

CONDITION ASSESSMENT REPORT FOR THE KZN ROWING ASSOCIATION

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REPORTS

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1 EXECUTIVE SUMMARY

1.1 General Description

The Bayhead area in the Port of Durban is a complex comprising of storage container yards, ship repair facilities, fishing and recreation, and other support services. This technical report presents the findings of a condition assessment conducted on the KZN Rowing Association building in Bayhead on September 6, 2023.

Condition assessments play a vital role in verifying that structures comply with applicable building codes, particularly in terms of their structural integrity and electrical installations. These assessments aim to identify potential structural failures caused by inadequate building maintenance and other non-controllable factors. Structural integrity ensures that a building functions optimally, withstands various structural loads (including its own weight), and remains stable, without significant deformation, brittle fractures, or collapse, while serving its intended purpose.

Regular inspections and maintenance are essential to ensure a structure operates at its optimal level. Neglecting these activities can lead to structural failure.

It is important to note that this physical inspection was conducted in the absence of as-built drawings. Consequently, all estimates and inspections were based solely on visual observations.

1.2 Property Description

The Ex-Offshore Warehousing property is located within the Bayhead precinct in the Port of Durban. The surrounding area consists of mainly logistics companies that handle containers, there are multiple container storage yards within the vicinity of the site. Figure 1 shows the aerial view of the site.



Figure 1: Locality

Property Details:

<i>Name:</i>	Ex-KZN Natal Rowing Association
<i>Description:</i>	Lease L90686 of Kings Flats 16344, Durban
<i>Address:</i>	Seafarer Road, Bayhead Precinct, Durban, 4001
<i>Purpose:</i>	Club facilities
<i>Size:</i>	1350m ²

2 INTRODUCTION

2.1 Purpose

The objective of this report is to present the findings of a condition assessment conducted at the former KZN Rowing Association property in the Bayhead Precinct on September 06, 2023. The purpose of this assessment was to evaluate the physical condition of the existing building, and electrical installation on the facility, as well as the electrical connection from the Municipality. It is important to note that the assessment was limited to a visual inspection of the structural aspect of the buildings on the property.

The results of this report aim to provide guidance to the Transnet (NPA) Property Department regarding the plans for the property. These plans may include options such as demolishing the building, upgrading the building, or repurposing it for other uses.

2.2 Scope of Investigation

The scope of the assessment was mainly focused on the structural elements of the buildings and including the electrical installations. The civil engineering team had to establish the condition of the structure and whether it is structurally sound and fit for purpose.

The main structural elements inspected consist of the following:

- Walls
- Floors
- Roof

The team was also looking for any visible sign of defects caused by natural and unnatural events such as:

- Natural disasters like lightning, hail and storm, flood, and volcanic eruption.
- Vandalism
- Fire

The electrical engineering team had to establish the condition of all electrical installations including air-conditioning units (if applicable) caused by natural and unnatural events such as:

- Natural disasters like lightning, hail and storm, flood, and volcanic eruption.
- Vandalism
- Fire

3 CONDITION ASSESSMENT FINDINGS

This section comprises of the findings from visual inspection conducted on the 6th of September 2023. It gives the structural description of the building, detailed assessment of defects and deterioration, and the survey of exposure to the aggressive marine environment. The conclusion and recommendations provided include engineering views, assessment, and judgement. Of which such conclusions and recommendations could be different, depending on the professional engineer assigned to undertake the inspections at that time.

The buildings were evaluated and rated using the TNPA Asset Maintenance Principles and Procedures (AMPP) shown in Table 1 below:

Table 1: AMPP Rating Guide

Condition				
Poor	<40%	Not safe for use	Major upgrades required	Decision required on future of asset
Satisfactory	40-59%	Safe	Some urgent work required	Use of current and planned budget
Good	60-79%	Safe	Moderate ongoing maintenance required	Plan for next cycle
Very good	80-89%	Safe	Minor maintenance required	Plan for next cycle
Excellent	90-100%	Safe	No maintenance required	No budget needed

3.1 Layout of the Property



Figure 2: Site Layout

The property comprises of a single building structure, which consists of a main open plan area and ablution facilities. The property is located at an area which where there's mainly fishing and recreational activities. The property is 30m away from the Bayhead's silt canal which is utilized by private small craft users.

3.2 The Assessment Findings

The building is constructed from masonry wall and an asbestos roof supported by timber truss. This building is separated into 2 compartments, the open plan area, and the ablutions sections.

- The building has a length of 22m and a width of 7m which makes an area of approximately 154m²
- The entire roof structure is covered by asbestos material, which is in relatively good condition, however the material will have to be replaced due to Health and Safety standards by TNPA.
- The roof has no drainage system, as well as the entire property. There's no evidence of a stormwater management system within the boundary of the property.



Figure 3: Building Exterior

- The timber roof structure visually in good condition, there were no observable defects, no sagging nor loose connections.
- Small panel gaps from the asbestos roofing were identified, which can cause water damage of the timber frames.



Figure 4: Roof Structure

- The interior walls show visibly pronounced structural cracks which could be a sign of settlement.
- The expansion joints have widened, which could be another sign of uneven settlement of the entire building.



Figure 5: Structural Cracks

- Ablution facility damaged and unusable.
- The floors are not adequately finished.
- There's no evidence of water supply within the building.

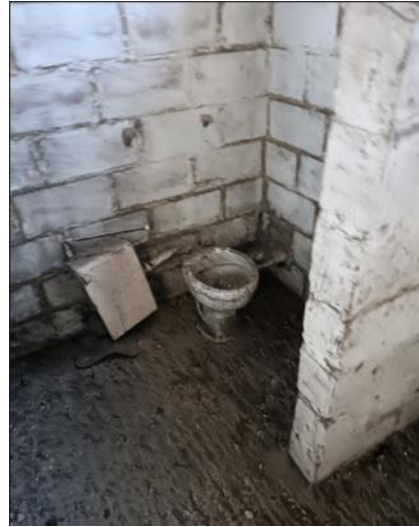


Figure 6: Ablution Facilities

Table 2: Building's Condition Rating

Structural Element	Condition Rating		Comments
	%	Safe/not safe	
Masonry walls	50%	Safe	Minor refurbishments required, pending foundation investigation
Timber truss roof structure	79%	Not Safe	Minor maintenance required
Steel roll-up door	39%	Not Safe	Needs to be replaced
Asbestos roof	39%	Safe	Needs to be replaced

4 LIMITATIONS

This was solely a visual inspection of a building structure, no load calculations or design verifications conducted. The constraints experienced include tall heights for roof inspection, lack of As-built drawings to assess the original design of the buildings.

5 FINANCIAL IMPLICATIONS

Item	Description	Unit	Qty	Rate	Amount
1	Clear and remove rubble	m ²	1000	R 18.00	R 18 000.00
2	Clear site of all bushes, grass, weeds, shrubs, trees with trunks not exceeding 200mm girth, etc., including grubbing up all roots, and cart away all vegetation and debris.	m ²	500	R 23.47	R 11 735.00
3	Supply and install IBR sheeting for roof cladding	m ²	154	R 297.02	R 45 741.08
4	Supply and install PVC rainwater gutters and downpipes	m	44	R 335.23	R 14 750.12
5	Supply and install ceiling boards	m ²	154	R 260.82	R 40 166.28
6	Supply and apply paint interior walls	m ²	300	R 159.12	R 47 736.00
7	Supply and install windowpanes	sum	1	R 2,121.60	R 2,121.60
8	Supply and install roller doors	No.	1	R 14,707.99	R 14,707.99
9	Supply and install toilets, cistern, sink and all necessary plumbing accessories	sum	1	R 2,735.80	R 2,735.80
10	Supply and apply floor coating	m ²	154	R 477.36	R 73 513.44
11	Conduct Geotechnical and Foundation analysis	sum	1		
12	Construct new drainage system within the site	sum	1	R 50,000.00	R 50,000.00
Total Estimated Costs					R 321 207.31

6 CONCLUSION

The general condition of the property is poor; however, the main buildings is still salvageable through major refurbishment. The major concern are the structural cracks observed on the walls and on expansion joints which could be an indication of uneven settlement of the building.

The structural timber members of the roof have no significant damage, however there are signs of prolonged exposure to the elements, hence the residual strength of the timber members must be assessed. The key elements of the structure (Walls, Roof, Foundation) require a further assessment by a professional engineer to establish their residual strength.

7 RECOMMENDATIONS

- a) Organize the necessary equipment (scaffolding or otherwise) for the inspection of the roof drainage system.
- b) The general drainage system on the property was not identified, hence the scope for refurbishing the property must include the establishment of a comprehensive drainage system.
- c) Refurbish the brick wall, floors, doors, and windows.
- d) Structural Assessment of the foundation of the buildings must be conducted by a Professional Service Provider.