

DATE: 13 June 2025 EMAIL: Ziphoscm@dbsa.org **ENQUIRIES**: Zipho Moselakgomo **TEL**: 011 313 3852

ADDENDUM NO 2

TENDER NO. RFP047/2025 APPOINTMENT OF A MECHANICAL ENGINEERING CONTRACTOR FOR THE MAJOR REFURBISHMENT AND CONSTRUCTION OF THE ROOIWAL WASTE-WATER TREATMENT NORTH AND WEST WORKS

AMENDMENT TO THE TENDER DOCUMENT:

THESE CLARIFICATIONS MUST BE READ TO FORM PART OF THE TENDER

1. Bidder Queries Response date

Response to all queries received is published with this addendum as Annexure A.

ZÍPHO MOSELAKGOMO PROCUREMENT SPECIALIST SUPPLY CHAIN MANAGEMENT

ACKNOWLEDGEMENT OF RECEIPT

I (Name)..... hereby acknowledge the existence of

Addendum No 2 on behalf of (Company Name)

.....

SIGNATURE

DATE



ANNEXURE A

RFP047/2025 RESPONSES TO BIDDERS

		DBSA
No.	Query	Response
	N.B Bidders are advised to use the recently updated/revised d PDF BOQ takes precedence, the bidder must price as per issued	ocuments. Non-compliance will result in the bidder being disqualified I PDF BOQs. Bidders will not be evaluated on the excel submissions but
	PDF	submissions
1	BOQ Line item 2.18 refers to " Profit and attendance on item 3.9", however there is no line item 3.9 under the preliminaries sheet. Should this be changed to 2.17?	Yes, changed to item 2.17
2	BOQ Line item 16 refers to " Profit and attendance on item 3.9", however there is no line item 3.9 under the provisional sums sheet. Should this be changed to item 15?	Yes, changed to item 15
3	Bill of Quantities - Mechanical (West) - Gravity/Equaliser Tank to Digesters- Mechanical - West Works Line Items: 1.01 to 1.22, Denotes the scope of work for the pipework & valves.	
	Please may you provide drawings for the above pipework and valves. The drawings shall assist us to establish the type of valves in relation to the requirements of the specifications and their service application, as well as the orientation & quantity of the pipework.	Refer to Drawing RWWTW-RW-ME-GET-S4-01r00, RWWTW-S/ADI/01 and RWWTW-RW-ME-GET-S4-02r00
4	 Bill of Quantities – Mechanical (West) – Sludge Recirculation System Line items 2.01 to 2.18, Denotes the scope of work for the pipework & valves, instrumentation and Pumps. a. Please may you provide drawings for the above pipework and valves. The drawings shall assist us to establish the type of valves in relation to the requirements of the specifications and their service application, as well as the orientation & quantity of the pipework. b. Line item – 2.02 – DN200 S/S Plug Valves The specification denotes These may be used for isolating duties on clean air and liquid duties up to DN 50. Bronze Gate Valves as 	Refer to PID Drawing RWWTW-RW-ME-BP-PID-S4-01 Boiler Plant PID and RWWTW-RE-ME-AD-GA-S4-02 and accompanying process drawings RWWTW-P- ANO1-01-03



	per SANS 776.Ball or plug valves of appropriate construction may also be used where preferred. Please advise on the plug/ball valve 4 referring44 not for DN 200 valve size for the sludge recirculation application.	Provide price on Plug valves, review and considerations will be undertaken post appointment on equipment submittals
	Please may you provide drawings for the above pipework and valves. The drawings shall assist us to establish the type of valves in relation to the requirements of the specifications and their service application, as well as the orientation & quantity of the pipework inb relation to the refurbishment work to be carried out. Is there a detail on the type of refurbishment required?	Refer to PID Drawing RWWTW-RW-ME-BP-PID-S4-01 Boiler Plant PID and RWWTW-RE-ME-AD-GA-S4-02 and accompanying process drawings RWWTW-P- ANO1-01-03
	 c. Line Item – 2.05 – Refurbish existing Vaughan HE8N100SN Horizontal Sludge Chopper Recirculation Pumps at 120lps,40m head complete with baseplate, control panel ,variable speed drive ,timers and provision for integration into SCADA Please may you elaborate the refurbishment requirements for this pump type? Or, is it the contractor to determine the refurbishment scope for tender? 	Refer to provided photos of the pumps in the attached photo gallery. Contractors must price for a worst-case refurbishment, including: replacement of internals (seals, bearings, impellers), baseplates, basic electricals (isolators), corrosion treatment, repainting, new VSD and control panel and full functional testing and commissioning report
	 d. Line Item – 2.15 – Provision for 3-Way Automated Plug Valve. Please may you provide more detail (requirements/specifications) regarding this valve. 	The 3-way automated plug valve forms part of a pump sludge recirculation system that serves both mixing and heating. There will be operational scenarios where only mixing is required without heating, scenarios where the biogas boiler system is not working, where heating is needed to maintain mesophilic conditions or where downstream pressure build-up necessitates reduced flow depending on site-specific delta T conditions. As such, a bypass arrangement is essential. Contractors are to allow for this valve in their pricing. The valve must be suitable for sludge, equipped with a manual override due to the absence of SCADA on site. Further consideration of applicable valve types will be reviewed post-appointment during the submittal process
5	Bill of Quantities – Mechanical (West) – Supernatant Withdrawal Line Please may you provide drawings for the above pipework and valves. The drawings shall assist us to establish the type of valves in relation to the requirements of the specifications and their service application, as well as the orientation & quantity of the pipework.	Refer to PID Drawing RWWTW-RW-ME-BP-PID-S4-01 Boiler Plant PID and RWWTW-RE-ME-AD-GA-S4-02 and accompanying process drawings RWWTW-P- ANO1-01-03



Τ	a.	Line Item – 3.03 – DN150 Isolation Manual Gate Valves	
		Please clarify which type of manual gate valves is required and	Valve must be RSV, wedge type, flanged, PN10 rated minimum, EPDM Seated,s/s
		the relevant specifications	stem, manual, ductile iron body
		·	
6	Bill of C	Quantities – Mechanical (West) – Biogas Boiler Plant,gas holder	
	and Pip	ping	
	Line Ite	ms 4.01, 4.02, 4.03, 4.04, 4.06. Please may you provide drawings	Refer to drawings RWWTW-RW-ME-BP-PID-S4-01, RWWTW-R-GH-PID-S4-02
	orienta	tion/routing of the pipework	The NR\/ will be installed unstream of the flame arrestor and must meet the
	ononia		following. Stainless steel Gr 316 spring loaded in-line type flanged minimum
	a.	Line Item 4.05 – Please may you assist with the specifications of	operating temp 12mBar.max allowable pressure up to 1 bar. crack pressure
		the non-return valve on the flame arrestor 5eferrin?	10mBar ,operating temp -10deg to 80deg
	D.	Line item 4.07 – "Flare Assembly", is the flare assembly beterring	The flare assembly is a combination of the flame arrestor, ignition system, burner,
		specifications around this 5 eferring type	stack etc refer to the PID provided DGR RWWTW-RW-ME-GH-PID-SE-01
			Poter to attached drawing P\/\/\/T\//_P\//_ME_MCC_S4_01 P\/\/\/T\//_P\//_ME_MCC_
	с.	Line Item 4.09 – Is there any drawings available regarding the	S4-02 and the Gas Holder PID's Provided
		biogas collector?	
	d.	Line Item 4.14 – In terms of the softening & resin plant required for	There is currently no hot water boiler on site.For tender purposes, estimate
		the boiler feedwater, is there any further specification or detail	softening and resin plant quantities based on one year of boiler operation, including
		around this item?	quarterly water analysis and support up to the first 12-month AIA inspection.
		le there a feedwater analysis available to base the design upon?	
		is there a recurrater analysis available to base the design upon?	The chemical dosing will be for the boiler water. It will be locate inside the boiler
	e.	Line Item 4.15 – Chemical Dosing Plant – Where shall the location	room
		of this plant be and where shall the required supply of chemicals	
		be stored? Also, is there any specification on the chemical dosing	
		for the sludge coagulation or softening plant?	
	f	Line Item 4.15 – No Unit or Quantity is specified. Please advise	Unit on line item is sum, qty is 1 and is inclusive of one dosing pump control panel
			and associated components
	g.	Line Item 4.17 – Line Item 4.17 - Is there any specification for the	Information provided on the bill is sufficient. Pumps provided are simulation pumps
		not water circulation pumps?	α alternatively know as feedwater number of the boiler with the duty given N+1
			or alternatively know as recurater pumps of the bolier with the duty given in the



7	Bill of C	Quantities – Mechanical (West) – Digester General Repairs	
	Please	may you provide drawings for the above pipework and valves. The	
	drawing	gs shall assist us to establish the orientation of the pipework and	
	valves,	as well as the lines that require refurbishment work. (Line Items	
	5.01 to	5.18)	
		,	
	a.	Line Item 5.01 – Please provide details on the stainless steel checker plate hole lid.	
	b.	Line Item 5.02 – Please provide detail for the cast iron neck at the inspection hole.	Refer to the Original Digester General arrangement drawing RWWTW-RE-ME-AD-GA-S4-01 and the pictures provided for Line items 5.01 to 5.07
	с.	Line Item 5.03 – Please provide details for the cast iron lid for the	
		mixer inlet hole.	
	d.	Line Item 5.05 – Please provide details for the methane gas outlet	
		cast iron neck to be replaced.	
	e.	Line Item 5.06 – Please provide details for the for the methane	
		gas outlet dome.	
	f.	Line Item 5.07 – Please provide details for the hand railing	
		refurbishment.	
	g.	Line Item 5.08 – Please provide detail on the type of	
		refurbishment required for the scum removal/overflow piping.	Refer to the Original Digester General arrangement drawing RWWTW-RE-ME-AD-GA-S4-01.The existing overflow/scum removal pipe is currently non-functional, as the outlet level is positioned above the top level of the digester contents. Refurbishment will require the existing cast iron overflow outlet to be cut back within the concrete chamber. The current cast iron pipe(about 2m) must be removed and
			replaced with Sch40 mild steel to the correct elevation shorter than the current.
	h.	Line Item 5.09 – Please provide detail on the pipework orientation	
		or lacation.	Defeate the Original Director Concercions are set described DMAATA/ DE ME AD
			Refer to the Original Digester General arrangement drawing RWWIW-RE-ME-AD-
	i.	Line Item 5.11 – Please provide detail for the hand railing to	
		enclose the tank valve chamber.	Refer the pictures provided, currently there is nothing installed, estimate area is
			provided on the bill item



	j.	Line Item 5.12 – Please provide the scope of refurbishment for the methane gas isolating valves.	Recommendation is to quote for the worst-case scenario which is replacement. Valve is a dn100, full-bore stainless-steel ball valve, flanged
	k.	Line Item 5.14 – Please provide specifications for the thermocouple.	Refer to pictures provided
	I.	Line Item 5.15 – Please provide drawings for the hand railing around the valve and pump chambers.	Refer to the Original Digester General arrangement drawing RWWTW-RE-ME-AD-GA-S4-01 and the pictures provided
	m.	Line Item 5.16 – Please provide detail drawings for the exposed sludge draw off piping and advise on the specific refurbishment requirements.	Refer to the Original Digester General arrangement drawing RWWTW-RE-ME-AD-GA-S4-01 and the pictures provided
	n.	Line Item 5.17 – Please advise on the type of valves and hence specification for the manual isolating hand valves.	Valves a manual knife gate valve, most with a rising stem, ductile iron body, handwheel operated. Refer to the Original Digester General arrangement drawing RWWTW-RE-ME-AD-GA-S4-01 and the pictures provided
	0.	Line Item 5.18 – Please may you advise on where the chain block davits shall be installed?	The exact positions for the chain block davits will be indicated by the Client on site. However, for planning purposes, one davit is to be provided on the east side of Rooiwal West Digesters and the other on the west side of Rooiwal West digesters
8	Bill of 0	Quantities – Mechanical (West) – Digested Sludge Pump Station	
	a.	Line Item 6.01 – Please advise on the duty for the Gorman Rupp Ultra Pump (V6A60).	95I/s @ 80m TDH
	b.	Line Item 6.02 – Please may you advise on the required refurbishment scope for the Gorman Rupp V6A60.	Contractor must allow for full refurb including but not limited to replacement of seals, bearings, gaskets, impellers, baseplates, pump casing, baseplates, repainting and corrosion protection. At the end the contractor is supposed to submit a full commission report.
	C.	Line Item 6.03 – Please may you advise on the required refurbishment scope for the manual suction & discharge valves.	



	What type of valves are these?	Manual knife gate valves on both suction and discharge.Refurbishment includes replacement of worn internal parts (gate,seals,seats,recoating and assembly with new gaskets
	d. Line Item 6.05 – What is the length and size of the 2T beam inside	
	the plantroom?	Allow for 5m beam with and 10m length to span the plantroom
	 Line Item 6.08 – Please advise on the required refurbishment scope regarding the inlet valves in situ at the digested sludge pump station. 	The scope will include removal of the top assembly only (handwheel, stem, bonnet and gate) for servicing, the bottom part will remain in fixed place
9	Mechanical Screens-	
	<u> Mechanical – North Works</u>	
	a. Point 1 refers to major service on ALL stainless steel sluice gates at channels, chambers and tanks. Please confirm the major servicing of the sluice gates on the BOQ refers to only the 3 mechanical front screens at the inlet works.	Confirmed
	 Point 2 refers to work being carried out in accordance with the manufacturers servicing instructions & technical 8eferring88nt. Please may you confirm the OEM/Manufacturer of the sluice gates and their contact details. 	Manufacturer could not be determined; nameplate does not exist on site.
10	Line Item 2.02 – Major service and restoration of mechanical inlet screens, including disassembly, cleaning, replacement of damaged components (chains, sprockets, bearings, screen panels, wipers, seals), reassembly, alignment, lubrication, and functional testing to restore full operational functionality	
	a. Point 1 refers to the major servicing and replacement of parts for the 3 inlet mechanical screens. However, the rest of the requirements (Points 2 to 18) denote design work and an additional dedicated control panel per screen). Do we then need to allow for all the requirements listed under the specification, or	The requirements of the specification must be read in conjunction with the BOQ. Pricing should therefore be based on the full scope as described in both the specification and the BOQ



	just the refurbishment of the existing screens as described on the	
b.	BOQ? Line Item 2.03 – Please may you provide a drawing and indicate where these sluice gates are located and is the refurbishment scope the same as for the inlet sluice gates?	Please refer to drawing RWWTW-M-WI-01r00 and the supporting photographic evidence provided. The refurbishment scope for these sluice gates is the same as that described under Item 2.02 for the inlet sluice gates.
C.	Line Item 2.04 – Please may you indicate on a drawing or photo the location of the hand railings to be refurbished, so that we may understand the 9eferring9.	Unfortunately, the available drawings do not indicate the Mentis grating or handrailing locations. However, please refer to the attached photographs for visual reference. The scope of refurbishment extends from the shed housing the mechanical screens up to the end of the vortex degritters. Estimated horizontal distance is 80m and handrails are on both sides
		Refer to drawing RWWTW-M-IW-01-r00
d.	Line Item 2.05 – Please may you provide the drawings referred to as per the BOQ description.	Please refer to the attached photograph showing the location into the old incinerator
e.	Line Item 2.06 – Please may you provide a drawing to assess the size of the hole required.	of one brick.
f.	Line Item 2.08 – Please may you provide a drawing showing the total area and location of the metal floor grating.	Unfortunately, no drawing is available for the metal floor grating area. The tenderers were expected to have noted the extent and location of this area during the tender briefing and site inspection.
g.	Line Item 2.12 – Please advise on which equipment the description referring to and where is the specification?	The equipment referred to is the reciprocating scrapers located at the vortex degritters. Please refer picture provided for this purpose only
h.	Line Item 2.16 – Please may you provide a drawing indicating the routing of the pipework.	Refer to drawing RWWTW-M-DG-01 and D-02 ,as well as the pictures provided for this purpose only
		Swing type, ductile or cast iron, stainless steel disc, EPDM Disc size to match
i.	Line Item 2.18 – Please indicate the specifications for the non return valve.	80mm bore, pressure class PN10,flanged



11	Primary Sedimentation Tanks	
	a. Line Item 2.201 – Please may you provide drawings indicating the	Refer to Drawing RWWTW/S/PST/04 r00
	division box and details of the sluice gates.	
	Ŭ	
	b. Line Item 2.203 – Please provide a drawing detail of the scum	Refer to Drawing RWWTW/C/PST/04 and RWWTW-C-PST-03
	removal pipework.	
12	The sludge Pump Station	
	a Line Item 2 309 – Please indicate what PP01 & PP03 are referring	Electromagnetic flow meters
	to and which drawing?	
	to and which drawing:	
	h Line Item 2 310 – Please indicate what PP02 & PP03 are referring	
	to and which drawing?	Electromagnetic flow meters.
	to and which drawing:	
	c Line Item 2 312 – Please indicate what PS05 & PS06 are referring	
	to and which drawing?	
13	Electrical Control & Instrumentation	
	Schedule No. 1 North Inlet PST Works	
	Design . Manufacture, supply, offloading, installation & Commissioning of	
	new PST MCC as shown in the specifications and drawings. The MCC	
	comprises of the following Equip.	
	Relocation and replacement of Electrical (My & LV) and communication	
	cables including trenching, decommissioning of old cables and transport to	
	Tshwane Stores	
	IDENTIFICATION & DETECTION OF EXISTING ELECTRICAL AND	
	COMMUNICATION CABLES	
	a kindly supply typical starter schematics for the DOL circuits	Circuit Breaker - Contactor - Overload Protection - Thermal Protection Scheme
	b. kindly supply details of the volume of trenching to be costed for	
	The lengths of cables to be removed and replaced	Approximately 700m ³
	c Does this include the entire site? Or a specific number of cables	
	and defined length to be identified and detected?	Entire Site
14	Schedule No. 2 North Inlet Incinerator Building	
17	Refurbish existing MCC by Repalcing Aux. Equipment (New Power Meter	
	Ammeters, Voltemeters, Hour Meters) and rewire existing MCC as shown	
	, , , 5	



	in the specifications and drawings (Single Line Diagrams). The refurbishment works are stated in the Scope of Works Document. a. kindly supply typical starter schematics for the Degritter pumps, Blowers, compressors, drawing for the distribution board, and IO count/PLC equipment for the PLC Section.	Refer to North Inlet Works Single line Diagram Provided.
15	 Design, Supply, Install and Commission 1 x new Motor Control Centre (MCC) tier to be installed next to existing MCC including power and auxiliary cabling for the new 6 x 0,37 kW classifiers direct-on-line (DOL) starter drives as per Single Line Diagram below. 	Circuit Breaker - Contactor - Overload Protection - Thermal Protection Scheme
16	<u>Schedule No. 3 North Reactor and SSTs</u> Surface mounted 35A, 5 pin 3 phase welding socket including male plug, IP65. (Wall Mounted) X9 a. the condition assessment report refers to 18x welding sockets as opposed to 9	Welding Plugs are x 9
17	 Decommissioning of 9 X Lighting Pole at the DB Centers and replace with New Poles and LED Lighting as specified. Installation of new 18 x Stainless Steel Emergency Stop Stations and Weatherproof 18 x Industrial Welding Plugs a. this has not been allowed for in the BoQ. Where do we allocate the cost for the replacement materials and labour? 	MMC Details provided in the Scope of Works Document
18	North Works: West Balancing Dam a. Scope of works in not included in the bill of quantities. Can the MCC diagram and schematic be shared	To be included in BOQ, Contractor to Design MCC
19	North Works: DAF Bypass Building MCC a. Scope of works in not included in the bill of quantities. Can the MCC diagram and schematic be shared	To be included in BOQ, Contractor to Design MCC
20	Schedule No. 4 North Chlorine and Final Effluent Dam	



	 Design Supply, Install and Commission 1 x New Final Effluent MCC as p Line Diagram. 	
	 Not included in the BoQ. Can the details of the existing MCCs be shared 	Provided in the Scope of Works Document.
21	Schedule No. 5 WAS & Dewatering Works Refurbish existing MCC by Repalcing Aux. Equipment (New Power Meter, Ammeters, Voltemeters, Hour Meters) and rewire existing MCCs as shown in the specifications and drawings (Single Line Diagrams). The refurbishment works are stated in the Scope of Works Document for WAS and Aerobic Sludge P/S MCCs	
	a. As per the condition report, does the refurbishment work include the supply and installation of new 3 x soft starters for the digested sludge pumps. Can the schematics for the MCCs be shared.	Yes, included Contractor to design and propose for approval
22	<u>Schedule No. 6 West Works</u> a. Design , Manufacture, supply, off loading, installation &	
	Commissioning of new West Works MCC as shown in the specifications and drawings.	
	 b. Design , Manufacture, supply, off loading, installation & Commissioning of new West Works Digester MCC as shown in the drawings and mechanical load list including instrumentation and control .MCC to incorporatate all equipment for Gravity Tanks, Sludge Recirculation System, Supernatant System, Biogas Boiler Plant, Gas Holder, Digested Sludge Pump Station as provided by Mechanical Engineer Load List. c. SCADA System installation and integration into existing System 	
	1 No drawings issued for West Works. Can we be issued SLD and	
	typicals. Drawings issued relate to East works.No drawings issued for West Works. Can we be issued SLD and	
	 typicals. Drawings issued relate to East works. No details issued for the SCADA system. As per the specification, it is stated the SCADA the configuration is allowed in the 	Contractor to Design and Propose for approval
	provisional sums. What does this line item entail?	Contractor to Design and Propose for approval



		SCADA for the complete Plant
23	Specifications 17. Human Machine Interface (HMI) The preferred HMI that must be mounted on the front panel of the dewatering plant belt press MCC. 18. PLC'S The PLC CPU (4 MB internal memory including an 8 MB SD card) must incorporate an Ethernet port, and the number of I/O modules must be able to accommodate the I/O indicated on the drawings. 20% spare I/O is required. All spare I/O must be wired to the terminals in the marshalling tier. Allowances must be made for PLC I/O for all instrumentation and valve actuators that are indicated on the various MCC single line diagrams. The PLC I/O required for the valve actuators that are indicated on the single line diagrams are as follows: 24V DC input: • End position closed. • Torque closed. • Torque closed. • Collective fault. • Local / PLC. Analog input: • Destine factback	
	 <u>Analog output:</u> Open / close. a. There is no specification for the PLCs. No I/O count or detail list has been given in the single line diagrams of the MCCs. 	SANS 61131-6:2017



24	With reference to the above-mentioned Tender Enquiries, currently with a Closing Date on 13th June 2025, we request your consideration for an extension to this Closing Date by a minimum of two weeks, therefore 27th June 2025, this will enable ourselves to prepare a fully comprehensive and compliant Tender Submission.	Closing date extended to 27 June 2025
25	We refer to the above-mentioned tender, currently set to close on 13 June 2025 at 23:55 , as per the tender documents issued by your office.	Closing date extended to 27 June 2025
	Given the technical complexity, scale, and compliance requirements of this project, particularly in light of the extensive scope of works, the detailed returnable schedules, and the necessary subcontracting and compliance confirmations.	
	we respectfully request an extension of the closing date to enable thorough coordination and compilation of the following:	
	 Consolidation of technical documentation and detailed BOQ pricing Finalization of a technically sound and competitive proposal aligned with your specifications 	