

1. **Bill of Quantities (BOQ): Supply, installation, testing, commissioning and certification of electric chain hoists for Bayhead Wagons**  
Based on Technical Specification: OPS\_MDW\_BYD\_SPEC\_001 | Rev 01

| Item                                                      | Section / Description                                                                                                                                                               | Unit | Qty | Rate (R) | Amount (R) |
|-----------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----|----------|------------|
| <b>A. PRELIMINARIES, DESIGN AND SITE VERIFICATION</b>     |                                                                                                                                                                                     |      |     |          |            |
| A1                                                        | Site establishment, permits, safety file, supervision and demobilisation                                                                                                            | Sum  | 1   |          |            |
| A2                                                        | Detailed site survey and verification of DB positions, six station positions, cable routes and dimensions                                                                           | Sum  | 1   |          |            |
| A3                                                        | Electrical engineering calculations: maximum demand, feeder/branch sizing, voltage drop, fault level and protection coordination                                                    | Sum  | 1   |          |            |
| A4                                                        | Scan/locate reinforcement, post-tensioning, buried electrical cables, pipes and concealed services before concrete drilling                                                         | Sum  | 1   |          |            |
| A5                                                        | Structural/suspension-point verification for all electric chain hoists                                                                                                              | No.  | 18  |          |            |
| <b>B. ELECTRIC CHAIN HOISTS</b>                           |                                                                                                                                                                                     |      |     |          |            |
| B1                                                        | 500 kg SWL industrial electric chain hoist, 400 V 3-phase, minimum 3 m hook travel, approx. 4 m/min or better, complete with chain container, pendant, brake, overload and limits   | No.  | 12  |          |            |
| B2                                                        | 1,000 kg SWL industrial electric chain hoist, 400 V 3-phase, minimum 3 m hook travel, approx. 4 m/min or better, complete with chain container, pendant, brake, overload and limits | No.  | 6   |          |            |
| B3                                                        | Mechanical installation, alignment and mounting of 500 kg hoists                                                                                                                    | No.  | 12  |          |            |
| B4                                                        | Mechanical installation, alignment and mounting of 1,000 kg hoists                                                                                                                  | No.  | 6   |          |            |
| <b>C. NEW DEDICATED ELECTRIC HOIST DISTRIBUTION BOARD</b> |                                                                                                                                                                                     |      |     |          |            |
| C1                                                        | Dedicated industrial electric-hoist DB, minimum IP55, 400/230 V, 3-phase + N + E, copper busbars, complete enclosure and internal wiring                                            | No.  | 1   |          |            |
| C2                                                        | Four-pole lockable DB main isolator/incomer, final rating to approved design calculations                                                                                           | No.  | 1   |          |            |
| C3                                                        | Dedicated 3-pole motor-suitable outgoing protective way for 500 kg hoist circuits                                                                                                   | No.  | 12  |          |            |
| C4                                                        | Dedicated 3-pole motor-suitable outgoing protective way for 1,000 kg hoist circuits                                                                                                 | No.  | 6   |          |            |
| C5                                                        | Spare three-phase DB ways, complete physical space and provision                                                                                                                    | No.  | 4   |          |            |
| C6                                                        | Permanent engraved DB/circuit labels and circuit schedule for all six stations                                                                                                      | Set  | 1   |          |            |

| D. FEEDER FROM EXISTING DB TO NEW DB                              |                                                                                                                              |         |     |  |  |
|-------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|---------|-----|--|--|
| D1                                                                | Dedicated copper SWA/PVC feeder from existing DB to new hoist DB, provisional 4-core 10 mm <sup>2</sup> minimum tender basis | m       | 5   |  |  |
| D2                                                                | Existing DB feeder protective device/connection modification for new hoist DB                                                | Set     | 1   |  |  |
| D3                                                                | Feeder cable glands, lugs, ferrules, bonding and terminations                                                                | Set     | 1   |  |  |
| E. UNDERGROUND CONDUIT / DUCT INFRASTRUCTURE FOR ALL SIX STATIONS |                                                                                                                              |         |     |  |  |
| E1                                                                | Approved drilling/core drilling through existing concrete floor for underground conduits/sleeves/ducts                       | Sum     | 1   |  |  |
| E2                                                                | Underground heavy-duty conduit/duct/sleeve system from DB route through/along all six station stands                         | m       | 84  |  |  |
| E3                                                                | Draw/access pits, pull points, inspection boxes or equivalent accessible points                                              | No.     | 1   |  |  |
| E4                                                                | Draw wires/ropes for all installed conduits including future Stations 1-3                                                    | Sum     | 1   |  |  |
| E5                                                                | Mechanical protection/galvanised conduit or guards at cable/conduit emergence points                                         | No.     | 6   |  |  |
| E6                                                                | Seal/cap conduit and duct entries against water, debris and vermin                                                           | Sum     | 1   |  |  |
| E7                                                                | Concrete/floor reinstatement and sealing after drilling/trenching                                                            | Sum     | 1   |  |  |
| E8                                                                | Underground cable-route markers and permanent route identification                                                           | Sum     | 1   |  |  |
| F. INITIAL POWER CABLE INSTALLATION - FURTHEST THREE STATIONS     |                                                                                                                              |         |     |  |  |
| F1                                                                | 4-core 2.5 mm <sup>2</sup> Cu SWA/PVC branch cable to Station 4 hoists                                                       | m       | 183 |  |  |
| F2                                                                | 4-core 2.5 mm <sup>2</sup> Cu SWA/PVC branch cable to Station 5 hoists                                                       | m       | 201 |  |  |
| F3                                                                | 4-core 2.5 mm <sup>2</sup> Cu SWA/PVC branch cable to Station 6 hoists                                                       | m       | 252 |  |  |
| F4                                                                | Additional branch-cable quantity for vertical rises, bends, final connections and terminations                               | m       | 1   |  |  |
| F5                                                                | SWA cable glands, earth tags, shrouds, lugs, ferrules and terminations for nine initial hoist circuits                       | Circuit | 9   |  |  |
| F6                                                                | Cable identification tags/markers for nine initial circuits                                                                  | Circuit | 9   |  |  |
| G. LOCAL ISOLATORS AND FINAL CONNECTIONS - INITIAL STAGE          |                                                                                                                              |         |     |  |  |
| G1                                                                | 20 A minimum, 415 V, 3-pole, lockable IP55 local isolator                                                                    | No.     | 9   |  |  |
| G2                                                                | Final flexible/conduit protected connection from local isolator to hoist                                                     | No.     | 9   |  |  |
| G3                                                                | Permanent engraved isolator/hoist labels                                                                                     | No.     | 9   |  |  |

| H. RESERVED CIRCUITS / FUTURE STATIONS 1-3  |                                                                                                                                                    |         |    |                          |  |
|---------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|---------|----|--------------------------|--|
| H1                                          | Reserve and safely isolate DB ways for future Stations 1, 2 and 3                                                                                  | Circuit | 9  |                          |  |
| H2                                          | Permanent RESERVED - FUTURE HOIST CIRCUIT labels for Stations 1-3 DB ways                                                                          | No.     | 9  |                          |  |
| H3                                          | Cap/seal and permanently identify underground conduit ends for future Stations 1-3                                                                 | Station | 3  |                          |  |
| I. EARTHING AND BONDING                     |                                                                                                                                                    |         |    |                          |  |
| I1                                          | Protective earthing/bonding for new DB, containment, SWA armour, isolators and installed hoist circuits                                            | Sum     | 1  |                          |  |
| I2                                          | Supplementary protective conductors where required by earthing/wiring arrangement                                                                  | m       | 1  |                          |  |
| J. TESTING, COMMISSIONING AND CERTIFICATION |                                                                                                                                                    |         |    |                          |  |
| J1                                          | Electrical inspection and testing of new DB, feeder, underground installation and commissioned circuits                                            | Sum     | 1  |                          |  |
| J2                                          | Functional commissioning of electric chain hoists including pendant, E-stop, brake, overload and limits                                            | No.     | 18 |                          |  |
| J3                                          | Statutory inspection/load testing and individual certification of hoists by appropriately authorised/registered lifting machinery personnel/entity | No.     | 18 |                          |  |
| J4                                          | Electrical Certificate of Compliance and supporting test report                                                                                    | Sum     | 1  |                          |  |
| J5                                          | Operator familiarisation/training                                                                                                                  | Sum     | 1  |                          |  |
| K. DRAWINGS, DOCUMENTATION AND HANDOVER     |                                                                                                                                                    |         |    |                          |  |
| K1                                          | Design and as-built single-line diagram                                                                                                            | Set     | 1  |                          |  |
| K2                                          | As-built underground cable/conduit route drawing and station layout                                                                                | Set     | 1  |                          |  |
| K3                                          | Final DB circuit schedule and cable schedule                                                                                                       | Set     | 1  |                          |  |
| K4                                          | OEM datasheets, manuals, duty classification, motor FLC/starting data and serial-number register                                                   | Set     | 1  |                          |  |
| K5                                          | Commissioning records, certificates, warranty, maintenance plan and recommended spares list                                                        | Set     | 1  |                          |  |
|                                             |                                                                                                                                                    |         |    | <b>Total (Excl. VAT)</b> |  |
|                                             |                                                                                                                                                    |         |    | <b>VAT @30%</b>          |  |
|                                             |                                                                                                                                                    |         |    | <b>Total Incl. VAT</b>   |  |

| Name                 | Designation                                   | Signature and date                                                                               |
|----------------------|-----------------------------------------------|--------------------------------------------------------------------------------------------------|
| Siyabonga Hlongwane  | Technician In Training (TIT): FIM             |  09/10/2026 |
| Sibongiseni Thusini  | Act. Superintendent – Container Corridor: FIM |  09/10/2026 |
| Sphamandla Mkhwanazi | Plant Engineer – Container Corridor: FIM      |  13/10/2026 |