



**Project: MOE – FLS Reference
Designs for Standard Classroom
Upgrade – 2-storey Nelson Block**
Accessibility Report

Reference: 246313
Prepared for: Ministry of
Education
Revision: D
2 September 2016

Document Control Record

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Document control				aurecon		
Report Title		Accessibility Report				
Document ID		Project Number		246313		
File Path		\\aurecon.info\shares\NZWLG\Projects\246313\03 Project Delivery\Reports\Accessibility\Avalon\246313-Avalon Block FLS Upgrade_Accessibility Report_Rev B.docx				
Client		Ministry of Education		Client Contact		
Rev	Date	Revision Details/Status	Prepared by	Author	Verifier	Approver
B	29 October 2015	For information	F Wee	F Wee	T Gazley	J Martins
C	13 July 2016	Building Consent	A Balram	A Balram	T Gazley	J Martins
D	1 September 2016	Building Consent	A Balram	A Balram	T Gazley	J Martins
Current Revision		D				

Approval			
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1. Introduction

This report considers the accessibility requirements of the standard 2-storey Nelson classroom Block at various Ministry of Education (MOE) schools throughout New Zealand. The proposed works include upgrading the standard 2-storey Nelson classroom Block to create a “Flexible Learning Space (FLS)”, previously referred to as “Modern Learning Environments” (MLE). Two options of a similar layout have been considered for the 2-storey Nelson Block FLS upgrade - Options 1 and 2.

Option 1 consists of 6-classroom equivalent interconnected classroom spaces with 2 to 4 small breakout rooms at the ground and first floors.

Option 2 is similar to Option 1, also consisting of 6-classroom equivalent interconnected classroom spaces at the ground and first floors but with 2 medium breakout rooms at the ground floor and no small breakout room at the first floor.

The proposed works are therefore alterations in terms of Section 112 of Building Act 2004. This states that:

112 Alterations to existing buildings

A building consent authority must not grant a building consent for the alteration of an existing building, or part of an existing building, unless the building consent authority is satisfied that, after the alteration, the building will -


- (a) comply, as nearly as is reasonably practicable with the provisions of the building code that relate to-
 - i. means of escape from fire; and
 - ii. access and facilities for persons with disabilities (if this is a requirement in terms of section 118); and
- (b) continue to comply with the other provisions of the building code to at least the same extent as before the alteration.

The Building Act: 2004 requires in section 4 (2) (k) for 'the need to provide, both to and within buildings to which section 118 applies, facilities that ensure that reasonable and adequate provision is made for people with disabilities to enter and carry out normal activities and processes in a building '.

Section 118 of the Building Act requires that access and facilities for persons with disabilities to and within buildings be considered for facilities to which the public are to be admitted, whether for free or on payment of a charge ... This includes educational institutions, including public and private primary, intermediate, and secondary schools, universities, polytechnics, and other tertiary institutions.

To demonstrate compliance with the above this report makes use of the Acceptable Solutions in the New Zealand Building Code Clause D1/AS 1, NZS 4121:2001 Design for Access and Mobility Buildings and Facilities.

Note that this report considers only those requirements necessary for the standard 2-storey Nelson classroom Block themselves to comply with accessibility requirements. Because each school where 2-storey Nelson Blocks are existing will have different configurations of site layout, vehicle and pedestrian access, building usage etc. a generic and comprehensive accessibility report is not possible. Therefore any particular school with 2-storey Nelson Blocks present would need a site specific accessibility report that would consider all the necessary requirements for access by people with disabilities. Site specific items have been identified in the report, and denoted as such in this report.



Note also that the requirements of this report may not be applicable to those 2-storey Nelson Blocks where the school can provide equivalent teaching facilities elsewhere on site for staff and/ or students with disabilities.

2. Proposed Building Work

2.1 Drawings and Specifications

This report is based on drawings by Brewer Davidson Architects Ltd.

Table 1: Reviewed drawings

Drawing Title	Drawing No.	Rev.	Date
2-storey Nelson Block ILE Upgrade Option 1	1301-N003	E	10/06/2016
2-storey Nelson Block ILE Upgrade Option 2	1301-N004	E	10/06/2016

2.2 2-storey Nelson Block

The 2-storey Nelson classroom block is a standard 2-storey classroom block for Ministry of Education (MOE) in their school nationwide. Each floor has area equivalent to 6 classrooms.

The proposed work is to upgrade the 2-storey Nelson Block to become a “Flexible Learning Space (FLS)” upgrade of MOE, previously referred to as “Modern Learning Environment (MLE). Two options of similar layout have been considered for the 2-storey Nelson Block FLS upgrade - Options 1 and 2.

Option 1 consists of 6-classroom equivalent interconnected classroom spaces with 2 to 4 small breakout rooms at the ground and first floors.

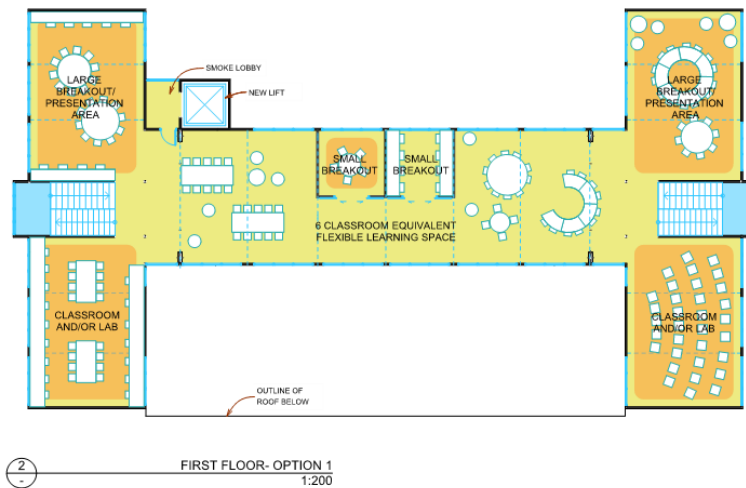
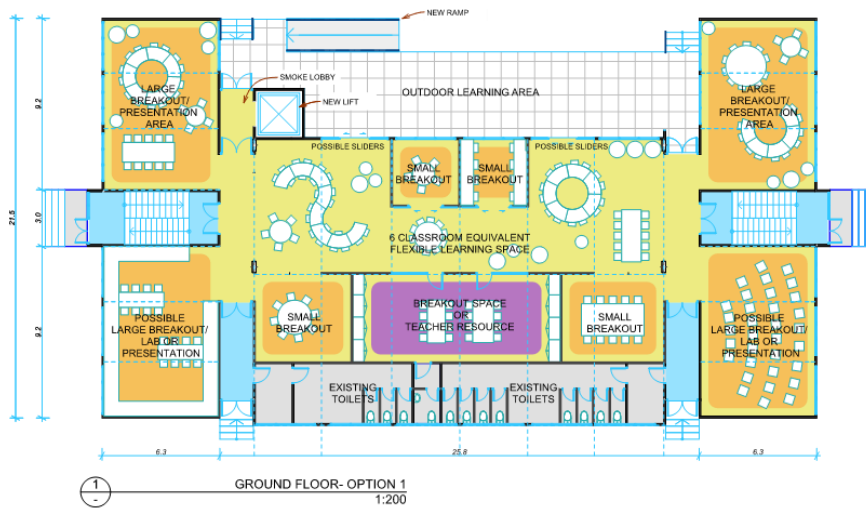
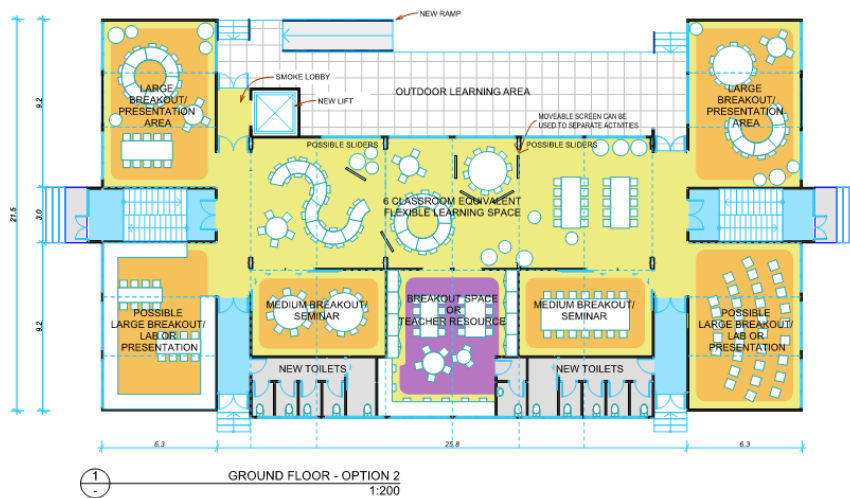
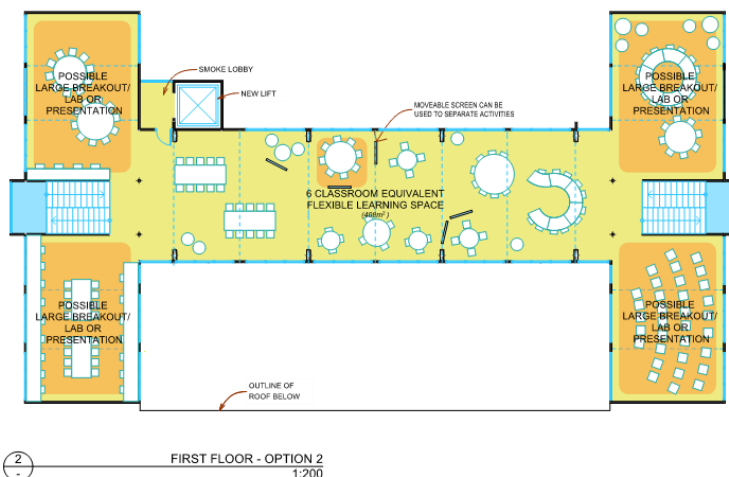


Figure 1: 2-storey Nelson Block FLS upgrade Option 1

Option 2 is similar to Option 1, also consisting of 6-classroom equivalent interconnected classroom spaces at the ground and first floors but with 2 medium breakout rooms at the ground floor and no small breakout room at the first floor.



1 - GROUND FLOOR - OPTION 2
1:200



2 - FIRST FLOOR - OPTION 2
1:200

Figure 2: 2-storey Nelson Block FLS upgrade Option 2

3. Accessible Car Parks

This is a site specific item. Accessible car park requirements of NZS 4121 for the school site are given in Table 2.

Table 2: Required accessible car park provisions

NZS 4121 Requirements	
No. of accessible car parks required	<ul style="list-style-type: none"> Not less than one accessible carpark when up to 20 normal car parks are provide; or Two accessible car parks for 21 to 50 normal car parks provided and for every additional 50 normal car parks an additional accessible car park is required.
Signage	Signage for the car parking space(s) shall be readily visible from the vehicle at the entrance to the car park, or guide signs shall be provided to indicate the direction

	of the space. The space shall have ground marking of the International Symbol of Access (ISA) and may have directional signage.
Spatial provision	<ul style="list-style-type: none"> • Car parks set at 90° to the footpath shall be not less than 3500 mm wide. • Any angled car parks shall have an operational width of 3500 mm. • Where the car park space is parallel and adjacent to a marked footpath on the same level as the parking space, the width of the common footpath may form part of the parking. • The car parking space length shall be no less than 5000 mm. • 2500 mm minimum height to be maintained from the entry of the car park to the accessible car park.
Ground condition	Accessible car park space(s) shall be provided on a stable, firm, slip resistant flat surface with a slope not exceeding 1:50.
General requirements	<ul style="list-style-type: none"> • People with disabilities shall not have to pass behind parked cars when moving to an accessible route, or when approaching an entrance. • Flat access shall be provided whenever possible between the car park space(s) and adjoining footpath - alternatively kerb ramps are to be provided.

4. Accessible Routes

4.1 Access- General

This is a site specific item. Where 2-storey Nelson Block classrooms are required to be accessible, NZS 4121 requires that an accessible route shall be provided that connects from the point of arrival on site to the 2-storey Nelson Block required to be accessible to people with disabilities. The main entrance to the school shall be on an accessible route. If this is not possible there shall be signage indicating the location of an accessible entrance.

4.2 Footpaths and Ramps

This is a site specific item. Where 2-storey Nelson Block classrooms are required to be accessible, footpaths and ramps to 2-storey Nelson Block shall meet the requirements in Table 3.

Table 3: Required ramp provisions

NZS 4121 Requirements	
Crossfall	Accessible route shall have a crossfall of no greater than 1:50.
Spatial provision	<ul style="list-style-type: none"> • Footpaths and ramps shall have a width of not less than 1,200 mm (1,000 mm between handrails). • Ramps shall have a maximum slope of 1:12. It is preferably 1:14. • Ramps steeper than 1: 20 shall have handrails both sides extending 300 mm beyond the head and foot of the ramp. • Ramps shall have landings top and bottom, extending 1,200 mm beyond any doorway or door swing. • Maximum rise between ramp landings (and rest areas) to be 750 mm.
Handrails	<ul style="list-style-type: none"> • Handrails to be between 840 and 1,000 mm above surface of ramp. • Handrail diameter between 32 and 50 mm. • Handrails to have clearance of 45 to 60 mm from wall.
Ground condition	Footpaths and ramps shall have a non-slip surface.
General requirements	<ul style="list-style-type: none"> • Portable ramp is not permitted. • All ramps to have an upstand no less than 75 mm high or low rail no more than 75 mm above the ramp to prevent a wheelchair from running off the edge.

Both design options have included an accessible ramp which provides access to the new lift lobby on the ground floor.

4.3 Building Entry

Refer to Figure 1 and Figure 2. Where 2-storey Nelson Block are required to be accessible, since each space is interconnected, it is proposed that accessible entrance to be provided at one of the double doors located adjacent to the toilet on proposed plans.

Table 4: Required accessible entrance provisions

	NZS 4121 Requirements	Proposed Features
Level access	The entry door into the 2-storey Nelson classrooms is preferably to include no thresholds, or is to be less than 20 mm.	<ul style="list-style-type: none"> To Comply
Spatial provision	<ul style="list-style-type: none"> 1200 mm wide by 1200 mm long manoeuvring areas are required both before and after entry door. A minimum clear width of 1200 mm to be provided within an accessible corridor following the entry door. 	<ul style="list-style-type: none"> The spatial provision in the proposed Option 1 and 2 at the entrance from the covered outdoor learning space will meet the requirements as inspected from the architectural drawings.
Opening of door	<ul style="list-style-type: none"> One leaf of the double door shall not less than 760 mm when the door is opened. . 	<ul style="list-style-type: none"> The double door into the 2-storey Nelson Block in the proposed Option 1 and 2 is no less than 760 mm for each door leaf therefore expected to meet the requirement
General requirements	<ul style="list-style-type: none"> Glazing if provided on entry doors it shall be marked in accordance with NZS 4223.3. Entry door shall have a clear colour contrast with respect to their surroundings. 	<ul style="list-style-type: none"> To Comply

4.4 Stairway

Where the 2-storey Nelson Block is required to be accessible, one of the 2 stairs provided shall be accessible and fully comply with NZS 4121 requirements below.

Table 5: Required accessible stair provisions

NZS 4121 requirements	Proposed features
Minimum length of stair landings	At least 1200 mm long landings (including mid-landings)
Nosings	Contrasting nosings and changes in surface treatments at the top and bottom of stair flights.
Minimum widths between handrails	At least 900 mm apart.
Height of handrails	Handrails of complying profiles shall be at a height between 900 mm and 1000 mm above the nosing of the stair tread.
Handrails extension at top and bottom landings	Handrails are to extend 300 mm into the top stair landing and 300 mm plus the stair going at the bottom landing, unless they continuously wrap around the landing.

Handrails	Handrails be continuous with no obstructions to the movement of hand along its length and have dome buttons installed 150 mm (-/+10 mm) from the end edge of the handrail.
The clear space of the handrail and the adjacent wall surface	50-60 mm at the sides and 100 mm above.
Length of treads, height of risers and nosings projection	Steps that have treads having a minimum length of 310 mm, risers having a maximum height of 180 mm and nosing projections no greater than 25 mm.
Length of landing between the leading edge of the entry door and the first step.	At least 400 mm
Rise of stair between landings and/or mid-landings.	The total rise of any flight of stairs shall not exceed 2500 mm between landings and/or mid landings.

4.5 Lift

Where the 2-storey Nelson Block is required to be accessible, the lift provided shall be accessible and fully comply with NZS 4121 requirements below.

Table 6: Required accessible lift provisions

NZS 4121 requirements	
General	Shall be clearly sign-posted and on an accessible route.
Space	<ul style="list-style-type: none"> • Include unobstructed areas 1800 mm deep in front of lift entry. • The spatial provision in the proposed Option 1 and 2 at the front of the lift will meet the requirements as inspected from the architectural drawings.
Interior clear space	1400 mm by 1400 mm.
Width of lift landing door	No less than 900 mm wide and have a clear colour contrast with respect to the surroundings.
Lift doors to be sliding.	Doors shall be side-hung and have at least -/60/30 FRR, and have clear opening width of at least 900 mm. The landing shall be located in a smoke rated lobby.
Height of control buttons	900 – 1350 mm above the cab floor and include Braille designations to the left of the standard designation.
Audible signals	Audible lift arrival and direction indicators and audible signals for floor landings arrived at.
Height of support rails	Support rails on three sides 950 mm to 1050 mm above the cab floor and are located at minimum of 30 mm from the cab walls.
The levelling accuracy of the lift car at each landing	Within a tolerance of +/- 20 mm under all loading conditions

As per MOE's requirements, a lift lobby with the dimensions of 1500mm x 1800mm are to be included in the building.

4.6 Doorways and Openings on Accessible Routes

The clear minimum width of doorways on an accessible route shall be 760 mm when the door is open. Any pair doorsets on accessible routes must have at least one leaf that provides a clear opening of 760 mm. All doors shall have handles between 900 and 1,200 mm above finished floor level, and which shall be lever action with the end of the handle returned towards the door.

Doors that swing both directions must have vision panels complying with NZS4121 7.3.2. Note that revolving doors, turnstiles or similar are generally not acceptable on accessible routes.

Internal doors have no thresholds, and exterior doors have thresholds less than 20 mm high which complies with NZS 4121.

4.7 Signs

NZS 4121 requires that every complying building shall have signs to enable people with disabilities to avoid having to ask for directions. Given that the 2-storey Nelson Block will be occupied principally by staff and students who must be completely familiar with the layout to be able to perform normal functions we propose that no additional special signage for disabled facilities is necessary.

5. Toilet Facilities

Both options do not have an accessible toilet facility proposed. This is acceptable provided that accessible hygiene facilities are present elsewhere on the school site and an accessible route between the 2-storey Nelson Block and the facilities is available. If accessible toilet is to be provided it shall comply with the requirements of NZS 4121 in Table 7.

Table 7: Required toilet provisions

NZS 4121 Requirements	
Spatial provision	<ul style="list-style-type: none">• Minimum dimensions of 1,900 mm x 1,600 mm.
Door	<ul style="list-style-type: none">• 760 mm clear opening.• If door is hinged shall swing outwards.• Sliding door is acceptable.
General requirements	<ul style="list-style-type: none">• Horizontal leg of grab rail beside WC pan is fixed 700 mm above floor level.• Vertical leg of grab rail is fixed between 150 and 250 mm from front of pan.• Top of pan seat is 460 mm above floor.• Front edge of pan seat is 700 – 750 mm from wall behind.• Washbasin has 675 minimum underside clearance from floor and is located 300 mm from the front of the pan.• Taps to have lever handles (hot tap to left of cold tap).

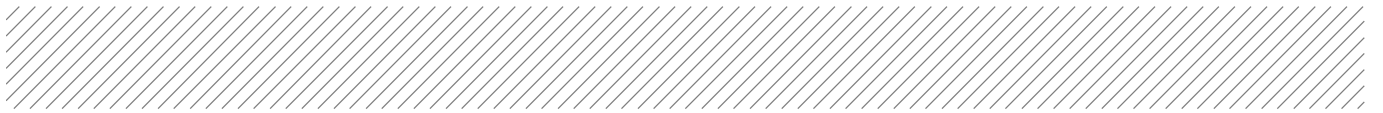
6. Public Facilities

6.1 Public Counter and Desks

Not applicable to 2-storey Nelson Block.

6.2 Telephone

Given the current level of use of mobile telephones available, it is not considered necessary to provide a public telephone in accordance with NZS 4121.



7. Conclusion

We are of the opinion that provided the above requirements are met, then the proposed FLS upgrade to the 2-storey Nelson Type classroom block- Options 1 and 2 will meet the requirements of the Building Code for access and facilities for persons with disabilities, and will otherwise continue to comply with the requirements of the New Zealand Building Code as nearly as is reasonably practicable.



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