



Project Title	BF101/23/E2SC2 Re-Advert: RIVERTON WTW REFURBISHMENT OF OLD PLANT'S FILTERS, CHLORINE AND CHEMICAL DOSING SYSTEMS
Work Package Title	Removal, Disposal and Replacement/installation of Filter Media (1 to 12)
Date of Work Package	24 October 2024
Project Manager	T.N Sibanda
Start Date	TBC
Expected Works Duration	14 days for each phase
Reference	C320-WPK004

Removal, Disposal and Replacement/installation of Filter Media (1 to 12)

Purpose

The purpose of this work package is to secure the services of a service provider for the in-situ removal, disposal and replacement/installation of filter media located in a packed bed rapid gravity filter.

Filter Media refers to the fine sand, grit and pebbles used for the treatment of drinking water.

C320 - Eigenbau Drawing of Filter Bed shows the depth of the filter media relative to the floor level. The removal and replacement of the filter media is required to be done using labour-intensive methods. The work package will be done in two phases, each six months apart to align with the restrictions that the water treatment works can only be taken out of service in two phases.

This work package is only available to enterprises that meet the following criteria for being Local, being a Local Emerging Contractor or being a Local Services Provider or Local Supplier and is a Targeted Enterprise as set out below.

Local

means the Sol Plaatje Municipality (SPM) area.

Local Emerging Contractor

means a legal business entity with its registered office and/or physical address in the Local area.

Local Supplier

means a legal business entity with its registered office and/or physical address in the Local area who has actively conducted business in the Local area for a period of more than 12 months and who supplies materials and plant directly to the end-user.





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Local Services Provider

means a legal business entity with its registered office and physical address in the Local area who has actively conducted business in the Local area for a period of more than 12 months and who supplies services directly to the end-user.

- Pre-Qualified Criteria for **Targeted Enterprises**

- i. an EME or QSE which is at least 51% owned by black people.
- ii. an EME or QSE which is at least 51% owned by black people who are youth.
- iii. an EME or QSE which is at least 51% owned by black people who are women.
- iv. an EME or QSE which is at least 51% owned by black people with disabilities.
- v. an EME or QSE which is 51% owned by black people living in rural or underdeveloped areas or townships.

Background

Eigenbau Pty Ltd is a company with a long history of successful projects in the water and wastewater treatment space. As such, Eigenbau competitively tendered for the appointment for various mechanical and electrical works at the Riverton Old Works. Eigenbau were appointed as the sole Main Contractor in the refurbishment of old plant's filters, chlorine and chemical dosing systems at Riverton Water Treatment works. Eigenbau is thus tasked with providing a Contract Nameboard for the Construction site and herewith issue this invitation to tender to suitable registered and experienced service providers for this as a works package to qualifying local entities.

Site Location

Riverton Water Treatment Works is located 30km north of Kimberly along the Vaal River. The construction site is adjacent to the plants main peripheral fencing close to the main entrance gate. The site is controlled/managed/ secured by Sol Plaatje Municipality and therefore any service provider is required to co-operate with them or their selected service providers/contractors etc and abide by any rules of their site. Access is by road.

- **Scope of work**

Eigenbau requires the services of a competent and fully registered Contractor to provide removal, correct disposal and installation of filter media at Riverton Water Treatment Works.

The Scope of work entails:

- a. Manually removing the filter media from each filter (media volume per filter is approximately 26m³) and there are 12 off filters as shown in [Drawing C320 – Eigenbau Drawing of Filter Bed.](#)
- b. Manual Installing the filter media (12 off tanks) as shown in [Drawing C320 – Eigenbau Drawing of Filter Bed.](#) Similarly, the replacement/installation process will be labour-intensive.





- c. Using the sand portion of the filter media to build a small volleyball court for the local community
- d. Disposing of the Gravel and Pebbles at a spoil (dump) site within 2km from the Water Treatment Works.

NOTE: The attached pricing schedule is used as a guide for each line-item. It remains the contractor's responsibility to ensure that each detail as part of the scope is noted and priced for.

Safe working practices will have to be adhered to at all times and without exception. All staff to have appropriate access to PPE, drinking water and related equipment. Safety transgressions could result in work stoppages or worse.

Access, Removal and installation of filter media

The filter bed is located approximately 3m below the upper walkway level inside the Filter Building as shown in the Drawing C320 – Eigenbau Drawing of Filter Bed. Access to the filter media can be achieved by a ladder from the top level, down to the filter bed.

For the removal process, the material would have to be shovelled into a bucket (or container) and reeled up to the platform level and emptied into a wheelbarrow. ALL the filter media in the filter bed will be removed from the filter bed.

The filter bed floor is a concrete slab with plastic nozzles sticking up on a tight spacing. Please see below sample picture of media scraped away to expose nozzles.





ALL the material around the nozzles should be removed such that the filter bed concrete layer is exposed and without material. Careful consideration should be taken when removing the filter media as the nozzles tend to break when mis-handled.

The wheelbarrow will then be transported to an identified opening in the building at the upper platform level. A chute or similar simple structure will need to be provided to connect this opening down to a waiting tipper truck or similar vehicle. The tipper truck will then need to be driven to the local dump site to offload media and then return for the next load.

Similarly, the installation process for new media will be a labour-intensive exercise. Filter media will be delivered to site in 25-40kgs bags. This will be placed at a proximity close to the filter media building on the outside and stored until needed (the offloading and storage is NOT included in this scope of work). The loose bags will be transported by manual labour into the filter building and up to the top filter platform. Thereafter, bags of media are to be emptied from the top level into the filter chamber from the upper level in the following sequence:

1. Pebbles in a layer of 150mm deep to be spread over the full filter floor. Note that the floor will now have new plastic nozzles installed and these need to be protected from damage caused by the loading and spreading of media. Protection is normally done by laying plywood 20mm in an area onto which the bags of pebbles are poured from above. Thereafter, plastic rakes or wood spreader planks are used for spreading the media in-between and over the nozzles. The nozzles are not suitable for walking over and can be easily damaged.
2. Grit in a layer of 100mm deep to be spread evenly over the pebbles. At this stage, the pebbles protect the nozzles, so no protection measures are required. Care should be taken to not mix the pebbles and the grit.
3. Sand in a layer of 700mm deep to be spread evenly over the grit. Care should be taken to not mix the sand and the grit.

Note: Damage of nozzle will result in penalties being imposed on the selected Contractor.

The Appointed Tenderer is recommended to have the following tools as a minimum:

- Buckets of the robust construction type
- Rope and slings (Max rating 500kg)
- Safety gear (PPE) for personnel.
- Wheelbarrows and shovels
- Scaffolding and/or ladders
- Shovels, Diggers, picks etc

NOTE: The above is a recommended removal strategy for the filter media. It is entirely up-to the selected tenderer to devise a more time effective methodology. Strict completion timelines will be enforced.

NOTE: After one complete backwash cycle, the final volume of each individual filter bed will be measured and recorded.





Deliverables

Below are the required deliverables.

- a. Completely empty filter gallery
- b. Exposed and clean Filter floor with nozzles
- c. Filter beds with new media packed in the correct sequence. (This will be measure after the first complete backwash cycle)
- d. Completely clean lower and upper gallery.

Assumptions

All cost related to this project should be in-cooperated into the submitted quotation for review. No variation orders will be tolerated.

Constraints

1. Submission closing date will be on the **07th of November 2024.**

Dependencies

- a. Nonapplicable.

Risks and Mitigation

All personnel will require a "working at heights" certificate.

Milestones

Not applicable to this work package

Progress reporting

The service provider shall report to the Project Manager on weekly progress. This progress will be emailed before close of business on Thursday.

Attachments and Appendices

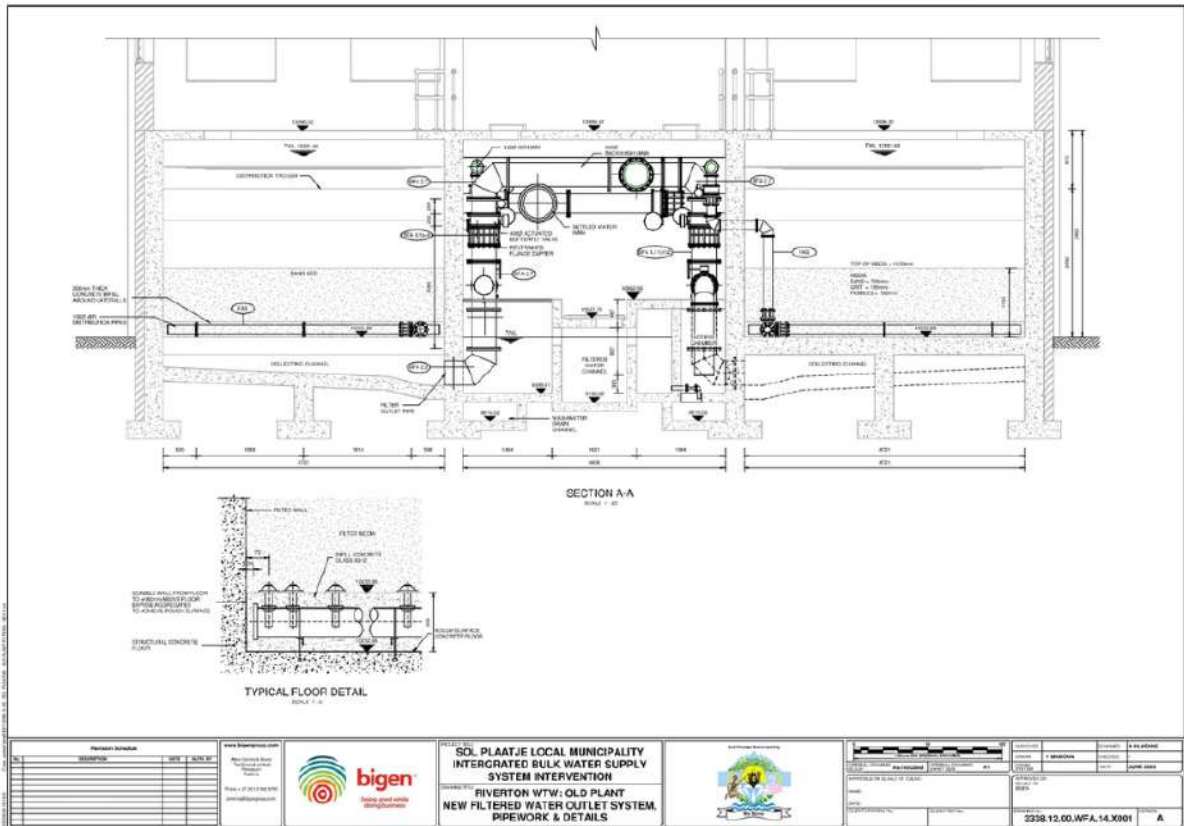
1. C320 – Drawing of Filter Media
2. C320 – Eigenbau Drawing of Filter Bed
3. C320 – Schedule Pricing for the removal, disposal and placement of filter media
4. C320 – Specification for Removal, Disposal and Replacement of Filter Media.

Approvals

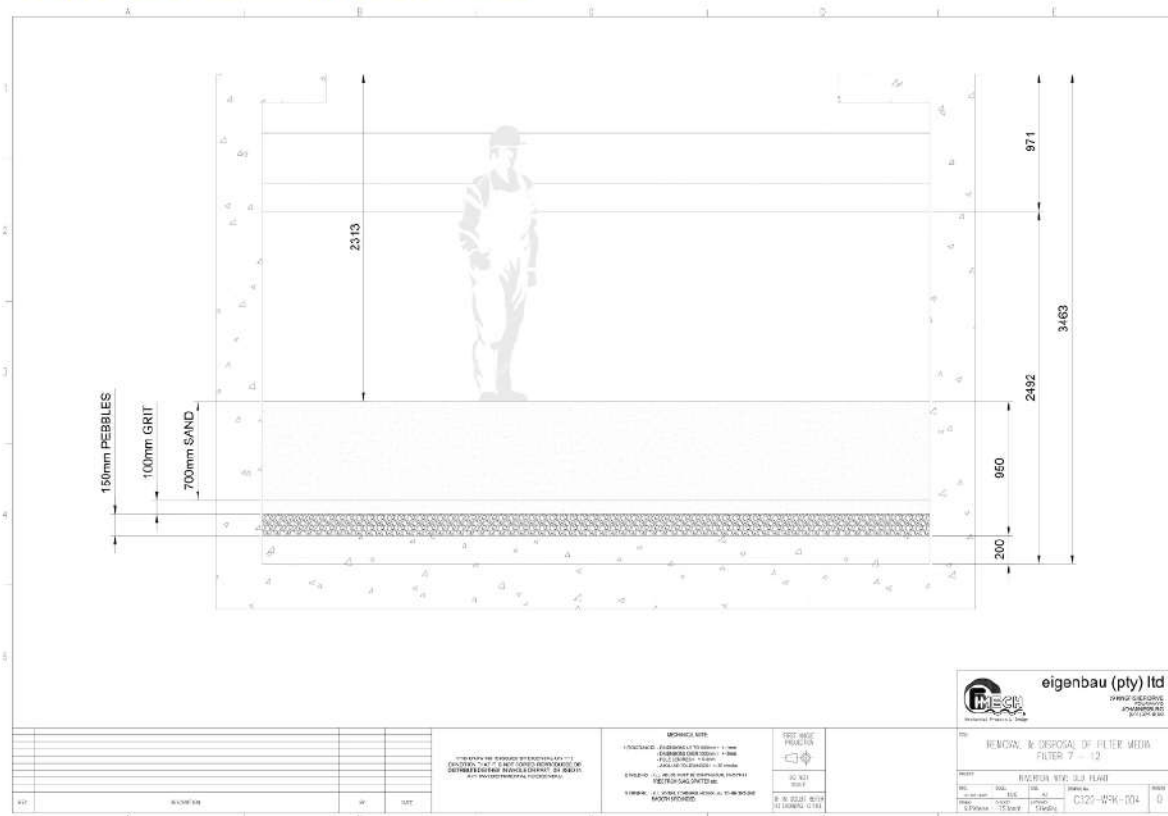
All approvals will be done by the Main contractors Project Manager.



C320 - Drawing of Filter Media



C320 - Eigenbau Drawing of Filter Bed





Returnable Documents

Below is a list of the required returnable documents:

1. Signed Quotation and Offer of Services addressing the Scope of Work.
2. Copy of CIDB Certification as proof of contractor's registration (Only application to Contractors who will be working on site).
3. CIPC Registration for the company (Only applicable to companies)
4. Tax Status Compliance or PIN. (This document is compulsory, and non-compliance will result in disqualification)
5. Certified copy of VAT Registration certificate
6. Certified copy of letter of good standing issued by the Department of Labour in terms of Act 130 of 1993.
7. Certified copy of Incorporation (Only required for applicants who are companies)
8. Certified copy of Partnership Agreement (If applicant is in a partnership)
9. Certified copy of Identity document of all owners/partners/directors etc.
10. Certified copy of the B-BBEE Status level verification certificate.
11. Copies of all identification for shareholder/directors/members etc (should not be older than 3 months)
12. CV of all key staff to be used on the project.
13. CV of the person who prepares the contractors Health, Safety and Environment plan.
14. Proof of Registration on the central supplier database (CSD)
15. Contractors Project Quality Plan.
16. Confirmation letter from bank for banking details.
17. Proof of Public Liability Insurance – not required for this package
18. List of experience in providing this service with contactable reference that are not related to the tendering entity.

Notes:

- a. A site briefing session will be held on the **31st of October 2024**. The sub-contractor tender prices will not be read out.
- b. Other queries in this regard can be emailed to tenders@eigenbau.co.za no later than 48 hours prior to the closing of the tender.

Commercial Terms and Conditions

Payment terms

- 1.Payment: Payments to sub-contractors will be based on monthly progress and invoices of work completed.
- 2.Payment period: Payments will be processed and finalised 30days from month-end of submission of invoice.
- 3.Retention period: n/a
- 4.Variations: When the sub-contractor or vendor is asked to perform additional work and/or changes are made to the scope, a variation order can be made.
- 5.No Advanced payment will be made for any work packages.
- 6.All other payment related queries, disputes and resolutions will be governed by the Conditions of Contract for Plant and Design (FIDIC yellow book).



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Submission of Documents

All documents must be submitted electronically by the 17.00 on the closing date, by scanning the originals and mailing them to tenders@eigenbau.co.za