



public works
Department:
Public Works
PROVINCE OF KWAZULU-NATAL



MECHANICAL ASSESSMENT REPORT

FOR

WIMS070196 THE REPAIRS TO THE ROOF TO THE DEPARTMENT OF TRANSPORT MLB DURBAN OFFICE BUILDING, ETHEKWINI REGION

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PREPARED: 15 March 2022

DOCUMENT CONTROL RECORD SHEET

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EXECUTIVE SUMMARY

Muteo Consulting was appointed by Department of Public Works, Kwazulu-Natal Province, to render mechanical engineering professional services, MLB Durban. The following scope of works is what the Mechanical Engineer will be rendering:

- Heating, Ventilation, Air Conditioning (HVAC),
- Fire Protection to be fire compliant,
- Internal Wet Services

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1 INTRODUCTION

KZN Public Works appointed Muteo Consulting to provide consulting engineering services for the supply, delivery, installation, testing and commissioning of mechanical works at MLB, Durban.

2 SCOPE OF WORKS

This scope covers the supply, delivery, off-loading, installation, testing, balancing, commissioning into service, training of personnel, as well as the following systems, complete with electrical wiring, instrumentation and controls and handing over of the complete Heating, Ventilation, Air Conditioning, Fire Protection and Wet Services at the MLB, Building. All work must be carried out to the complete satisfaction of the client, Architect and Consulting Engineer.

3 MECHANICAL SERVICES ASSESSED

3.1 HEATING, VENTILATION AND AIR CONDITIONING (HVAC)

The building consists of two floors which is the ground floor and the first floor.



Figure 1: MLB Building Outdoor Units



Figure 2: First Floor Boardroom aircon



Figure 3: First floor split



Figure 4: Dispatch Area Cassette and Fresh Air Diffuser Installation is Complete

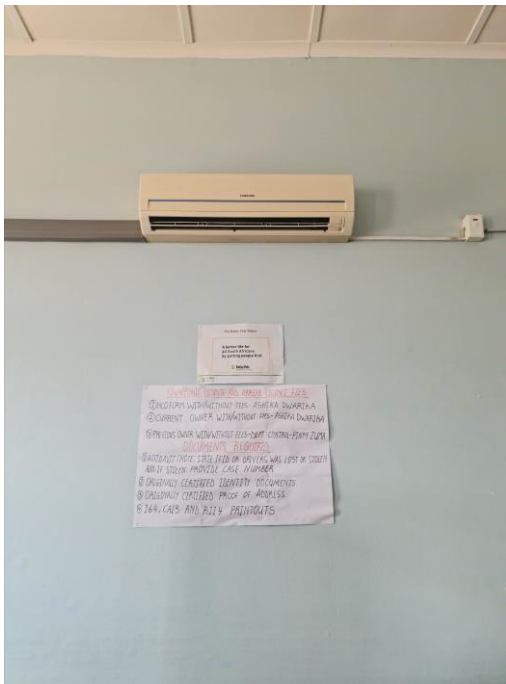


Figure 5: Staff room /office high wall split unit and fresh air supply diffuser installed



Figure 6: Room xx aircon is old and need to be replaced



Figure 7: Rooms 116 & 118 aircons are old



Figure 8: Room 114 aircon is broken and not working



Figure 9: Room 115 (115a, 115b and 115c) aircons



Figure 10: Ground floor Admin office Room 26 aircon



Figure 11:Ground floor Rooms 30, 30a and 33a aircons

3.2 FIRE PROTECTION AND SIGNAGE

The fire extinguishers and hose reels of the whole building need to be serviced.



Figure 12: Fire Extinguishers and Signage installed

3.3 WET SERVICES



Figure 13: Hot & Cold-Water pipes need to be replaced



Figure 14: Geysers 100L need maintenance



Figure 15: Drainage pipe need to be maintained (Room 35)

3.4 KITCHEN EQUIPMENTS



Figure 16: The stoves (x2) is old and not functioning



Figure 17: Hydro boil need to be replaced



Figure 18: Fridge is old and need replacement



Figure 19: Kitchen first floor microwave is old need replacement



Figure 20: Ground floor admin microwave need replacement



Figure 21: Ground floor admin hydro boil need replacement



Figure 22: Ground floor admin fridge need replacement

4 CERTIFICATE OF COMPLIANCE AND STANDARDS

- On completion of the services above, certificates of compliance will be issued to the client in terms of the Occupational Health and Safety Act, 1993 (Act 85 of 1993).
- All other certificates as per the national building standards shall be issued as such as well as per the construction contract.
- South African National Standards (SABS)
- National Fire Protection Association (NFPA)
- SANS 10400-XA
- Department of Infrastructure Development Quality Specifications (GP/M1), Rev 3
- SANS 914 and 151
- SANS 204 (2011)
- SANS 10400 (2011)

5 ESTIMATES

Table 1: Estimates

ITEM	SUMMARY OF THE TOTAL BILL	Original Amount
1	Preliminary and General	
2	HVAC First Floor	R3 274 717,00
3	Ventilation	R315 534,39
4	Fire Protection	R108 100,00
5	Wet Services	R102 308,00
	Subtotal before Contingencies	R3 800 659,39
	FINAL AMOUNT (Excluding VAT)	R3 800 659,39
	VAT @ (15%)	R570 098,91
	TOTAL (Incl VAT)	R4 370 758,30

6 CONCLUSION

The building is not in good condition. The it is not fire compliant and the wet services and ventilation need to be replaced.