INFRASTRUCTURE ASSESSMENT AUDIT FOR SUVA – NAUSORI URBAN SCHOOLS

DUDLEY INTERMEDIATE SCHOOL (2342)

SUMMARY REPORT

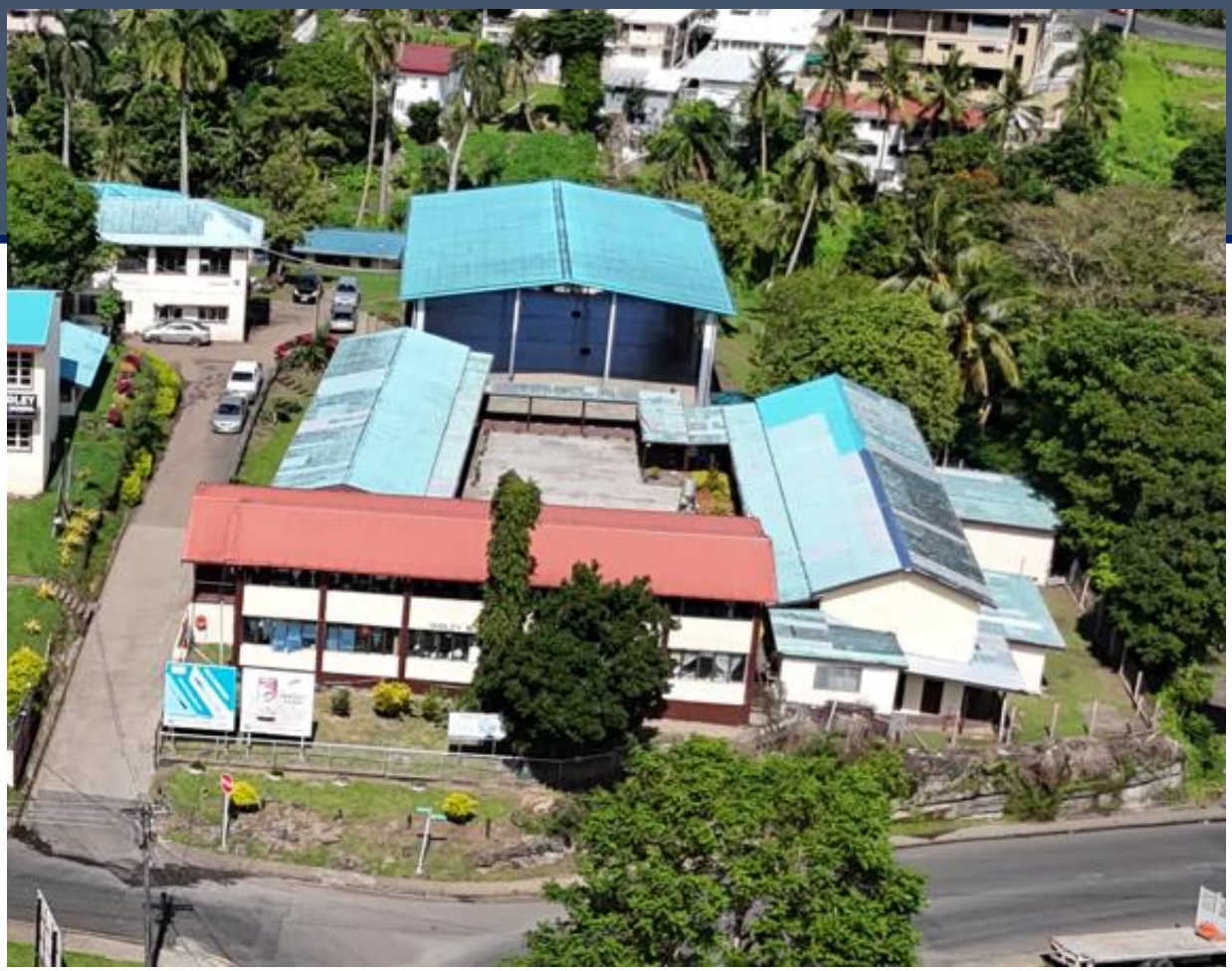


TABLE OF CONTENTS

1) INSPECTION SUMMARY

School Inspection Summary	
School name:	DUDLEY INTERMEDIATE SCHOOL
Overall condition state:	POOR

Key recommendations:

- Overcrowding – 6 new classrooms required based on FNBC standards
- Overcrowding – 3 new classrooms required based on recommended sizing (1.5m^2)
- WASH – 4 new toilet cubicles required for girls / maintenance of ablution blocks required
- Accessibility –All buildings require accessibility ramps, accessible doorways
- Disaster resilience – Windows to include cyclone shutters and roof cladding fastened with Cyclone roofing screws.

Comments:

Major defects were noted as follows:

- Missing ramps (All buildings)
- Inadequate stairway width. (all buildings)
- Rusted roof cladding, gutter and roofing nails
- Block 2 to be immediately demolished and reconstructed with Morden class rooms.
- Very little recreational facilities for children during breaks.

Aerial view of school

General view of school

School type:	**Primary**	✓	**Secondary**		**Year levels**	7, 8
School address:	16 EDEN STREET TOORAK					
School enrolment and staff figures	**No. of Students (Male)**	**No. of Students (Female)**	**No. of Students with Disability**	**No. of Teachers (Male)**	**No. of Teachers (Female)**	
	244	235	0	6	6	
School building arrangement	TOTAL NUMBER OF BUILDINGS: 5 **B1** – 2 STOREYS / **B2** – 1 STORY / **B3** – 2/STOREYS / **B4** – PORTAL FRAME					
Local government area:	TOORAK					
Date of inspection:	1ST JULY 2024 & 21ST AUGUST 2024					
Inspection team:	RAJIV KUMAR FREDDY TURAQA ALEKSIO MANOA LAITE TELAWA					
Data collection methods	Visual inspection	✓	Onsite measurement	✓		
	Interviews with school staff	✓	Drone / aerial imagery	✓		
	Survey form	✓	Desktop research	✓		
	Other:					
Assumptions:	SCHOOL HAS A BOUNDARY PLAN, FEMIS IS UPDATED					
Limitations:	UNAVAILABILITY OF ALL SCHOOL DOCUMENTS SUCH AS BOUNDARY AREA.					

2) ASSESSMENT OF OVERCROWDING

An assessment for overcrowding was undertaken based on FNBC standards and 2024 enrolment data. The table below summarises the data collected through visual inspection and interrogation of enrolment data and compares this against the FNBC standard student to classroom size ratio of 2 m^2 per student.

The results of the assessment indicate that, based on 2024 data, an additional 12 classrooms are required for Mahatma Gandhi memorial Primary School to achieve compliance with FNBC standards.

ear	Stream	Number of students	Current number of classrooms	Number of extra classrooms required based on FNBC on 2024 data
7	701	**43**	6	2
	702	**43**		
	703	**44**		
	704	**43**		
	705	**43**		
	706	**40**		
8	801	**49**	6	1
	802	**50**		
	803	**45**		
	804	**47**		
	805	**51**		
	806	**49**		
	802	**37**		
	803	**39**		

3) EXISTING INFRASTRUCTURE CONDITIONS

Given the outlined procedure, the following observations were made:

Block Code	Length (m)	Width (m)	Height (m)	No. of Levels	Type	Room List
Block 1	33	17	6	2	Basement constructed with Concrete and 1st floor timber structure with cladding on timber framed roof structure	Block 1 – Basement level contains; Female Teachers Toilet – 1.5m x 2m, Male Teachers Toilet – 1.5m x 2m, Boys Toilet – 10.2m x 2.4m, Girls Toilet – 8.4m x 2.8m, Workshop – 7.5m x 4.4m, Storage Room – 3m x 4.4m, YR702 – 7m x 6.6m, Library – 7.4m x 6m. Block 1 – 1st Floor contains; Main Office – 8.7m x 3.7m, Admin Office – 5.6m x 6.7m, Computer Room – 6.7m x 6.7m, YR701 – 6.6m x 6.7m, Staff Room – 6.7m x 6.7m, Canteen – 4.5m x 3.5m.
Block 2	29	7.5	3	1	timber structure with cladding on timber framed roof structure	Block 2 – Contains; YR703 – 7.2m x 6.1m, YR704 – 7.3m x 6.1m, YR705 – 7.3m x 6.1m, YR706 – 7.3m x 6.1m.
Block 3	26	9	5.5	2	Concrete with cladding on timber framed roof structure	Block 3 – Ground floor level contains; YR801 – 7.3m x 6.4m, YR802 – 7.4m x 6.4m, YR803 – 7.4m x 6.4m. Block 3 – 1st level contains; YR804 – 7.4m x 6.4m, YR805 – 7.4m x 6.4m, YR806 – 7.4m x 6.4m.
Block 4	26.8	18	6.5	1	Steel portal frame	**Portal frame**

NOTE: Toilets mentioned refers to a set of cubicles.

Summary Table for Classrooms

This table provides a quick overview of the assessment findings, helping to identify areas that need immediate attention and those that are in good condition. The following criteria was used:

- Good - No additional works / intervention required
- Fair - Remedial works required
- Poor - Demolition and replace with new

Assessment Area	Criteria	Conditions
Structural Integrity	Walls, ceiling, floor, foundation and roofs	Poor
General upkeep	Exterior, interior, furniture and fixtures	Fair
Safety compliance	Fire safety, electrical safety,	Poor
Disability	Accessibility	Poor
Ventilation and lighting	Ventilations, Natural Lighting, Artificial Lighting.	Fair

Observations on Structural Elements

- **Walls and Ceiling** –There were no signs of wear and tear on walls. The walls and ceiling were well painted. Block 2 requires demolition and rebuilding.
- **Floors and Foundation** – the floor and foundation for the entire school is found to be stable. There were no visible or sign of cracks or uneven surface. Block 2 requires replacement
- **Roofs** – the school reported that there are no leaks. It was found that roof materials are in good condition. However, some roof cladding and fastenings are partially rusted and requires upgrading works.
- **Windows** – some missing window louvre blades were recorded at various buildings
- **Earthquake –** not applicable, as school has maximum of 2 storeys.
- **Cyclone** – minor roof upgrading works required to increase cyclone resilient capacity of the structures. Except for Block 3, which requires demolition and rebuilding.

Existing Conditions of Building and Maintenance

- **Exterior –** the building is in fair condition as the wall, beam, column, window seal, doors, eaves, fascia boards and gutters are intact and coated with paint. The school executes periodical maintenance. The timber structures are in very poor condition
- **Interior –** the building is in fair condition as the walls, beams, columns windows, doors and ceiling are intact and coated with paint. The school executes periodical maintenance. The classrooms were found to be clean with proper waste disposal. Block 2 requires replacement immediately.
- **Furniture and Fixtures –** the classrooms and offices have adequate furniture and fixtures that do not impede on the function of the buildings.

Safety and compliance with standards

- **Fire Safety –** the school does not possess adequate fire safety mechanisms. Present fire Extinguishers need maintenance and commissioning. No fire hydrants and alarm systems were found. The school has Emergency exit plan and designated assembly area provisioned.
- **Electrical Safety –** The school is connected to EFL Grid. The school has surface wiring with no fault outlets. All electrical systems are measured to be safe.
- **Accessibility –** the school does not meet disability accessibility standards. The school does not have facilities such as ramps, handrails and accessible restrooms.

Lighting and Ventilation

- **Ventilation –** HVAC system (Heating, Ventilation, and Air Conditioning) is centrally located in the school, in particular, offices and Computer Labs.
- **Natural Lighting –** there are adequate number of windows installed in classrooms, that are regularly cleaned to allow natural light to enter into classrooms unobstructed.
- **Artificial Lighting –** it was found that all light fixtures are working and provides adequate illumination.

4) WATER SANITATION HYGIENE (WASH) FACILITIES

Condition of Toilets and Washrooms

Dudley Intermediate School has 1 block with toilet facilities. The facilities have some minor defects such as:

- The cubicle doors were damaged.
- Some toilet seat pans were missing.
- Rust was found on the door hinges and steel connectors of the PVC pipe outlets in the toilet system.
- The floor and walls had damaged.
- Shower facilities need replacement.

The WASH facilities were unclean and lacked maintenance while the toilet cubicles do not comply with the FNBC for toilet numbers.

TOILET CUBICLE(S)	No. of Cubicles		Toilet Ratio (1 cubicle: students)		Compliance of Student to Toilet Cubicle Ratio (FNBC).	
Building Index	Female	Male	Female	Male	Female Requirement (1:20) Extra Toilets?	Male Requirement (1:30) Extra Toilets?
Block 1	8	10	30	25	4	0
HAND BASINS IN THE TOILET	No. of Hand Basins		Handbasin Ratio 1:		Compliance of Student to Hand Basin Ratio (FNBC).	

Building Index	Female	Male	Female	Male	Female Requirement (1:60) Extra Handbasins?	Male Requirement (1:60) Extra Handbasins?
Block 1	2	2	118	122	3	3
GENERAL OUTDOOR TAPS	No. of General Outdoor Taps		Outdoor Taps Ratio 1:		Compliance of Student to Outdoor Taps Ratio Requirement (1:60) (FNBC) Does it require additional hand basins?	
Building Index						
Block 2 and 5	12		40		0	

5) DISASTER RESILIENCE ASSESSMENT

This infrastructure condition assessment aims to evaluate the architectural, structural, and non-structural features of the school to ensure it is resilient to natural disasters and provides a safe learning environment for students. The assessment also identifies areas for improvement and highlights the measures already in place to enhance overall resilience. FNBC 1990 and basic loading, wind and seismic AS/NZS codes typical details were utilized during and after inspection.

Architectural

- Cyclonic Roof: The school has a cyclonic roof designed to withstand strong winds and seismic activity. However, replacement with new roof cladding and roofing screws is needed. Except for block 3
- Central Location: The school is centrally located, allowing easy access to main streets and relief services.

Structural

- Material Quality: The school buildings are constructed using reinforced concrete and follow acceptable engineering design principles.
- Structural Integrity: Buildings have demonstrated the capability to withstand and recover from natural disasters like earthquakes, category 2 cyclones, and floods. Except for block 1 and 2.

Non-Structural

- Disaster Preparedness: Implementation of disaster evacuation plans, emergency exit routes, and safety protocols.
- Fire Safety: Equipped with a fire alarm system and strategically placed fire extinguishers to mitigate fire-related risks.

6) ACCESSIBILITY ASSESSMENT

1. **Compliance with Accessibility Standards:**
   - Educational facilities did not meet accessibility standards, such as the Fiji Disable People Federation Access Audit Tool 1.0. This toolkit covers aspects like ramps, door widths, signage, and accessible routes, also the noncompliance extends beyond physical structures to digital accessibility.

2. **Facilities for Students with Disabilities:**

- Classrooms did not have adjustable seating arrangements, clear sightlines, and adequate space for mobility aids also including accessible desks and adjustable podiums.
- Libraries require accessible shelving, reading stations, and assistive technology (such as screen readers) to enhance library usability.
- Restrooms (WASH facilities) were not wheelchair-accessible or have grab bars and sinks at an appropriate height.
- Common Areas: the cafeterias and outdoor spaces were not designed inclusively. Benches, seating areas, and a few pathways are not able to accommodate everyone.

3. **Access to Classrooms, WASH Facilities, and Common Areas:**

- Classrooms do not have wide doorways and ramps to ensure access to classrooms. Additionally, acoustics are not considered for students with hearing impairments.
- WASH Facilities do not have accessible restrooms with proper signage and a clear pathway to the wash facilities.
- Common Areas like corridors, courtyards, and gathering spaces are not barrier-free and are without proper lighting and contrasting floor materials to aid navigation.

SUMMARY OF FINDINGS

The following summarizes the individual characteristics assessed during the Suva-Nausori school audit for Jai Narayan College:

Categories of Assessment	Existing Condition / State	Required as per Standards	Gaps Observed
Existing Infrastructure Condition	- Structural Integrity – Columns, slabs, beams, rafters, purlins of adequate size. - General upkeep – Minor irregular maintenance. - Safety compliance- handrails where necessary. - Disability- no consideration when constructed. - Ventilation and lighting – damaged and missing lights at some sections of buildings.	- Structural Integrity – Columns, slabs, beams, rafters, purlins sizes to follow FNBC 1990. - General upkeep –routine checkup as per MOE policies with major defects requiring immediate intervention. - Safety compliance- handrails, extra doors and signage where necessary. - Disability- to comply with FDPF Disability audit tool - Ventilation and lighting – adequate windows and doors required as per FNBC 1990.	- Structural Integrity – Columns, slabs, beams, rafters, purlins sizes to follow FNBC 1990. - General upkeep –requires immediate intervention to major defects. - Safety compliance- safety handrails were only present in suspended floors while ground floor rails beside drain had missing rails (not fully safety compliant). FDPF requires signage which was absent from the school. - Disability- not fully compliant with FDPF Disability audit tool - Ventilation and lighting – limitations in the count of windows and lightings compared to required FNBC.
Assessment of Overcrowding	- The classrooms are accommodating an average of 479 roll/12 classrooms of 40 students.	- FNBC 1990 requires classroom occupancy to have $2m^2$ per person. Based on that, the required roll per classroom was calculated.	- All classrooms were accommodating more roll than required. - Given the recommended sizing ($1.5m^2$), about 8 extra classrooms are required to address overcrowding in school.

Water Sanitation Hygiene (WASH) facilities	Toilets (students: Cubicle) - Boys – 25:1 (10 cubicles) - Girls – 30:1 (8 cubicles) Taps (students: tap) - Students – 40:1 (12 taps) - Menstrual Hygiene was present in every female washroom block and at main office.	Toilets Ratio (students: Cubicle) - Boys – 30:1 (0 cubicles) - Girls – 20:1 (4cubicles) Taps Ratio (students: tap) - Students – 60:1 (8 taps) **Please note: Above number of cubicles and taps are respective of 2024 enrolment numbers. Due to variation of ratio with student population in FNBC, the initial ratio is referred ONLY for reporting.** - Menstrual Hygiene to be present in every female washroom block	- The girls toilet ratio exceeded the FNBC requirement indicating not enough toilet cubicles are in the school. Given the roll of girls, a total of 4 extra cubicles is required - The tap ratio was below the FNBC requirement indicating extra taps are in the school. - school require maintenance of rusting pipes and algae buildup in WASH facilities.
Disaster Resilience Assessment	- columns, beams, slabs had hairline cracks. - All roof had truss roof frames. - The windows only have burglar shutters at some sections. - roofing nails show rusting.	Fiji Building Code 1990. Requirement is that roof cladding be free of rust and fastened securely with type 17 cyclonic screws with neoprene washers. Additionally, cyclone brackets to be fixed on every window frame.	- Rusting of cladding contradicts to the cyclone certification requirement requiring replacement. - Absence of cyclone brackets are not acceptable as per the cyclone certification.
Accessibility Assessment	-Handrails partially damaged in corridors. - Classrooms and labs have typical door size of 0.8 – 0.9m width. - Stairway – average 0.9m width.	**The following are requirements from Fiji Disabled People's Federation Access Audit Tool** - Ramps – required wherever elevation with minimum 1:8 maximum 1:20 - Walkway clearance - minimum 1.8m. - Handrails to be 0.76m to 0.9m. - Doors and Door size – minimum 0.9m. - Clearance required of 1.2m and tread width of minimum 310mm. (National Building Code Table D2.1)	The following facilities are missing. - Ramps and elevators for vertical access - Wide doorways and clear pathways - Proper signage - Wheelchair-accessible restrooms - Grab bars - Proper signage - Inclusive seating areas and pathways - Proper lighting - Contrasting floor materials

7) RECOMMENDATIONS

- In order to comply with the FNBC, the school will require the following:
  - Classrooms: An additional 6 new classrooms for students in years 7-8. This expansion aims to accommodate the growing number of students and provide them with an enhanced learning environment.
  - Block 3 has to be demolished and reconstructed.
- WASH Facilities: An additional 4 cubicles for girls are required, equipped with up-to-date WASH facilities (handbasins), catering particularly to the needs of female students. These new facilities are essential to ensure hygiene and comfort. Additionally, some consideration could also be given to the boys' toilet cubicles as the ratio is in par with the FNBC ratio. The exact number could be discussed upon further analysis.

Weekly routine maintenance work and daily cleanup directive from MOE is also a critical component of the plan which includes:

- Roof repairs due to rusting of cladding, roofing nails, gutter and gutter straps.
- Plumbing fixes due to algae buildup.
- New paint application on rails and walls

These maintenance activities are designed to address existing wear and tear and to ensure that the school buildings remain in good condition. It is recommended that maintenance be carried out at regular intervals, ideally every 12 months, to prevent deterioration and to maintain a safe and functional environment.

- Accessibility: Prioritize building accessibility features, such as ramps and handrails, to ensure compliance with standards. These features are vital for providing all students, including those with disabilities, with equal access to the school's facilities.

8) COMPLIANCE

Upon inspecting Dudley Intermediate School, the following conclusions were drawn:

- **MEHA Compliance:** Compliant
- **WASH Facilities:** The school has ample taps. Additional 4 girls toilet cubicles required to comply with FNBC 1990.
- **Land Availability:** There is sufficient land for additional blocks.
- **NFA Compliance:** Compliant with NFA basic guidelines but does not have NFA certification.
- **WAF Compliance:** Adequate water supply, but no backup system for water cuts.
- **FNBC Compliance:** The school is not fully compliant with the occupancy requirements as well as the category 5 cyclone standards based on the windows and roofing requirements.
- **NDMO Compliance**: Targeting NFA and NBC compliance for safety.
- **EFL Compliance:** Assumed to be compliant with EFL standards.
- **DISABILITY Accessibility:** non-compliant

9) APPENDIX

Appendix A - Site Inspection Report

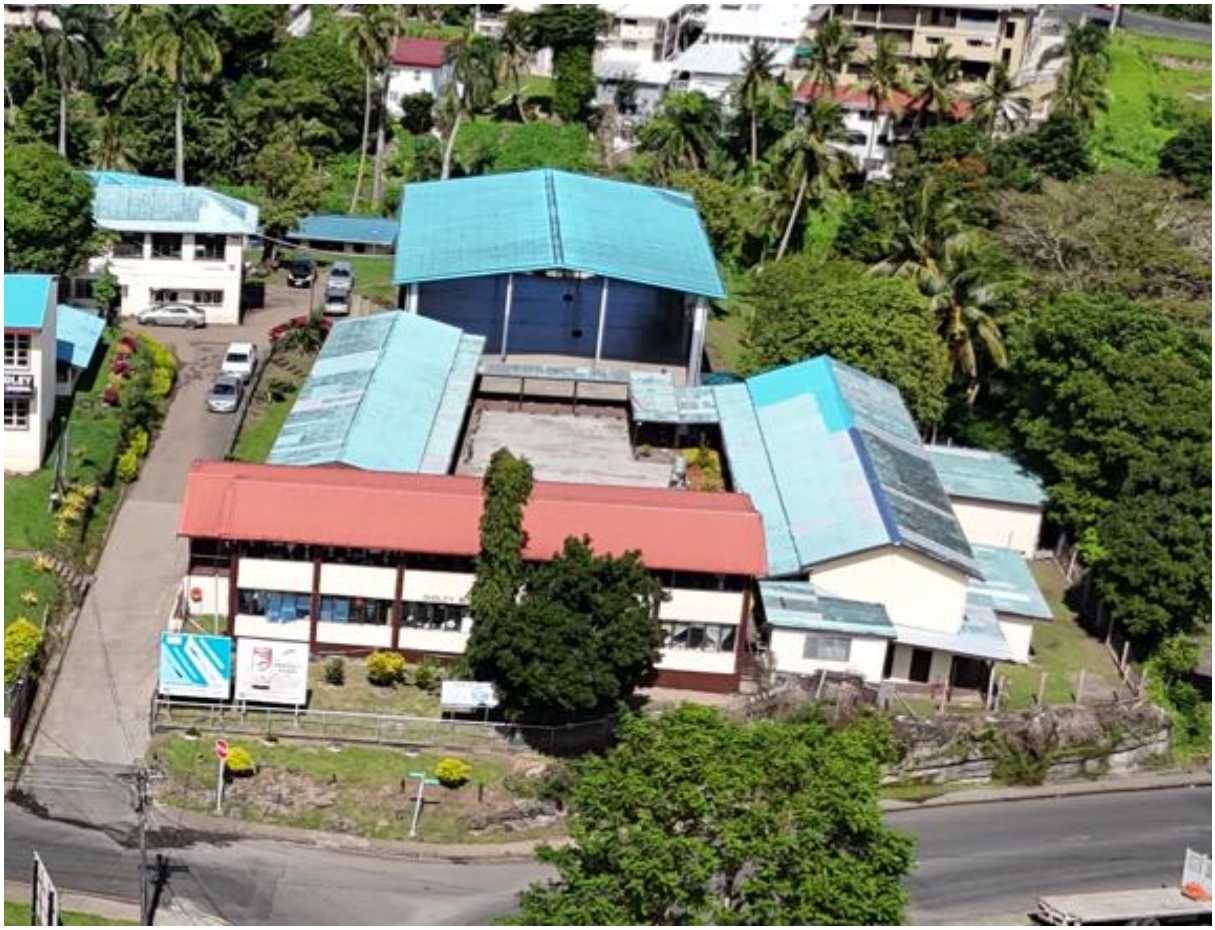
Appendix B – Excel Scoring Sheet

Appendix C – Land Available for Expansion

Appendix A - Site Inspection Report

INFRASTRUCTURE ASSESSMENT AUDIT FOR SUVA – NAUSORI URBAN SCHOOL

DUDLEY INTERMEDIATE SCHOOL (2342) SITE INSPECTION REPORT



CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS

NRWM	NRW Macallan (Fiji) Pte Ltd
MOE	Ministry of Education
TT	Tetra Tech International Development Pty Ltd
DFAT	Department of Foreign Affairs and Trade (Australia)
FEG	Free Education Grant
OHS	Occupational Health and
NFA	National Fire Authority
WAF	Water Authority of Fiji
NBC	National Building Code
NDMO	National Disaster Management Office
EFL	Energy Fiji Limited

1) SCHOOL BACKGROUND

The old baka (banyan) tree at Delai Turaki stands as the lasting testament of it's founding mother. Under the shade of the enormous landmark of Toorak in Suva, Methodist missionary Hannah Dudley conducted classes in Hindi and Urdu for the poor and the neglected members of the Indian Community. Miss Dudley arrived in Fiji from Australia on August 24, 1897 and began a mission which would last 13 years, most in what was regarded at the time as the Indian quarter in Suva. From Toorak her work reached out towards Nausori as she taught the young and administered to the sick.

Her love for and dedication towards this community stemmed perhaps from the fact that she was forced to quit India after six years of mission work due to ill health. Despite several attempts to return to the mission field on the sub – continent Miss Dudley was refused permission by the British Methodist Missionary Society. Upon hearing that was a need for missionaries to the Indian community in Fiji, she leapt at the opportunity. This missionary had a few educational qualifications but what Miss Dudley had lacked in knowledge she made up for kindness and self-sacrifice.

In such high regard was she held that the Indian community in Suva including the non-Methodist referred to her as Maharaji Mataji (Our Honoured mother). Her work with the Indian community did not end with education and preaching the Gospel. Miss Dudley took in five children whom she reared as her own, one of them rising to become the President of the New Zealand Methodist conference in 1956. The Methodist Church named Dudley High School – initially a school for young Indian women – in Honor of this dedicated missionary.

After extending its hostel intake to rural indigenous girls and opened its doors to boys in 1964, it stands today at the corner of Amy, Holland and Eden Street in Toorak as a proud symbol of a diverse, multiracial, multicultural educational institution. When the roots of the old tree started to threaten the existence of the school, a proposal to bring it down was vigorously challenged. All efforts that were made to bring it down failed and this old tree still stands till today. And it was under this tree that the nurturing of doctors, scientists, lawyers, teachers, engineers, economist, journalist, business people, sports stars and many other professions were held.

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Table 1: SCHOOL DETAILS

NAME OF SCHOOL	DUDLEY INTERMEDIATE SCHOOL
SCHOOL REGISTRATION NUMBER	2342
SCHOOL LOCATION	16 EDEN STREET TOORAK
SCHOOL TYPE	PRIMARY
FEEDER SCHOOL	SUVA METHODIST PRIMARY SCHOOL
DATE OF INSPECTION	1ST JULY 2024 & 21ST AUGUST 2024
MILESTONE	26/ 86 SCHOOLS
INSPECTED BY (TEAM 4)	RAJIV KUMAR (RK)
	FREDDY TURAQA (FT)
	ALEKSIO MANOA (AM)
	LAITE TELAWA (LT)

Table 2: SCHOOL ENROLMENT FIGURES

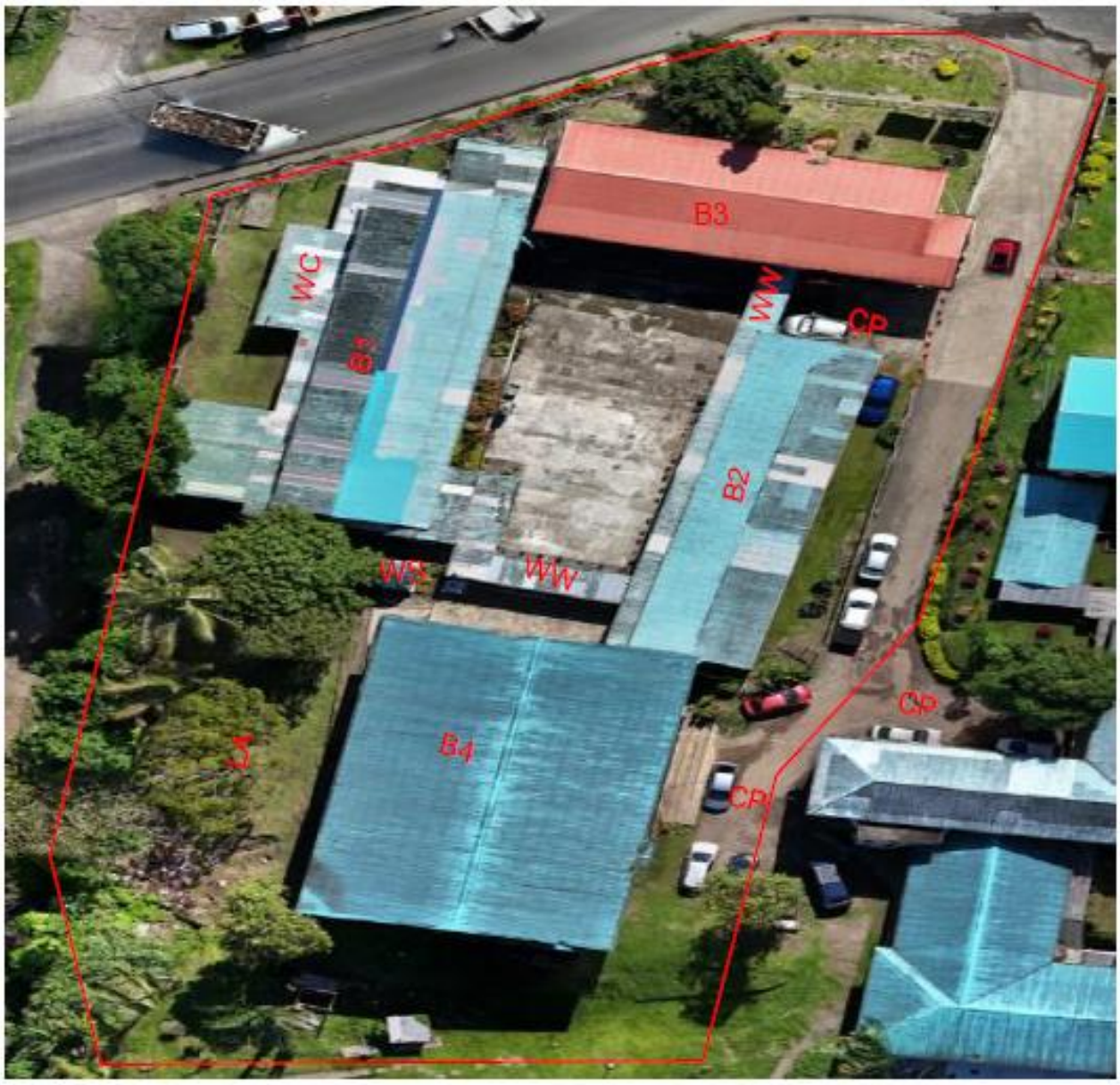
Year of Enrolment	Number of Students			Students with Disability	Number of Teachers			Comments
	Male	Female	Total		Male	Female	Total	
2024	244	235	**479**	0	6	6	12	• 12 classrooms • Student to stream is 479 roll / 12 classrooms = 40 :1 for 2024 school calendar • Total taps count = 12 - WASH ratio (Taps) = 40:1 < 60:1 • WASH ratio (Toilets) - total boys toilet cubicle count = 10 - Male = 25:1 > 30:1 - total girls toilet cubicle count = 8 - Female = 30:1 > 20:1 EVACUATION CENTRE = NO RECORD
2023	237	237	**474**	0	6	6	12	
2022	219	223	**442**	0	6	6	12	
2021	216	200	**416**	0	6	6	12	
2020	240	207	**447**	0	6	6	12	
2019	233	224	**457**	0	6	6	12	

Table 3: 2024 CLASSROOM ENROLLMENT DETAILS

GRADE	CLASS NUMBER	TOTAL STUDENT ROLL	NUMBER OF TEACHERS	DIMENSIONS (m)		ACCESS WAY COUNT		OVERCROWDING
				LENGTH	WIDTH	NO. OF DOORS	NO. OF WINDOWS	
Year 7	701	41	1	6.6	6.7	1	10	☒YES ☐NO
	702	41	1	7	6.6	1	13	☒YES ☐NO
	703	40	1	7.2	6.1	1	14	☒YES ☐NO
	704	40	1	7.3	6.1	1	13	☒YES ☐NO
	705	39	1	7.3	6.1	2	16	☒YES ☐NO
	706	38	1	7.3	6.1	1	14	☒YES ☐NO
Year 8	801	41	1	7.3	6.4	1	18	☒YES ☐NO
	802	41	1	7.4	6.4	1	18	☒YES ☐NO
	803	39	1	7.4	6.4	1	18	☒YES ☐NO
	804	39	1	7.4	6.4	1	18	☒YES ☐NO
	805	40	1	7.4	6.4	1	18	☒YES ☐NO
	806	40	1	7.4	6.4	1	18	☒YES ☐NO

2) SCHOOL SITE PLAN (DRONE IMAGERY OF SCHOOL)

AERIAL VIEW



LEGEND

B#	BUIDLINGS	DR#	PONDS/CREEKS/DRAINAGE
PG#	PLAYGROUND	H#	HOSTELS
WC#	TOILETS	ST#	STAFF QUARTERS
T#	TAP / WASH AREA	F#	DINING/FOOD AREA
WS#	WATER STORAGE FACILITY	EFL#	EFL POSTS/ JUNCTION BOX
SEP#	SEPTIC TANK	CP	CAR PARK
LA#	LAND AVAILABILITY	WW#	WALKWAY

3) VISUAL INSPECTION RESULTS

a) EXISTING BUILDING INFORMATION

Table 4: Existing Building Information for Building 1

Building Index	**BLOCK 1**		**Year built: - 1964 & 2015 (Age: 60 & 9)**
Type:	**MENTION THE CONTENTS OF EACH LEVEL. EXAMPLE:** ➢ **Basement – Girls Toilet, Boys Toilet, Store Room, YR702, Library & Wash Facilities** ➢ **1s Floor – Main Office, Admin Block, YR701, Staff Room, Canteen**		**No. of Levels: 2**
Dimensions	**Length (m):33**	**Width (m): 17 and 9.5m – Variable**	**Height (m): 6**

Existing State of Building

REF. No.	Building Component	Good [1]	Fair[2]	Poor[3]	Structure Type [4]	Comments	
1	Roof Lining	✓			Matel Cladding	Roof needs a paint job	
2	Roof Structure	✓			Timber Frame	Connection Concealed	
3	Walls	✓			Concrete & Timber	No Sign of Cracks. Paint Finish	
4	Columns	✓			Concrete	No Sign of Cracks. Paint Finish	
5	Beams	✓			Concrete	No Sign of Cracks. Paint Finish	
6	Floor	✓			Concrete	No Sign of Cracks. Paint Finish	
7	Handrails	✓			Metal pipes	Safe height, need painting	
8	Walkway(s)	✓			Concrete	1.8m walkway and 2 stairs linking Basement	
9	Services – water supply	✓				Connected to WAF Grid with Back up Water Tanks	
10	Available taps for general use	✓				13 of taps	Student – tap ratio = 40: 1
11	Services – electricity	✓				Connected to EFL grid	
12	Services – communication	✓				Internet limited to Computer Labs; Adequate PA system installed. Safety signs displayed	
13	Drainage	✓				All Drainage directed to SCC Drains	

Block 1 is constructed out of concrete beams and column with slab on ground and suspended floor slab for 1st, floor.

Block walls for external load bearing for basement and for 1st floor it is weather board on timber framed studs and noggings.

Partition walls are split in to 2 types, it is either concrete or timber framed.

Doors and windows present on length wise of the structure.

Gable roof with metal cladding, old building with timber framed.

Staircase present at both ends of the building. The steps are 130mm rise and 270mm run.

Ventilation is satisfactory with adequate lighting.

Irrespective of old structure, classrooms are well maintained.

Block 01 is not a disable friendly, all office, classrooms, entry and exit points has floor split levels.

There is a presence of fire extinguishers but require replacement and commissioning.

[1] Good - No additional works / intervention required
[2] Fair - Remedial works required – min CAT 3 standard
[3] Poor - Demolition and replace with new - min CAT 4 standard
[4] Type of structure - Timber/concrete/steel

Block 1 – Basement level contains; Female Teachers Toilet – 1.5m x 2m, Male Teachers Toilet – 1.5m x 2m, Boys Toilet – 10.2m x 2.4m, Girls Toilet – 8.4m x 2.8m, Workshop – 7.5m x 4.4m, Storage Room – 3m x 4.4m, YR702 – 7m x 6.6m, Library – 7.4m x 6m.

Block 1 – 1st Floor contains; Main Office – 8.7m x 3.7m, Admin Office – 5.6m x 6.7m, Computer Room – 6.7m x 6.7m, YR701 – 6.6m x 6.7m, Staff Room – 6.7m x 6.7m, Canteen – 4.5m x 3.5m.

Block 1 is joined with block 2 and Block 3 through Walk way.

Classrooms has fan and adequate exterior and interior electricity lighting. All switches are working

Table 5: EXISTING BUILDING INFORMATION FOR BUILDING 2

Building Index	BLOCK 2				Year built: - 1964 (Age: 60)	
Type:	MENTION THE CONTENTS OF EACH LEVEL. EXAMPLE: ➢ Single Floor: Classroom					No. of Levels: 2
Dimensions	Length(m):29		Width (m): 7.5		Height (m): 3	
Existing State of Building						
REF. No.	Building Component	Good [5]	Fair[6]	Poor[7]	Structure Type [8]	Comments
1	Roof Lining	✓			Matel Cladding	Roof needs a paint job
2	Roof Structure	✓			Timber Frame	Connection Concealed
3	Walls	✓			Timber	Structure Wearing out
4	Columns	✓			Timer	Timber Studs
5	Beams	✓			Timber	Enclosed
6	Floor	✓			Timber	Wearing out
7	Handrails	✓			NA	
8	Walkway(s)	✓			Concrete	1.8m walkway
9	Services – water supply	✓				Connected to WAF Grid with Back up Water Tanks
10	Available taps for general use	✓				
11	Services – electricity	✓				Connected to EFL grid
12	Services – communication	✓				Internet limited to Computer Labs; Adequate PA system installed. Safety signs displayed
13	Drainage	✓				All Drainage directed to SCC drains

Block 2 is constructed out of timber. Doors and windows present on length wise of the structure. Gable roof with metal cladding and timber framed roof members. Ventilation is satisfactory with adequate lighting. The building is very old, however management has managed to maintain up keep of building.

Block 02 is not a disable friendly, classrooms, entry and exit points has floor split levels.

There is a presence of fire extinguishers and fire hose reels, but require immediate maintenance and commissioning.

Block 2 – Contains; YR703 – 7.2m x 6.1m, YR704 – 7.3m x 6.1m, YR705 – 7.3m x 6.1m, YR706 – 7.3m x 6.1m.

Block 2 is joined with block 1, 2 & 3 through Walk way

Classrooms has fan and adequate exterior and interior electricity lighting. All switches are working

[5] Good - No additional works / intervention required
[6] Fair - Remedial works required – min CAT 3 standard
[7] Poor - Demolition and replace with new - min CAT 4 standard
[8] Type of structure - Timber/concrete/steel

Table 6: EXISTING BUILDING INFORMATION FOR BUILDING 3

Building Index	B 3				Year built: - 2003 (21years)	
Type:	MENTION THE CONTENTS OF EACH LEVEL. EXAMPLE: ➢ Ground floor: Classroom ➢ 1st floor: Classroom					No. of Levels: 2
Dimensions	Length(m):26		Width (m): 9		Height (m): 5.5	
Existing State of Building						
REF. No.	Building Component	Good [9]	Fair[10]	Poor [11]	Structure Type [12]	Comments
1	Roof Lining	✓			Matel Cladding	Roof needs a paint job
2	Roof Structure	✓			Timber Frame	Connection Concealed
3	Walls	✓			Concrete	No Sign of Cracks. Paint Finish
4	Columns	✓			Concrete	No Sign of Cracks. Paint Finish
5	Beams	✓			Concrete	No Sign of Cracks. Paint Finish
6	Floor	✓			Concrete	No Sign of Cracks. Paint Finish
7	Handrails	✓			Metal pipes	Safe height, need painting
8	Walkway(s)	✓			Concrete	2m walkway and 1 stairs
9	Services – water supply	✓				Connected to WAF Grid with Back up Water Tanks
10	Available taps for general use	✓				- -
11	Services – electricity	✓				Connected to EFL grid
12	Services – communication	✓				Internet limited to Computer Labs; Adequate PA system installed. Safety signs displayed
13	Drainage	✓				All Drainage directed to SCC Drainage Network

Block 3 is constructed out of concrete beams and column with slab on ground and suspended floor slab for 1sty floor. Block walls for external load bearing. Partition walls are split in to 2 types, it is either concrete or timber framed. Doors and windows present on length wise of the structure. Gable roof with metal cladding and timber framed roof members. Ventilation is satisfactory with adequate lighting. Classrooms are well maintained.

Block 3 is not a disable friendly, all classrooms, entry and exit points has floor split levels.

There is a presence of fire extinguishers and fire hose reels, but require immediate maintenance and commissioning.

Block 3 – Ground floor level contains; YR801 – 7.3m x 6.4m, YR802 – 7.4m x 6.4m, YR803 – 7.4m x 6.4m.

Block 3 – 1st level contains; YR804 – 7.4m x 6.4m, YR805 – 7.4m x 6.4m, YR806 – 7.4m x 6.4m.

Block 3 is connected to Block 1 and 3 through Walkway

Classrooms has fan and adequate exterior and interior electricity lighting. All switches are working.

[9] Good - No additional works / intervention required
[10] Fair - Remedial works required – min CAT 3 standard
[11] Poor - Demolition and replace with new - min CAT 4 standard
[12] Type of structure - Timber/concrete/steel

Table 7: EXISTING BUILDING INFORMATION FOR BUILDING 4

Building Index	**B 4**				**Year built: - 2003 (21years)**	
Type:	**MENTION THE CONTENTS OF EACH LEVEL. EXAMPLE:** ➢ **Hall**					**No. of Levels: 1**
Dimensions	**Length(m):26.8**	**Width (m): 18**			**Height (m): 6.5**	
Existing State of Building						
REF. No.	**Building Component**	**Good** [13]	**Fair**[14]	**Poor** [15]	**Structure Type** [16]	**Comments**
1	Roof Lining	✓			Matel Cladding	Roof needs a paint job
2	Roof Structure	✓			Steel framed	H-Rafter, PFC, Lateral Ties
3	Walls	✓			NA	Open
4	Columns	✓			Steel	H beam
5	Beams	✓			Steel	
6	Floor	✓			Concrete	No Sign of Cracks
7	Handrails					
8	Walkway(s)					
9	Services – water supply					
10	Available taps for general use				-	-
11	Services – electricity	✓				Connected to EFL grid
12	Services – communication					
13	Drainage	✓				All Drainage directed to SCC Drainage Network
Block 4 is is a Steel Framed Portal Structure, with lateral ties at the ends, equal angle bracings every 3rd purlin.						

[13] Good - No additional works / intervention required
[14] Fair - Remedial works required – min CAT 3 standard
[15] Poor - Demolition and replace with new - min CAT 4 standard
[16] Type of structure - Timber/concrete/steel

b) EXISTING BUILDING AND TOILET BLOCKS ACCESS INFORMATION FOR DISABILITY AUDITS

Table 8: EXISTING BUILDING AND TOILET BLOCKS ACCESS INFORMATION FOR DISABILITY AUDITS FOR BLOCK 1

Building Index	**BLOCK 1**		**Year built: - 1964 & 2015 (Age: 60 & 9)**
Type:	**MENTION THE CONTENTS OF EACH LEVEL. EXAMPLE:** ➢ **Basement – Girls Toilet, Boys Toilet, Store Room, YR702, Library & Wash Facilities** ➢ **1s Floor – Main Office, Admin Block, YR701, Staff Room, Canteen**		**No. of Levels: 2**
Dimensions	**Length (m):33**	**Width (m): 17 and 9.5m – Variable**	**Height (m): 6**

Existing State of Building

REF. No.	Building Component	Good [17]	Fair[18]	Poor[19]	Structure Type [20]	Dimensions (m)	Comments
1	Ramps			✓	N/A	N/A	No ramps on site
2	Walkway clearance space	✓			Concrete	1.1 – 2	Accessible for wheelchair user
3	Handrails		✓		Steel	0.9	Paint peel and minor rusting.
4	Doors and Door Size (typical)		✓		Timber	0.8 0.6 – 0.9	Interior Door Exterior Door
5	Stairway		✓		Concrete	0.9	Not accessible for wheelchair users

Comments

Ramps

- Absence of ramps throughout the building.

Handrails

- Partially damaged/denting requiring intervention.

Doors and Door Size (typical)

- Not accommodating to wheelchair users who require a minimum of 1m clearance.

Stairway

- No accessible to disable students. Clearance required of 1.2m and tread width of minimum 310mm. (National Building Code Table D2.1)

[17] Good - No additional works / intervention required
[18] Fair - Remedial works required – min CAT 3 standard
[19] Poor - Demolition and replace with new - min CAT 4 standard
[20] Type of structure - Timber/concrete/steel

Table 9: EXISTING BUILDING AND TOILET BLOCKS ACCESS INFORMATION FOR DISABILITY AUDITS FOR BLOCK 2

Building Index	**BLOCK 2**		**Year built: - 1960 & 2015 (Age: 64 & 9)**
Type:	**MENTION THE CONTENTS OF EACH LEVEL. EXAMPLE:** ➢ **Single Floor: Classroom**		**No. of Levels: 2**
Dimensions	**Length(m):29**	**Width (m): 7.5**	**Height (m): 3**

Existing State of Building

REF. No.	Building Component	Good [21]	Fair[22]	Poor[23]	Structure Type [24]	Dimensions (m)	Comments
1	Ramps			✓	N/A	N/A	No ramps on site
2	Walkway clearance space	✓			Concrete	1.1 – 2	Accessible for wheelchair user
3	Handrails		✓		Steel	0.9	Paint peel and minor rusting.
4	Doors and Door Size (typical)		✓		Timber	0.8 0.6 – 0.9	Interior Door Exterior Door
5	Stairway		✓		Concrete	0.9	Not accessible for wheelchair users

Comments

Ramps

- Absence of ramps throughout the building.

Handrails

- Partially damaged/denting requiring intervention.

Doors and Door Size (typical)

- Not accommodating to wheelchair users who require a minimum of 1m clearance.

Stairway

- No accessible to disable students. Clearance required of 1.2m and tread width of minimum 310mm. (National Building Code Table D2.1)

[21] Good - No additional works / intervention required
[22] Fair - Remedial works required – min CAT 3 standard
[23] Poor - Demolition and replace with new - min CAT 4 standard
[24] Type of structure - Timber/concrete/steel

Table 10: EXISTING BUILDING AND TOILET BLOCKS ACCESS INFORMATION FOR DISABILITY AUDITS FOR BLOCK 3

Building Index	**BLOCK 3**		**Year built: - 1960 (Age: 64)**
Type:	**MENTION THE CONTENTS OF EACH LEVEL. EXAMPLE:** ➢ **Ground floor: Classroom** ➢ **1st floor: Classroom**		**No. of Levels: 2**
Dimensions	**Length(m):26**	**Width (m): 9**	**Height (m): 5.5**

Existing State of Building

REF. No.	Building Component	Good [25]	Fair[26]	Poor[27]	Structure Type [28]	Dimensions (m)	Comments
1	Ramps			✓	N/A	N/A	No ramps on site
2	Walkway clearance space	✓			Timber	1.1 – 2	Accessible for wheelchair user
3	Handrails						Paint peel and minor rusting.
4	Doors and Door Size (typical)		✓		Timber	0.8 0.6 – 0.9	Interior Door Exterior Door
5	Stairway						Not accessible for wheelchair users

Comments

Ramps

- Absence of ramps throughout the building.

Handrails

- Not present

Doors and Door Size (typical)

- Not accommodating to wheelchair users who require a minimum of 1m clearance.

Stairway

- Not applicable

[25] Good - No additional works / intervention required
[26] Fair - Remedial works required – min CAT 3 standard
[27] Poor - Demolition and replace with new - min CAT 4 standard
[28] Type of structure - Timber/concrete/steel

Table 11: EXISTING BUILDING AND TOILET BLOCKS ACCESS INFORMATION FOR DISABILITY AUDITS FOR BLOCK 4

Building Index	**BLOCK 4**		**Year built: - 1960 (64years)**
Type:	**MENTION THE CONTENTS OF EACH LEVEL. EXAMPLE:** ➢ **Hall**		**No. of Levels: 1**
Dimensions	**Length(m):26.8**	**Width (m): 18**	**Height (m): 6.5**

Existing State of Building

REF. No.	Building Component	Good [29]	Fair[30]	Poor[31]	Structure Type [32]	Dimensions (m)	Comments
1	Ramps				N/A	N/A	No ramps on site
2	Walkway clearance space	✓			Concrete	1.1 – 2	Accessible for wheelchair user
3	Handrails						Paint peel and minor rusting.
4	Doors and Door Size (typical)						Interior Door Exterior Door
5	Stairway						Not accessible for wheelchair users

Comments

Ramps

- Absence of ramps throughout the building.

Handrails

- Not Present

Doors and Door Size (typical)

- Not accommodating to wheelchair users who require a minimum of 1m clearance.

Stairway

- Not applicable

[29] Good - No additional works / intervention required
[30] Fair - Remedial works required – min CAT 3 standard
[31] Poor - Demolition and replace with new - min CAT 4 standard
[32] Type of structure - Timber/concrete/steel

c) TOILET BLOCKS (BOYS and GIRLS)

Table 12: TOILET BLOCKS (BOYS & GIRLS) AT BUILDING 1

Building Index	**BLOCK 1**							
Type:	**Basement:** • **Boys Toilet (10 Toilets, 1 Urinal Bowels, 3 Shower) – 10.2m x 2.4m.** • **Girls Toilet (8 Toilet, 2 Shower, 2 Hand Basin) – 8.4m x 2.8m.** • **Female Staff Toilet (1 Toilet, 1 Hand Basin) – 1.5m x 2m.** • **Male Staff Toilet (1 Toilet, 1 Hand Basin) – 1.5m x 2m.**						**No. of Levels: 1**	
Dimensions	**Length (m): Specified Above**		**Width (m): Specified Above**				**Height (m): Specified Above**	
Existing State of Building								
REF. No.	**Building Component**	**Good[33]**	**Fair[34]**	**Poor[35]**	**Structure Type [36]**	**Count [37]**	**Comments**	
1	Toilet Bays – male		✓			10	With 1 urinal channels	
2	Toilet Bays – female					8		
3	Toilet Partition between boys and girls.		✓				Concrete	
4	Shower bay		✓			5	Combined	
5	Toilet Bays – accessible		✓				Not disable friendly	
6	Entry to toilet building		✓				1 door	
7	Exit to toilet building		✓				1 door	
8	Menstrual Hygiene facilities						Present	
9	Students to **WASH** ratio	Toilet taps: 12		Male	0	Female	2	
Each student water closet cubicles measured to be 1.6m long and width of 1m. all water closet are operational, shall there be any damages or mis-function, handyman of the school is tasked to execute repairs. All cubicles have swing doors on hinges. Whole floor provided with tiles. 6 taps are outside Boys Toilet.								

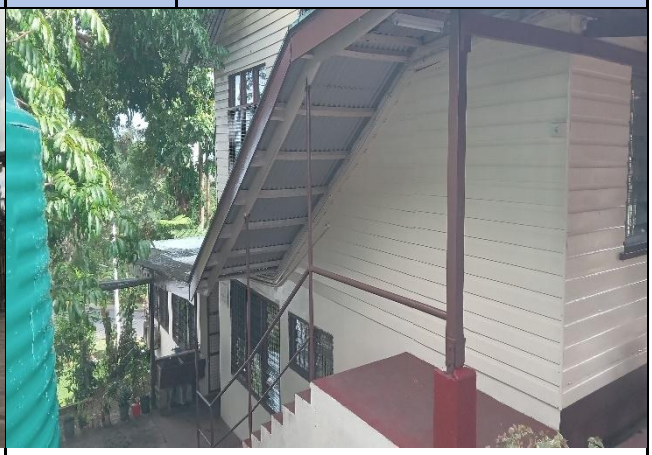
[33] Good - No additional works / intervention required
[34] Fair - Remedial works required – min CAT 3 standard
[35] Poor - Demolition and replace with new - min CAT 4 standard
[36] Type of structure - Timber/concrete/steel
[37] Count - Used for identifying number of toilet bays and menstrual hygiene facilities

4) PHOTOGRAPHIC REPORT

Figure 1: PHOTOGRAPHIC VIEW OF BLOCK 1

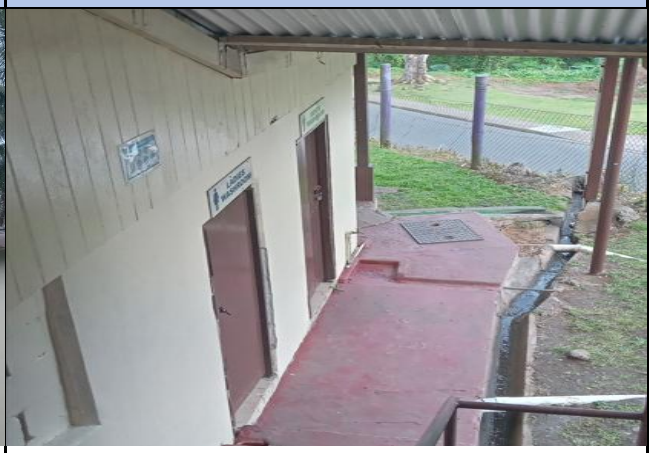
Client:	**TETRA TECH INTERNATIONAL DEVELOPMENT (PTY) LTD**	**School Name:**	**DUDLEY INTERMEDIATE SCHOOL**
Project:	**INFRASTRUCTURE PLAN FOR SUVA – NAUSORI URBAN SCHOOL.**	**Building Index:**	**B1**

PHOTOGRAPH No. 1: FRONT

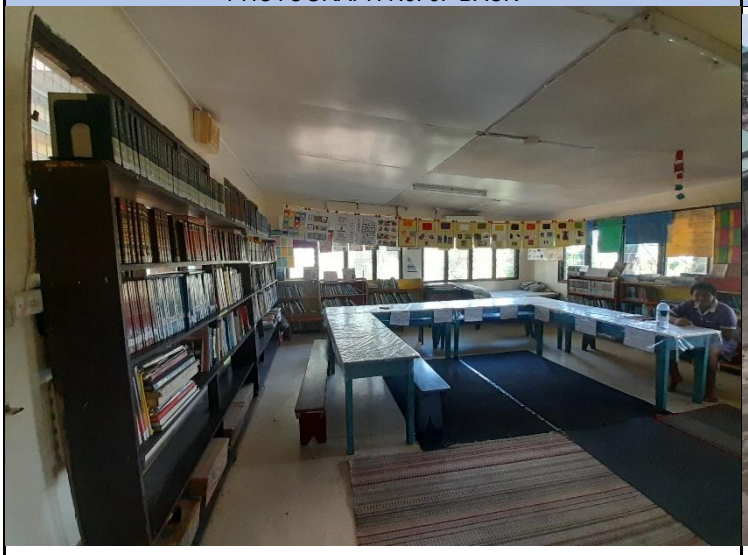


PHOTOGRAPH No. 2: LEFT SIDE

PHOTOGRAPH No. 3: BACK



PHOTOGRAPH No. 4: RIGHT SIDE



PHOTOGRAPH No. 5: LIBRARY (INTERIOR)

PHOTOGRAPH No. 6: ROOF

Figure 2: PHOTOGRAPHIC VIEW OFTOILET AT BLOCK 1

Client:	**TETRA TECH INTERNATIONAL DEVELOPMENT (PTY) LTD**	**School Name:**	**DUDLEY INTERMEDIATE SCHOOL**
Project:	**INFRASTRUCTURE PLAN FOR SUVA – NAUSORI URBAN SCHOOL.**	**Building Index:**	**B1**

PHOTOGRAPH No. 1: GIRLS TOILET

PHOTOGRAPH No. 2: TYPICAL STUDENT WASHROOM

PHOTOGRAPH No. 3: TYPICAL STAFF TOILET

PHOTOGRAPH No. 4: STAFF WASHROOM

PHOTOGRAPH No. 5: OUTSIDE TAP

PHOTOGRAPH No. 6: OUTSIDE TAPS

Figure 3: PHOTOGRAPHIC VIEW OF BLOCK 2

Client:	TETRA TECH INTERNATIONAL DEVELOPMENT (PTY) LTD	School Name:	DUDLEY INTERMEDIATE SCHOOL
Project:	INFRASTRUCTURE PLAN FOR SUVA – NAUSORI URBAN SCHOOL.	Building Index:	B2

PHOTOGRAPH No. 1: FRONT

PHOTOGRAPH No. 2: LEFT SIDE

PHOTOGRAPH No. 3: BACK

PHOTOGRAPH No. 4: RIGHT SIDE

PHOTOGRAPH No. 5: INTERIOR

PHOTOGRAPH No. 6: ROOF

Figure 4: PHOTOGRAPHIC VIEW OF BLOCK 3

Client:	**TETRA TECH INTERNATIONAL DEVELOPMENT (PTY) LTD**	**School Name:**	**DUDLEY INTERMEDIATE SCHOOL**
Project:	**INFRASTRUCTURE PLAN FOR SUVA – NAUSORI URBAN SCHOOL.**	**Building Index:**	**B3**

PHOTOGRAPH No. 1: FRONT

PHOTOGRAPH No. 2: LEFT SIDE

PHOTOGRAPH No. 3: BACK

PHOTOGRAPH No. 4: RIGHT SIDE

PHOTOGRAPH No. 5: INTERIOR

PHOTOGRAPH No. 6: FIRE HOSE REEL

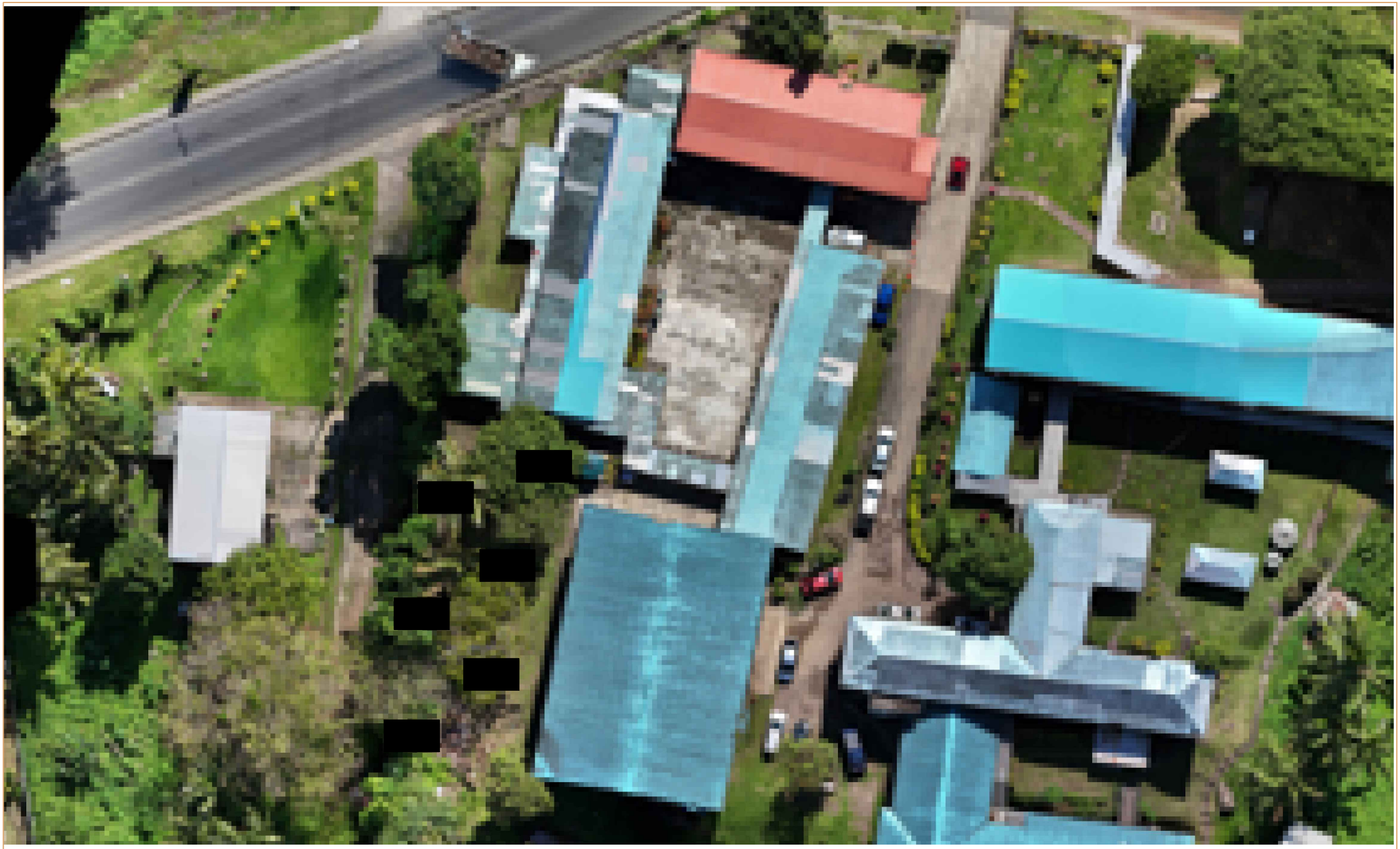
Figure 5: PHOTOGRAPHIC VIEW OF BLOCK 4

Client:	**TETRA TECH INTERNATIONAL DEVELOPMENT (PTY) LTD**	**School Name:**	**DUDLEY INTERMEDIATE SCHOOL**
Project:	**INFRASTRUCTURE PLAN FOR SUVA – NAUSORI URBAN SCHOOL.**	**Building Index:**	**B4**
			
PHOTOGRAPH No. 1:		PHOTOGRAPH No. 2:	

Appendix B – Excel Scoring Sheet

	WEIGHTED CRITERIA		
1	**PART A - CLASSROOM OVERCROWDING (40%)** **Classrooms facilitating students beyond room capacity, determined through number of students per classroom and classroom size**		
	Poor - most to all classrooms are accommodating students above capacity.	32 to 40	**40**
	Criteria Item Score		**40.0**
2	**PART B - WASH FACILITIES (20%)** **WASH- Student ratio based on the Fiji National Building Code (FNBC) Infrastructure Standards (10%)**		
	Poor - WASH-Student ratio for school toilet blocks falls below the ratio in the standard specified by FNBC.	8 to 10	**9**
2.1	**Quality of facilities and current condition such as funtionality and maintenance (10%)**		
	Poor - school toilet facilities are not maintained and the physical infrastructure cause major disturbances to end users.	8 to 10	**8**
	Criteria Item Score		**17.0**
3	**PART C - CONDITION OF INFRASTRUCTURE (20%)** **Building structure and condition of walls, floors, ceilings, overall structural integrity (10%)**		
	Poor - all building structures need remedial work to improve structural integrity and condition.	8 to 10	**8**
3.1	**Maintenance and assessment of the upkeep of facilities including painting and repairs (10%)**		
	Fair - school facilities are not maintained well and the physical infrastructure may need repairs or remedial work due to causing moderate distrubances to the end users.	6 to 7.9	**7**
	Criteria Item Score		**15.0**
4	**PART D - DISABILITY ACCESSIBILITY (10%)** **Accessibility features such as the presence of existing ramps, handrails, accessible toilets etc**		
	Poor - School buildings and facilities do not have accessibility features.	8 to 10	**10**
	Criteria Item Score		**10.0**
5	**PART E - DISASTER RESILIENCE (10%)** **Presence and quality of measures for disaster resilience of buildings including structural measures, cyclone shutters and fire safety systems**		
	Poor - most or all school building structures are not resilient to natural disasters and do not have safety systems in place.	8 to 10	**9**
	Criteria Item Score		**9.0**
	TOTAL CRITERIA SCORE		**91.0**

Appendix C – Land Available for Expansion



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SCHOOL NAME:

Dudley Intermediate School