BID NUMBER	**BID 6/2026**
CLOSING DATE AND TIME	**THURSDAY 30 JULY 2026 STRICTLY @ 12:00**
DESCRIPTION	**JAN DU TOIT MECHANICAL EARTHMOVING OF EXCESS MATERIAL IN RIVER**
NAME OF TENDERER/BIDDER	
CSD NUMBER	
TOTAL BID PRICE (VAT INCLUDED)	
VALIDITY PERIOD OF BID	**90 DAYS**

SUBMISSION OF DOCUMENTS

Sealed tenders, endorsed as indicated in the bid document, must reach **Casidra** SOC Ltd at their Head Office, 22 Louws Avenue, Southern Paarl, placed in the bid box available at Reception.

FAILURE TO PROVIDE ANY OF THE COMPULSORY DOCUMENTATION AND PARTICULARS MAY RENDER THE BID INVALID.

PLEASE NOTE:
Documents must be bound as **Casidra** will not take responsibility for any information that is lost due to unbound submissions of tenders.

THE FOLLOWING RETURNABLE DOCUMENTS (INCLUDING THE CBD FORMS AS PART OF THE BID) MUST BE VALID FOR A PERIOD OF 90 CALENDER DAYS AFTER CLOSURE OF THE BID AND SUBMITTED AS PART OF THE BID PACKET

Document	Description	Compulsory	Comment
CBD 1	**Invitation to bid**	✓	
CBD 2	**Conditions to submit bid**	✓	
CBD 3	**Terms of Reference**	✓	
CBD 4	**Pricing schedule**	✓	

CBD 5 (a)	**Supply Chain – Preferential Procurement Regulations 2022 and Codes of good practice**	✓	
CBD 5 (b)	**Declaration**	✓	

Name of bidder	
Postal address	
Street address	
Telephone number (code and number)	
Cellphone number	
E-mail address	
VAT registration number	

SARS TCC attached (Foreign suppliers with no tax obligation in South Africa must complete the SBD1 form that will be submitted to SARS for verification and issuing of a Confirmation of Tax Obligation letter.)		YES	☐	NO	☐
Originally certified B-BBEE status level certificate/Original Sworn Affidavid (A B-BBEE status level verification certificate must be delivered to Casidra SOC Ltd, 22 Louws Avenue, Paarl, in order to qualify for preference points for B-BBEE)		YES	☐	NO	☐
CIDB Registration number	Number:	YES	☐	NO	☐
COIDA	Number:	YES	☐	NO	☐

I, _____

as the authorised representative of the company / CC / business hereby declare that, to the best of my knowledge the information submitted is true and correct and that I am duly authorized as a signatory of this bid. On behalf of my business, I accept the terms and conditions as set out in this document. I will supply documentary proof of any information supplied herein on request and to the satisfaction of **Casidra**.

In terms of the POPI Act I further give consent that my contact and company details as will be captured on the **Casidra** database may be shared with the role players/funders involved in the project and be used by **Casidra** for the purpose of further procurement.

Signature of bidder		**Date**	
Capacity under which this bid is signed			

1. BID SUBMISSION:

1.1. Bids must be delivered by the stipulated time to the correct address. **Late bids will not be accepted**.
1.2. All bids must be submitted on the official forms provided (not to be re-typed).
1.3. Bidders must be registered on the Central Supplier Database (CSD).
1.4. Original Sworn Affidavit and originally certified B-BBEE certificates must be submitted to bidding institution to qualify for preference points for B-BBEE.
1.5. Bids are subject to the **Casidra** SOC Ltd Financial Regulations, Preferential Procurement Policy Framework Act and the Preferential Procurement Regulations, 2022, the General Conditions of contract (GCC) where applicable, and if applicable other special conditions of contract.

2. TAX COMPLIANCE REQUIREMENTS

2.1. Bidders must ensure compliance with their tax obligations.
2.2. If a discrepancy exists between CSD and SARS, a printed version of the Tax Clearance Certificate (TCC) must be supplied by the supplier and the e-Filing PIN number for verification of authentication by **Casidra** SOC Ltd.
2.3. Foreign suppliers with no tax obligation in South Africa must complete SBD1 that will be submitted to SARS for verification and the issuing of a Confirmation of Tax Obligation letter.
2.4. Consortia/joint ventures/sub-contractors must each submit a separate TCC.

3. QUESTIONNAIRE TO BIDDING FOREIGN SUPPLIERS

3.1. Is the bidder a resident of the Republic of South Africa (RSA)	Yes ☐	No ☐
3.2. Does the bidder have a branch in RSA?	Yes ☐	No ☐
3.3. Does the bidder have a permanent establishment in the RSA?	Yes ☐	No ☐
3.4. Does the bidder have any source of income in the RSA?	Yes ☐	No ☐

IF THE ASWER IS "NO" TO ALL OF THE ABOVE, THEN IT IS NOT A REQUIREMENT TO OBTAIN A TAX COMPLIANCE STATUS/TAX COMPLIANCE SYSTEM PIN CODE FROM THE SOUTH AFRICAN REVENUE SERVICE (SARS) AND IF NOT REGISTER AS PER 2.3 ABOVE.

4. TENDER CONDITIONS

CASIDRA reserves the right to:

- disregard any bids where the declaration has not been signed;
- accept parts of the bid items or split bids based upon item prices;
- disclose the results of the points awarded on request;
- evaluate and award points according to the documentation supplied and evaluate functionality at its own discretion;
- award the bid to the qualifying bidder with the highest number of points scored, unless the prices are not market related or on the basis of objective criteria stated in the tender documents, and
- to award the bid to a bidder which does not necessarily have the lowest price.

The bid may be cancelled if:

- all the bid offers received are higher than R50 million;
- circumstances change and there is no longer a requirement for this service;
- funds are no longer available or if there are insufficient funds available in the budget for the work;
- no acceptable bids and/or market related prices are received;
- there is a material irregularity in the tender process (administrative non-compliance of prescribed legislation);
- false information was supplied by the bidder;
- Cancellation of bid will be placed in the same media as initially advertised.

Other notes:

- Final points scored will be rounded off to the nearest 2 decimal places.
- In the event of equal scores, the offer with the highest B-BBEE score will be successful. If scores are still equal, and where functionality is part of the bid, the offer with the highest functionality score will be successful. If the scores are still equal, the drawing of lots will determine the outcome.
- **Casidra** SOC Ltd retains the right to amend financial/accounting calculations and to accept the amended amount as the new bid amount.

FOR OFFICE USE ONLY – TO BE COMPLETED AT BSC MEETING

PLEASE INDICATE TYPE OF WORKS	
Infrastructure/construction (includes animal husbandry, building, greenhouses, sheds and storerooms, civil and building works including stores, engineering and electrical engineering works)	☒

PROCUREMENT STRATEGY **(Please indicate by choosing either YES or NO and click on the box.)**	Yes	No
1. Advertising on e-tender	☒	☐
2. Advertising on CIDB	☒	☐
3. Advertising on Casidra portal	☒	☐
4. RFQ	☐	☒
5. Open tender process	☒	☐
6. Contract administration sheet completed	☒	☐
7. Procure plan sheet completed	☒	☐
8. Advertise period **(2 week)** ***Note if bid document and advertisement period is less than 14 days, attach CEO approval.***	☒	☐

SUPPORTING DOCUMENTATION		
Project managers to indicate what supporting documentation MUST form part of the tender. If marked YES, then it must be provided to SCM:	Yes	No
Baseline Risk Assessment	☒	☐
Health & Safety plan	☒	☐
Drawings / sketches	☒	☐

DEADP MMP approval letter.pdf Jan du Toits River MMP_FINAL_Mainrepor.. Jan du Toits WUA map.pdf		
COMPULSORY DOCUMENTATION NEEDED TO BE SUBMITTED AS PART OF THIS BID:		
COIDA – Letter of good standing	☒	☐
COMPANY PROFILE – Detailed company profile including but not withstanding core business activities, background, resources, etc.	☒	☐
CONSTRUCTION MANAGER COMPETENCY - Provide proof of competency of a construction manager in terms of Construction Regulations 2014 Clause 8 in format of CV showing competency in field of construction as well as health & safety	☒	☐
CIDB – Provide active grading certificate for a minimum of **3CE** or higher.	☒	☐
REFERENCES – Provide a minimum of least **three (3)** different reference letters from **three (3)** different companies	☒	☐
EXPERIENCE – Provide detailed list of completed projects with contact numbers regarding civil projects completed as well as monetary value	☒	☐

PROJECT: JAN DU TOIT MECHANICAL EARTHMOVING OF EXCESS MATERIAL IN RIVER

GENERAL REQUIREMENTS

The works, as described, is situated in Jan Du Toits River it entails the mechanical clearing of debris which is causing blockages and flooding when there are peak flow events using earth moving equipment.

The quoted amount will be a measured bid and must include labour, material and machinery. The successful bidder must have the capacity to start the works within 7 (seven) days of appointment.

Conditions that may pose a risk:

Working in a river & flooding are at the foremost for risks at this specific construction site.

The requirements of the Occupational Health and Safety Act will be strictly enforced.

The contractor must put all necessary precautions in place to work under these conditions. A detailed risk management plan and Occupational Health & Safety specification is provided.

CONTRACT PERIOD	The completion period of this service is **(5) Five weeks** starting from the day of appointment**.**
RETENTION	Retention is **10%** of contract sum for 3 months not bearing interest, with no upper limit.
PENALTY CLAUSE	The penalty **R 1500.00** per calendar day will be applied for late completion of works.
CIDB GRADING (If marked **YES** under Procurement Strategy above)	**For Construction works above the value of R500 000**: tenderers must have a CIDB contractor grading designation **3 CE** or higher **3 CE** **Joint ventures** are eligible to submit tenders provided that: 1. Every member of the joint venture is registered with the CIDB; 2. The lead partner has a contractor grading designation in the (above indicated) class of construction work; 3. The combined contractor grading designation calculated in accordance with the Construction Industry Development Regulations is equal to or higher than a contractor grading designation determined in accordance with Table 9 of the *Construction Industry Development Regulations, 14 November 2008, GG 31603.*

SUB CONTRAC TING Bidder to complete sub-contracting section on CBD 5 if applicable.	Under CIDB Practice note 7 of 2007, one of the following subcontracting will apply: 1. Domestic subcontractor (appointed by the main contractor at his/her discretion);

FUNCTIONAL REQUIREMENTS

Functional refers to: A service or product that is designed to be practical, useful, working or operating, taking into account factors like quality, reliability, viability, and durability and the technical capacity (time and resources) and ability (knowledge and skills) of the bidder to execute the works.

Bids that fail to meet the minimum score, for individual criteria and total for functional criteria as stipulated in the tender document, will be an unacceptable tender.

This bid is subject to the evaluation of functional requirements. **NO**

LABOUR LOG SHEETS

One of Casidra's agreed mandate with the Western Cape Department of Agriculture is to report on jobs created for the individual projects. To assist Casidra with accurate reporting it is a condition of this bid document that the successful bidder will have to submit labour log sheets with all required information properly completed.

Documentation **MUST be submitted with every payment claim** from the Contractor on a monthly basis. Failure to submit this information will result in default by the contractor and may affect payment certificates being issued.

Documentation will consist of excel spreadsheet combined total person days, weekly log timesheet & relevant copies of South African ID Documents of workers claimed for under person days. This documentation will be emailed to the successful bidder. Weekly log sheet MUST be signed by workers on the site. The person days claimed for workers must have South African citizenship.

The Protection of Personal Information Act 4 of 2013 (also known as POPIA), regulates and controls the processing, usage and storage of personal information. In order to be compliant with POPIA, Casidra commits not to share your information with any third party outside Provincial & National Departments of Agriculture, project management agencies, co-workers and associates / partners as per our business approval and evaluation, and reporting processes.

SCOPE OF WORKS

This project consists of the following elements:

The proposed scope of works entails providing immediate disaster support to affected communities through the mechanical clearing and restoration of river systems. The works will primarily include:

- Removal of debris, vegetation, rock islands, and accumulated sand deposits from river channels;
- Reinstatement of natural flow paths within affected rivers;
- Repair and plugging of breached berm sections;
- Loading and hauling of excess material to approved spoil areas; and
- Associated emergency river rehabilitation measures.
- Trimming and finishing off blocked river channels.
- Removal of organic material and sediment causing obstruction to the watercourse

Levels are already pegged out on site

Estimated material to be moved is 30 000 m3. The estimated plant is three 20-ton excavators, two D7 Dozers and 3 10-ton Dumper Trucks.

All prices are to be "WET" when pricing.

METHODOLOGY

The works will be undertaken at various locations along the Jan Du Toit's River, as identified by the relevant Water User Association. The specific work areas will be indicated to the Contractor on site by the appointed Project Manager representing the respective Water User Association or Irrigation Scheme.

Attached hereto is the Maintenance Management Plan approved by the Department of Environmental Affairs and Development Planning. All activities and works executed under this contract shall be carried out strictly in accordance with the approved methodologies, conditions, and requirements contained within the Maintenance Management Plan.

SITE ACCESS:

The movement of vehicles on the site should be confined to clearly demarcated access routes and existing roads should be used where approved by the Farmer / Land owner. Any deviation should first be approved by the Project Manager, with consultation with the Landowner. The Contractor should ensure that vehicles leaving the site are clean and, wherever possible do not deposit mud and any other earth material on road surfaces.

SHEDS FOR EMPLOYEES AND MATERIALS:

The Contractor shall provide for the supply, erection and maintenance and removal on completion of the works, of ample temporary sheds for the proper storage of materials and for the use of his employees

TEMPORARY LATRINES:

The contractor shall provide for the supply and erection of proper temporary latrines for the use of his employees. Latrines are to be maintained in a thoroughly clean and orderly condition and adopt such precautions to prevent the soil from being contaminated/polluted and remove such latrines at the completion of the works.

DISCREPANCIES BETWEEN PLAN AND SPECIFICATION:

Any discrepancy between the plan and the specification must be brought to the attention of the technical Project Manager before the tenderer submits his price. This is to eliminate any confusion as to what is required for the contract because the tenderer must take note of the fact ***that no additional costs will be entertained for discrepancies between the plan and the specification after the tender price has been submitted.***

SECURITY:

The successful bidder is responsible for his own security of his/her plant, facilities, resources, etc for the duration of the contract.

CLEARING AWAY OF RUBBISH AND MATERIALS:

All rubbish accumulated during the works (including testing and commissioning) and all superfluous materials not required for completion of the contract shall be removed from site by the Contractor on an on-going basis, and as and when directed by the Engineer or Employer.

DUST CONTROL:

The Contractor is to take appropriate measures to minimise the generation of dust as a result of construction works, to the satisfaction of the Project Manager.
(Please see the baseline risk assessment and the health and safety specification).

FIRE PRECAUTIONS:

All reasonable precautions shall be taken to avoid the outbreak of fire, particularly in work involving the use of naked flames. The Contractor is to allow for full time supervision, and nominate a responsible person to ensure each artisan who is welding, or carrying out any operation that could cause a fire hazard, be equipped with a fire extinguisher. All workmen shall be made aware of the dangers involved in the careless disposal of matches, cigarettes and the like as well as the accumulation of rubbish on site. Hot work permits shall be enforced.

SITE CLEAN UP:

The Contractor shall ensure that all structures, equipment, materials and facilities used or created on site for or during construction activities are removed to the satisfaction of the Project Manager once the project has been completed. All roads to be repaired to at least its original condition. All damage to the sites infrastructure or land production must be repaired or rehabilitated before completion of the project.

NOISE AND NUISANCE CONTROL:

Operations shall be conducted in such a manner that nuisance shall not be caused to the general public, adjoining residents and users of adjacent buildings. If such nuisance is being caused the Contractor shall immediately make such arrangements that will prevent a recurrence of the same and indemnify the Employer against any claims arising therefrom.

RESTRICTIONS ON WORKMEN:

Ensure that workmen confine their activities to the area in which the Contract Works are being carried out. On no account shall workmen enter and use any existing building on site or any completed building without permission. No workmen shall be allowed to use any of the new fittings such as sinks, basins, WC's, cooking equipment, electrical circuits or appliances etc. Smoking will not be allowed on site.

Any transgressions of the above may lead to permanent dismissal from site. All workmen shall be identifiable by suitable ID cards and uniform work clothing.

PLACING OF ORDERS:

The contractor shall place al orders for materials as early as possible, as he/she will be held responsible for any delay in the delivery thereof.

DIMENSIONS OF NEW WORK:

The contractor shall take all dimensions affecting new work on the site since he will be held solely responsible for all new work being of the correct sizes.

EXISTING SERVICES:

If the contractor encounters any existing services such as cables, pipes or sewers during the execution of the works, he must immediately notify the Engineer, halting all work in the vicinity thereof, until instructions to proceed have been given by the Project Manager

Electric wires, telephone wires, pipes, etc. will not be interfered with during the course of the contract but if it should be necessary to disconnect or cut any such wires or pipes, the Project Manager will be advised thereof and his instruction awaited

PUBLIC LIABILITY

The Supplier shall put in place and maintain for the duration of the Contract general liability insurance to a value of R5 million (Five Million) per claim to cover both the Purchaser and the Supplier for liability arising from death or injury of a person, or loss or damages to property caused by the execution of the Contract. The number of claims shall be unlimited for the duration of the Contract. Please provide proof hereof.

END OF WORK TO BE DONE

TIMELINE

ACTION	START DATE	END DATE	TOTAL DAYS
Administrative and tender preparation	2026-06-18 Thu	2026-07-09 Thu	21
Tender runtime/sourcing of quotes	2026-07-14 Tue	2026-07-30 Thu	16
Adjudication and award of bid (BEC)	2026-07-30 Thu	2026-08-06 Thu	7
Adjudication and award of bid (BAC)	2026-08-06 Thu	2026-08-13 Thu	7
Award & objection period	2026-08-14 Fri	2026-08-28 Fri	14
Time to activate delivery	2026-08-28 Fri	2026-08-31 Mon	3
Construction time/delivery completed	2026-08-31 Mon	2026-10-05 Mon	35
		Total duration	**103**

BID CONDITIONS

Measured Bid

These documents are for a measured bid for all labour and material as set out in the Scope of Works. For the purposes of variation orders, the unit rates rate of the services should also be given if requested on the form **CBD 4.**

No unit rate price adjustment of whatever nature, except for decreases or increases in the Value-Added Tax (VAT) and / or Variation Orders, will be applicable in this contract. The bidder shall make provision in his bid price for possible fluctuations in costs.

Premises in Occupation

The premises for the works **will** be in occupation during the contract period. Approval to access the premises must be obtained from the land owner.

Fixed Price Bids

No contract price adjustment of whatever nature, except for decreases or increases in the Value-added Tax (VAT) and / or Variation Orders, shall be applicable in this contract. The Contractor will make provision in his bid for possible fluctuations in costs.

If the instruction / appointment for the construction of certain phases is done after the validity of the bid has expired, prices may, on request, be updated or re-negotiated within the reasonable norms of escalation.

Expenses in Preparation of Bid

The Client will not be responsible for, subject to the Preferential procurement regulations, nor pay any expenses for losses which the bidder may incur in preparation of this bid.

Inspection of Site

Bidders must familiarise themselves with the local conditions, the accessibility of the site, the full extent and nature of the work to be done and the conditions affecting the execution and pricing of the bid. Claims on the grounds of lack of knowledge in such respects or otherwise will not be entertained.

If a site meeting is held, notice of attendance must be forwarded to the contact person.

Only information given in writing to the Contractor by the Engineer during the tender period will be regarded as binding on the Contract. Verbal information, given during the site inspection or at any other time prior to the award of the Contract, will not be regarded as binding on the Contract.

Site

The site to be occupied will be clearly pointed out to the Contractor at the site handover. The Contractor will not be allowed to extend his operations beyond the boundaries of the site.

Water for the Works

The Contractor may use if available. He will obtain permission from the Land Owner before any connection to or extension of the existing supply is made, which will be executed, removed and made good on completion of the works at the Contractor's own expense.

Electricity & Lighting for the Works

The Contractor may use the existing power if available. He will obtain permission from the Land Owner before any connection to or extension of the existing supply is made, which shall be executed, removed and made good on completion of the works at the Contractor's own expense.

The Contractor will allow for the risk of failure in the electrical supply or in case of an insufficient supply, in which case he will make his own arrangements and all costs that may arise shall be for his own account.

Scaffolding & Hoisting Equipment

The Contractor will provide for the supply, erection and removal of scaffolding and / or hoisting equipment as required.

Tools, Equipment & Machinery

The Contractor will provide all his own tools and equipment as well as facilities and transport for this project. Machinery should be sufficient to complete the works in the allocated time.

Existing Services

If the Contractor encounters any existing services such as cables, pipes or sewers during the execution of the works, he must immediately notify the Client, halting all work in the vicinity thereof, until instructions to proceed have been given by the Project Manager.

Electric wires, telephone wires, pipes, etc. will not be interfered with during the course of the contract but if it should be necessary to disconnect or cut any such wires or pipes, the Client will be advised thereof and his instruction awaited.

Accounts and Payments

Payment of accounts received by the Client in terms of the works completed, shall be affected within 30 days after receipt of a correctly completed and approved invoice for the work module. The Client does not accept responsibility for delays in payment due to faulty accounts or paperwork.

Payments will be done maximum on a fortnight basis and will only be made for work done/completed. Payment will be based upon a completed payment schedule which will be completed by bidder on award of tender. Payments will only be made upon physical inspection and sign off of completed work. Please allow timeous notice for inspections so that the necessary travel arrangements can be made.

Wage rates

Be responsible for all the sub-Contractors appointed by him to complete the works. A minimum **of 35%** of local labour must be incorporated in the project and all workers must be SA citizens.

The area for which local labour is to be sourced is in a 50km radius from site.

The following guidelines should be considered when setting rates of pay for workers:

- The rate set should take into account wages paid for comparable unskilled work in the local area per sector, if necessary.
- The rate should be an appropriate wage to offer an incentive for work, to reward effort provided and to ensure a reasonable quality of work.
- It should not be more than the average local rate to ensure people are not recruited away from other employment and jobs with longer-term prospects.
- Men, women, disabled persons and the aged must receive the same pay for work of equal value.
- Provision should be made in the tender for value for payment of UIF and COIDA statutory levies.

Construction Insurance

Proof of construction insurance for planned work must be submitted by the successful contractor **within 14 calendar days upon receipt of letter of award**. If you do not have insurance, for smaller (less than R100 000) projects, Casidra can put it under its insurance portfolio for your own costs (0.5% of the contract value). We must be given enough prior notice regarding this.

Inspections, tests and analysis

All pre-bidding testing will be for the account of the contractor.

If it is a bid condition that supplies to be produced or services to be rendered should at any stage during production or execution or on completion be subject to inspection, the premises of the contractor shall be open, at all reasonable hours, for inspection by a representative of the Client or an organization acting on behalf of the Client.

If there are no inspection requirements indicated in the bidding documents and no mention is made in the contract, but during the contract period it is decided that inspections shall be carried out, the Client shall itself make the necessary arrangements, including payment arrangements with the testing authority concerned.

If the inspections, tests and analyses show the supplies to be in accordance with the contract requirements, the cost of the inspections, tests and analyses shall be defrayed by the Client.

Where the supplies or services do not comply with the contract requirements, irrespective of whether such supplies or services are accepted or not, the cost in connection with these inspections, tests or analyses shall be defrayed by the contractor.

Supplies and services which do not comply with the contract requirements may be rejected.

Any contract supplies may on or after delivery be inspected, tested or analysed and may be rejected if found not to comply with the requirements of the contract. Such rejected supplies shall be held at the cost and risk of the contractor who shall, when called upon, remove them immediately at his own cost and forthwith substitute them with supplies which do comply with the requirements of the contract. Failing such removal, the rejected supplies shall be returned at the contractors cost and risk. Should the contractor fail to provide the substitute supplies forthwith, the Client may, without giving the supplier further opportunity to substitute the rejected supplies, purchase such supplies as may be necessary at the expense of the contractor.

The provisions of above clauses regarding inspection & testing shall not prejudice the right of the Client to cancel the contract on account of a breach of the conditions thereof, or to act in terms of the conditions of contract.

Warranty

The contractor warrants that the goods supplied under the contract are new, unused, of the most recent or current models, and that they incorporate all recent improvements in design and materials unless provided otherwise in the contract. The contractor further warrants that all goods supplied under this contract shall have no defect, arising from design, materials, or workmanship (except when the design and/or material is required by the Client's specifications) or from any act or omission of the contractor, that may develop under normal use of the supplied goods in the conditions prevailing in the country of final destination.

This warranty shall remain valid for **twelve (12) months** after the goods, or any portion thereof as the case may be, have been delivered to and accepted at the final destination indicated in the contract, or for eighteen (18) months after the date of shipment from the port or place of loading in the source country, whichever period concludes earlier, unless specified otherwise.

The Client shall promptly notify the contractor in writing of any claims arising under this warranty. Upon receipt of such notice, the contractor shall, within the period specified and with all reasonable speed, repair or replace the defective goods or parts thereof, without costs to the Client.

If the contractor, having been notified, fails to remedy the defect(s) within the period specified, the Client may proceed to take such remedial action as may be necessary, at the contractor's risk and expense and without prejudice to any other rights which the Client may have against the contractor under the contract.

PRICING SCHEDULE **CBD 4**

NAME OF BIDDDER	
BID NUMBER	**6/2026**

Are you registered in terms of sections 23 of the Value-Added Tax Act 1991 (Act no 89 of 1991) asamended?1	**Yes** ☐	**No** ☐
If yes to above, provide your VAT number		
Bill of quantities (if yes, it will be attached separately)	**Yes** ☐	**No** ☐

Item no	Days	Qty	Description	Bid price (RSA currency) (see 3a)
1		9	Establishment cost (per machine)	
2		9	De-establishment cost (per machine)	
3	25 days	3	20-ton Bell excavator wet per day based on 8 hours a day	
4	12 days	2	D7 Dozer wet based on 8 hours a day	
5	25 days	3	10-ton Dumper truck wet based on 8 hours a day	
			10% CONTIGENCY	
			SUB TOTAL	
			VAT	
			GRAND TOTAL	

Signature of bidder	
Date	

NOTES (applicable where indicated)

A. PRICE (where applicable)

1. FIRM PRICES

a. Only firm prices will be accepted.
b. No non-firm prices will be considered.
c. All delivery cost must be included in the bid price for delivery at prescribed destination.
d. In cases where different delivery points influence the pricing, a separate pricing schedule must be submitted for each delivery point.

2. NON-FIRM PRICES

a. In cases of period contracts, non-firm prices will be adjusted (loaded) with the assessed contract price adjustments implicit in non-firm prices when calculated the comparative prices.
b. Price adjustments will be allowed at periods and times specified in the bidding documents.
c. In cases where different delivery points influence the pricing, a separate pricing schedule must be submitted for each delivery point.
d. The quantities are given as a guideline for a bid and for the purposes of unit rates and in no way be used as a measured bid.

3. PROFESIONAL SERVICES

a. All applicable taxes include value-added tax, pay as you earn, income tax, unemployment insurance contributions and skills development levies.

B. CONSTRUCTION (applicable to construction only)

1. The total price for the service must include all labour and material required for the proper execution of the work as described in the Scope of Works and as per Engineers drawings (where applicable).
2. The tender will be evaluated on the criteria for a market related price.
3. The contractor must attach a **detailed and comprehensive** proof of competency of a construction manager in terms of Construction Regulations 2014, Clause 8 including experience regarding construction health & safety regulations.
4. The contractor **must** attach the proof of CIBD grading as specified in the scope of works.
5. The contractor **must** be in possession of a valid COIDA letter of good standing and it must be attached.
6. Where applicable, the contractor **must** attach valid proof or registration with the Department of Labour for the installation of the main electrical supply.

C. OTHER NOTES (applicable to all bids)

1. The tender will be evaluated on the criteria for a market related price.
2. The full cost of the service and/or works must be indicated and may not be discounted or cross subsidised against another service, project, transaction or sale of goods. Such contributions against the total project cost must be specified, itemised, costed and clearly indicated in the bid.
3. The prices must be **valid for a period of 90 days** from date of closure of the bid to allow for evaluation and appointment.
4. **Casidra** SOC Ltd retains the right to amend financial/accounting calculations and to accept the amended amount as the new bid amount.

D. COMPANY PROFILE (applicable when requested)

1. The contractor must attach a **detailed and comprehensive** company profile including **core competencies of personnel.** The company profile must summarize information about the organisation.
2. The company profile must include the following:
   a. Company core business activities (describe products and services and markets in which it operates).
   b. Company background (state number of years in business, location, history of company etc.)
   c. Company resources (number of employees, core competencies of personnel, structure of company)

E. WARRANTY (applicable when requested)

1. Where requested, the bidder must attach proof of warranty offered on the letterhead of the bidder.

F. BROCHURE (applicable when requested)

1. Bidder must provide detailed brochure and technical specifications of products where requested.
2. Bidder must be able to provide proof of service location within applicable radius as specified in CBD 3 (Scope of works).

G. AFTER SALES SERVICES AGREEMENT (applicable when requested)

1. Where applicable, the bidder must sign and submit the after sales agreement.

H. APPOINTMENT (applicable to construction and professional services)

1. The successful contractor will be given notification in writing by means of an appointment letter
2. The successful contract must sign the **CBD 8**, together with this document, which will form the contract.

CHANGES MADE BY BIDDER	
If the bidder wishes to make any changes to any of the bid conditions or specifications, or wishes to qualify this bid in any way, it must be clearly set out below. Any changes made and not listed, will disqualify a bid. **Any changes made by the bidder outside the scope of works, resulting in not meeting pre-qualifying conditions or compulsory subcontracting, may influence the functionality of the end product and may result in the bid being disqualified.**	
Item	**Suggested change**

PROOF OF REFERENCES

Supply at least **three (3)** different reference letters from **three (3)** different companies with contact numbers

PROOF OF RELEVANT EXPERIENCE

Provide detailed list of completed projects with contact numbers regarding civil projects completed as well as monetary value

SCHEDULE: CONSTRUCTION MANAGER COMPETENCY

The contractor must attach to this page DETAILED & COMPREHENSIVE proof of competency of a construction manager in terms of Construction Regulations 2014 Clause 8.

Please attach a complete CV for evaluation purposes relevant to this occupation of Construction work. Please also supply this particular person's experience regarding construction health & safety regulations.

SCHEDULE: DETAILED COMPANY PROFILE

The contractor must attach to this page a DETAILED & COMPREHENSIVE company profile including core competencies of personnel. The company profile must summarize information about your organisation. In order for a company profile to be compliant for this bid, the following detail MUST be included in the company profile.

- Company core business activities – Describe your products and services and markets in which you operate

- Company background – State number of years in business, location, history of company, etc

- Company resources – Number of employees, core competencies of personnel, structure of company - organogram

COIDA LETTER OF GOOD STANDING

The contractor must attach to this page a copy of the current letter of good standing

CIDB GRADING

The contractor must attach to this page CIDB grading of **3CE** or higher

SUPPLY CHAIN MANAGEMENT

PREFERENCE POINTS CLAIM FORM IN TERMS OF THE PREFERENTIAL PROCUREMENT REGULATIONS 2022 AND CODES OF GOOD PRACTICE

Only for use of bids from R2 000 to maximum of R50 million

Casidra, as a Schedule 3D development and implementation agent for the Western Cape Provincial Government underwrites, and complies with the Provincial and National developmental initiatives and administers funds on behalf of donors. Within this context, and because of the specific requirements of the donors for the application of the funds, the awarding of bids is dependent on the special evaluation criteria as set out in the policies of **Casidra**. The evaluation criteria of this Preferential Procurement Policy are based on the "**Preferential Procurement Policy Framework (Act 5 of 2000)**" and related Regulations.
Awarding of the bid is dependent on preferential points system, and every presentation is measured against the specific evaluation criteria as shown. **The completion and signature of the document is thus a pre-requisite to qualify as a service provider.**

This preference form must form part of all bids invited. It contains general information and serves as aclaim form for preference points for Broad-Based Black Economic Empowerment (B-BBEE) Status Level of Contribution.

NB: BEFORE COMPLETING THIS FORM, BIDDERS MUST MAKE SURE OF THE CONTENTS OF THE BROAD BASED BLACK ECONOMIC EMPOWERMENT ACT AND THE CODES OF GOOD PRACTICE WHICH CAN BE FOUND ON:

- http://www.thedtic.gov.za/financial-and-non-financial-support/b-bbee/broad-based-black-economic-empowerment/
- https://www.gov.za/documents/broad-based-black-economic-empowerment-act
- https://www.bbbeecommission.co.za/

DEFINITIONS

1.1 **"affidavit"** is a type of verified statement or showing, or in other words, it contains a verification, meaning itis under oath or penalty of perjury, and this serves as evidence to its veracity and is required for court proceedings;
1.2 **"B-BBEE"** means broad-based black economic empowerment as defined in section 1 of the Broad-Based Black Economic Empowerment Act;
1.3 "**B-BBEE status level of contributor"** means the B-BBEE status received by a measured entity based on its overall performance using the relevant scorecard contained in the Codes of Good Practice of Black Economic Empowerment, issued in terms of section 9(1) of the Broad-Based Black Economic Empowerment Act;
1.4 **"EME"** is an Exempted Micro Enterprise with an annual total revenue of R10 million or less;
1.5 **"Large Enterprise"** is any enterprise with an annual total revenue above R50 million;
1.6 **QSE** is a Qualifying Small Enterprise with an annual total revenue between R10 million and R50 million;
1.7 **"The Act"** means the Preferential Procurement Policy Framework Act, 2000 (Act No. 5 of 2000);
1.8 "**The Regulations**" means the Preferential Procurement Regulations, 2011 and 2022;
1.9 **"Consortium or joint venture"** means an association of persons for the purpose of combining theirexpertise, property, capital, efforts, skill and knowledge in an activity for the execution of a contract;
1.10 **"person"** includes a juristic person;
1.11 **"sub-contract"** means the primary contractor's assigning, leasing, making out work to, or employing, another person to support such primary contractor in the execution of part of a project in terms of the contract;
1.12 **"trust"** means the arrangement through which the property of one person is made over or bequeathed to a trustee to administer such property for the benefit of another person; and
1.13 **"trustee"** means any person, including the founder of a trust, to whom property is bequeathed inorder for such property to be administered for the benefit of another person;
1.14 **"Original sworn affidavit"** means the initial document which was not photocopied or electronically reproduced;
1.15 **"Original certified B-BBEE certificate"** means the certification of a copy of the B-BBEE certificate confirming the validity of the original document. The stamp of the notary must be **ORIGINAL**.

GENERAL CONDITIONS

1.1 The value of this bid is estimated to **not exceed R50 million** (all applicable taxes included) and therefore the 80/20 points system shall be applicable.
1.2 Preference points for this bid shall be awarded for:
(a) Price; and
(b) B-BBEE Status Level of Contribution.
1.3 The maximum points for this bid are allocated as follows:

POINTS

PRICE	**80**
B-BBEE STATUS LEVEL OF CONTRIBUTION	**20**
Total points for Price and B-BBEE	**100**

1.4 Failure on the part of a bidder to fill in, sign this form and submit in the circumstances prescribed in the Codes of Good Practice either a B-BBEE Verification Certificate form issued by a Verification Agency accredited by the South African Accreditation System (SANAS) or by a Registered Auditor approved by theIndependent Regulatory Board of Auditors (IRBA) or an affidavit confirming annual total revenue and level of black ownership together with the bid, will be interpreted to mean that preference points for B-BBEE status level of contribution are not claimed.

1.5 The purchaser reserves the right to require of a bidder, either before a bid is adjudicated or at any time subsequently, to substantiate any claim in regard to preferences, in any manner required by the purchaser.

1.6 The bidder is responsible to provide **Casidra** SOC Ltd with (refer to 2.2 under POINTS AWARDED FOR PRICE:

1.6.1. An **original sworn affidavit**

1.6.2. An **originally certified B-BBEE certificate.**

ADJUDICATION USING A POINT SYSTEM

1.1 Subject to Regulation 7 of the **Casidra** SOC Ltd Financial Regulations and PPR 2022, the bidder obtaining the highest number of total points will beawarded the contract.

1.2 Preference points shall be calculated after prices have been brought to a comparative basis taking into account all factors of non-firm prices and all unconditional discounts.

1.3 Points scored must be rounded off to the nearest 2 decimal places.

1.4 In the event that two or more bids have scored equal total points, the successful bid must be the one scoring the highest number of preference points for B-BBEE.

1.5 However, where functionality criterion forms part of the bid and is part of the evaluation process, and two or more bids have scored equal points including equal preference points for B-BBEE, the successful bid must be the one scoring the highest scorefor functionality.

POINTS AWARDED FOR PRICE

THE 80/20 PREFERENCE POINT SYSTEM

1. A maximum of 80 points is allocated for price on the following basis:

$$Ps = 80\left(1 - \frac{Pt - P\,min}{P\,min}\right)$$

Where

Ps = Points scored for price of tender under consideration

Pt = Rand value of offer tender consideration

Pmin = Rand value of lowest acceptable tender

2. A maximum of 20 points will be awarded for B-BBEE status level of contribution:

2.1. In terms of Regulations 5(2) of the Regulations preference points must be awarded to a bidder for attaining the B-BBEE status level of contribution in accordance with the table below:

B-BBEE Status Level on Contributor	Number of points	Points awarded (for office use only)	BEE recognition level
1	20	EME & QSE 100% Black owned	135%
2	18	EME & QSE 51% + Black	125%
3	14		110%
4	12	EME 51% < Black owned	100%
5	8		80%
6	6		60%
7	4		50%
8	2		10%
Non-compliant contributor	0		0%

2.2. B-BBEE requirements:

An ***EME*** must submit a valid, fully completed, **original, certified, dated and signed sworn affidavit** (no photostat copies of certification allowed) confirming annual turnover and level of black ownership or an affidavit issued by Companies Intellectual Property Commission (accounting officer for a Closed Corporation).

If a **startup EME,** a **clear, originally certified copy**, of B-BBEE certificate issued by the CIPC for EME's only is accepted.

A ***QSE that is less than 51% (50% or less) black owned*** must be verified in terms of the QSE scorecard issued via Government Gazette and submit a **clear, valid, originally certified copy** of a B-BBEE Verification Certificate issued by SANAS.

A ***QSE that is at least 51% black owned (51% or higher)*** must submit an **original, certified, dated and signed sworn affidavit** confirming turnover and level of black ownership as well as declare its empowering status or an affidavit issued by Companies Intellectual Property Commission.

A ***large enterprise*** must submit a **clear, valid, originally certified copy** of a B-BBEE Verification Certificate issued by a verification agency accredited by SANAS.

A **trust, consortium or joint venture**, will qualify for points for their B-BBEE status level as a legal entity, provided that the entity submits their B-BBEE status level certificate.

A **trust, consortium or joint venture** (including unincorporated consortia and joint ventures) must submit a consolidated B-BBEE status level verification certificate for every separate tender.

Tertiary institutions and public entities will be required to submit their B-BBEE status level certificates in terms of the specialized scorecard contained in the B-BBEE Codes of Good Practice.

3. Bids of non-compliant contributors (where no certificate was submitted) will be considered but no points will be awarded for B-BBEE status.

DECLARATION

Bidders who claim points in respect of B-BBEE status level of contribution **MUST** complete the following:

1. B-BBEE status level of contributor claimed in terms of paragraph 1 and 2 above:

B-BBEE status level of contributor:

2. SUB-CONTRACTING

2.1. Will any portion of the contract be sub-contracted: ***(Tick applicable box)***	Yes ☐	No ☐
2.2. If YES, INDICATE:		
a. What percentage of contract will be subcontracted?		
b. The name of the subcontractor		
c. B-BBEE status level of the sub-contractor		
d. Is sub-contractor EME or QSE	Yes ☐	No ☐
e. Attach the **originally certified** B-BBEE certificate/**original** sworn affidavit as proof.		

MARKET RELATED PRICING

If a bidder, whose tender is compliant and received the highest overall points, do not offer a market related price, the offer may be negotiated with that bidder to be market related.

Are you willing to negotiate your offer?	Yes ☐	No ☐

SUPPLY CHAIN PERFORMANCE MEASUREMENT

In order for **Casidra** to measure its supply chain efficiency and effectiveness, please assist us by answering the following questions:

- **What were the source that made you became aware of this bid being available.**

Personal Email invite to bid:	☐
Via a friend or business partner:	☐
National Government E-Tender website:	☐
Local Newspapers:	☐
Casidra own website:	☐
CIDB website	☐
Other (specify) ……	☐

- **Was the time allowed to date of closure sufficient for you to compile an offer?**

No – too short ☐	Yes – Sufficient ☐	No - Too long ☐

I, _____

as the authorised representative of the company / CC / business hereby declare that, to the best of my knowledge the abovementioned information is true and correct and that I am duly authorized as a signatory of this bid. On behalf of my business, I accept the terms and

conditions as set out in this document. I will supply documentary proof of any information supplied herein on request and to the satisfaction of **Casidra**. In terms of the POPI Act I further give consent that my contact and company details as will be captured on the **Casidra** database may be shared with the role players/funders involved in the project and be used by **Casidra** for the purpose of further procurement.	
Signature	
Date	

BIDDER'S DISCLOSURE

1. PURPOSE OF THE FORM

1.1 Any person (natural or juristic) may make an offer or offers in terms of this invitation to bid. In line with the principles of transparency, accountability, impartiality, and ethics as enshrined in the Constitution of the Republic of South Africa, 1996 (Constitution), and further expressed in the various applicable legislation, it is required for the bidder to make this declaration in respect of the details required hereunder.

1.2 If a person is listed in the Register for Tender Defaulters and/or the List of Restricted Suppliers, that person will automatically be disqualified from the bid process.

2. DECLARATION ON EMPLOYMENT BY ORGAN OF STATE

2.1 Is the bidder, or any of the directors / trustees / shareholders / members / partners of the bidder employed by an organ of state, as defined in section 239 of the Constitution? **YES/NO**

2.2 If YES, furnish particulars of the names, individual identity numbers, in the table below:

Full Name	Identity Number	Name of organ of state

2.3 Do you, or any person connected with the bidder, have a relationship with any person who is employed by the procuring institution? **YES/NO**

2.3.1 If so, furnish particulars:

……
……

2.4 Does the bidder or any of its directors/trustees/shareholders members/partners or any person having a controlling interest in the enterprise have any interest in any other related enterprise, whether or not they are bidding for this contract? **YES/NO**

2.4.1 If so, indicate all companies registered in the CSD in the table below:

Supplier registration number (MAAA)	Status (active/inactive/deleted)

Failure to disclose all CSD-registered active companies linked to all Directors will lead to disqualification.

3 GENERAL DECLARATION

I, ……....., the undersigned, in submitting the accompanying bid, do hereby make the following statements that I certify to be true and complete in every respect:

3.1 I have read and I understand the contents of this disclosure.

3.2 I understand that the accompanying bid will be disqualified if this disclosure is found to be false.

3.3 The bidder has arrived at the accompanying bid independently from, and without consultation, communication, agreement or arrangement with any competitor.

3.4 In addition, there have been no consultations, communications, agreements or arrangements with any competitor regarding the quality, quantity, specifications, prices, including methods, factors or formulas used to calculate prices, market allocation, the intention or decision to submit or not to submit the bid, bidding with the intention not to win the bid and conditions or delivery particulars of the products or services to which this bid invitation relates.

3.5 The terms of the accompanying bid have not been, and will not be, disclosed by the bidder, directly or indirectly, to any competitor, prior to the date and time of the official bid opening or of the awarding of the contract.

3.6 There have been no consultations, communications, agreements or arrangements made by the bidder with any official of the procuring institution in relation to this procurement process prior to and during the bidding process except to provide clarification on the bid submitted where so required by the institution; and the bidder was not involved in the drafting of the specifications or terms of reference for this bid.

3.7 I am aware that, in addition and without prejudice to any other remedy provided to combat any restrictive practices related to bids and contracts, bids that are suspicious will be reported to the Competition Commission for investigation and possible imposition of administrative penalties in terms of section 59 of the Competition Act, 1998 (Act No. 89 of 1998) and or may be referred to law enforcement agencies for criminal investigation and or may be restricted from conducting business with the state for a period not exceeding 10 years in terms of the Prevention and Combating of Corrupt Activities Act, 2004 (Act No. 12 of 2004) or any other applicable legislation.

I CERTIFY THAT THE ABOVE IS CORRECT.

I ACCEPT THAT THE PROCURING INSTITUTION MAY REJECT THE BID OR TAKE APPROPRIATE ACTION AGAINST ME IF THIS DECLARATION IS FALSE.

……	……
Signature	Date
……	……..
Designation	Name of bidder

TENDER NR: 6/2026

JAN DU TOIT MECHANICAL EARTHMOVING OF EXCESS MATERIAL IN RIVER

BASELINE RISK ASSESSMENT REPORT

A baseline risk assessment focuses on the identification of risk that applies to the whole project. The purpose of conducting a baseline risk assessment is to establish a risk profile.

This is an initial risk assessment that focuses on a broad overview in order to determine the risk profile to be used in subsequent risk assessments. It is performed to obtain a benchmark of the types and size of potential hazards, which could have a significant impact on the whole project and all stakeholders.

The stakeholders need to identify the major and significant risks, then prioritise these risks and evaluate the effectiveness of current systems for risk control.

The risks for the above project which have been identified have been highlighted under the following categories:

1. **Scope of work (what is being built?)**

   This project consists of the following elements:

- Construction of a temporary channel and berm to temporarily accommodate river flows and protect the construction site.
- Excavation and shaping to rehabilitate the river channel.
- Trimming and finishing off river channel and fill slopes.
- Removal of organic material and sediment causing obstruction to the watercourse
- The areas are to be shaped to guide the watercourse as per the watercourse

2. **Location of site and elements specific to the location (municipal by-laws, weather factors, geographical factors)**

For office use only	**Version no: 1**	**Date: 5 September 2019**	
To be signed upon appointment of winning bidder to form the agreement between the parties			
Signature for **Casidra**		Signature for Contractor	

Location

Approx. 12km North to Northeast Worcester, Western Cape (Lat: - 33.580785 | Long: 19.333237)

Weather

Weather always poses a risk to any construction project. Therefore, the below information is important to manage this risk item accordingly.

The area normally receives about 487 mm of rain per year, with most rainfall occurring mainly during winter. It receives the lowest rainfall (25 mm) in January and the highest (64 mm) in June. The monthly distribution of average daily maximum temperatures shows that the average midday temperatures for Worcester range from 11°C in July to 22.3°C in February. The region is the coldest during July when the mercury drops to 11°C on average during the night.

There is the possibility of the river flooding if weather conditions are abnormal and large amounts of rain is present and/or dams releasing large quantities of water into the river.

3. Geo- technical risks (conditions of the soil, raise any concerns that may hinder the project progress)

The selected site is situated on one side of the river in aquatic and undulating conditions, as well as working in an active running riverbed. The density and growth of alien biomass varies from dense to sparse, from large to small.

Certain soil conditions could be waterlogged and muddy underfoot causing access to and on site impossible. The consent and approval of the local municipality and the community representatives will need to be obtained when creating access roads to the site.

Steep river banks will increase the risk of equipment and people falling in the river.

4. Environmental risks (This is the actual or potential threat of adverse effects on living organisms and environment by effluents, emissions, wastes, resource depletion, etc. involved in the construction phase)

The environmental risks associated with this site are as follows:

The nature of the construction work will take place directly in the riparian zone both sides of the Jan Du Toit River. Within this habitat there are indigenous plants/trees which have to be protected, as well fauna which is present in this riparian zone. A high volume of bird life is present.

Due to the site being in an environmental area there is always the risk for soil, groundwater and surface water pollution and contamination when using mechanical plant, fuel and pesticides. It will not be allowed to dispose of any kind of waste by burying it on site.

Biomass not removed also poses a major threat, as this material just ends up in the river again and further exacerbate the current problem.

Movement of vehicles on farm access roads creates dust which in turn sits on farmers crops affecting their quality of produce.

Disturbance of ground and biomass increases the possibility of personell being attacked by snakes and bees.

5. Risk assessments based on scope of work (Is this a high-rise building in a built-up area? Is it working in a flood plain and/or river with eroded soil conditions?)

Cutting logs at rivers edge also is evident and this restricted access poses risk to both the method of felling of tree and resources used in this operation.

Access to construction activities invariably means making access through landowner's farms through windbreaks, orchards, etc. This has to be managed so as to cause the least damage to infrastructure. Access to sites will mean using farmer's roads on their land. This will need to be coordinated as to where the impact is minimal on both farming operations and infrastructure.

Also, all the farms/resorts are working farms/resorts, so farm /resort workers and implementation is at risk regarding both transport and biomass removal.

6. Equipment Risks.

The equipment risks associated with this project is as follows:

This will be a mechanised job with large numbers of mechanised earth moving equipment in close proximity to people, infrastructure, and surrounding environment. This earth moving equipment has to gain access in limited space areas with treacherous ground conditions being stable and at times unstable.

7. Material Risks.

The following could pose risks associated with the project:

- Flammable materials such as diesel/petrol in a highly flammable environment
- Hazardous substances such as pesticides and herbicides will have to be used
- Cement potency for concrete works.

8. Ergonomic Risks (Ergonomic hazards refer to workplace conditions that pose the risk of injury to the musculoskeletal system of the worker).

The ergonomic risks associated with the above project are as follows:-

•Severe injury/death from falling trees
•Severe injury/death from mechanical plant
•Asphyxiation due to smoke inhalation if burning of biomass is done.
•Drowning due to falling in river.
•Humidity could be high working under canopy with high heat expected.
•Heat stroke due to high temperatures and extended periods of direct sunlight exposure.

9. Controls specific to client requirements (two-day induction, pink overalls, entrance to existing premises, etc.).

The list of client requirements applicable to this project is: -

- Working hours is 07h30 to 17h00 on weekdays and 07h30 to 15h00 on Saturdays

RISK OVERVIEW CHART FOR PROJECT:

LOCATION	High temperatures	Heat exhaustion of personnel	5
	Rain	Worsen conditions underfoot & raise river level	2
GEOGRAPHICAL	Soil conditions aquatic and undulating	Difficult conditions to operate heavy machinery in to remove biomass.	4
ENVIRONMENTAL	Dust pollution	Dust will affect neighboring farmers crops	3
	Indigenous plants	Risk of damaging indigenous vegetation	2
	Soil contamination	Risk of pollution to ground & river by contaminants	4
	Snakes	Risk of being bitten by snakes	5
	Bees	Risk of being stung by bees	5
SCOPE OF WORK	Access to site	Access routes through various farm owners and access to riparian zone also difficult	3
	Water over & in water	Dangerous working in flowing river for personnel & equipment	4

For office use only	**Version no: 1**	**Date: 5 September 2019**	
To be signed upon appointment of winning bidder to form the agreement between the parties			
Signature for **Casidra**		Signature for Contractor	

EQUIPMENT	Mechanized earthmoving equipment	Working in difficult terrain and in close proximity to personnel	5
MATERIAL	Flammable material and pesticides	Dangerous to work with and to store	3
ERGONOMIC	Falling trees	Injury or even loss of life can occur if safety measures are not in place during felling operations	5
	Drowning	Injury or even loss of life can occur if safety measures are not in place while working near or in river.	5
	Asphyxiation	Injury or even loss of life can occur when unplanned fires are started. Damage to infrastructure is a high probability	4
CLIENT REQUIREMENTS	Working hours	Only certain times when construction activity can take place	2

Please find below risk assessment template which can be used by the contractor to manage the above identified risks.

Risk assessment							
Title:							
Company name:				Date assessment was carried out:			
Assessment carried out by:				Date of next review:			
Risk assessment Activity or area	**What are the hazards?**	**Who might be harmed and how?**	**What are you already doing?**	**What further action do you need to take?**	**Who needs to carry out the action?**	**When is the action needed by?**	**Done**

For office use only	**Version no: 1**	**Date: 5 September 2019**	
To be signed upon appointment of winning bidder to form the agreement between the parties			
Signature for **Casidra**		Signature for Contractor	

TENDER NR: 6/2026

JAN DU TOIT MECHANICAL EARTHMOVING OF EXCESS MATERIAL IN RIVER

In terms of the Construction Regulations 2014 Regulation 5, a baseline risk assessment for the intended works is required to be done by the Client for each specific construction site.

This risk assessment will inform the site-specific Occupational Health and Safety specifications that must be supplied to the designer, who will supply any design specifications to be added and then supplied to the prospective Contractor (Bidder) as part of the tender documents. This specification must be translated into actions and preventative risk management measures by the Contractor that will form part the Occupational Health and Safety Plan of the Contractor.

This specification forms an integral part of the contract, and the Contractor is required to use it at pre-tender phase to make sufficient provision for related costs for risk management and after award of tender for the purpose of drawing up its project-specific construction phase health and safety plan.

It is the responsibility of the Contractor in the bidding process to:

- ensure that he include adequate provision for the cost for health and safety measures in his bid and
- Provide proof and include in his cost the necessary competencies and resources to perform the work safely.

The risks for the above project which have been identified, evaluated and resulted in the following specifications that are highlighted under the following categories:

This specification does not replace the requirement of the Contractor to comply with all relevant legislation and the regulations of the Occupational Health and Safety Act,

For office use only	**Version no: 1**	**Date: 3 September 2019**	
To be signed upon appointment of winning bidder to form the agreement between the parties			
Signature for **Casidra**		Signature for Contractor	

but just highlight the specific identified and relevant risk factors that need special mention and attention by the Contractor in his bid.

1. General administrative requirements

DESIGNATION	NAME	CONTACT NO's	ADDRESS	RESPONSIBLE PERSON
Project Client				
Department of Labour				
Municipality				
Project Funder				

2. Scope of work (what is being built?)

- Construction of a temporary channel and berm to temporarily accommodate river flows and protect the construction site.
- Excavation and shaping to rehabilitate the river channel.
- Trimming and finishing off river channel and fill slopes.
- Removal of organic material and sediment causing obstruction to the watercourse
- The areas are to be shaped to guide the watercourse as per the watercourse

3. Location of site and elements specific to the location (municipal by-laws, weather factors, geographical factors)

What is the risk?	Heat and rain
Hazard Identification?	High temperatures together with high humidity.
Who will be injured & mechanism of injury?	All personnel working on site. Possible injury will vary from heat exhaustion and or broken ankles from muddy soil.

Preventative action recommended	
Description	**Category: Reduction/transfer/ control/avoidance**
• Monitor weather for worsening soil conditions on daily basis. When conditions underfoot do not assist with mechanical and/or personnel, call site off until conditions improve	Risk reduction/ control

For office use only	**Version no: 1**	**Date: 3 September 2019**	
To be signed upon appointment of winning bidder to form the agreement between the parties			
Signature for **Casidra**		Signature for Contractor	

• Ensure for shade and sufficient water onsite for high temperatures. • Ensure temperature is monitored and call site off with WGT of 40 and higher	
What is the risk?	Cold and rain
Hazard Identification?	Low temperatures together with high wind factor.
Who will be injured & mechanism of injury?	All personnel working on site. Possible injury will vary from pneumonia and or broken ankles from muddy soil.
Preventative action recommended	
Description	**Category: Reduction/transfer/ control/avoidance**
• Monitor weather for worsening soil conditions on daily basis. When conditions underfoot do not assist with mechanical and/or personnel, call site off until conditions improve • Ensure for enclosures and shelters onsite for lower temperatures. • Ensure temperature is monitored and call site off with WGT of 40 and higher	Risk reduction/ control

4. Geo- technical risks (conditions of the soil, raise any concerns that may hinder the project progress)

What is the risk?	Soil conditions
Hazard Identification?	Difficult terrain
Who will be injured & mechanism of injury?	Infrastructure damage, damage to earthmoving equipment and personnel injury will vary from dislocation, broken bones to death
Preventative action recommended	
Description	**Category: Reduction/transfer/ control/avoidance**
This is specialized work that requires competent human resources that are adequately skilled in working with heavy and dangerous machinery in aquatic and undulating conditions. Guidelines and practical advice to all work operations to ensure effective and	Risk control

Proper management of high-risk areas must be in place. The contractor is hereby directed to the Casidra website to gain access to Working for Water Health & Safety Plan. This must be implemented as part of the contractors Health & Safety plan. The document name is: • WfW Health & Safety Doc on website www.casidra.co.za	

5. Environmental risks (This is the actual or potential threat of adverse effects on living organisms and environment by effluents, emissions, wastes, resource depletion, etc involved in the construction phase)

What is the risk?	Dust pollution	
Hazard Identification?	Dust affects neighbour's crops	
Who will be injured & mechanism of injury?	Farmers infrastructures resources and both farm workers and personnel working on farm and site	
Preventative action recommended		
Description		**Category: Reduction/transfer/ control/avoidance**
The Contractor is to take appropriate measures to minimise the generation of dust as a result of construction works, to the satisfaction of the Project Manager. A water truck must be on standby at all times to assist with this operation. Daily liaison must be done with the landowner to discuss vehicle movements in relation to dust pollution on crops.		Risk reduction

What is the risk?	Indigenous plants	
Hazard Identification?	Risk of damage to environment	
Who will be injured & mechanism of injury?	Plants trees, shrubs can be damaged and destroyed by mechanical equipment	
Preventative action recommended		
Description		**Category: Reduction/transfer/ control/avoidance**
Due to the sensitive biodiversity within the riparian zone of the Berg River, the use of any equipment which has the potential to cause extensive		Risk avoidance

damage to the river banks and indigenous flora may not be used. No firewood or plant material to be collected from natural veld.	

What is the risk?	Soil contamination
Hazard Identification?	Risk of pollution to ground and river by its contaminants
Who will be injured & mechanism of injury?	Environment and this invariably falls over to communities, which then in affect the members of the public
Preventative action recommended	
Description	**Category: Reduction/transfer/ control/avoidance**
Maintenance and service areas should be demarcated during site establishment and all maintenance and service activities contained so as to avoid any contamination of soil and / or water. All vehicles, equipment, fuel and petroleum services and tanks should be maintained in a good condition that prevents leakage and possible contamination of soil or water supplies. Refueling areas should be bunded and lined to prevent spilled fuels and oils from contaminating the ground or water. It is suggested that as a minimum, sandbags should be placed surrounding the bulk fuel supply tank. The floor of the area is to be lined with plastic and a layer of sand of approximately 50mm is placed on top of the plastic. Automatic shut-off nozzles are recommended on all dispensing units. The park and service area should be treated with a suitable hydrocarbon absorption or remediation product. Absorbent spill mop-up products should to be on hand. All servicing should be done with a drip tray present to prevent accidental spillage of oils and fuels. A suitable leak proof container for the storage of oiled equipment (filters, drip tray contents and oil changes, etc.) should be established. All spills to be immediately contained, reported to the Project Manager, and dealt with.	Risk control/ reduction

What is the risk?	Snakes
Hazard Identification?	Being bitten by snakes
Who will be injured & mechanism of injury?	Personnel working on site
Preventative action recommended	
Description	**Category: Reduction/transfer/ control/avoidance**
As the work entails working in dense brush and biomass areas, the risk of disturbing a snake is very high. Make sure that all personnel are made aware	Risk reduction/control/

of the increased risk of the presence of snakes. Wear proper protective clothing to protect against snake bites. An increased awareness and alertness is the best protection, the snake will not be looking for you, so watch for it. If a snake is seen or reported on site, note the area of the snake and work in this area stops until the hazard is removed. DO NOT approach, attack or otherwise provoke the snake as 95% of those bitten have done this. REMEMBER - IF PROVOKED IT WILL STRIKE. If bitten, the following procedures should apply: 1. Immediately apply a broad firm bandage around the limb and on the bitten area. It should be as tight as one would bind a sprained ankle. As much of the limb should be bandaged as possible. Bind from below upwards. Crepe bandages are ideal, but any flexible material can be used, e.g. tear up clothing or old towels into strips. Panty hose is satisfactory. 2. Keep the limb and the victim as still as possible. Splint the limb. 3. Bring transport to the victim if possible. 4. Leave the bandage and splint on until medical care is reached. Don't cut or excise the bitten area. Don't apply an arterial tourniquet. Don't wash the bitten area. The snake involved may be identified by the detection of venom on the skin.	avoidance

What is the risk?	Bees
Hazard Identification?	Being stung by bees
Who will be injured & mechanism of injury?	Personnel working on site

Preventative action recommended	
Description	**Category: Reduction/transfer/ control/avoidance**
Upon finding a bee hive/nest, do not try to get rid of the nest or hive yourself. Each type of insect or situation will likely need different removal methods. It is best to call pest control professionals for this service. Upon being stung, most people experience local effects like pain, swelling,	Risk avoidance/control/reduction/transfer

For office use only	**Version no: 1**	**Date: 3 September 2019**	
To be signed upon appointment of winning bidder to form the agreement between the parties			
Signature for **Casidra**		Signature for Contractor	

itching, and redness around the sting site. In rare cases, a **severe allergic reaction** can occur. This situation is serious and can cause "**anaphylaxis**" or anaphylactic shock. Symptoms of anaphylaxis can appear immediately (within minutes) or up to 30 minutes later. Symptoms to watch for include:

- hives, itching and swelling in areas other than the sting site,
- swollen eyes and eyelids,
- wheezing,
- tightness in the chest and difficulty breathing,
- hoarse voice or swelling of the tongue,
- dizziness or sharp drop in blood pressure,
- shock,
- Unconsciousness or cardiac arrest.

Although most deaths result from severe allergic reactions, some are caused by direct toxicity of the insect venom. Of those who die from a severe allergic reaction to a sting, half die within 30 minutes, and three-quarters within 45 minutes. If you see any signs of reaction, or even if you are not sure, call or have a co-worker call the emergency medical services right away. Also, get medical help if the sting is near the eyes, nose or throat. People who have been stung multiple times (such as when fleeing from a swarm or nest) can sometimes suffer serious health effects. While rare, death may occur.

Employers should be notified if a worker, especially one who works outdoors, has allergies to insect stings. Co-workers should be trained in emergency first aid, be aware of the signs of a severe reaction, and know how to use the bee sting kit (self-injectable epinephrine). Always carry a cellular phone in case you need emergency medical help.

The best way to prevent stings is to avoid the insects. Leave the area, if possible. If there is a travelling swarm, they will likely leave within a few days.

Note that insect repellent ("bug spray") does not affect these stinging insects. Avoidance and awareness are the keys to not being stung.

Before working at a site:

- Take a look around. Check to see if there are any visible signs of activity or a hive or nest. If you see a number of insects flying around, check to see if they are entering and exiting from the same hole or place. If so, it is likely a nest or a source of food.
- Wear long sleeve shirts, and long pants. If you

cannot avoid working near bees or wasps, wear a bee-keepers style hat with netting to cover your head, neck and shoulders. Tape your pant legs to your boots/socks, and your sleeves to your gloves. You may also wish to wear an extra layer of clothing since wasp stings are long enough to reach through one layer of clothing.

- Power tools such as lawnmowers, weed eaters and chainsaws will aggravate the insects. When using these tools, be aware that the tools may provoke the insects or in some cases, cause the insects to swarm.

If you find you are working near stinging insects, here are some tips.

- Most bees and wasps will not sting unless they are startled or attacked. Do not swat at them or make fast movements. The best option is to let the insects fly away on their own. If you must, walk away slowly, or gently "blow" them away. The only exception is if you have disturbed a nest and hear "wild" buzzing. Protect your face with your hands and run from the area immediately.
- Wear light coloured clothes such as khakis, beige, or blue. Avoid brightly coloured, patterned, or black clothing.
- Tie back long hair to avoid bees or wasps from getting entangled in your hair.
- Be careful when shaking out clothing or towels as the insects could be inside the folds.
- If you find a bee or wasp in your car, take a thick cloth and cover the insect before it gets frightened. Carefully, let the insect back outside through an open window.

DO NOT

- Do not wear perfumes, colognes, scented soaps, or powders as they contain fragrances that are attractive.
- Do not go barefoot or wear sandals, especially in areas where there is clover or other flowering plants that attract bees.

For office use only	**Version no: 1**	**Date: 3 September 2019**	
To be signed upon appointment of winning bidder to form the agreement between the parties			
Signature for **Casidra**		Signature for Contractor	

6. Risk assessments based on scope of work (Is this a high rise building in a built up area? Is it working in a flood plain and/or river with eroded soil conditions?)

What is the risk?	Water
Hazard Identification?	Dangerous medium to work both in/on with mechanized equipment & personnel
Who will be injured & mechanism of injury?	Damage to equipment and personnel injury will vary from dislocation, drowning, broken bones to death

Preventative action recommended	
Description	**Category: Reduction/transfer/ control/avoidance**
As with all work activities, working over, on, or near water needs to be carried out in a safe and healthy manner adopting appropriate control measures to minimize risks and mitigate the effects of any incident. General controls that may need to be adopted when work is carried out over, on, or near water include provision of appropriate platforms and gangways; safety nets and safety harnesses; illumination; first aid equipment; personal protective equipment and clothing, including personal buoyancy equipment; suitable means of access to and egress from the location; and suitable rescue equipment and procedures. No river work should be carried out by someone working alone. Inspections from the bank may be permitted, but lone working procedures should apply with a short call-in period to the monitoring base. A frequent check that a good telephone signal is available should be made, and the monitoring base should be informed of the location (including which bank) and the direction of travel of any lone worker. A buoyancy aid should be worn. In determining the risk at each site, it is important to: • Assess how quickly water levels can rise; • Prepare an evacuation procedure that will ensure that all personnel – if not equipment – are out of the river before conditions become hazardous.	Risk reduction/control

What is the risk?	Access to Biomass
Hazard Identification?	Environmental impacts
Who will be injured & mechanism of injury?	Infrastructure

Preventative action recommended	
Description	**Category: Reduction/transfer/ control/avoidance**
Site access should be monitored and controlled and all access routes should be clearly demarcated in order to minimise environmental impacts. A constant regard must be taken to safety and dangerous areas and should be adequately cordoned off to prevent accidental injury	Risk avoidance

What is the risk?	Access to site / movement
Hazard Identification?	A construction is a dangerous environment regarding vehicles, materials and constant flow of traffic/material and personnel
Who will be injured & mechanism of injury?	Public will be injured and/or killed

Preventative action recommended	
Description	**Category: Reduction/transfer/control/avoidance**
Construction work should be fenced off and suitably signed. This will protect people from site dangers and the site from vandalism and theft. Site access should be monitored and controlled and all access routes should be clearly demarcated. A constant regard must be taken to safety and dangerous areas and should be adequately cordoned off to prevent accidental injury. Temporary fencing/hoarding with appropriate warning signs must be in place. Make sure there is a system to ensure necessary precautions are kept in place during working hours and that night-time and weekend protection is put in place as required before the	Risk control

For office use only	**Version no: 1**	**Date: 3 September 2019**	
To be signed upon appointment of winning bidder to form the agreement between the parties			
Signature for **Casidra**		Signature for Contractor	

site closes	

What is the risk?	Structural stability
Hazard Identification?	Unstable working platforms could cause risk of collapse on trenches. Risk of excavations collapsing and burying or injuring people working in them; material falling from the sides into any excavation; and people or plant falling into excavations
Who will be injured & mechanism of injury?	Risk that people be killed or seriously injured by collapses and falling materials while working in excavations

Preventative action recommended

Description	**Category: Reduction/transfer/control/avoidance**
COLLAPSE OF EXCAVATIONS **Temporary support** – Before digging any trench pit, tunnel, or other excavations, decide what temporary support will be required and plan the precautions to be taken. Make sure the equipment and precautions needed (trench sheets, props, baulks etc) are available on site **before** work starts. **Battering the excavation sides** – Battering the excavation sides to a safe angle of repose may also make the excavation safer. In granular soils, the angle of slope should be less than the natural angle of repose of the material being excavated. In wet ground a considerably flatter slope will be required **FALLING OR DISLODGING MATERIAL** **Loose materials** – may fall from spoil heaps into the excavation. Edge protection should include toeboards or other means, such as projecting trench sheets or box sides to protect against falling materials. Head protection should be worn. **Undermining other structures** – Check that excavations do not undermine scaffold footings, buried services or the foundations of nearby buildings or walls. Decide if extra support for the structure is needed before you start. Surveys of the foundations and the advice of a structural engineer may be required. **Effect of plant and vehicles** – Do not park plant and vehicles close to the sides of excavations. The extra loadings can make the sides of excavations more likely to collapse.	Risk reduction/avoidance

FALLING INTO EXCAVATIONS **Prevent people from falling** – Edges of excavations should be protected with substantial barriers where people are liable to fall into them. To achieve this, use: • Guard rails and toe boards inserted into the ground immediately next to the supported excavation side; or • fabricated guard rail assemblies that connect to the sides of the trench box • the support system itself, eg using trench box extensions or trench sheets longer than the trench depth. **INSPECTION** A competent person who fully understands the dangers and necessary precautions should inspect the excavation at the start of each shift. Excavations should also be inspected after any event that may have affected their strength or stability, or after a fall of rock or earth. A record of the inspections will be required and any faults that are found should be corrected immediately.	

7. Equipment Risks

What is the risk?	Mechanized earthmoving equipment	
Hazard Identification?	Collision of mechanized plant in difficult overgrown terrain & environmental damage	
Who will be injured & mechanism of injury?	Infrastructure damage, damage to earthmoving equipment and personnel injury will vary from dislocation, broken bones to death	
Preventative action recommended		
Description		**Category: Reduction/transfer/ control/avoidance**
This is specialized work that requires competent human resources that are		Risk Control

For office use only	**Version no: 1**	**Date: 3 September 2019**	
To be signed upon appointment of winning bidder to form the agreement between the parties			
Signature for **Casidra**		Signature for Contractor	

adequately skilled in working with heavy and dangerous machinery in aquatic and undulating conditions. Guidelines and practical advice to all work operations to ensure effective and proper management of working with mechanical plant must be in place. Toolbox talks MUST make all personnel aware of the dangers. Equipment must be checked for proper working controls such as reverse warning sirens, etc. The contractor is hereby directed to the Casidra website to gain access to Working for Water Health & Safety Plan. This must be implemented as part of the contractors Health & Safety plan. The document name is:- • WfW Health & Safety Doc on website www.casidra.co.za	

8. Material Risks

What is the risk?	Herbicide material
Hazard Identification?	Working with toxic/hazardous material
Who will be injured & mechanism of injury?	Personnel working with herbicide and surrounding eco environment

Preventative action recommended	
Description	**Category: Reduction/transfer/ control/avoidance**
Personal injury, spillage, wastage and defective equipment can cause serious damage if not managed properly. Guidelines and practical advice to work operations to ensure effective and proper management of herbicide must be in place. The contractor is hereby directed to the Casidra website to gain access to Working for Water Health & Safety Plan. This must be implemented as part of the contractors Health & Safety plan. The document name is:- • WfW Health & Safety Doc on website www.casidra.co.za	Risk control

For office use only	**Version no: 1**	**Date: 3 September 2019**	
To be signed upon appointment of winning bidder to form the agreement between the parties			
Signature for **Casidra**		Signature for Contractor	

What is the risk?	Flammable material
Hazard Identification?	Dangerous to work with and store for prevention of fires
Who will be injured & mechanism of injury?	Infrastructure damage and injury or death to all persons
Preventative action recommended	

Description	**Category: Reduction/transfer/ control/avoidance**
Fuels and flammable materials should be stored in suitably equipped storage areas demarcated within the Contractor's camp. These areas must comply with general fire safety requirements. No fuel may be stored within drainage lines or areas. Impervious lining materials should be used in these storage areas to prevent contamination of the ground in the event of spillages or leaks, and automatic shut-off nozzles should be used on all dispensing units. Quantities of fuels and flammable/hazardous materials stored on site should be appropriate to the requirement for these substances on site. Fuels and oils should be safely located out of harm's way from the elements. No fuel / oil containers may be left unattended within drainage areas. All open containers containing used oil, etc., should be kept under roof or have adequate water tight lids. All spills to be immediately contained, reported to the Project Manager and dealt with. Adequate fire fighting equipment should be available on site, in good working order, and according to the fire hazard present during construction activities of at least one type ABC all-purpose 12.5kg extinguisher and a water cart with a minimum capacity of 1000 litres for the duration of the contract. Any welding, gas cutting or cutting of metal should only be permitted inside the demarcated working areas for this purpose and these areas should be approved by the Project Manager.	Risk control

9. Ergonomic Risks (Ergonomic hazards refer to workplace conditions that pose the risk of injury to the musculoskeletal system of the worker).

What is the risk?	Drowning, Asphyxiation & felling
Hazard Identification?	On-site injuries due to physical alien biomass clearing taking place
Who will be injured & mechanism of injury?	Personnel injury will vary from dislocation, broken bones to death
Preventative action recommended	

For office use only	**Version no: 1**	**Date: 3 September 2019**	
To be signed upon appointment of winning bidder to form the agreement between the parties			
Signature for **Casidra**		Signature for Contractor	

Description	Category: Reduction/transfer/ control/avoidance
Guidelines and practical advice to all work operations to ensure effective and proper management of high risk areas must be in place. The contractor is hereby directed to the Casidra website to gain access to Working for Water Health & Safety Plan. This must be implemented as part of the contractors Health & Safety plan. The document name is:- • WfW Health & Safety Doc on website www.casidra.co.zsa	Risk reduction/transfer/ control/avoidance

10. Controls specific to client requirements (two day induction, pink overalls, entrance to existing premises, etc.)

What is the risk?	Data Collection
Hazard Identification?	Inaccurate or incomplete data
Who will be injured & mechanism of injury?	Project will suffer as information is needed for budgeting for future projects and reporting against job creation

Preventative action recommended	
Description	**Category: Reduction/transfer/ control/avoidance**
Ensure that all data records are kept on site in a file, and that information is distributed on a weekly basis so as to ensure that the capturing is done and that on-site activities are measured.	Risk control

11. Personal Protective Equipment (PPE) and Clothing

The principal contractor and other contractors shall ensure that all workers are issued with protective clothing free of charge and make use of the equipment and protection provided such as to wear hard hats, protective footwear, overalls, etc. The Principal Contractor and all Contractors shall

make provision and keep adequate quantities of SABS approved PPE on site at all times. The Principal Contractor shall clearly outline procedures to follow when PPE or Clothing is:

- Lost or stolen;
- Worn out or damaged

The above procedure applies to Contractors and their Sub-contractors, as they are all employers in their own right, as per section 37 (2) of the Act.

(The general PPE requirements are attached under Annexure A to this document as well as an additional list of PPE for biomass removal is also attached as Addendum B to this specification).

12. Occupational Health and Safety signage

The Contractor shall provide and maintain adequate on-site OHS signage. Including but not limited to: 'no unauthorised entry', 'report to site office', 'beware of overhead work', 'hard hats, overalls, safety boots, respirators, etc.'. Signage shall be posted up at all entrances to site as well as on site in strategic locations e.g. access routes, stairways, entrances to structures and buildings, scaffolding, and other potential risk areas/operations

13. Fences and access

Construction sites in built-up areas or adjacent to public roads must be suitable and sufficiently fenced off and provided with controlled access points to prevent the entry of unauthorised persons.

14. Admittance to site

A notice must be posted up at every entrance to a building site prohibiting the entry of unauthorised persons to such workplace and no person shall enter such a site without the permission of the employer or user as the case may be. In no circumstances may the wording "Enter at Own Risk" be used

15. Speed Restrictions, construction vehicles and Protection

The Principal Contractor shall ensure that all persons in its employment, all Contractors, and all those that are visiting the site are aware and comply with the site speed restriction(s) and route identification for construction vehicles only. Separate vehicle and pedestrian access routes shall be provided, maintained, controlled, and enforced.

16. Hazardous Chemical Substances (HCS)

The Principal Contractor and other relevant Contractors shall provide the necessary training and information regarding the use, transport, and storage of HCS. The Principal Contractor shall ensure that the use, transport, and storage of HCS is carried out as prescribed by the HCS Regulations. The Contractor shall ensure that all hazardous chemicals on site have a Material Safety Data Sheet (MSDS) on site and the users are made aware of the hazards and precautions that need to be taken when using the chemicals. The First Aiders must be made aware of the MSDS and how to treat HCS incidents appropriately.

The below acts are relevant regarding the transporting, storage and application of these agricultural chemicals:

- Fertilizers, farm feeds, agricultural remedies and stock remedies act, 1947 (Act no. 36 of 1947)
- Hazardous Substances Amendment Act, No. 53 of 1992
- The South African National Pesticide registration authority registrar: Act no. 36 of 1947

17. Public and Site Visitor Health and Safety

The Principal Contractor shall ensure that every person working on or visiting the site, as well as the public in general, shall be made aware of the dangers likely to arise from site activities, including the precautions to be taken to avoid or minimise those dangers. Appropriate health and safety notices and signs shall be posted up, but shall not be the only measure taken.

The Principal Contractor has a duty in terms of the OHS Act 85/1993 to do all that is reasonably practicable to prevent members of the public and site visitors from being affected by the construction activities.

Site visitors must be briefed on the hazards and risks they may be exposed to and what measures are in place or should be taken to control these hazards and risks. A record of these ‘inductions’ must be kept on site in accordance with the Construction Regulations.

18. Occupational Hygiene

Exposure of workers to occupational health hazards and risks is very common in any work environment, especially in construction. Occupational exposure is a major problem and all contractors must ensure that proper health and hygiene measures are put in place to prevent exposure to these hazards. Prevent inhalation, ingestion, absorption, and noise induction.

Contractor must identify site-specific health risks for construction. e.g., cement dust, wet cement, wood-dust, noise, etc.

For office use only	**Version no: 1**	**Date: 3 September 2019**	
To be signed upon appointment of winning bidder to form the agreement between the parties			
Signature for **Casidra**		Signature for Contractor	

19. Welfare Facilities

The Principal Contractor must supply the following clean, hygienic and maintained facilities:

- Shower facilities, after consultation with employees or employee representative (1 shower for every 15 persons).
- Sufficient toilets (1 toilet per 30 workers) and hand washing facilities. Separate toilets needed for both males and females. Toilet paper must be provided.
- Changing facilities for each sex
- Sheltered eating areas
- Waste bins must be strategically placed and emptied regularly.

Workers who are far removed from their homes, reasonable and suitable living accommodation for the workers must be provided and adequate transportation between sites and homes where suitable living accommodation is not available.

20. Alcohol and other Drugs

No alcohol and other drugs will be allowed on site. No person may be under the influence of alcohol or any other drugs while on the construction site. Any person on prescription drugs must inform his/her superior, who shall in turn report this to the Principal Contractor forthwith.
Any person suffering from any illness/condition that may have a negative effect on his/her safety performance must report this to his/her superior, who shall in turn report this to the Principal Contractor forthwith. Any person suspected of being under the influence of alcohol
or other drugs must be sent home immediately, to report back the next day for a preliminary inquiry. A full disciplinary procedure must be followed by the Contractor concerned and a copy of the disciplinary action must be forwarded to the Principal Contractor for his records.

21. Other compliance requirements

Notwithstanding the Occupational Health & Safety Act, the contractor must also confirm to the following acts:

- Basic conditions of employment act 75 of 1997
- National Road Traffic Act 93 of 1996
- National Environmental Management: Biodiversity Act, no 10 of 2004
- National Veld and Forest Fire Act, no 101 of 1998.
- Fertilizers, Farm Feeds, Agricultural Remedies and Stock Remedies Amendment act

For office use only	**Version no: 1**	**Date: 3 September 2019**	
To be signed upon appointment of winning bidder to form the agreement between the parties			
Signature for **Casidra**		Signature for Contractor	

22. Management control measures and review

Risk assessment of the site must be reviewed at least every 30 days. Based on the effectiveness of the existing measures, the safety plan must be adjusted to meet the new or existing identified deficiencies.

23. Electrical Safety

All persons who carry out or arrange for work of any description for **Casidra** in connection with electrical apparatus shall make themselves acquainted with the Occupational Health and Safety Act (Act 85 1993) with particular reference to the Electrical Machinery Regulations, Regulations 1 to 23 inclusive.

The works performed under this contract shall comply in every respect with the latest relevant rules and regulations including following:

- Occupational Safety and Health Act (OSH Act)
- The South African Bureau of Standards Code of Practice SANS 10142
- Normal requirements laid down by Eskom.
- The latest requirements of the IEC and the British Standard Institute, where no SANS codes of practice exist.
- All rules and regulations issued by local and other authorities having jurisdiction over the contract.

NOTE:
The Electrical Installation Regulations clause 6 (2) require electrical contractors to register annually.

"(2) Any person who does electrical installation work as an electrical contractor shall register annually in the form of Annexure 3 with the chief inspector or a person appointed by the chief inspector "

In terms of the OHS Act Electrical Installation Regulations, a Certificate of Compliance (CoC) must be issued by a registered person, defined as "a person registered as an electrical tester for single phase, an installation electrician, or a master installation electrician". Registered persons may be the owners or employees of electrical contractors. They must be currently registered with the Department of Labour (DoL), and registrations must be renewed annually, bi-annually or every three years depending on the application. No company may do electrical contracting work unless they have a permanently employed registered person as part of the company.

Department of Labour stating the certification as either 'single phase tester", "installation electrician" or "master installation electrician" with a unique licence number

For office use only	**Version no: 1**	**Date: 3 September 2019**	
To be signed upon appointment of winning bidder to form the agreement between the parties			
Signature for **Casidra**		Signature for Contractor	

Safety equipment
The following equipment required for working on electrical installations and distribution systems, must be maintained in good order and repair and must be made available:

Safety belt, overalls, hard hat, safety shoes or boots, rubber gloves, "Men Working" notice boards, locks for locking off switches, buss bar shutters in truck-type switchgear, isolators or earthing links, rubber sheet and length of rope with short circuiting earthing-chains, earthing sticks and testing/phasing sticks rated for the voltage of the equipment to be tested.

Under no circumstances shall work be carried out on electrical apparatus unless the proper safety equipment is used

With regard to overhead linesmen, no work shall be carried out unless use is made of a non-metallic ladder and the appropriate safety belt, rubber gloves, overalls, hardhat and safety shoes or boots are worn. The buddy system must also be implemented.

Earthing
Always safety test before applying earths

Risk assessment of the site must be reviewed at least every 30 days. Based on the effectiveness of the existing measures, the safety plan must be adjusted to meet the new or existing.

At completion of the electrical installation work in the tender, a test as required must be performed to ensure safe operation of the equipment and a signed original CoC be supplied to the client.

24. Asbestos

Under no circumstances shall any work of any nature whatsoever on any **ASBESTOS** material be undertaken unless the work is entrusted and mandated to a "**REGISTERED ASBESTOS CONTRACTOR**" in terms of the Asbestos Regulations

ADDENDUM A – GENERAL MINIMUM PPE REQUIREMENTS

Subject	Requirement
*PPE needs analysis	Need for PPE identified and prescribed in writing. PPE remain property of Employer, not to be removed from premises GSR 2(4)
*Head Protection	All persons on site wearing Safety Helmets including Sub-contractors and Visitors (where prescribed)
*Foot Protection	All employees on site wearing Safety Footwear including Gumboots for concrete / wet work and non-slip shoes for roof work. Visitors to wear same upon request or where prescribed
*Eye and Face Protection	Eye and Face (also Hand and Body) Protection (Goggles, Face Shields, Welding Helmets etc.) used when operating the following: * Jack/ Kango Hammers * Angle / Bench Grinders * Electric Drills (Overhead work into concrete / cement / bricks * Explosive Powered tools * Concrete Vibrators / Pokers * Hammers & Chisels * Cutting / Welding Torches * Cutting Tools and Equipment * Guillotines and Benders * Shears * Sanders and Sanding Machines * CO2 and Arc Welding Equipment * Skill / Bench Saws * Spray Painting Equipment etc.
*Hearing Protection	Hearing Protectors (Muffs, plugs etc.) used when operating the following: * Jack / Kango Hammers * Explosive Powered Tools * Wood/Aluminium Working Machines e.g., saws, planers, routers
*Hand Protection	Protective Gloves worn by employees handling / using: * Cement / Bricks / Steel / Chemicals * Welding Equipment * Hammers & Chisels * Jack / Kango Hammers etc.
*Respiratory Protection	Suitable/efficient prescribed Respirators worn correctly by employees handling / using: * Dry cement * Dusty areas * Hazardous chemicals

For office use only	Version no: 1	Date: 3 September 2019	
To be signed upon appointment of winning bidder to form the agreement between the parties			
Signature for **Casidra**		Signature for Contractor	

	* Angle Grinders * Spray Painting etc.
*Fall Prevention Equipment	Suitable Safety Belts / Fall Arrest Equipment correctly used by persons working on / in unguarded, elevated positions e.g.: * Scaffolding * Riggers * Lift shafts * Edge work * Ring beam edges etc. Other methods of fall prevention applied e.g., catch nets
*Protective Clothing	All jobs requiring protective clothing (Overalls, Rain Wear, Welding Aprons etc.) Identified and clothing worn.
*PPE Issue & Control	Identified Equipment issued free of charge. All PPE maintained in good condition. (Regular checks). Workers instructed in the proper use & maintenance of PPE. Commitment obtained from wearer accepting conditions and to wear the PPE. Record of PPE issued kept on H&S File. PPE remain property of Employer, not to be removed from premises GSR 2(4)

Western Cape Government
Environmental Affairs and Development Planning

Directorate: Land Management (Region 1)

REFERENCE: 16/3/1/6/3/B2/32/1022/14, 16/3/1/6/3/B2/32/1023/14, 16/3/1/6/3/B2/32/1024/14, 16/3/1/6/3/B2/32/1025/14, 16/3/1/6/3/B2/32/1026/14, 16/3/1/6/3/B2/32/1027/14, 16/3/1/6/3/B2/32/1028/14, 16/3/1/6/3/B2/32/1029/14, 16/3/1/6/3/B2/32/1145/14, 16/3/1/6/3/B2/32/1146/14
ENQUIRIES: LORRETTA OSBORNE
DATE: 17.9.2014

The LandCare Manager
Western Cape Department of Agriculture
P.O. Box 66
WORCESTER
6849

Attention: Mr R Röscher

Tel: (023) 347 1003
Fax: (023) 342 6779

Dear Sir

RE: MAINTENANCE MANAGEMENT PLANS FOR THE NOREE AND VINK RIVERS, UPPER AND LOWER BREEDE RIVER, JAN DU TOIT'S RIVER, HARTEBEES RIVER, UPPER AND LOWER HEX RIVER, KLAASVOOGDS RIVER AND KEISIE RIVER.

1. The abovementioned documents, the additional information submitted on 25 July 2014 and the electronic correspondence received between 25 August 2014 and 10 September 2014, refer.

2. Following review of the information submitted to this Department, the following is noted and applies to all the Maintenance Management Plans submitted for agreement:

   2.1 Activities were grouped in five categories of potential risk of ecological degradation, which include clearing of alien and **indigenous vegetation**. Please be advised that under certain circumstances the clearing of indigenous vegetation will trigger listed activities in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998) ("NEMA") Environmental Impact Assessment ("EIA") Regulations 2010, as defined in Government Notice ("GN") No. R. 546 of 18 June 2010. E.g. If 300 square metres or more indigenous vegetation is cleared within any critically endangered or endangered

2nd Floor, 1 Dorp Street, Cape Town, 8001
Tel: +27 21 483 3696/4349 Fax: +27 21 483 3633
E-mail: Lorretta.Osborne@westerncape.gov.za

Private Bag X9086, Cape Town, 8000
www.westerncape.gov.za/eadp

ecosystem listed in terms of section 52 of NEMBA Activity 12 of GN No. R. 546 will be applicable.

2.2 Pages 23 and 25 illustrate two forms that will be completed for the pre- and post-commencement of activities. However, the word "before" in Section F of the form on page 25 must be amended to read, "after".

2.3 Point two in table 5.2 on page 24, which refers to the different Acts, must be amended to exclude the "Regulations on Control of Use of Vehicles in the Coastal Zone, 2004..."

2.4 The comment received from the Department of Water and Sanitation on 10 September 2014 is insufficient. Therefore, this Department requires a copy of the Water Use Licence application and proof of submission thereof to the Department of Water and Sanitation.

3. The Department reserves the right to revise initial comments and request further information based on the information received.

Yours faithfully

pp

HEAD OF DEPARTMENT
DEPARTMENT OF ENVIRONMENTAL AFFAIRS AND DEVELOPMENT PLANNING

Jan du Toit's River Maintenance Management Plan

Riparian and instream biota: Karl Reinecke[1]
Geomorphology and wetlands: Mark Rountree[2]
MMP application process: Jonathan Crowther[3]

[1]Southern Waters Ecological Research and Consulting cc
[2]Fluvius Environmental Consultants
[3]CCA Environmental



SOUTHERN WATERS ECOLOGICAL RESEARCH AND CONSULTING CC

In association with

Fluvius Environmental Consultants
Managing water for the environment

cca ENVIRONMENTAL

Jan du Toit's River Maintenance Management Plan

DEADP Project number: 16/3/1/6/3/B2/32/1146/14

Authors: K. Reinecke
M. Rountree
J. Crowther

Report status: Final

Prepared by: Southern Waters Ecological Research and Consulting cc and partners

SW Project number: 107596

Date: 17 June 2014

Author(s):



Dr Karl Reinecke	Mark Rountree	Jonathan Crowther
Project Manager		

SOUTHERN WATERS
Approved by:

_____
Dr C.A. Brown
Project Director

Jan du Toit's Water User Association
Approved by:

_____
Mr Etienne Weidemann
Secretary

Table of Contents

List of Figures

List of Tables

List of acronyms and abbreviations

BOCMA	Breede Overberg Catchment Management Agency
CBA	Critical Biodiversity Area
CCA	CCA Environmental
DEADP	Department of Environmental Affairs and Development Planning
DWA	Department of Water Affairs
ESA	Ecological Support Area
Fluvius	Fluvius Environmental Consultants
GA	General Authorisation
GIS	Geographical Information System
IB	Irrigation Board
NEMA	National Environmental Management Act
NFEPA	National Freshwater Ecosystem Priority Area
NWA	National Water Act
MMP	Maintenance Management Plan
PMC	Project Management Committee
TOR	Terms of Reference
WCDOA	Landcare division, Cape Winelands District, Western Cape Department of Agriculture
IB	Irrigation Board
WULA	Water User License Application

1 Introduction

This Maintenance Management Plan (MMP) is submitted to the Department of Environmental Affairs and Development Planning (DEADP) on behalf of the Jan du Toit's Irrigation Board (IB) in terms of Activity 18, Listing Notice 1 (GN R. R544, 18 June 2010).

Activity 18 regulates excavations in watercourses and specifies that prior environmental authorisation must be obtained for "*the infilling or depositing of any material of more than 5 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, ... pebbles or rock of more than five cubic metres from (inter alia) a watercourse...*".

This requirement for prior authorisation is waived where infilling, depositing, dredging, excavation, removal or moving sediment is undertaken for maintenance purposes in accordance with an approved management plan. This, however, does not exempt landowners or the IB from the need to obtain environmental authorisation for other activities that constitute construction of new, or expansion of existing, infrastructure (see Appendix F). Only like-for-like repairs to the bed, banks and existing infrastructure are accepted into this MMP.

1.1 Background

The Landcare Division, Cape Winelands District, Western Cape Department of Agriculture (WCDOA) appointed Southern Waters Ecological Research and Consulting cc, in collaboration with Fluvius Environmental Consultants (Fluvius) and CCA Environmental (CCA), to prepare a River Maintenance Management Plan (MMP) for the Jan du Toit's River. The 16-month project ran from the 1st April 2013 to the 31st July 2014.

MMPs are intended to support sustainable development in local agriculture by evaluating and, where applicable, authorising low-impact maintenance activities in or near watercourses on farms in terms of the National Environmental Management Act (NEMA, Act 107 of 1998).

The project mandate, according to the Terms of Reference (TOR), was to:

- inform members of the Jan du Toit's River IB of the project and invite them to participate in the MMP application;
- engage with interested members to determine the location, nature, frequency and extent of maintenance activities in and near the river;
- map and categorise proposed maintenance activities on the river for inclusion in the MMP;
- update the available information on the ecological condition of the affected river reaches, and to map land use, riparian vegetation, features of biodiversity and the maintenance activities using a geographical information system (GIS); and
- produce an MMP for submission to the DEADP.

In addition, underlying objectives of the project as a whole included the evaluation of the potential for an improvement in the ecological condition of the Jan du Toit's River and, where

possible, recommendations for restoration. It is important, however, to understand that these opportunities are severely curtailed by historic channel infilling and landuse change. Restoration to a natural or near natural condition is next to impossible. Even initiatives that focus on the remaining main channel are limited as this is now expected to carry the vast bulk of winter flows and sediments. The fundamental mismatch between the capacity of the channel and the volumes of water and sediment directed down it means that large-scale erosion and deposition is inevitable, and that the ongoing maintenance activities are essential if large-scale flooding of agricultural land, infrastructure and quite possibly loss of life, is to be avoided (see explanation in Appendix C). Thus, this MMP focusses on opportunities for reducing the need for maintenance where possible, and reducing the ecological impact of the individual maintenance activities by that are expected to be required through better control and direction.

1.1.1 Study area

The study area comprised a 250-m riparian area along each side of the Jan du Toit's River from its source to its confluence with the Breede River.

1.2 DEADP MMP Requirements

The DEADP guidelines for an MMP (November 2013)[1] require:

- Personal details of the landowners and municipal information related to the farms.
- Descriptions of the environments that may be affected by the maintenance activities.
- A description of arrangements for interaction with the public.
- Comments or decisions by other authorities.
- Descriptions of the maintenance activities proposed.
- Method statements for the proposed maintenance activities.
- A procedure to monitor the maintenance activities.
- Declarations by those proposing the maintenance activities to abide by the MMP and the regulations imposed by NEMA.

DEADP's MMP guidelines cover a wide range of maintenance activities from the movement of many hundreds of cubic metres of sediment from a river channel to small localised activities such as the clearing of c. 5 m^3 of sediment from a pump hole. [As a reference 5 m^3 of sediment is equivalent to about 40 scoops[2] with a mechanical excavator fitted with a 600-mm bucket (Rudoloph Röscher, personal communication).]

Maintenance activities where less than 5 m^3 of sediment is moved do not require authorisation. Such maintenance activities may include clearing of alien plants or repairs to a pipeline. However, method statements for some exempted activities have been included in this MMP to provide guidance on the recommended procedures for these.

[1] The guidelines were still under review when this project was completed in July 2014.
[2] Assuming each scoop is c. 0.12 m^3.

Finally, as is the case for full Environmental Impact Assessments (NEMA 2010), an MMP application may require specialist studies. In the case of the Jan du Toits River, these comprised specialist investigations on the geomorphology and aquatic ecology. The recommendations from these studies have been incorporated into the MMP, and the complete specialist reports are provided in Appendix C and Appendix D.

1.2.1 Guiding principles for maintenance work in water courses (DEADP 2013)

The DEADP MMP guidelines (DEADP 2013) provide the following set of guiding principles for maintenance work in water courses:

- Minimise the spatial extent of disturbance and maximise physical diversity.
- Minimise the frequency of, or requirement for, maintenance activities.
- Employ site - specific designs.
- Minimise upstream/downstream impacts on the reach in which the site is located.
- Do not impede the movement of aquatic and riparian biota.
- Minimise development below the 1:100 year flood line.
- Minimise alterations to flow- and sediment-capacity.
- Avoid developments in ecologically-important or -sensitive rivers
- Rehabilitate and re-vegetate after construction.
- Clear alien plant species.
- Minimise impact on the structural integrity of the water course and maintain a minimum base flow at all times.

DEADP (2013) also lists the following general guidelines for maintenance:

- Maintenance activities are best done during the dry season to minimise flood-related damage to newly constructed areas.
- Manual labour is preferred to the use of mechanical equipment in order to minimise physical disturbance around the activity location.
- Whenever possible only one river bank should be worked at a time.
- All reasonable measures should be undertaken to ensure that river maintenance activities minimise erosion.
- Whenever possible existing access routes should be used. If there are none, one should be created, by:
    - Selecting a single route through the most degraded area.
    - Considering the potential for erosion while maintaining aesthetics.
    - Limiting disturbance to the river bank and bed.
    - Restoring the footprint around the access route upon completion.
- All potential pollutants must be kept away from rivers.
- Spoil material should be removed to approved dumping sites.
- After construction, any areas within the maintenance footprint that have been degraded from their condition prior to construction and as a result of the construction activities must be restored to their former condition.
- Channelization or canalization is actively discouraged as it tends to result in bigger problems than those it was intended to solve.

- Valuable biophysical or aesthetic areas, including meanders, and in-channel and floodplain habitat, should be retained.
- **Cleared** woody material must be removed from the riparian area to prevent it being washed into the river channel during the wet season.

1.3 Purpose of this document

This is the Maintenance Management Plan (MMP) for the activities listed in Section 4, all of which focus on the Jan du Toit's River. Participation in this MMP by landowners was entirely voluntary and the activities listed are done at the owners' discretion[3]. As such, the MMP does not portend to provide an exhaustive list of activities on the river.

The MMP provides the information required by DEADP for the listed maintenance activities (see Section 1.2). The MMP, if accepted, will authorise the participating landowners to undertake those activities without having to apply and pay for individual Environmental Impact Assessments (EIA).

[3] [3] Descriptions and locations of proposed activities were provided by the landowners.

2 Process

Throughout this project there was extensive sharing of information between the project team and stakeholders. Importantly, since the guidelines for MMP preparation were under review during this project, DEADP provided considerable input into the format of, and information required for, the MMP. It was also necessary to interact with stakeholders to gather information and to provide feedback on progress made. DEADP advised that this should be done through a series of meetings, which are described below.

2.1 Stakeholder participation

The stakeholder participation comprised:

- Liaison with DEADP with respect to requirements of the MMP.
- Liaison with other government departments with respect to additional legal requirements that may be triggered by the proposed maintenance activities.
- Liaison with the Jan du Toit's IB representative with respect to their role as the proponent of the MMP on behalf of all the landowners.
- Liaison with individual landowners with respect to their maintenance requirements.
- Liaison with stakeholders with respect to the content of the MMP.

Information sharing within this process comprised:

- Presentation of the MMP process and expected outcome.
- Gathering descriptions and locations of proposed maintenance activities on maps of farms in the study area from landowners.
- Presentation of the Scoping Report that summarised the general ecology of the study area and the expected impacts of the maintenance activities to stakeholders.
- Distribution of the Scoping Report for comment and review.
- Presentation of the content of the MMP.
- Distribution of the MMP for comment and review.

A Project Management Committee (PMC) comprising representatives from DEADP, Department of Water Affairs (DWA), CapeNature, the Breede Overberg Catchment Management Agency (BOCMA), WCDOA and a representative of the Jan du Toit's River Irrigation Board (IB) was established in April 2013 to guide the project progress and direction. PMC meetings were held on:

- July 2013 at the Worcester Campus of Stellenbosch University, where the project objectives and work plan were presented, discussed and approved.
- October 2013 at the offices of the Cape Winelands District Municipality, where the Scoping Report were presented, discussed and approved.
- 18 June 2014 at the Cape Winelands District Municipality, where the MMP will be presented, discussed and approval sought for submission to DEADP.

In addition to their involvement on the PMC, DEADP representatives met with Karl Reinecke of Southern Waters and Jonathan Crowther of CCA at the start of the project to discuss the requirements of the MMP, followed by ongoing liaison between Southern Waters and

DEADP on the format and content of the MMP. Furthermore, during the course of the study it became clear that the proposed maintenance activities would trigger the need for Water User License Applications (WULA), and so additional meetings and discussions took place between DWA, BOCMA, Southern Waters and Fluvius with respect to accommodating the WULA requirements. The application for WULAs is being handled in a separate contract (Fluvius 2014, see Appendix E).

The Jan du Toit's IB representative, Etienne Weidemann, hosted a site visit by PMC members at key maintenance activity locations on the river, which allowed them an opportunity to see the sorts of maintenance activities envisaged for inclusion in the MMP and to discuss key issues. He also agreed to engage with riparian landowners with respect to the MMP, to represent their collective interests over the course of the project to the PMC group.

Two landowner meetings took place:

1. 22nd August 2013 at the Wabooms River Hall, where maintenance activities were planned and documented.
2. 17th June 2014 at the Philip Susan Hall, where the MMP was presented to the landowners for comment and review.

The owners of all the farms that fell within the study area were invited by the Jan du Toit's River representative to the first meeting. Southern Waters also phoned landowners who did not respond to the initial invitation to request their presence at the meeting. Twelve (out of 32) landowners attended the first meeting. At the meeting, landowners were introduced to the project and given an opportunity to sign up as a participant in the MMP. Participation in the MMP is entirely voluntary. Some landowners declined to participate. At the same meeting, maps were provided so that participating landowners could locate and describe planned routine maintenance activities on their farms within the study area to the project team (see Section 4).

After the first landowner meeting, landowners who had not attended the meeting were contacted and asked whether they wanted to participate in the MMP, and if so, to submit data on their farms. 20 additional landowners were contacted. Maps were provided to the four additional landowners who wanted to participate, and in some cases interviews were set up to capture their data.

2.2 Data gathering and synthesis:

The data gathering exercise comprised:

- Mapping of farm boundaries, maintenance activity locations, river and wetland boundaries and associated biodiversity related information.
- Categorisation of maintenance activities in terms of their extent, duration and frequency of application and whether the activity pertained to the movement of sediment, infrastructure repair or the clearing of vegetation.
- Field visits to the site of each maintenance activity to be included in the MMP, during which an assessment of the geomorphological and ecological condition of the aquatic

and riparian environments was done and the location of agricultural infrastructure where repairs were proposed was verified.

The data supplied by the participating landowners were used to generate a list of proposed maintenance activities and to rank these in terms of their impact on the river ecosystem. On the basis of this, a Scoping Report (Southern Waters 2013) was compiled. The report listed the proposed maintenance activities, provided their location, summarised their expected impact on the river ecosystem, and outlined the work plan for the assessment of the geomorphological and ecological condition at each location. Once the work plan was approved by the PMC, the Scoping Report was distributed to all the participating landowners to check that their data were captured correctly.

The outcome of the field work evaluations were written into a geomorphological (see Appendix C) and a general aquatic ecological (see Appendix D) specialist report and these results were incorporated into this MMP.

All comments and suggestions were considered and, where appropriate, incorporated into this MMP.

3 Participating landowners

There are 32 landowners and 43 riparian farms along the Jan du Toit's River. These are numbered from upstream to downstream in Figure 3.1[4]. Of these, nine landowners (Table 3.2), who together own 18 farms (Figure 3.2), are participating in the MMP application (referred to hereafter as participating farms/landowners). Landowners, farm names and associated cadastre data for each farm are provided in Table 3.1. Their sequential numbering, relative to the other farms in the valley, is retained in the MMP.

Table 3.1 Names of participating landowners and farm cadastre data. RE = Remaining Extended.

Landowner	Farm Name	Farm Nr.	Co-ordinates	Erf No.	Portion
Charles Lamprechts	The Farm	3	-33° 34.294', 19° 20.552'°	656	0
Jannie Naude	Doornboom	9	-33° 35.573', 19° 20.298'°	293	1
Izak Visagie	The Farm Westheim Westheim The Farm	8 17 21 43	-33° 35.473', 19° 19.735' -33° 36.054', 19° 19.254' -33° 36.262', 19° 19.146' -33° 36.416', 19° 19.060'	293 270 270 268	11 RE 2 0
Kowie Stofberg	The Farm	22 23 25 26 41 42	-33° 36.292', 19° 19.466' -33° 36.373', 19° 19.451' -33° 36.477', 19° 19.369' -33° 36.526', 19° 19.342' -33° 36.337', 19° 19.211' -33° 36.585', 19° 19.018'	262 263 264 265 266 256	0 0 0 0 0 0
Fafa le Roux	Groenvlei	28	-33° 37.300', 19° 18.933'	799	RE
Pieter Stofberg	Groenvlei	31	-33° 37.141', 19° 19.572'	598	7
Hentie Huisamen	Groenvlei	29	-33° 37.480', 19° 19.381'	598	6
Petrus van Rensburg	Holland	37	-33° 38.268', 19° 20.663'	630	1
Viljoen Hugo	Hartebeesrivier Hartebeesrivier	39 40	-33° 38.832', 19° 21.068' -33° 38.869', 19° 21.581'	379 379	17 58

Site-specific information was captured on behalf of participating landowners only and is provided in this MMP (see Appendix C and Appendix D).

3.1 Contact details for participants

Contact details for persons responsible for implementing planned routine maintenance activities at each farm are provided in Table 3.2.

Access to the farms is provided from the N1 via the R43 in a westerly direction or in a southerly direction via the R101 (Figure 3.2).

[4] 40 farm numbers were assigned chronologically in a downstream direction using cadastre data dated 2011 (SRK 2011) for the landowner meetings. However, three farms were added at a later stage based on updates to the farm boundaries and ownership, but the original sequence of numbers was retained.

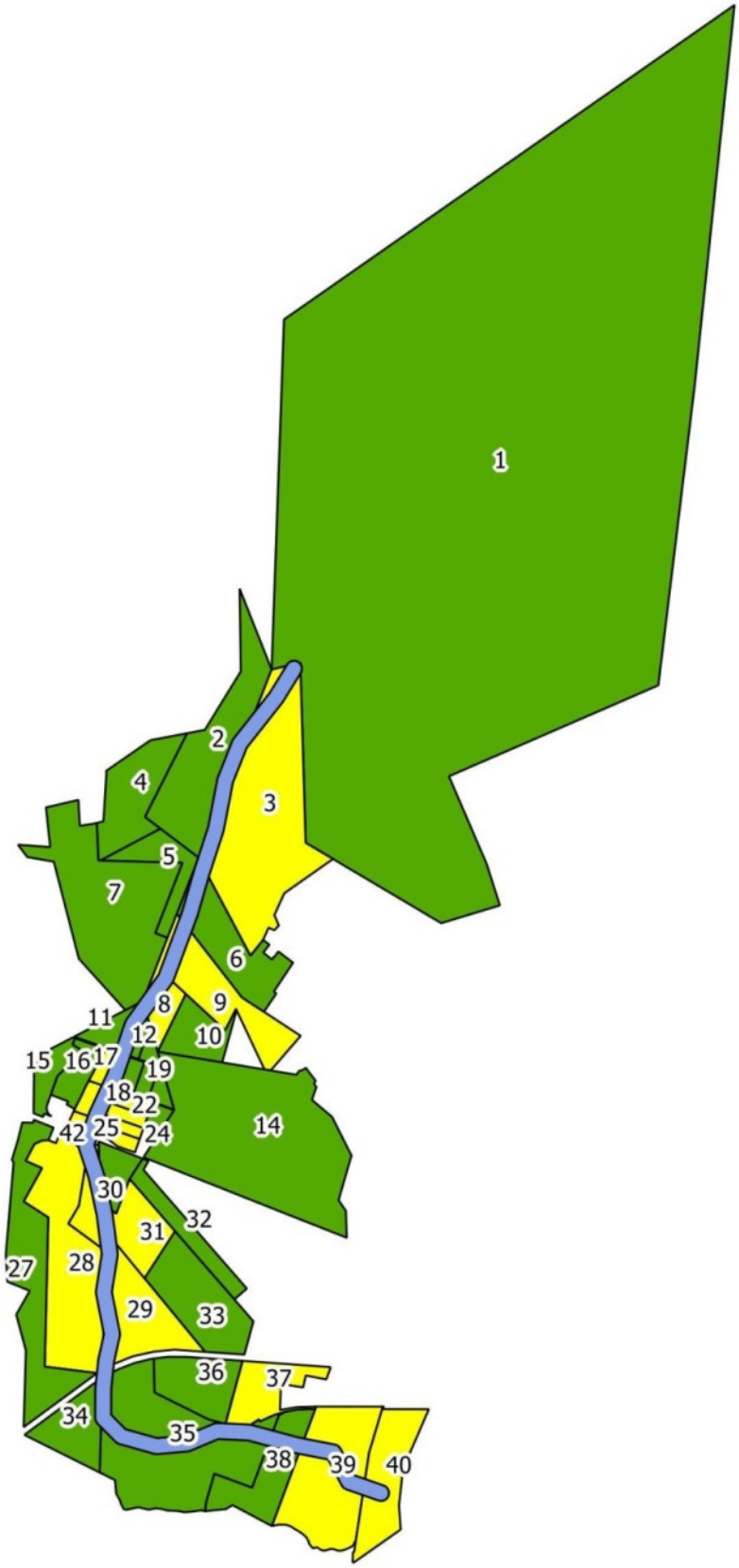


Figure 3.1 Location of participating farms (yellow). Non-participating farms are green.

Table 3.2 Contact persons at participating farms.

Farm number	Name	E-mail	Cell	Landline	Postal address
3	Etienne Weidemann	etwowater@gmail.com	0822178648	0233474671	Jan du Toit's Irrigation Board, PO Box 1153, Worcester, 6849
9	Jannie Naude	suzette@breede.co.za	0729698546	0233478844	PO Box 20, Goudiniweg, 6856
8,17,21,43	Izak Visagie	montezuma251@gmail.com	0827954642	0219762911	Keerweeder 3, Vygeboom, Durbanville, 7550
22,23,25 26,41,42	Kowie Stofberg	jastofberg@bolandis.co.za	0836333766	0233443604	PO Box 19, Goudiniweg, 6856
28	Fafa Le Roux	fleroux@compnet.co.za	0826482339	0233443720	PO Box 16, Goudiniweg, 6856
31	Pieter Stofberg	pjdstofberg@breede.co.za	0828236997	0233443726	PO Box 89, Rawsonville, 6845
29	Hentie Huisamen	henti@bolandis.co.za	0822367176	0233443667	PO Box 17, Goudiniweg, 6856
37	Petrus van Rensburg	morgenrood@bolandis.co.za	0827003043	0233443723	PO Box 38, Goudiniweg, 6856
39,40	Viljoen Hugo	viljoen@wilgevlei.co.za	0832906898	0233551631	PO Box 12, Botha, 6857

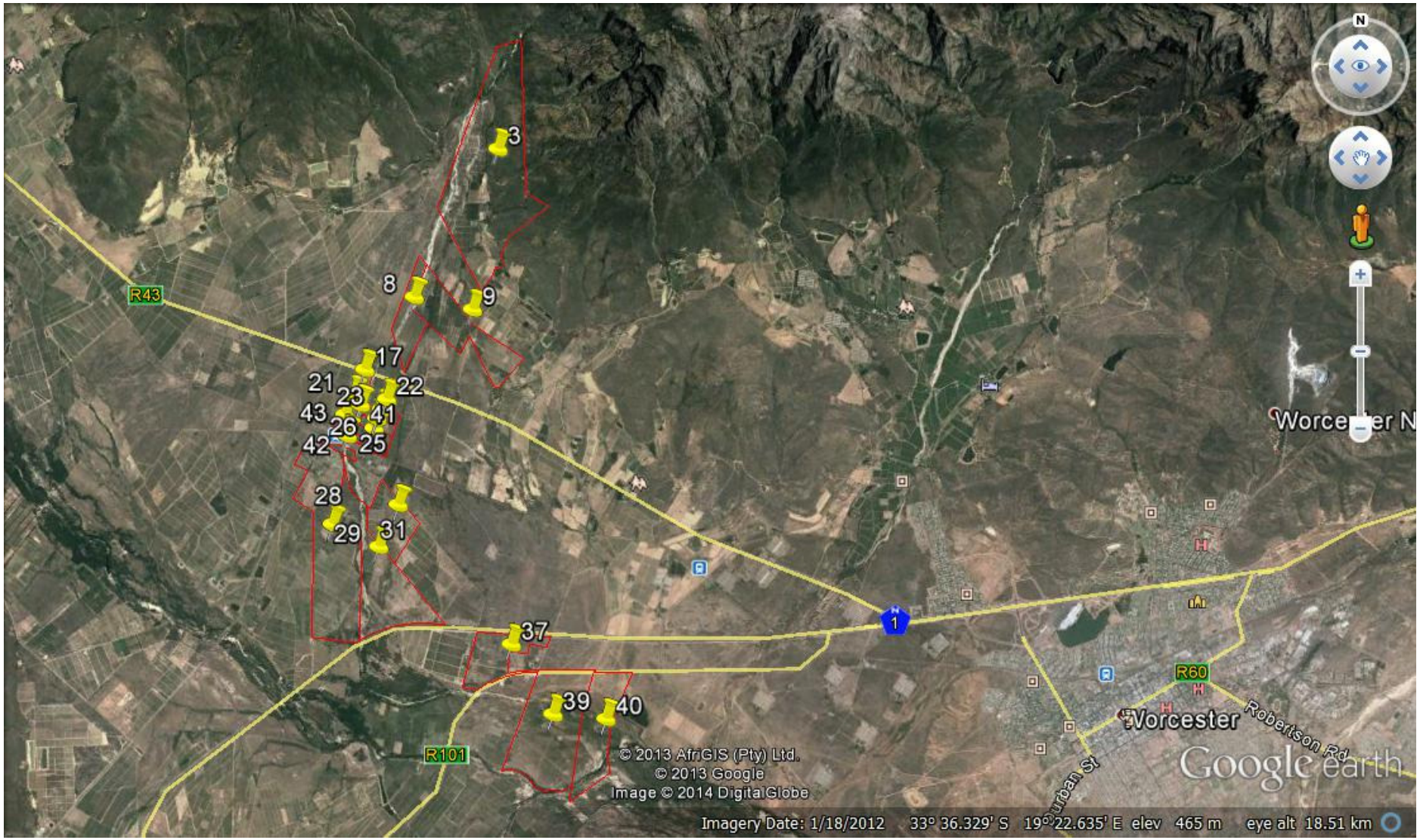


Figure 3.2 Main roads in the vicinity of participating farms.

4 Proposed maintenance activities

The maintenance activities proposed in this MMP are necessary to maintain existing irrigation infrastructure and to protect agricultural land in the valley. None of these activities impede river flow. Activities related to the maintenance and repair of irrigation infrastructure have been included on the assumption that the infrastructure and the water abstractions made using it are legal (Section 32 of the NWA).

Proposed maintenance activities are listed in Table 4.1 Activity codes (Table 4.1) were assigned to each activity based on whether it targeted a man-made structure or a natural feature (as defined in Table 4.2) and the farm number (Table 3.1). Activities were grouped into five categories of increasing potential risk of potential ecological degradation:

- (1) Clearing of alien vegetation[5].
- (2) Repairs to infrastructure.
- (3) Sediment movement at infrastructure.
- (4) Sediment removal from the channel for flood conveyance/channelization.
- (5) Sediment reworking in the channel to repair the banks or berms.

A description of the proposed activities is provided in Appendix Table 3. A topographical map showing the activity locations is provided in Appendix Figure 1. Aerial photographs showing the footprint of each proposed maintenance activity are provided in Appendix Figure 2 - Appendix Figure 12, along with reference to the relevant method statement and any site specific recommendations (Section 6).

Table 4.1 Maintenance activities proposed on participating farms.

Activity Code	Activity Type	Activity category	Action	Severity of impact[6]
A3-WGV	2	Infrastructure repair	Repair weir.	Low
VG-WGV	3	Sediment at infrastructure	Remove sediment from weir.	Low
HR-9	5	Sediment reworking	Repair river bank.	Low
VG-9	5	Sediment reworking	Move sediment to river bank.	Low
VP-9	3	Sediment at infrastructure	Clear sediment from pump intake.	Low
VU-9	1	Alien vegetation	Clear alien plants.	Low

[5] Please be advised that under certain circumstances the clearing of indigenous vegetation will trigger listed activities in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998) ("NEMA") Environmental Impact Assessment ("EIA") regulations 2010, as defined in Government Notice ("GN") No. R.546 of 18 June 2010. E.g. if 300 square metres or more indigenous vegetation is cleared within any critically endangered or endangered ecosystems listed in terms of section 52 of NEMBA Activity 12 of GN No. R. 546 will be applicable.

6 Impact severity classes (DEADP 2013):

- low (disturbance of degraded area with little conservation value; minor change in species occurrence or variety; mitigation easily achieved or little required);
- medium (disturbance of area with potential conservation value or of use as a resource; complete change in species occurrence or variety);
- high (disturbance of area with important conservation value; destruction of rare or endangered species; no possible mitigation or mitigation is difficult, expensive and time consuming.

Activity Code	Activity Type	Activity category	Action	Severity of impact[6]
L-9	2	Infrastructure repair	Repair pipeline.	Low
VG-8	5	Sediment reworking	Move sediment to berm.	Low
VG-17	4	Sediment removal	Remove sediment from channel.	Low
HK-22	5	Sediment reworking	Repair berm.	Low
VG-22	5	Sediment reworking	Move sediment to berm.	Low
VG-21	4	Sediment removal	Remove sediment from channel.	Low
HK-23	5	Sediment reworking	Repair berm.	Low
VG-23	5	Sediment reworking	Move sediment to berm.	Low
HK-25	5	Sediment reworking	Repair berm.	Low
VG-25	5	Sediment reworking	Move sediment to berm.	Low
VG-43	4	Sediment removal	Remove sediment from channel.	Low
HK-26	5	Sediment reworking	Repair berm.	Low
VG-26	5	Sediment reworking	Move sediment to berm.	Low
VG-28	5	Sediment reworking	Move sediment to river bank.	Low
HR-28	5	Sediment reworking	Repair river bank.	Low
HR-31	5	Sediment reworking	Repair river bank.	Low
VG-31	5	Sediment reworking	Move sediment to bank.	Low
VG-29	4	Sediment removal	Remove sediment from channel.	Low
VU-29	1	Alien vegetation	Clear alien plants.	Low
HR-29	5	Sediment reworking	Repair river bank.	Low
VG-39	5	Sediment reworking	Move sediment in channel.	Low
VU-39	1	Alien vegetation	Clear alien plants.	Low
VG-40	4	Sediment removal	Remove sediment from channel.	Low
VU-40	1	Alien vegetation	Clear alien plants.	Low

Table 4.2 Definition of codes for proposed maintenance activities (Afrikaans/english)[7].

ACTION		MAN MADE		NATURAL FEATURE	
H	herstel/repair	B	brug/bridge	R	rivier/river
V	verwyder/remove	L	pyplyn/pipeline	G	grond/ground
X	opvulling/infill	P	pomp/pump	I	inheemse/indigenous vegetation
		K	keerwal/berm	U	uitheemse/alien vegetation
		A	aftrekpunt/off take point		
		gp	grondpad/gravel road		
		D	dreinering/drainage outlet		
		M	muur/retaining wall		

Figure 4.1 depicts the locations at which each of the proposed maintenance activities would take place.

[7] Codes were allocated according to Afrikaans descriptions.

There are four notifications to clear alien plants. The method statement that deals with vegetation clearing is provided in Section 6.1.

There is one request to repair a pipeline and two requests to repair weirs, if these are damaged by floods. The method statement that deals with infrastructure repair is provided in Section 6.2.

There are also two requests to remove sediment from IB abstraction weirs and one to clear sediment from a pump hole. The method statement that deals with infrastructure repair and the movement of sediment around points of infrastructure is provided in Section 6.3.

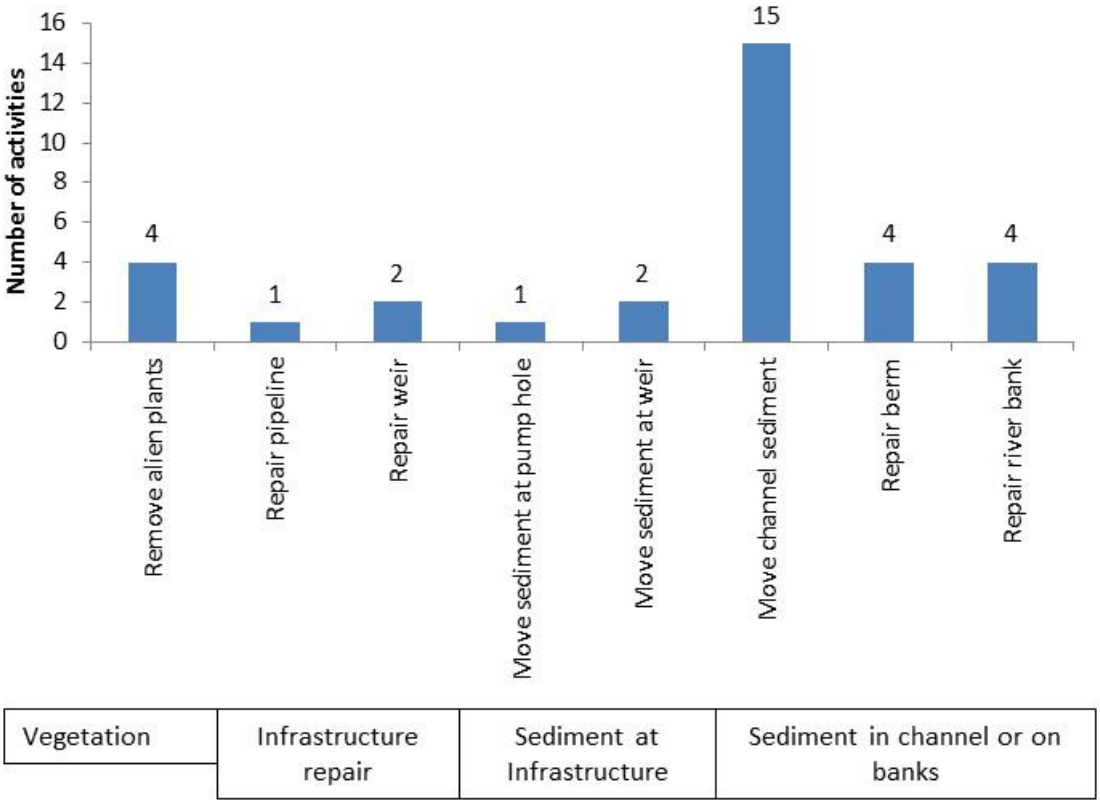


Figure 4.1 **A classification of the 33 maintenance activities proposed along the Jan du Toit's River.**

There are 15 requests to move sediment in the river channel or on the banks in expectation of sediment deposition during flooding where the sediment will be moved to repair eroded river banks or berms, of which there are eight requests. The other seven of the requests for sediment removal are to aid flood conveyance in an effort to reduce the risk of sustaining flood damage. The method statement that deals with sediment movement to aid flood conveyance is provided in Section 6.4 and that for repairs to river banks and berms is provided in Section 6.5.

4.1.1 Risk of ecological degradation associated with maintenance activities

Each maintenance activity was assigned a risk of potential ecological degradation based on whether or not it involved the movement of sediment, the extent of the area affected and whether it was proposed annually or on a needs basis (less frequently), for instance, in response to occasional flood damage (see Section 6 for more detail).

Activity Type 1 relates to the removal of alien vegetation. If clearing is done by hand, e.g., using a chain and/or bow saws, there should be minimal movement of sediment and little or no associated risk. Moreover, the removal of alien plants from the river would improve the ecological condition of the river thus offsetting minor impacts due to the clearing itself. If clearing is done using heavy machinery, e.g., bulldozers or digger loaders, then the activity carries similar risks to sediment removal (Activity Type 4) and reworking of sediment (Activity Type 5). The distribution of alien plants along the river is provided in Appendix Table 12.

Table 4.3 Maximum potential risks of ecological degradation associated with the proposed activities.

Activity type		Maximum potential risk	Description
1	Vegetation	No risk	Remove alien species
2	Infrastructure repair	Low risk	Repair pipeline
		Low risk	Repair weir
3	Sediment at infrastructure	Low risk	Move sediment at pump hole
		Low risk	Move sediment at weir
4	Sediment removal	Moderate/high risk	Increase flood conveyance
5	Sediment reworking	Moderate/high risk	Repair berm
		Moderate/high risk	Repair river bank

Activity Type 2 relates to infrastructure repair, specifically a pipeline and two weirs. These repairs are expected in response to flood damage and should not entail the movement of significant volumes of sediment or disturbance to large areas of the channel or riparian area and so carry a low risk.

Activity Type 3 relates to removal of sediment deposited into a pump hole and into/around two weirs. The impacts should be localised around these structures and so they carry a low risk.

Activity Type 4 relates to the removal of sediment from the river channel that carries a moderate to high environmental risk. These maintenance activities are expected to be needed in response to flood damage or once every three years, in order to maintain channel conveyance.

Activity Type 5 relates to the movement of sediment from one part of the channel and deposition in another, which carry a moderate/high risk since the impacts may occur over a

larger footprint. Repairs to river banks and berms were proposed every year prior to the wet season to try and contain the floods from spilling out into the adjacent agricultural fields.

The historic changes to the river ecosystem and the need for undertaking these sediment removal and deposition activities in and alongside the river channel are described in 0.

Detailed method statements to undertake these maintenance activities are described in Section 6, with additional mitigation measures at priority sites provided in Appendix B.

5 Responsibilities of the participants

Activity Types 1, 2 and 3 (Table 4.1) are exempt except where >5 m^3 of sediment will be moved. The responsibilities provided in this section apply to all maintenance activities falling under Activity Types 4 and 5 based on the assumption that these will involve movement of >5 m^3 of sediment.

5.1 Management of the site and personnel

The responsibilities of the participants with respect to management of the site and personnel are as follows[8]:

1. Documented emergency procedures must be in place.
2. The contractor and sub-contractors must be briefed and fully understand their responsibilities in terms of the MMP.
3. An Environmental Control Officer or Site Manager must be appointed to ensure compliance with the MMP and to monitor sediment and debris removal from the water courses(s).
4. DEADP must be notified one week prior to commencement of maintenance activities.
5. There must be compliance with any conditions described in the letter of approval for the MMP.
6. Records of compliance/non-compliance with the (methods statements in the) MMP must be documented and made available to DEADP on request.
7. Any non-compliance with the (methods statements in the) MMP must be reported to DEADP.

These are dealt with in sequence below.

5.1.1 Emergency procedures

Participants must lodge a copy of their health and safety procedures with the Jan du Toit's River IB when they submit their first information sheet (Table 5.1). These procedures must:

- Ensure that staff know where emergency equipment is located and are able to contact the police, ambulance service and nearest hospital in an emergency.
- Ensure that staff members understand the potential hazards of maintenance activities to themselves and to the environment.
- Ensure that equipment is well maintained and in good working order.
- Describe an emergency procedure to deal with spills of potentially hazardous chemicals, if applicable.

5.1.2 Briefing of the contractor and sub-contractors

In most cases, the landowner will supervise the maintenance activity and the use of any mechanical equipment. Each participating landowner will ensure that they fully understand

[8] Currently under review as at November 2013 and supplied by Ms Loretta Osborne (DEADP).

his/her responsibilities in terms of the MMP. Each landowner will also take full responsibility for briefing staff or outside contractors employed to assist him/her with the work.

5.1.3 Environmental Control Officer or Site Manager

All maintenance activities are exempt from this requirement provided they are done by the landowner him/herself or the farm manager. If the landowner contracts an outside contractor to undertake the work then they must have an independent Environmental Control Officer or a Site Manager on site during the whole operation.

5.1.4 DEADP notification

Participating landowners are required to inform the Jan du Toit's IB ten days prior to commencement of maintenance activities using the information sheet (Table 5.1) and declaration form (Table 5.2) provided. The Jan du Toit's IB will inform DEADP via email of any and all planned maintenance activities covered by this MMP at least a week in advance of their commencement.

The information required by DEADP is explained in Section 5.2

5.1.5 Compliance/non compliance

Work will be done in the spirit of the guiding principles (Section 1.2.1) and the relevant Method Statement (Section 6), and any additional conditions described in the letter of approval for the MMP.

Records of compliance/non-compliance must be documented and made available to DEADP on request (see Section 5.2 for format).

5.2 Information requirements of DEADP

The landowners and the IB must keep a copy of the information sheets submitted to DEADP (Section 5.2.1) so that the outcome of the activity can be recorded and resubmitted to DEADP on completion (Section 5.2.1). Copies must be retained.

5.2.1 Before commencement of activity

Sections A, B and C of the information form (Table 5.1) must be submitted to the Jan du Toit's IB ten days prior to commencement of maintenance activities, along with at least two photographs and coordinates of the photograph locations taken **before** the maintenance activities are performed. One form must be submitted per maintenance activity per farm. One declaration must be signed and submitted (Table 5.2).

Table 5.1 DEADP activity notification and information form 1.

JAN DU TOIT'S MMP NOTIFICATION AND INFORMATION FORM.1				
Section A: Landowner details				
Name	**Surname**	**Farm No.**	**Erf No.**	**Today's date**
Section B: Details of proposed maintenance activity				
WUA reference No.	**Activity Type (please tick)**	**Activity code**	**Footprint area (m^2)**	**Volume of sediment (m^3)**
	1 Vegetation management 2 Infrastructure repair 3 Sediment at infrastructure 4 Sediment removal 5 Sediment reworking			
Equipment	**Description of method for planned activity**			**Date when work will commence**
What date did this site last flood?	**What were the previous maintenance activities undertaken at this site (WUA Ref No)?**			
Section C: Photographs of activity location before maintenance				
Before 1.1 **Coordinates:** **S** **E**			**Date**	**Notes**
Before 1.2 **Co-ordinates:** **S** **E**			**Date**	**Notes**

Table 5.2 DEADP activity declaration form.

JAN DU TOIT'S MMP DECLARATION FORM

I ……., in my **personal capacity** or **duly authorised** (please circle the applicable option) by ……..…… (name of legal entity) thereto hereby declare that I/we:

- Regard the information contained in this information form to be true and correct.
- Am fully aware of my responsibilities in terms of the National Environmental Management Act of 1998 ("NEMA") (Act No. 107 of 1998) and that, notwithstanding an agreement to this Maintenance Management Plan, I/we shall comply with any other statutory requirement applicable in terms of the Conservation of Agricultural Resources Act, 1983 (Act 43 of 1983), the National Water Act, 1998 (Act 36 of 1998) and the Environmental Impact Assessment Regulations ("EIA Regulations") in terms of NEMA.
- Am fully aware that the proposed maintenance constitutes a listed activity in terms of the NEMA EIA Regulations, 2010, namely, Activity 18 of GN No. R. 544 and that an environmental assessment for environmental authorisation may be required for any other listed activities.
- Shall undertake only those tasks described in the Maintenance and Management Plan, failing which environmental authorisation will be required, where applicable.
- Shall provide the competent authority with access to all information at my disposal that is relevant to this request.
- Shall be responsible for any costs incurred in complying with environmental legislation.
- Hereby indemnify the government of the Republic, the competent authority and all its officers, agents and employees, from any liability arising out of, *inter alia*, any loss or damage to property or person as a consequence of undertaking this maintenance management plan.
- Am aware that a false declaration is an offence in terms of regulation 71 of GN No. R. 543.

Signature: Date:

Name of institution/company:

5.2.1 After completion of maintenance activity

Sections D, E, and F of the information form (Table 5.3) must be submitted to the Jan du Toit's River IB within seven days after completion of the maintenance activities, along with at least two photographs **taken from the same position and direction** as before, **after** the maintenance activities are performed. Any changes that were necessary to the planned activity, problems encountered or deviations from the recommended method statement must be described.

Table 5.3 DEADP activity notification and information form 2.

JAN DU TOIT'S MMP NOTIFICATION AND INFORMATION FORM.1				
Section D: Landowner details				
Name	**Surname**	**Farm No.**	**Erf No.**	**Today's date**
Section E: Details of completed maintenance activity				
WUA Ref No.	**Activity Type (please tick)**	**Activity code**	**Footprint area (m^2)**	**Volume of sediment (m^3)**
	1 Vegetation management 2 Infrastructure repair 3 Sediment at infrastructure 4 Sediment removal 5 Sediment reworking			
Equipment	**Description of method for completed activity**			**Date activity completed**
Were the method statements used?	**Describe any changes made to the MMP method statement.**			
Section F: Photographs of activity location after maintenance				
After 1.1 **Coordinates:** **S** **E**			**Date**	**Notes**
After 1.2 **Co-ordinates:** **S** **E**			**Date**	**Notes**

6 Method statements

Five method statements are provided, one for each Activity Type (Table 6.1). The method statements have been kept as simple as possible. Each statement is complete for the task, thus there is some repetition between statements. The general principles and guidelines for maintenance work in rivers (Section 1.2.1) apply to every activity. Application of these methods needs to take into account site and/or damage specific conditions, which are going to change between years. These must be supplied in the in the **notification and information form 1** (Table 5.1) prior to the activity begins and any changes to this provided in the **notification and information form 2** (Table 5.3) after completion of the activity.

6.1 Activity Type 1: Remove alien plant species

Application forms for assistance with clearing alien tree species may be found on the Working for Water website (http://www.dwaf.gov.za/wfw/Control/).

The distribution of alien plants along with river is provided in Appendix Table 11 and Appendix Table 12.

Before commencing with clearing (see also Section 6.6: Table 6.4):

- Identify and mark indigenous species (e.g., Figure 6.1 and Figure 6.2):
    - If unsure, please contact the WCDOA or CapeNature for assistance with identifying indigenous species in the clearing area.
- Ensure that indigenous plants are not trampled or cleared[9].

For mature alien trees:

- Fell each tree to a level as close to the ground as is practically possible (up to 10 cm):
    - Best achieved using a chainsaw.
- Apply herbicide, prepared as per instructions (Table 6.2), to the cut stump:
    - The herbicide prevents a coppicing species from re-sprouting, and the dye shows that a stump has been treated.
    - If the herbicide is dissolved in diesel, apply to the whole stump and any exposed roots.
    - If the herbicide is dissolved in water, apply to the cut area.
    - Applications should be by means of a low pressure, coarse droplet spray from a narrow cone nozzle.
    - WCDOA are willing to assist with the procurement of herbicides for the treatment of cut stumps.

[9] Please be advised that under certain circumstances the clearing of indigenous vegetation will trigger listed activities in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998) ("NEMA") Environmental Impact Assessment ("EIA") regulations 2010, as defined in Government Notice ("GN") No. R.546 of 18 June 2010. E.g. if 300 square metres or more indigenous vegetation is cleared within any critically endangered or endangered ecosystems listed in terms of section 52 of NEMBA Activity 12 of GN No. R. 546 will be applicable.

Table 6.1 A description of the maintenance activities with reference to the method statements and the consequences if no maintenance activities are undertaken.

Activity Type	Sediment type	Description	Consequences of no action	Summary method statement
1	Vegetation	**Remove alien trees** from the channel bed and river banks to improve flood conveyance and ecological condition.	Alien plants shade out indigenous species that stabilise river banks thereby increasing flooding and erosion risks; alien trees increase the occurrence of large woody debris in the channel blocking flow, raising flood water heights and deflecting flood flows into river banks.	Section 6.1
2	Infrastructure repair	**Repair pipelines** that are buried or run alongside the channel that are damaged during large flood events. These are localised and small-scale repairs.	If the irrigation infrastructure is not maintained, irrigation of crops is not possible and economic and job losses would occur.	Section 6.2
		Repair fixed weirs that are damaged during exceptionally large flood events. These are infrequent localised repairs.	If the irrigation abstraction is not maintained, irrigation of crops is not possible and economic and job losses could occur.	
3	Sediment at infrastructure	**Move sediment at pump holes** that blocks pumps/ flow to pumps.	If the pumps are not operational, irrigation of crops is not possible and economic and job losses would occur.	Section 6.3
		Move sediment at weirs that block the offtake point or from around the weir (< 5m^3) by hand.	If the irrigation infrastructure is not maintained, irrigation of crops is not possible and economic and job losses would occur.	
4	Sediment removal	**Move sediment in channel** that is deposited on the river bed or as bars and that threaten to divert flood flows into adjacent river banks or that raise the level of flooding due to aggradation of the channel bed. Large volumes are removed and river form changed back to pre-flood condition.	If sediment deposition in the channel (aggradation) is left unmanaged, the risk of flooding to adjacent agricultural fields and large areas of the valley bottom (wherever relict secondary channels may be reactivated) is increased dramatically and would remove infrastructure and crops in these areas.	Section 6.4
5	Sediment reworking	**Repair berms** by replenishing sediment that has eroded from the top and/ or base of the berm.	If the berms which protect agricultural lands and other infrastructure from flooding are not maintained, erosion of the berms and increased flooding would remove infrastructure and crops in these areas.	Section 6.5
		Repair river banks where large volumes of sediment are deposited against the bank and threaten to divert flood flows into the channel banks or where the river bank has been eroded or undercut. Sediments from channel are used to restore the bank to pre-flood conditions to reduce flooding risk or undercutting of low banks that support berms.	If the banks and adjacent lands are not maintained, the banks may be undercut and result in erosion of the banks. This can cause a loss of access (if adjacent roads are eroded) and/or loss of productive agricultural lands. Excessive erosion may also create sedimentation and flooding problems for downstream landowners.	

- Remove all slash (hacked woody debris) from the riparian area and then burn or mulch.
    - Do not leave slash on site as it can retard growth of indigenous species[10] and wash into the channel causing blockages that increase channel erosion.
    - Do not burn slash in the riparian zone as the heat of the fires can kill off the indigenous seed bank resulting in "bald spots".
    - Move slash to a nearby disturbed area or an area of sand or stone where few terrestrial indigenous plants are present, for burning.
    - Inform CapeNature or WCDOA of your intention to burn the slash.
    - Burn slash during winter, preferably after rain.
- Leave all tree stumps in place as this minimises post-clearing erosion. Do not disturb the river bed or banks by digging up large tree stumps.

For alien seedlings or saplings, either:

- Hand-pull[11], ensuring that the root stock is removed.
    - Use a lopper to dislodge the root before hand-pulling.
    - Dig out roots that break off.
- Saw stem off at the base of the plant, as close to the ground as possible:
    - Use a bow saw to cut young stems.
    - Apply herbicide as for mature trees.

Table 6.2 Herbicides and their application for different alien species (http://www.dwaf.gov.za/wfw/Control/).

Species	Common name	Method	Herbicide	Dilution
Acacia longifolia	Long leaved wattle	Cut stump, frill	Timbrel 360 SL	300ml/10 litres water, 0.5% wetting agent and dye
Acacia mearnsii	Black wattle	Cut stump	Timbrel 360 SL	300ml/10 litres water, 0.5% wetting agent and dye
Acacia mearnsii (juv)	Black wattle	Hand pull	None	
Acacia melanoxylon	Blackwood	Cut stump, frill	Timbrel 360 SL	300ml/10 litres water, 0.5% wetting agent and dye
Acacia saligna	Port Jackson	Cut stump, frill	Timbrel 360 SL	300ml/10 litres water, 0.5% wetting agent and dye
Acacia saligna (juv)	Port Jackson	Hand pull	None	
Casuarina sp.	Beefwood	Cut stump, frill	Garlon 4	300ml/10 litres water, 0.5% wetting agent and dye
Casuarina sp. (juv)	Beefwood	Hand pull	None	
Eucalyptus sp.	Gum	Cut stump	Plenum 160 ME	450ml/10 litres water, 0.5% wetting agent and dye
Eucalyptus sp. (juv)	Gum	Hand pull	None	

[10] E.g,. *Eucalyptus* release allelochemicals that inhibit the germination and growth of other species.

[11] Varies depending on the species, e.g., black wattle up to 2.5 m tall can be pulled out by hand, but a Port Jackson that is 0.5 m tall cannot.

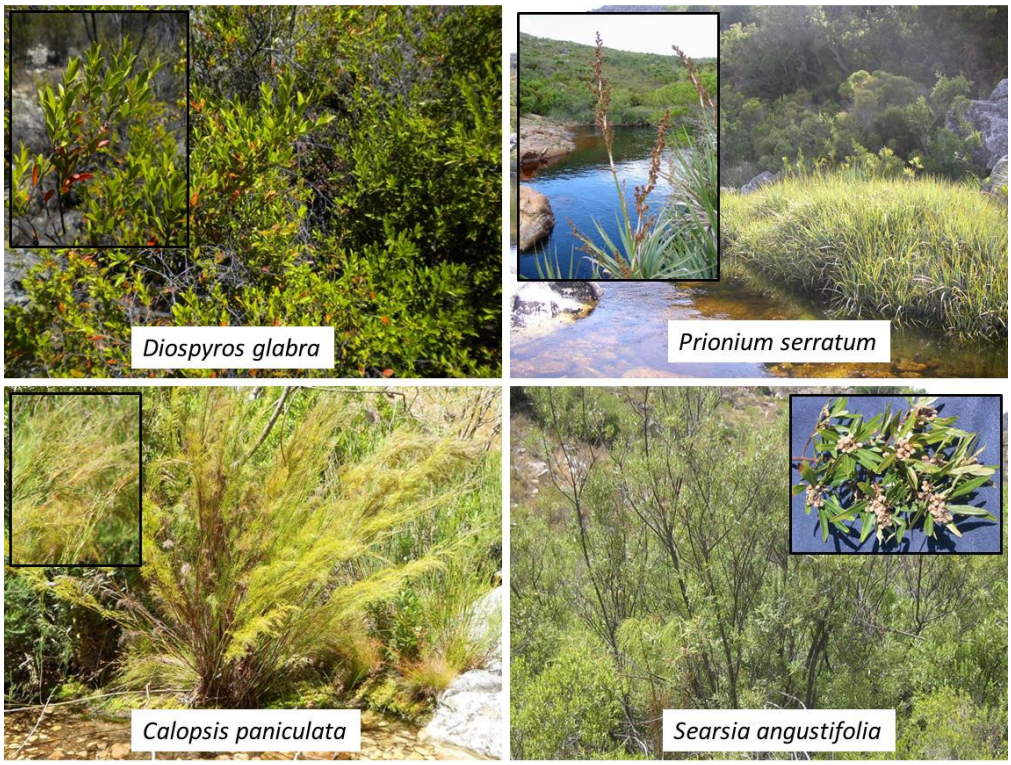


Figure 6.1 Common indigenous shrubs along the Jan du Toit's River.

Figure 6.2 Common indigenous trees along the Jan du Toit's River.

6.2 Activity Type 2: Infrastructure repair – no sediment movement required

Repairs will typically involve the movement of personnel and/or mechanical equipment into the riparian area and in some cases across the river channel. These general guidelines to minimise the spatial extent of the disturbance apply (see also Section 6.6: Table 6.5):

- Infrastructure must occupy the same foot print before and after repairs (like-for-like).
    - Increases in size and/or footprints of infrastructure require a separate application process and are not approved in this MMP[12].
- Make repairs during the dry season.
- Use existing access routes. If there are none, create one route through the most degraded area avoiding areas of obvious erosion and stands of indigenous vegetation.
- Use manual labour if possible rather than mechanically operated equipment.
- Keep potential pollutants away from the river.
- Remove spoil material to a selected dumping site.
- Do not block the river flow or the passage of aquatic and riparian biota.
- Clear alien plants to encourage regrowth of indigenous species.
- Restore any areas disturbed by the activity to their prior condition, including reinstatement of indigenous vegetation.

6.3 Activity Type 3: Sediment movement at infrastructure

The movement (usually removal) of sediment around infrastructure (pumps, culverts, weirs and offtake structures) that involves relatively small volumes of sediment should be undertaken by hand rather than using mechanical equipment as this will limit site disturbance. However, where larger volumes of sediment require removal, machinery may be used.

In either case, the following conditions apply (see also Section 6.6: Table 6.6):

- Sediment removal should wherever possible be undertaken during the dry season.
- Use existing access routes. If there are none, create one route through the most degraded area avoiding stands of indigenous vegetation.
- Use manual labour where-ever possible.
- Keep potential pollutants away from the river. Where machinery is used, ensure that there are no oil leaks, and refuel outside of the riparian area, where accidental spillages of fuel or lubricants will pose no threat of pollution.
- Hand-clear alien plants to encourage regrowth of indigenous species.
- Do not block the river flow or the passage of aquatic and riparian biota.
- Ensure that any top soil that is removed from the banks is replaced. Re-vegetate repaired or reshaped banks with indigenous riparian vegetation (see Table 6.3).
- The spoil or sediments removed from the area around the infrastructure:

[12] Depending upon the size of the project this will require either a Basic Assessment, for a small job, and a full Environmental Impact Assessment, for larger jobs, as well as a Water Use License.

- may be placed downstream of the infrastructure if (1) it is a very small (less than 5m^3) volume of sediment and (2) will not result in a flow impediment to flows or floods;
- may be used for other river-related maintenance activities (such as Activity Type 5), if such additional activities are authorised under this MMP;
- must not be used to create any new or larger berms; and
- unless utilised as described above, must not be dumped anywhere within the river bed or anywhere on the banks[13]. Any unused sediment must be removed from the river and taken out of the riparian area (i.e. outside of the berms, if present) to a suitable spoils stockpile.

- On completion of the maintenance activity, the ***topography of the site should be similar to the pre-damage condition*** (i.e. the bank shape should be similar to the condition it was in prior to the sedimentation event/s that are being remedied). This means that the channel or banks cannot be made narrower, berms higher or the river channel deeper than before.

Table 6.3 River bank locations for planting common riparian plants to re-vegetate river banks. D = distance and E = elevation from the river's low-flow water edge.

	Marginal zone	Lower banks	Upper banks
Distance	D <=1.5 m	D <1.5 m	D > 1.5 m
Elevation	E <=0.12 m	0.12 m < E < 1.29 m	E > 1.29 m
Non-trees	*Isolepis prolifera* *Prionium serratum*	*Elegia capensis* *Calopsis paniculata*	*Pteridium aquilinum* *Diospyros glabra*
Trees	*Salix mucronata*	*Metrosideros angustifolia* *Morella serrata*	*Searsia angustifolia* *Brabejum stellatifolium*

6.4 Activity Type 4: Sediment removal to increase flood conveyance

The purpose of this activity is to remove newly-deposited sediment to increase flood conveyance and reduce flooding risks. Typically, such sediment is deposited: adjacent to the low river bank, which diverts flood flows across the channel (causing erosion on the opposite banks); on the river bed, raising water levels and reducing flood conveyance; or, in the middle of the channel, reducing flood conveyance and increasing the risk of bank erosion.

In many cases, sediment deposition in is response to some change in the downstream river. This may be a result of deliberate changes to the channels shape and conveyance but, more often than not, is a result of invasion of the riparian area (and channel) by alien woody plants. The resistance provided by this vegetation slows down floodwaters, raising the water level during floods and increases sediment deposition on the river bed because of the slow velocities. If such invasion has occurred downstream, the situation can often be significantly reduced by removing the alien plants rather than, or at least before, removing the deposited sediment (see Activity Type 1).

[13] Large piles of sediment that are dumped in the river channel or on the river bed smother the underlying habitat and promote invasive alien vegetation.

The general guidelines to minimise the spatial extent of the disturbance apply (Section 1.2.1). In addition (see also Section 6.6: Table 6.7):

- Make repairs during the dry season.
- Use existing access routes. If there are none, create one route through the most degraded area avoiding stands of indigenous vegetation.
- Use manual labour where-ever possible.
- Keep potential pollutants away from the river. Where machinery is used, ensure that there are no oil leaks, and refuel outside of the riparian area, where accidental spillages of fuel or lubricants will pose no threat of pollution.
- Hand clear alien plants to encourage regrowth of indigenous species.
- Do not block the river flow or the passage of aquatic and riparian biota.
- Do not create new berms.
- Ensure that any top soil that is removed from the banks is replaced.
- Re-vegetate repaired or reshaped banks with indigenous riparian vegetation (see Table 6.3).
- Do not deepen the river beyond the original (pre-damage condition) thalweg (point of lowest elevation in the channel; see Figure 6.3).
- To the extent possible, do not disturb the sediments ≥2 m on either side of the thalweg. It is important from an ecological perspective that the natural low-flow channel be allowed to re-establish, and any marginal vegetation that establishes there remain intact as it provides cover, habitat and food for the riverine biota.
- The spoil or sediments removed from the area around the infrastructure:
    - may be placed downstream of the infrastructure if (1) it is a very small (less than $5m^3$) volume of sediment and (2) will not result in a flow impediment to flows or floods;
    - may be used for other river-related maintenance activities (such as Activity Type 5), if such additional activities are authorised under this MMP;
    - must not be used to create any new or larger berms; and
    - unless utilised as described above, must not be dumped anywhere within the river bed or anywhere on the banks[14]. Any unused sediment must be removed from the river and taken out of the riparian area (i.e. outside of the berms, if present) to a suitable spoils stockpile.
- On completion of the maintenance activity, the ***topography of the site should be similar to the pre-damage condition*** (i.e. the bank shape should be similar to the condition it was in prior to the sedimentation event/s that are being remedied). This means that the channel or banks cannot be made narrower, berms higher or the river channel deeper than before.

[14] Large piles of sediment that are dumped in the river channel or on the river bed smother the underlying habitat and promote invasive alien vegetation.

Figure 6.3 The red arrow illustrates the thalweg.

6.5 Activity Type 5: Sediment reworking to repair berms and banks

This is the most controversial of the activities, in that the repair work done is to berms and often artificial river banks, using material taken from the channel. Typically berms are present on both banks and are in place to prevent flooding into adjacent agricultural fields. Eroded berms are repaired by moving sediment from the river channel up onto the bank to infill scour-holes. Such repairs offer little or no ecological benefit, but in the context of the current development of the valley these repairs are extremely important to prevent widespread loss of agricultural productivity, land and infrastructure. As a general rule however, berms should be situated as far away from the active channel as possible, as the wider channels and flood areas (1) increase the flood conveyance potential of the channel (and its riparian area) and (2) provide much needed opportunities for re-establishment of natural riparian functions. Berms that are situated on the inner edges of riparian areas or in the active channel reduce the conveyance of the channel and increase sheer stress during flooding, which increases the risk of erosion and thus the need for maintenance.

The general guidelines to minimise the spatial extent of the disturbance apply (Section 1.2.1). In addition (see also Section 6.6: Table 6.8):

- Sediment removal should wherever possible be undertaken during the dry season.
- Limit activities to REPAIR of existing berms and banks.
- Use manual labour where-ever possible.
- Use existing access routes. If there are none, create one route through the most degraded area avoiding stands of indigenous vegetation.
- Do not disturb stable bed and bank areas.
- Keep potential pollutants away from the river. Where machinery is used, ensure that there are no oil leaks, and refuel outside of the riparian area, where accidental spillages of fuel or lubricants will pose no threat of pollution.
- Do not use foreign material, such as concrete, rubble, logs, alien vegetation debris and/or terrestrial soil for berm or bank repairs.

- Do not increase berm heights.
- Do not create new berms.
- Where possible, move berms as far away from the active channel as possible [15]..
- Do not take sediment from stable bed and bank areas and avoid areas with indigenous vegetation. If more than $5m^3$ of sediment is required source these larger volumes from areas authorised for sediment removal (Activity Type 4 sites labelled VG in 0).
- Do not deepen the river beyond the original (pre-damage condition) thalweg (point of lowest elevation in the channel; see Figure 6.3).
- To the extent possible, do not disturb the sediments ≥2 m on either side of the thalweg. It is important from an ecological perspective that the natural low-flow channel be allowed to re-establish, and any marginal vegetation that establishes there remain intact as it provides cover, habitat and food for the riverine biota.
- On completion of the maintenance activity, the ***topography of the site should be similar to the pre-damage condition*** (i.e. the bank shape should be similar to the condition it was in prior to the sedimentation event/s that are being remedied). This means that the channel or banks cannot be made narrower, berms higher or the river channel deeper than before.

Five activity sites were identified where berms were very close to, or occasionally within, the active channel (see Section 6.5). These sites provide an opportunity to increase the width of the riparian area and improve flood conveyance through the channel by moving the berms out of the active channel toward the agricultural fields. This will mitigate impacts due to channelisation by reducing flood velocities and the risk of flooding, as well as improving conditions for the establishment and migration of riparian vegetation and other river organisms.

[15] Berm heights cannot be increased, but it is recommended that landowners pull back berms to the edges of their agricultural lands (at the same height to replicate the same present day flood protection functions) as this will widen the riparian area and result in slower flood velocities

6.6 Summary method statements

Tabulated method statement summaries are required for the MMP application and are provided below.

Table 6.4 Method statement for clearing alien plants: Activity Type 1.

Activity Type	Description	Submit application form	Before maintenance	Method	Special precautions	Equipment
1	Alien clearing (Section 6.1)	Not required unless heavy machinery is used and/or >>5 m^3 sediment will be moved.	• Read the general guidelines in Section 1.2.1. • Identify and mark indigenous species (see Figure 6.1 and Figure 6.2) to be avoided during clearing. Contact WCDOA or CapeNature for assistance.	TREES • Fell trees at ground level (~ 10cm) with chainsaw. • Mix herbicide as per instructions (See Table 6.2). • Apply herbicide with nozzle sprayer to cut stump. • Stack cleared material away from indigenous plants on cobble bars or sand deposits. • Mulch or burn cleared material during wet season. SAPLINGS • Cut stems of saplings with a bowsaw. • Apply herbicide, stack and mulch/burn as for trees. SEEDLINGS • Use lopper to dislodge roots of large seedlings. • Hand pull small seedlings. • Dig out roots that break off. • Stack and mulch/burn as for trees.	• Do not leave cleared material in the river or riparian area. • Inform CapeNature before burning slash.	Chainsaws, herbicide, nozzle sprayers, bow saws, cattle hide gloves, mulcher, fuel.

Table 6.5 Method statement for infrastructure repairs: Activity Type 2.

Activity Type	Description	Submit application form	Before maintenance	Method	Special precautions	Equipment
2	Repair infrastructure (Section 6.2)	Not required unless heavy machinery is used and/or >>5 m^3 sediment will be moved.	• Read the general guidelines in Section 1.2.1.	• Clear alien plants (see Table 6.4). • Repair damaged infrastructure with the same construction material over the same footprint as before.	• Work in the dry season. • Use existing access routes. • Use manual labour where possible. • Keep pollutants out of the river. • Remove spoil material to a dumping site. • Do no block river flow or hinder movement of river biota.	Various hand-held tools and electronic equipment, spades, mechanical equipment (bulldozers, digger loaders).

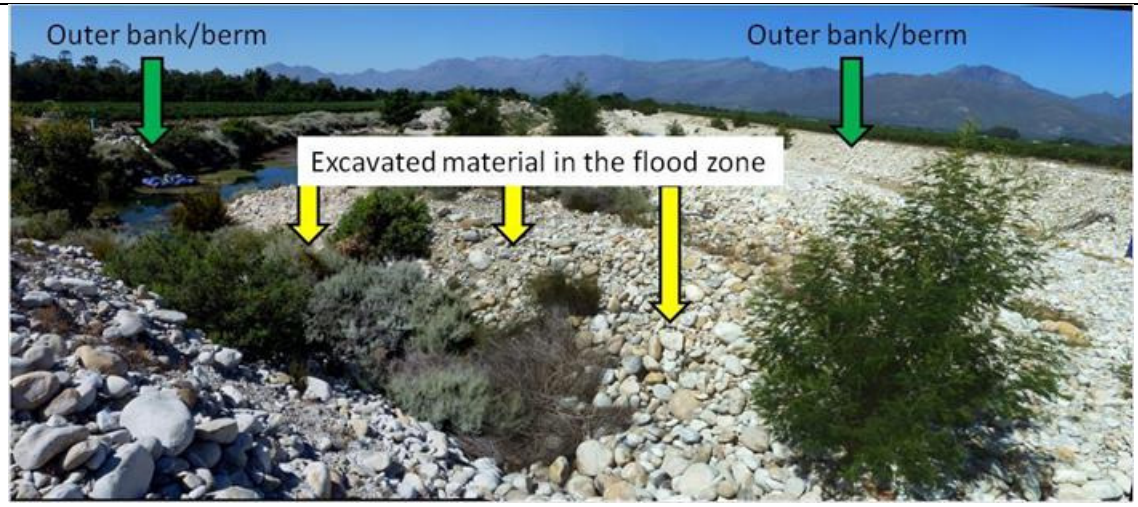
Table 6.6 Method statement for sediment removal from infrastructure: Activity Type 3.

Activity Type	Description	Submit application form	Before maintenance	Method	Special precautions	Equipment
3	Clear sediment from infrastructure (Section 6.3)	Not required unless heavy machinery is used and/or >>5 m^3 sediment will be moved.	• Read the general guidelines in Section 1.2.1.	• Clear alien plants (see Table 6.4). • Remove top soil, store and replace on disturbed banks. • Clear sediment by hand with spades (if possible), use mechanical equipment carefully. • Place removed sediments downstream if > 5m^3, or use for Activity Type 5 (see Table 6.8), or remove from riparian area to a stock pile. • Take photographs before and after works.	• Abide by precautions of Table 6.5. • Do not disturb the thalweg (see Figure 6.3). • The topography of the site must be restored to the same as the pre-damage condition.	Spades, mechanical equipment (bulldozers, digger loaders).

Table 6.7 Method statement for sediment removal from the channel: Activity Type 4.

Activity Type	Description	Submit application form	Before maintenance	Method	Special precautions	Equipment
4	Clear sediment from river channel (Section 6.4)	Yes	• Read the general guidelines in Section 1.2.1.	• Clear alien trees 100 m up and downstream of the activity site (see Table 6.4). • Remove top soil, store and replace on disturbed banks. • Clear sediment by hand with spades (if possible), use mechanical equipment carefully. • Place removed sediments downstream if > $5m^3$, or use for Activity Type 5 (see Table 6.8), or remove from riparian area to a stock pile. • Take photographs before and after works.	• Abide by precautions of Table 6.5. • Do not disturb the thalweg (see Figure 6.3). • The topography of the site must be restored to the same as the pre-damage condition.	Spades, mechanical equipment (bulldozers, digger loaders).

Table 6.8 Method statement for sediment reworking from the channel to the banks/berms: Activity Type 5.

Activity Type	Description	Submit application form	Before maintenance	Method	Special precautions	Equipment
5	Rework sediment in river channel (Section 6.5)	Yes	• Read the general guidelines in Section 1.2.1.	• Clear alien trees 100 m up and downstream of the activity site (see Table 6.4). • Remove top soil, store and replace on disturbed banks. • Move sediment by hand with spades (if possible), use mechanical equipment carefully. • Use sediment/soil from the immediate vicinity if < 5m^3 is needed. • Use sediment from Activity Type 4 (see Table 6.7) if > 5m^3 is needed. • If possible, plant indigenous species to encourage faster stabilisation of the banks (see Table 6.3).	• Abide by precautions of Table 6.5. • Do not disturb the thalweg (see Figure 6.3). • Do not source sediment from stable bed and bank areas, and areas of indigenous vegetation. • Do not use foreign material (concrete, rubble, logs, alien vegetation debris and terrestrial soil). • The topography of the site must be restored to the same as the pre-damage condition.	Spades, mechanical equipment (bulldozers, digger loaders).
Site – specific recommendations (see 0).						
Farm 9	Excavated material should be moved to the banks/berms at the edges of the agricultural fields to maximize flood conveyance, reduce flood velocities and heights, and allow for an improvement of instream ecological conditions through reduced maintenance frequencies.					

Farm 23	Material alongside the active channel (the inner berm indicated in the above photograph) should be pulled back to the existing outer berm. This would allow for increased flood conveyance, reduced flood velocities and heights, and allow for an improvement of instream ecological conditions through reduced maintenance frequencies at the site	
Farm 25	The outer bank/berms need to be maintained, but the material located alongside the active channel, and the low inner berm, should be pulled back to the outer existing berm. This would allow for increased flood conveyance, reduced flood velocities and heights, and allow for an improvement of instream ecological conditions through reduced maintenance frequencies at the site.	
Farm 28	The cobbles and sediment are removed from the active channel bed to counteract aggradation, but these berms/sediment deposits must be pulled back to the edge of the agricultural fields to improve flood conveyance. Alien plants should be removed.	

Farm 31	Alien plants in this reach should be cleared and the sediment deposits (low berms along the edge of the active channel) moved back to the edge of the agricultural fields to improve flood conveyance.	

7 Acknowledgements

Ms Wilanie de Villiers from the WCDOA is thanked for preparing all the maps and aerials photographs. Ms Loretta Osborne from DEADP is thanked for guidance on the content of the report and the MMP administrative procedures. Professor Cate Brown from Southern Waters is thanked for reviewing this document. Ms Elkerine Rossouw is thanks for guidance through the NWA.

8 References

DEADP 2013. Request for agreement to a Maintenance Management Plan in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), and the Environmental Impact Assessment Regulations, 2010.

Fluvius Environmental Consultants (*in prep*). Specialist supporting information for the Integrated Water Use Licence Application for proposed Section 21 (c) and (i) water uses associated with the Maintenance Management Plan (MMP) on the Jan du Toit's River in the Upper Breede River, Western Cape. Prepared by M. Rountree for the Dept of Agriculture, Western Cape.

NEMA 1998. National Environmental Management Act No 107. Government Gazette Volume 401, No. 19519. Republic of South Africa.

NEMA 2010. National Environment Management Act No. 107. Environmental Impact Assessment regulations [as corrected by "Correction notice 1 (GN No. R. 660 of 30 July 2010) and "Correction Notice 2 (GN No. R. 1159 of 10 December 2010)]. Government Gazette No. 33306, No. R543.

Southern Waters 2013. Breede River Maintenance Management Plans (MMPs). Scoping Report. Unpublished consultancy report prepared by Southern Waters, Fluvius Environmental Consultants and CCA Environmental. Cape Town, South Africa.

SRK 2011. Environmental Management Framework: Cape Winelands District Municipality, 2010-2017. SRK consulting Report No. 410438/4. Unpublished consultancy report. SRK consulting, Cape Town, South Africa.

Flood Support
JAN DU TOITS
Water Users Associat

Legend

- Jan Du Toits
- Coordinates

N

Scale:	1:98 800
Data Source:	WCDoA
Date created:	June 4, 2026
Compiled by:	W de Villiers

Disclaimer
Liability disclaimed. Use at own

Western Cape Government
FOR YOU