

ANNEXURE C3.2: SCOPE OF WORK (INCLUDING DRAWINGS, WHERE APPLICABLE)

A) REPAIRS & MAINTENANCE OF VARIOUS ROLLER SHUTTER DOORS AT RAND WATER ZUIKERBOSCH WATER TREATMENT PLANT, THREE RIVERS, VEREENIGING, AND CENTRAL DEPOT

Description of works

1.1 SCOPE OF WORK FOR ROLLER SHUTTER DOORS

Mechanical Components

- Check all components that are used to fasten or mount the door wherever it is mounted. (Fasten, fix, replace if needed)
- Check condition of the canopy; (Fasten, fix, or replace if needed)
- Check the condition of the tension spring and lubricate if needed.
- Check, clean and lubricate the door guides.
- Check the condition of the slats and end caps; (Replace if necessary).
- Check the condition of the T-bar; (Replace if damaged).
- Check how the door opens and closes.
- Check the condition of the stoppers and make sure it serve its purpose.
- Check the functionality of manual crank operated door.
- Check the functionality of manual chain operated door.

Electrical and instrumentation components

- Check if there is power supply.
- Check the circuit breaker of the roller shutter door.
- Check whether the motor functions correctly.
- Check the condition of control switches including remote controls and their functionality.
- Check if electronic limit sensors function correctly.
- Make sure the motor override chain is long enough that it can be operated easily on a stable position.

Motor Specification

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| ► Model | : YZ-500-1P |
| ► Rated load | : 5000N |
| ► Weight | : 500KG |
| ► Rated power | : 500W(370W) |
| ► Voltage | : 220-240V |
| ► Current | : 3.5A |
| ► Rated operating time | : 6Min |
| ► Frequency | : 50Hz |
| ► Working temperature | : -20-40°C |

Repairs and Maintenance of various industrial roller shutter doors on site at Rand Water Zuikerbosch Water Treatment Plant, Three Rivers, Vereeniging:

POINT (A) ZUIKERBOSCH

AREA: STATION No. 3

1. Polly Dosing Plant G & H = Replace the broken roller shutter door slats and shaft. (H = 2.4m x W = 2.3m)
2. Polly Dosing Plant J & K = Service 1 roller shutter door.
(H = 2.47m x W = 1.7m)
3. Polly Dosing Plant L & M = Repair & Service 1 roller shutter door.
(H = 2.4m x W = 1.7m)
4. Lime Dosing Pump House = Service 1 roller shutter door.
(H = 3.2m x W = 1.84m)
5. No. 3 Chlorine Plant (east) = Repair & Service 1 front roller shutter door, re-align & fix the cover and remount plus check the sensor. (H = 3.8m x W = 4.1m)
6. No. 3 Chlorine Plant (west) = Repair & Service 1 back roller shutter door, re-align & fix the cover and remount plus check the sensor. (H = 3.8m x W = 4.1m)
7. No. 3 Control Room (east) = Service 1 roller shutter door.
(H = 5.4m x W = 3.53m)
8. No. 3 Control Room (west) = Supply, Install and Commission new motor (220V) and service the roller shutter door.
(H = 5.4m x W = 3.53m)
9. No. 3 Blower Room = Service 1a roller shutter door.
(H = 5.4 x W = 5.2m)
10. No. 3 Blower Room = Service 1b roller burglar shutter door.
(H = 5.4m x W = 5.2m)
11. No. 3 Blower Room = Service 1c steel roller burglar shutter door.
(H = 3.2m x W = 4.7m)
12. No. 3 Blower Room = Service 1d steel roller burglar shutter door.
(H = 3.2m x W = 4.7m)
13. No. 3 Engine Room = Service 1a roller shutter door.
(H = 3m x W = 3.1m)
14. No. 3 Engine Room = Service 1b roller shutter door.
(H = 3m x W = 3.1m)
15. No. 3 Engine Room = Service 1c roller shutter door.
(H = 3m x W = 3.1m)

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| 16. | No. 3 Engine Room | = | Service 1 sliding shutter door.
(H = 4.84m x W = 4.84m) |
| 17. | No. 3 Engine Room | = | Repair & Service 1 steel burglar door, fix and align. (H = 4.84m x 4.84m). |
| 18. | No. 3 Engine Room | = | Supply & install new industrial Roller Shutter Door with open/close, hold switch, long override chain switch. 50% solid & perforated slats.
(H = 4.95m x W = 5.53m) |
| 19. | No. 3 Fire Bank Building | = | Service 1 roller shutter door.
(H = 2.5m x W = 2.42m) |
| 20. | No. 3 Ferric Plant | = | Service 1a roller shutter door.
(H = 2.27m x W = 1.5m) |
| 21. | No. 3 Ferric Plant | = | Service 1b roller shutter door.
(H = 2.3m x W = 1.5m) |
| 22. | No. 3 Ferric Plant | = | Repair and Service 1c roller shutter door.
(H = 2.3m x W = 1.5m) |
| 23. | No. 3 Slaker House | = | Service 1a roller shutter door.
(H = 2.8m x W = 2.63m) |
| 24. | No. 3 Slaker House | = | Service 1b roller shutter door.
(H = 2.8m x W = 2.63m) |
| 25. | No. 3 Filter House (Compressor Room) = Service 1 roller shutter door.
(H = 4m x W = 2.94m) | | |
| 26. | Flocculator No. 4 (Valve 144) | = | Repair & Service 1 roller shutter door, re-align slates. (H = 2.73m x W = 1.3m) |
| 27. | Flocculator No. 3 (Valve 145) | = | Repair and Service 1 roller shutter door.
(H = 2.73m x W = 1.3m) |
| 28. | Flocculator No. 2 (Valve 146) | = | Service 1 roller shutter door plus alignment. (H = 2.73m x W = 1.3m) |
| 29. | No.3 Systems Sedimentation Tank | = | Supply & install 1 new industrial roller shutter door. (H = 2.63m x W = 1.42m) |
| 30. | WA2 Wash Water Treatment Plant | | Supply & install 6 new roller industrial shutter doors. (H = 2.25m x W = 1.1m) |
| 31. | Civil Workshop Front entrance | = | Replace 1 roller shutter door with new door with wicket gate, automated with press and hold open/close switch with override chain. (H = 2.8m x W = 3.4m) |
| 32. | Civil Workshop Back entrance | = | Replace 1 roller shutter door with new Door with wicket gate, automate with press and hold open/close switch with override chain. (H = 2.8m x W = 2.42m) |

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| 33. | Civil Workshop diesel entrance | = | Replace 1 roller shutter door with new industrial roller shutter door.
(H = 2.4m x W = 2.8m) |
| 34. | WA1 Lime Plant - Lime Bunker | = | Supply, install and commission 1 roller shutter door, complete with press and hold, open/close lockable switch, and long manual override chain.
(H = 7.2m x W = 6.3m) |
| 35. | WA1 Electrical Workshop | = | Automate 2 existing roller shutter doors, complete with limit Switches plus open/close switches with long override chain plus. Service and replace T-Bar on one door. (H = 4.4m x W = 4.54m) |

AREA: STATION No. 4

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| 36. | Engine Room 4A (Generator 1) | = | Service rolls up burglar door.
(H = 5.3m x W = 3.4m) |
| 37. | Engine Room 4A (Generator 2) | = | Service rolls up burglar door.
(H = 5.3m x W = 3.4m) |
| 38. | Engine Room 4A (Generator 3) | = | Service rolls up burglar door.
(H = 5.3m x W = 3.4m) |
| 39. | Engine Room 4A (Generator 4) | = | Service rolls up burglar door.
(H = 5.3m x W = 3.4m) |
| 40. | Engine Room 4A (Generator 5) | = | Service rolls up burglar door.
(H = 5.3m x W = 3.4m) |
| 41. | Engine Room 4A (Between A&B-1) | = | Service rolls up burglar door.
(H = 4.95m x W = 4.95m) |
| 42. | Engine Room 4A (Between A&B-2) | = | Service rolls up shutter door.
(H = 5.2m x W = 4.8m) |
| 43. | Engine Room 4A (West side) | = | Service 1 small roll up shutter door. (H = 2.5 m x W = 1.34m) |
| 44. | Fire Bank Building | = | Service rolls up shutter door.
(H = 5.3m x W = 3.4m) |
| 45. | Chlorine 4A (North) | = | Service rolls up shutter.
(H = 4.5m x W = 4.1m) |
| 46. | Chlorine 4A (South) | = | Service rolls up shutter.
(H = 4.5m x W = 4.1m) |
| 47. | Chlorine 4B (South) | = | Service rolls up shutter.
(H = 4.5m x W = 4.1m) |
| 48. | Chlorine 4B (North) | = | Service rolls up shutter.
(H = 4.5m x W = 4.1m) |

49.	Filter House 4A (1)	=	Service the roll up shutter door. (H = 2.22m x W = 1.74m)
50.	Filter House 4A (2)	=	Service the roll up shutter door. (H = 2.5m x W = 3.3m)
51.	Filter House 4A (3)	=	Service the roll up shutter door. (H = 2.5m x W = 3.3m)
52.	Filter House 4B (1)	=	Service the roll up shutter door. (H = 2.22m x W = 1.74m)
53.	Filter House 4B (2)	=	Service the roll up shutter door. (H = 2.5m x W = 3.3m)
54.	Filter House 4B (3)	=	Service the roll up shutter door. (H = 2.5m x W = 3.3m)
55.	Filter House 4C (1)	=	Service the roll up shutter door. (H = 2.5m x W = 2.7m)
56.	Filter House 4C (2)	=	Service the roll up shutter door. (H = 2.5m x W = 2.7m)
57.	Filter House 4C (3)	=	Service the roll up shutter door. (H = 2.5m x W = 2.7m)
58.	Filter House 4C (4)	=	Service the roll up shutter door. (H = 2.5m x W = 2.7m)
59.	Filter House 4C (5)	=	Service the roll up shutter door. (H = 2.5m x W = 2.7m)
60.	Filter House 4C (6)	=	Service the roll up shutter door. (H = 2.5m x W = 2.7m)
61.	Filter House 4C (7)	=	Service the roll up shutter door. (H = 2.5m x W = 2.7m)
62.	Filter House 4C (8)	=	Service the roll up shutter door. (H = 2.5m x W = 2.7m)
63.	Filter House 4C (9)	=	Service the roll up shutter door. (H = 2.5m x W = 2.7m)
64.	Filter House 4C (10)	=	Service the roll up shutter door. (H = 2.5m x W = 2.7m)
65.	4C Wash Water Pump House (1)	=	Service the roll up shutter door. (H = 2.6m x W = 2.3m)
66.	4C Wash Water Pump House (2)	=	Service the roll up shutter door. (H = 4.7m x W = 4.2m)
67.	Central Sludge No.2 (1)	=	Service the roll up shutter door. (H = 5.33m x W = 4.8m)
68.	Central Sludge No.2 (2)	=	Service the roll up shutter door. (H = 5.33m x W = 4.8m)
69.	Central Sludge No.2 (3)	=	Service the roll up shutter door. (H = 3.8m x W = 2.7m)

70.	Central Sludge No.2 (4)	=	Service the roll up shutter door. (H = 3.8m x W = 2.7m)
71.	Central Sludge No.2 (5)	=	Service the roll up shutter door. (H = 3.8m x W = 2.7m)
72.	Central Sludge No.2 (6)	=	Service the roll up shutter door. (H = 3.8m x W = 2.7m)
73.	Wash Water Treatment Plant (1)	=	Service the roll up shutter door. (H = 3.97m x W = 3.27m)
74.	Wash Water Treatment Plant (2)	=	Service the roll up shutter door. (H = 3.3m x W = 1.72m)
75.	Wash Water Treatment Plant (3)	=	Service the roll up shutter door. (H = 3.1m x W = 2.8m)
76.	Wash Water Treatment Plant (4)	=	Service the roll up shutter door. (H = 2.4m x W = 2.8m)
77.	Compressor Room next to S-system (1)	=	Service the roll up shutter door. (H = 2.8m x W = 3m)
78.	Compressor Room next to S-system (2)	=	Service the roll up shutter door. (H = 3.4m x W = 2.91m)
79.	WA2 Maintenance Workshops (1)	=	Repair & Service the roll up shutter door. (H = 4.6m x W = 4.3m)
80.	WA2 Maintenance Workshops (2)	=	Service the roll up shutter door. (H = 3.23m x W = 3.8m)
81.	WA2 Maintenance Workshops (3)	=	Service the roll up shutter door. (H = 2.9m x W = 3.5m)
82.	WA2 Maintenance Workshops (4)	=	Service the roll up shutter door. (H = 2.6m x W = 3.3m)
83.	WA2 Maintenance T & P Store (2)	=	Service the roll up shutter door. (H = 3.4m x W = 2.96m)
84.	WA2 Maintenance T & P Store (2)	=	Service the roll up shutter door. (H = 3.4m x W = 2.96m)
85.	Crusher House no.4 (1)	=	Service the roll up shutter door. (H = 3.8m x W = 3.3m)
86.	Crusher House no.4 (2)	=	Service the roll up shutter door. (H = 3.4m x W = 2.7m)
87.	Raw Water no. 4 Pump House (1)	=	Service the roll up steel burglar door. (H = 5.5m x W = 4.5m)
88.	Raw Water no. 4 Pump House (2)	=	Service the roll up steel burglar door. (H = 5.5m x W = 4.5m)

89.	Raw Water no. 4 Pump House (3)	=	Service the roll up shutter door. (H = 5.4m x W = 4.5m)
90.	Raw Water no. 4 Pump House (4)	=	Service the roll up shutter door. (H = 5.4m x W = 4.5m)
91.	Raw Water no. 4 Pump House (5)	=	Service the roll up steel burglar door at MCC room. (H = 2.8m x W = 2.1m)
92.	Raw Water no. 4 Pump House (6)	=	Service the roll up steel burglar door at MCC room. (H = 2.8m x W = 2.1m)
93.	PAC Plant (1)	=	Service the roll up shutter door. (H = 4.5m x W = 3.3m)
94.	PAC Plant (2)	=	Service the roll up shutter door. (H = 3.3m x W = 3.3m)
95.	PAC Plant (3)	=	Service the roll up shutter door. (H = 3.3m x W = 3.3m)
96.	PAC Plant (4)	=	Service the roll up shutter door. (H = 3.3m x W = 3.3m)
97.	PAC Plant (5)	=	Service the roll up shutter door. (H = 3.3m x W = 3.3m)
98.	Flocculator F9 (1)	=	Service the roll up shutter door. (H = 2.5m x W = 1.2m)
99.	Flocculator F10 (1)	=	Service the roll up shutter door. (H = 2.5m x W = 1.2m)
100.	Sodium Silicate Dosing Plant (1)	=	Service the roll up shutter door. (H = 2.5m x W = 1.2m)
101.	Sodium Silicate Dosing Plant (2)	=	Service the roll up shutter door. (H = 2.5m x W = 2.6m)
102.	Sodium Silicate Dosing Plant (3)	=	Service the roll up shutter door. (H = 2.3m x W = 1.9m)
103.	Sodium Silicate Dosing Plant (4)	=	Service the roll up shutter door. (H = 2.3m x W = 1.2m)
104.	Sodium Silicate Dosing Plant (5)	=	Service the roll up shutter door. (H = 2.3m x W = 1.2m)
105.	Slaker House no.4 (1)	=	Service the roll up shutter door. (H = 2.7m x W = 2.2m)
106.	Slaker House no.4 (2)	=	Service the roll up shutter door. (H = 3.6m x W = 2.4m)
107.	Ferric Plant no.4 (1)	=	Service the roll up shutter door. (H = 2.5m x W = 1.2m)
108.	Ferric Plant no.4 (2)	=	Service the roll up shutter door. (H = 2.5m x W = 1.2m)

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| 109. | Ferric Plant no.4 (3) | = | Service the roll up shutter door.
(H = 2.5m x W = 1.2m) |
| 110. | Lime Plant no. 2 (1) | = | Service the roll up shutter door
and replace T-Bar and Yale Lock.
(H = 3.4m x W = 4m) |
| 111. | Lime Plant no. 2 (2) | = | Service the roll up shutter door
and replace T-Bar and Yale Lock.
(H = 3.4m x W = 4m) |
| 112. | Lime Plant no. 2 (3) | = | Service the roll up shutter door.
(H = 3.4m x W = 4m) |
| 113. | Lime Plant no. 2 (4) | = | Service the roll up shutter door.
(H = 3.4m x W = 4m) |
| 114. | Lime Plant no. 2 (5) | = | Service the roll up shutter door.
(H = 3.4m x W = 2.8m) |
| 115. | Lime Plant no. 2 (6) | = | Service the roll up shutter door.
(H = 3.4m x W = 2.3m) |
| 116. | Lime Plant no. 2 (7) | = | Service the roll up shutter door.
(H = 3.4m x W = 2.3m) |
| 117. | Lime Plant no. 2 (8) | = | Service the roll up shutter door.
(H = 3.4m x W = 4m) |
| 118. | Lime Plant no. 2 (9) | = | Service the roll up shutter door.
(H = 3.4m x W = 4m) |
| 119. | Flat 58 | = | Replacement of roller chromadek
door. (H = 2.48m x W = 2.8m) |
| 120. | Flat 61 | = | Replacement of roller chromadek
door (H = 2.48m x W = 2.8m) |
| 121. | Safety File Costs | = | Zuikerbosch Safety File Cost |
| 122. | ENGINE ROOM No.2 | = | Supply and Install one roller
shutter door, with a wicked door
and operated with a chain.
(H = 3.7m x W = 3.32m) |
| 123. | ENGINE ROOM No.2 (Planning Side) | = | Fix the damaged Burglar Roller
Shutter door and replace its T-bar.
(H = 4m x W = 4m) |
| 124. | Lime Plant no.1 Conveyor Bunker. | = | Service the roller shutter door as it
is not closing correctly Install new
operating chain.
(H = 3.2m x W = 2.42m) |
| 125. | House 7 | = | Repair the damaged chromadek |

door. (H = 2.48m x W = 2.8m)

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| 126. Store Yard | = | Fasten the existing Roller shutter door securely by replacing its current bolts and nuts with long ones and install a 5mm thick steel plate on the inside to protect the bricks.
(H = 3.4m x W = 3.9m) |
| 127. No.1 Filter House (S/W) | = | Install new industrial roller shutter door at South West
(H = 2.73m x W = 1.3m) |
| 128. Line 128 was deleted. | | |
| 129. No.1 Filter House (N/W) | = | Install new industrial roller shutter door at North West.
(H = 2.73m x W = 1.3m) |

POINT (B) CENTRAL DEPOT

130. SUPPLY, INSTALL, TEST AND COMMISSION ON SITE 1X6MX4M ROLLER SHUTTER DOOR AT RAND WATER CENTRAL DEPOT-ELECTRICAL WORKSHOP.

130. SUPPLY, INSTALL, TEST AND COMMISSION ON SITE 1X ROLLER SHUTTER DOOR MOTOR AT RAND WATER CENTRAL DEPOT-ELECTRICAL WORKSHOP:

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| ▶ Model | : YZ-500-1P |
| ▶ Rated load | : 5000N |
| ▶ Weight | : 500KG |
| ▶ Rated power | : 500W(370W) |
| ▶ Voltage | : 220-240V |
| ▶ Current | : 3.5A |
| ▶ Rated operating time | : 6Min |
| ▶ Frequency | : 50Hz |
| ▶ Working temperature | : -20-40°C |

130. REPAIR ROLLER DOOR AT RAND WATER-CENTRAL DEPOT-TRANSPORT

131. Safety File (CD)

DEPARTMENT

NB: The successful supplier will be required to supply all materials and make sure of final sizes prior to ordering roller shutter doors.

The successful supplier will be required to submit a safety file and to undergo induction before the work can commence.

The objective of the project is to service, repair, and NEW installation of roller shutter doors

1.2 Equipment

All equipment and machinery such as grinders, drilling machine, gas monitor, safety harness, scaffolding or extension ladders shall be supplied by the contractor for working at the respective heights.

1.3. Safe work plan

The contract shall supply a safety file including detailed method statements (Safe Working Procedure) to the client before he commences with the work. The contractor shall supply the employees with the correct personal protective equipment during the duration of the project.

1.4 Pictures

Not Applicable