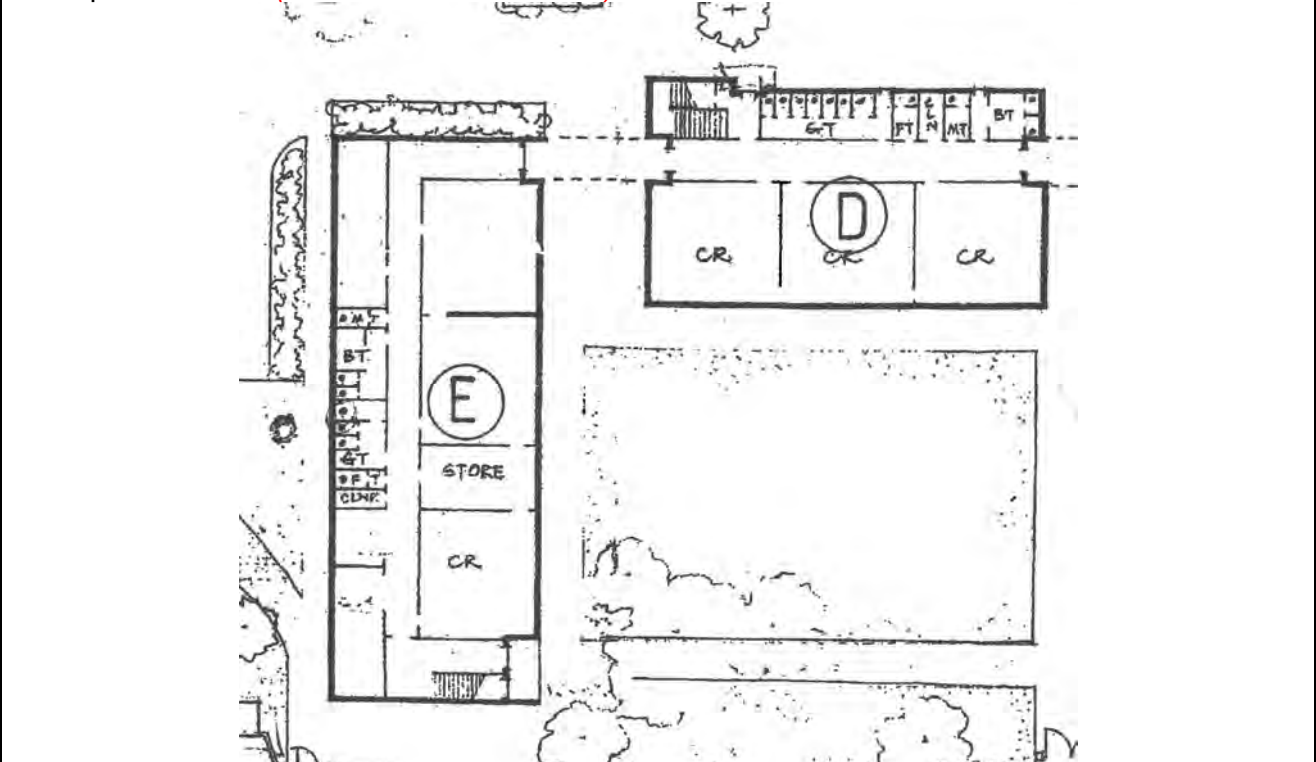
Additional photographs and block drawings	
Front view <i>(School and Block)</i> 	Rear view <i>(School and Block)</i> <p>No photograph</p>
Foundations <i>(School and Block)</i> <p>No photograph</p>	Inside view of ceiling <i>(School and Block)</i> 
Corridor Level 1 <i>(Rangiora High School)</i> 	Corridor Level 2 <i>(Rangiora High School)</i> 



Floor plan ground floor (*Rangiora High School E block*)



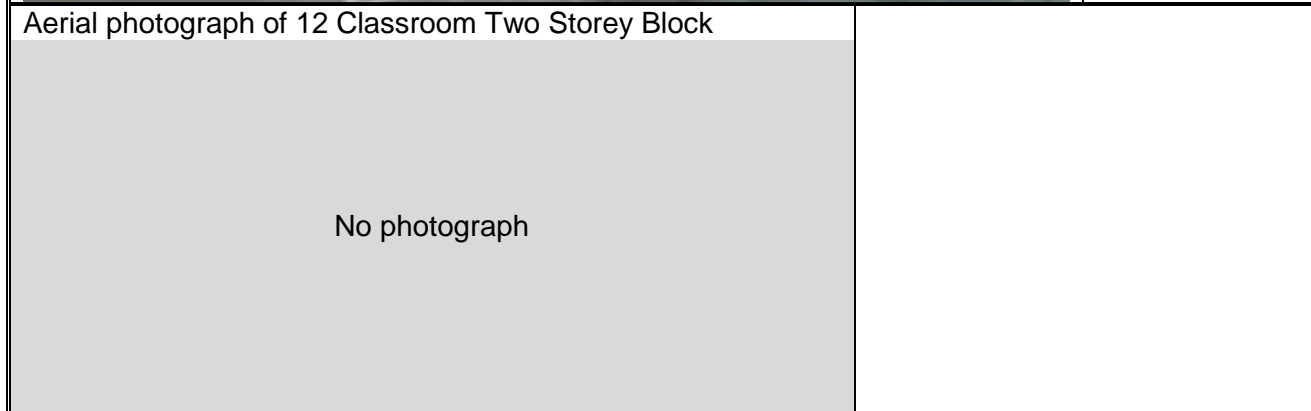
Floor plan first floor (*School and block names*)



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**Building / Block Name: 12 Classroom Two Storey Block**

**PMIS code: 212**



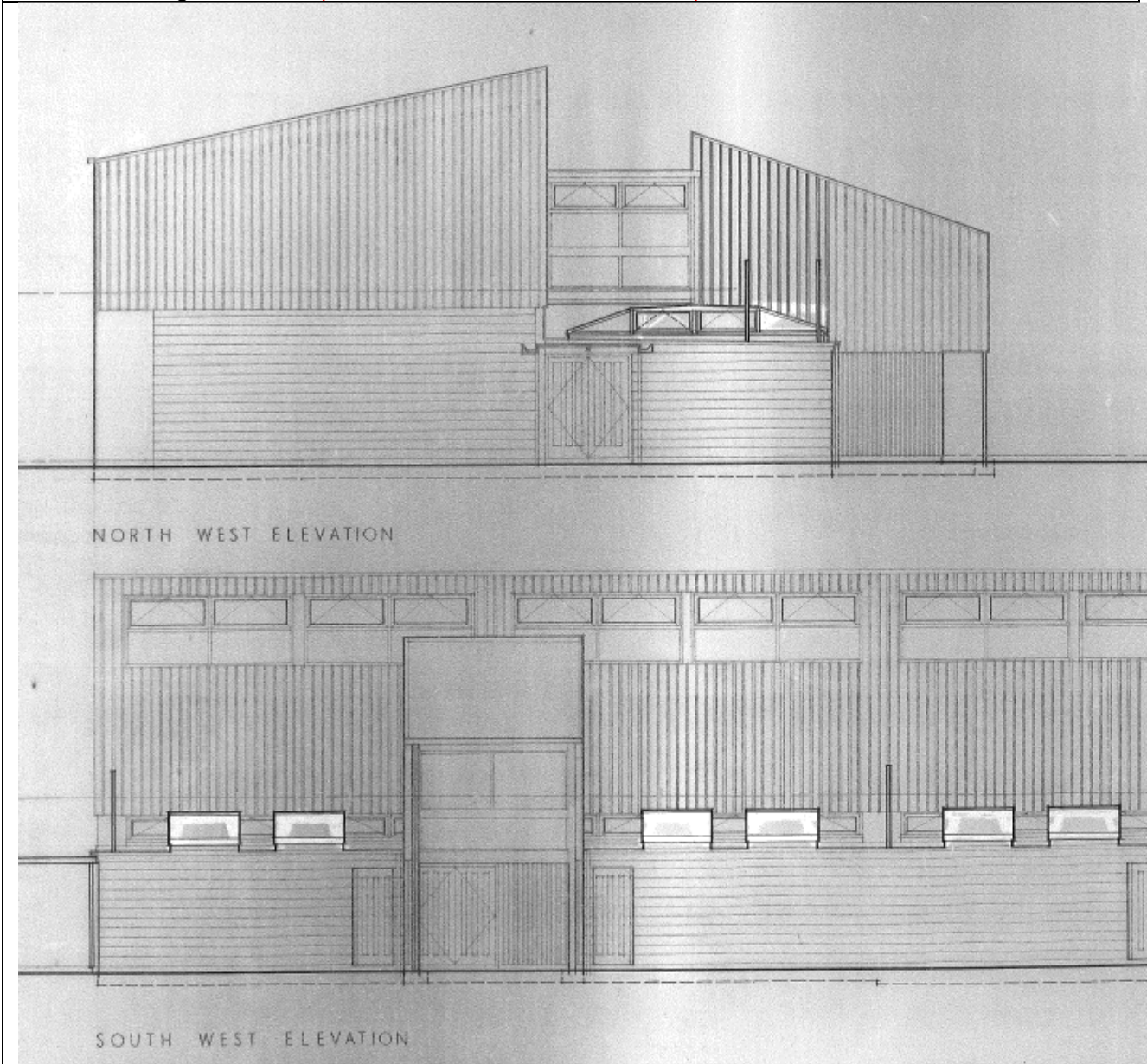
Building description		Variants within standard design
Roof	Unknown	Unknown
Walls and cladding	Unknown.	Unknown
Floor and foundations	Unknown	Unknown
Constructed	<i>Age range unknown</i>	
Key identifying features	Unknown	Unknown



**Looks similar to the following**  
Unknown

**General description**  
Unknown

**MLE Compliance**  
Unknown

Cross section ground floor (*Unknown School Block unknown*)



<b>Building / Block Name:</b>		<b>1950's Two Storey Blocks</b>
<b>PMIS code:</b>		<b>250</b>
Overview front oblique ( <i>Rangiora High School</i> ) 	Overview rear oblique ( <i>Rangiora High School</i> ) 	

<b>Building description</b>		<b>Variants within standard design</b>
Roof	Ridged centrally along the line of the building. Clad in lightweight corrugated steel roofing with tray or asphaltic or membrane roof over stairs and lower toilet roofs.	Unknown
Walls and cladding	Concrete, Brick veneer, Weather Board and Asbestos Fibre Cement.	Some blocks do not have the brick veneer to lower front and toilet blocks.
Floor and foundations	Suspended timber floor and concrete perimeter foundations and concrete floor toilets. Upper floor timber supported on concrete beams.	Unknown
Constructed	From 1951 to 1955	<i>(approximate date range only)</i>
Key identifying features	Linear shape with stair wells at each end of Block. Upper floor stepped out at front and corridor at rear with lower roof for clerestory classroom windows.	Location and appear of stairs may vary with each classroom block layout.

**Looks similar to the following**  
 Nelson straight blocks with corridors at rear on upper level but has cantilevered upper floor at front.

**General description**  
 Common secondary school classroom type built in 1950's throughout New Zealand. Examples include One Tree Hill Penrose High School (Penrose High School), Cashmere High School, Linwood High School and Rangiora High School. Classrooms linear with large glazed north facing walls and vertical screen between classrooms on lower level. Upper classrooms are cantilevered at front and corridors along rear on both levels. Classroom numbers and layout vary between schools with location and appearance of stair wells being the main variation.

**MLE Compliance**  
 Unknown

Additional photographs and block drawings	
<p>Front view (<i>Linwood College</i>)</p> 	<p>Rear view (<i>Linwood College</i>)</p> 
<p>Inside view of upper classroom ceiling (<i>Rangiora High School</i>)</p> 	<p>Inside view of lower classroom ceiling (<i>Rangiora High School</i>)</p> 
<p>Aerial photograph of 1950s Two Storey Block</p> <p style="text-align: center;">No photograph</p>	<p>Lower corridor ceiling (<i>Rangiora High School</i>)</p> 

Floor plan ground floor (*Linwood College*)



Cross section ground floor (*Linwood College*)

