



**CHAND ENGINEERING CONSULTANTS LTD.**

**CONSULTING ENGINEERS & PROJECT MANAGERS**

**CYCLONE WINSTON PRELIMINARY ASSESSMENT  
SCHOOLS, HEALTH FACILITIES AND PUBLIC BUILDINGS  
FOR  
FIJI INSTITUTION OF ENGINEERS &  
DEPARTMENT OF NATIONAL PLANNING  
(MINISTRY OF FINANCE)**



NAME OF FACILITY: Burievanua District School  
TYPE: Primary School  
LOCATION: Rakiraki  
DATE OF ASSESSMENT: 14 April 2016

JOB NO: 16-122  
GOVERNMENT FACILITY NUMBER: GFN-119

**RAPID ASSESSMENT TEMPLATE: CYCLONE WINSTON DAMAGED BUILDINGS  
SCHOOLS, PUBLIC BUILDINGS & HEALTH FACILITIES**

INSPECTOR: AAD  
FIRM/COMPANY: CHAND ENGINEERING CONSULTANTS LIMITED

**GENERAL INFORMATION**

Building Name: Bureivanua District School  
Type: 1 Kindergarden (15x6), 1Library (20x10), 3 to 8 Classroom (15x5),  
1 Dinning Hall (15x5) & 1 Kitchen (7x8)  
Location: Kings Highway, Rakiraki  
No. of Buildings: 9  
Ariel Plan Available: YES / NO

**REPORT**

Page No. : 1  
Building No. : as above  
Building Approx Age: Not Known  
No. of Storeys: single

**Extent of Damage Rating Description**

1	Minor/Cosmetic/Water
2	Some Damage
3	Extensive but Repairable
4	Irreparable

**Types of Buildings**

**School Block**  
**Staff Quarters**  
**Toilet Block**  
**Utility Building (FEA, Services, etc)**  
**Divisional Hospital**  
**Sub-Divisional Hospital**  
**Health Centre**  
**Nursing Station**  
**Public Building or Facility**

**EVALUATION**

Type of Construction	Description	Build Quality	Damage	Extent of Damage Rating	Photo No.
Floor	reinforced concrete slab on ground & timber	1 Good 2 Average 3 Poor	No visible damage	0	N/A
Foundations	Not Visible	1 Good 2 Average 3 Poor	No visible damage- concealed	0	N/A
Walls		1 Good 2 Average 3 Poor			1
Rafters		1 Good 2 Average 3 Poor			N/A
Purlins		1 Good 2 Average 3 Poor			N/A
Roof	corrugated roof cladding	1 Good 2 Average 3 Poor	10% of the roof damaged	2	
Electrical	typical standard switches, GPO's and fluorescent tubelights and bulbs	1 Good 2 Average 3 Poor	No damage known- FEA power not available at the time of inspection	0	N/A
Hydraulics	None	1 Good 2 Average 3 Poor	N/A	N/A	N/A
Windows/Doors	louver windows on standard carriers typically for all windows. combination of timber doors with fixed glass T&G lined doors in T&G framing.	1 Good 2 Average 3 Poor	Doors have water damage Lourves shattered	2	N/A
Shutters		1 Good 2 Average 3 Poor	No damage	0	N/A
Ceilings	Ply board ceiling typically throughout-partial collapse of ceiling due to water damage-painted	1 Good 2 Average 3 Poor	Water damage	1	N/A
Terraces/Verandah	typically concrete and timber floor	1 Good 2 Average 3 Poor	no damage		
Tiles/Floor Covering		1 Good 2 Average 3 Poor	No damage		N/A
Gutters	Standard PVC gutters with proprietary PVC straps fixed to the outside of the gutter.	1 Good 2 Average 3 Poor	At least 50% guttering	2	
Downpipes	100mm PVC downpipes with PVC straps	1 Good 2 Average 3 Poor	At least 50% down pipes damaged		
Fascia Boards	timber fascia board.	1 Good 2 Average 3 Poor	20% damage- verandah area of the		N/A
Furniture/Desks etc.	Desk	1 Good 2 Average 3 Poor			
<b>Possible Intermediate Solution</b>	Re-construct the kitchen portion in compliant to the NBCF with new roof trusses, purlins and new ceiling. Replace all broken glass panes and louver blades . New guttering, downpipes, flashings, fascia boards for all buildings.				
<b>Possible Long Term Solution</b>	1 Kindergardern from timber to Concrete as per cyclone standards- \$114,300.00 1 Library from timber to Concrete as per cyclone standards- \$254,000.00				

Damage Assessment (\$) \$80,000.00 Intermediate

Basis of Calculation Engineers Estimate-TBC (note can be QS assisted)

**FEES ESTIMATE:**

Design/Documentation: TBC

Tender/Approval: TBC

Inspection/End Construction: TBC

**RAPID ASSESSMENT TEMPLATE: CYCLONE WINSTON DAMAGED BUILDINGS  
SCHOOLS, PUBLIC BUILDINGS & HEALTH FACILITIES**

INSPECTOR: AAD  
FIRM/COMPANY: CHAND ENGINEERING CONSULTANTS LIMITED

**Extent of Damage Rating Description**

1	Minor/Cosmetic/Water
2	Some Damage
3	Extensive but Repairable
4	Irreparable

**GENERAL INFORMATION**

Building Name: Bureivanua District School  
Type: Quarters 1 (12x7), Quarters 2 (10x5), Quarters 3 (10x5), quarters 4 (10x5)  
Head Teachers Quarters (15x8)  
Location: Kings Highway, Rakiraki  
No. of Buildings: 9  
Ariel Plan Available: YES / NO

**Types of Buildings**

- School Block
- Staff Quarters
- Toilet Block
- Utility Building (FEA, Services, etc)
- Divisional Hospital
- Sub-Divisional Hospital
- Health Centre
- Nursing Station
- Public Building or Facility

**REPORT**

Page No. : 1  
Building No. : as above  
Building Approx Age: not known  
No. of Storeys: single

**EVALUATION**

Type of Construction	Description	Build Quality	Damage	Extent of Damage Rating	Photo No.
Floor	reinforced concrete slab on ground & timber	1 Good 2 Average 3 Poor	No visible damage	0	N/A
Foundations	Not Visible	1 Good 2 Average 3 Poor	No visible damage- concealed	0	N/A
Walls		1 Good 2 Average 3 Poor			1
Rafters	timber	1 Good 2 Average 3 Poor			N/A
Purlins	timber	1 Good 2 Average 3 Poor			N/A
Roof	corrugated roof cladding	1 Good 2 Average 3 Poor	10% of the roof damaged	2	
Electrical	typical standard switches, GPO's and fluorescent tubelights and bulbs	1 Good 2 Average 3 Poor	No damage known- FEA power not available at the time of inspection	0	N/A
Hydraulics	None	1 Good 2 Average 3 Poor	N/A	N/A	N/A
Windows/Doors	louver windows on standard carriers typically for all windows. combination of timber doors with fixed glass T&G lined doors in T&G framing.	1 Good 2 Average 3 Poor	Doors have water damage Lourves shattered	2	N/A
Shutters		1 Good 2 Average 3 Poor	No damage	0	N/A
Ceilings	Ply board ceiling typically throughout-partial collapse of ceiling due to water damage-painted	1 Good 2 Average 3 Poor	Water damage	1	N/A
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Tiles/Floor Covering		1 Good 2 Average 3 Poor	No damage		N/A
Gutters	Standard PVC gutters with proprietary PVC straps fixed to the outside of the gutter.	1 Good 2 Average 3 Poor	At least 50% guttering	2	
Downpipes	100mm PVC downpipes with PVC straps	1 Good 2 Average 3 Poor	At least 50% down pipes damaged		
Fascia Boards	timber fascia board.	1 Good 2 Average 3 Poor	20% damage- verandah area of the		N/A
Furniture/Desks etc.		1 Good 2 Average 3 Poor			
<b>Possible Intermediate Solution</b>	Quarters 1 Kitchen Portion Temporarily Repaired Replace all broken glass panes and louver blades . New guttering, downpipes, flashings, fascia boards for all buildings.				
<b>Possible Long Term Solution</b>	Quarters 1 from timber to Concrete- \$106,680.00 Quarters 2 from timber to Concrete- \$63,500.00 Quarters 3 from timber to Concrete- \$\$63,500.00 Head Teachers Quarters- \$152,400.00				

Damage Assessment (\$) \$70,000.00 Intermediate  
Basis of Calculation Engineers Estimate-TBC (note can be QS assisted)

**FEES ESTIMATE:**

Design/Documentation: TBC  
Tender/Approval: TBC  
Inspection/End Construction: TBC



**PHOTOS**

**Photo 1: Portion of roof damaged with ceiling**



**Photo 2: Kitchen Portion of Dining been blown away**



**Photo 3: Damaged side wall of Kindergarden**



**Photo 4: Damaged Gutters & Down pipes**



**Photo 5: Damaged Gutters**



**Photo 6: View of the Walkway with Damaged Fascia, Gutters**



**Photo7: Damaged Gutters of Quarters**

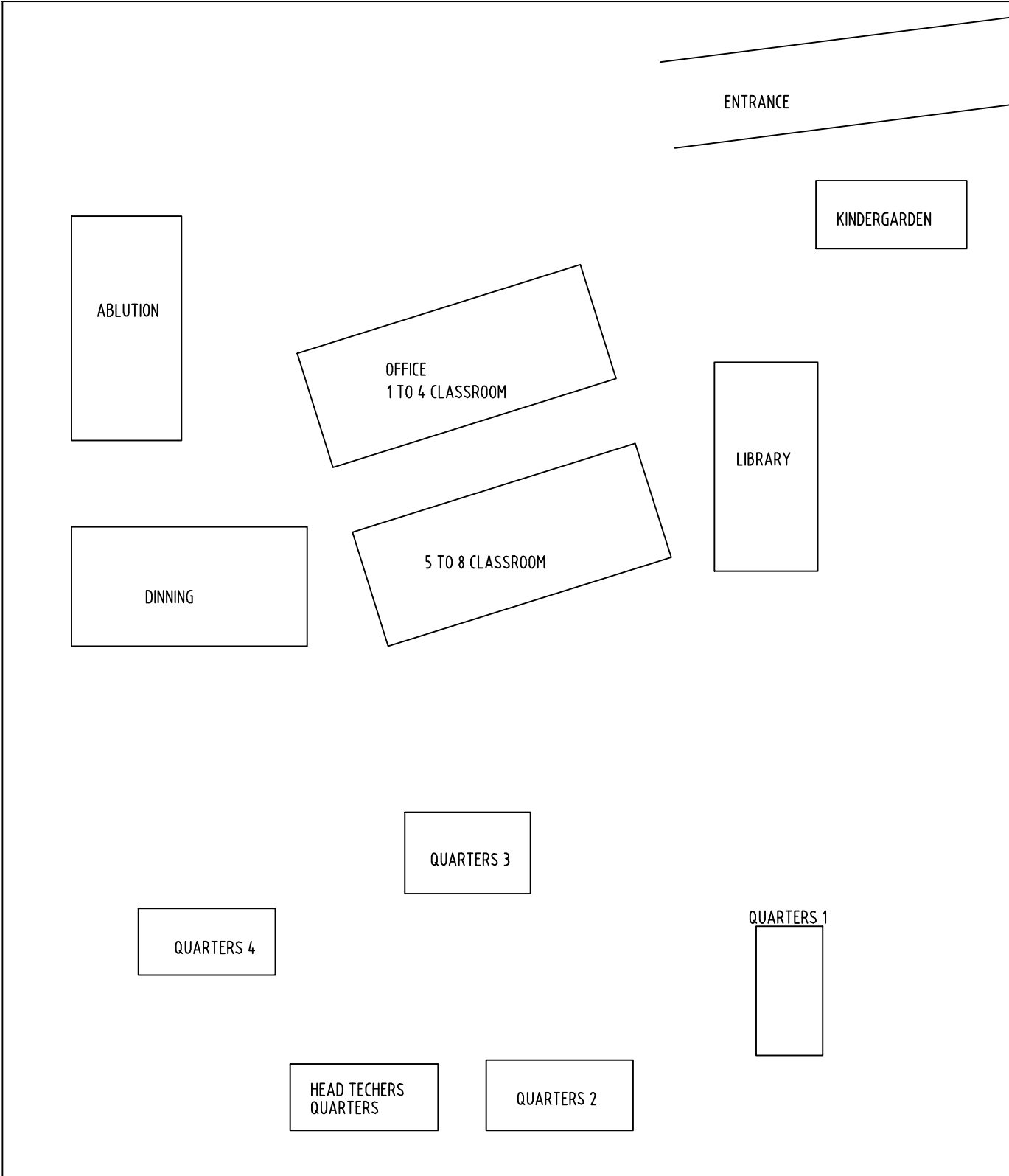


**Photo8: Damaged kitchen of Quarter 1**





THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS ON SITE PRIOR TO SETTING OUT THE WORKS AND SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY DISCREPANCIES AND/OR ERRORS. THE LOCATION OF UNDERGROUND SERVICES ARE APPROXIMATE ONLY AND THEIR EXACT POSITION SHALL BE PROVIDED BY THE CONTRACTOR.



**SITE PLAN**  
NTS

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CLIENT:  
**BUREIVANUA DISTRICT SCHOOL**

DESIGNED AAC	DESIGN CHECK	SCALE AS SHOWN
DRAFTED AAD	DRAWING NO. A01	ISSUE DATE 15/04/16
PROJECT No. 16-122	DRAWING SHEET A-01	REVISION -