

AGREEMENT

APPENDIX 1: SCOPE OF SERVICES

1. PROJECT CONTEXT

1.1 PURPOSE OF THIS DOCUMENT

This Scope of Services governs the appointment of a specialist consulting firm to prepare an integrated bridging study or masterplan for the Mzimvubu Water Project (MWP). The purpose of the study is to develop a funded and prioritised pipeline of bulk and reticulation water services infrastructure projects, supported by a detailed implementation plan, to ensure that the systems required to abstract raw water from the Ntabelanga Dam, treat it, and distribute potable water to households are fully planned from “source to tap.” This work is essential to ensure that water services can be delivered to end users in a sustainable and revenue-generating manner.

In addition, the appointed consulting firm will be required to close the gaps identified in the MWP by two authoritative sources:

- National Treasury’s Budget Facility for Infrastructure (BFI) letter of 22 February 2024 (BFI-1712), signed by Deputy Director-General Edgar Sishi, which identified four specific deficiencies that prevented a positive funding recommendation and set a 2025/2026 deadline for resolution; and
- The DWS Reconfiguration Report June 2023 (signed by Director Ms C Fourie), which identified additional technical, financial, institutional and compliance gaps arising from the repackaging of the project from R17.9 billion to R8.1 billion.

The appointed consultant will work in close collaboration with TCTA and DWS and must coordinate with Infrastructure South Africa (ISA) and Government Technical Advisory Centre (GTAC) as specifically recommended by NT in BFI-1712. All work must be completed in time for a revised BFI submission targeting the 2026/27 financial year funding cycle.

1.2 PROJECT DESCRIPTION

The Mzimvubu Water Project (MWP) was identified as one of the Strategic Integrated Projects (SIP 19) in 2014 under the National Infrastructure Plan. The objective was to drive socio-economic development in the Eastern Cape by constructing two multi-purpose dams (Ntabelanga and Lalini) to provide water for agriculture, domestic use and hydropower generation. It is intended to serve community water supply, bulk irrigation, and long-term inter-basin transfer objectives for Nelson Mandela Bay, Buffalo City and Gauteng.

Following three unsuccessful BFI applications, the project was reconfigured in June 2023, reducing the total project cost from approximately R17.9 billion to R8.1 billion. The reconfigured project comprises:

Stage 1: Construction of access roads to Ntabelanga Dam- under construction; funded from DWS Augmentation Fund (R335 million).

Stage 2: (2a) Construction of Ntabelanga Dam and (2b) Staff Housing (including basic services) and other access roads – R2,6 billion; funding confirmed from fiscus.

Stage 3(a): Bulk Potable Water Distribution – R4.9 billion; to be funded by via RBIG and MIG.

Stage 3(b): Bulk Raw Water / Irrigation Distribution – R1.0 billion; conditional on DALRRD approval.

Stage 4: Lalini Dam and Hydropower Component – deferred; R3.9 billion; blended finance to be explored.

The fourth BFI submission (BFI-1712) was assessed by the Joint Technical Committee (JTC) comprising National Treasury (NT), ISA, and Department of Planning, Monitoring and Evaluation (DPME). While the JTC acknowledged significant improvement over prior submissions and confirmed project eligibility, it identified four gaps that must be resolved before MTEC can recommend funding. NT also noted that additional technical studies and institutional agreements – flagged in the DWS Reconfiguration Report – remain outstanding.

In addition to the gaps identified by National Treasury, it was further noted that the value proposition for the Ntabelanga Dam is not sufficiently supported due to limited readiness by the Water Services Authorities to implement the planned projects required to utilise the additional raw water. As a result, a detailed study is proposed to address and close this gap.

The bridging study or masterplan will evaluate the adequacy of the existing bulk and reticulation infrastructure in relation to the projected infrastructure requirements necessary to support the uptake of the additional raw water to be supplied by the dam project. This will include assessing the systems required to treat the water and distribute the treated supply to the various communities. Based on this assessment, the study will develop a comprehensive pipeline of bulk and reticulation projects to be implemented by the Water Board, the Water Services Authorities (WSAs), or any other designated Implementing Agent, with the objective of ensuring reliable and sustainable potable water services to all communities drawing supply from the dam.

This study will assess, among other considerations, whether it is more viable to develop a central water treatment works to supply potable water directly to the WSAs, or whether it is more feasible to supply raw water to the WSAs for them to undertake treatment and distribution. This decision will be informed by an options analysis based on full life-cycle costing. All existing planning inputs will be integrated into the masterplan and will inform the development of the project pipeline.

Once the pipeline of projects has been developed and costed, the appointed PSP will align the available funding streams (MIG, RBIG, WSIG, BFI, and internal revenue) to the project pipeline, resulting in a fully funded set of projects accompanied by an implementation plan. Both the bulk and reticulation projects will then be incorporated into the WSAs' WSDPs. Thereafter, DWS will recommend and approve grant funding only for projects included in the WSDPs, ensuring full alignment between the implementation plan and the allocation of grant funding.

This funded pipeline of projects will also inform which entities should be appointed to implement each project, as well as the level of planning required to support funding applications across the various funding streams. This, in turn, will guide the WSAs in appointing the appropriate Implementing Agents (IAs) for the execution of the associated projects.

The DWS team engaged TCTA to support the appointment of a PSP to undertake a comprehensive study aimed at optimising the benefits of the reconfigured Mzimvubu Water

Project (Ntabelanga Dam). The study will consolidate existing plans developed by the Water Services Authorities (WSAs), identify bulk and reticulation infrastructure gaps and deficits, and develop a prioritised, costed pipeline of projects supported by appropriate financial models to enable full-service coverage across the project footprint. This study is critical for unlocking funding for the project, with TCTA serving as the supporting Project Management Office (PMO).

Following a review of the existing water services planning undertaken by the WSAs, DWS recognised that the WSAs were—understandably—planning in isolation. Their infrastructure requirements and resulting project proposals were based solely on their individual demand profiles. Consequently, there was no integrated or holistic approach for abstracting water from the Mzimvubu Dam and supplying the various WSAs in a coordinated manner.

If DWS and the WSAs were to implement the projects as they are currently planned, they would miss significant opportunities for economies of scale and operational efficiency. Instead, the current fragmented approach would lead to inefficiencies such as each WSA proposing its own dedicated pipeline from the dam, rather than developing a shared transmission system serving multiple WSAs. This would result in substantial cost escalation, both in capital expenditure and long-term O&M costs, ultimately compromising the sustainability of the broader project.

An integrated bulk water supply plan that optimises infrastructure across WSAs and ensures efficient, economic delivery of services is therefore crucial to the bankability and long-term viability of the Mzimvubu Dam project.

1.3 ENVIRONMENTAL AUTHORISATIONS AND APPROVALS

An Environmental Impact Assessment (EIA) and environmental authorisation were previously obtained for the Ntabelanga Dam and associated infrastructure. The current Environmental Authorisation remains valid and the Environmental Management Programme (EMP) is being implemented under a separately appointed Environmental Management Consultant (EMC).

The appointed PSP shall not be required to undertake or replicate environmental authorisation or EIA work. The PSP will be provided with all relevant environmental compliance documentation, the updated Social Impact Assessment, Resettlement Action Plan, and associated outputs produced by the EMC as baseline reference material. The PSP shall ensure that the proposed infrastructure configurations and project pipeline recommended under this study are consistent with the conditions of the existing Environmental Authorisation and do not give rise to new material environmental impacts that would require regulatory approval.

1.4 GENERAL OBJECTIVES

The purpose of this bridging study or masterplan is to develop a funded and prioritised pipeline of water services infrastructure projects, supported by a detailed implementation plan, to ensure that the required bulk and reticulation systems are in place to abstract raw water from the Ntabelanga Dam, treat it, and distribute potable water to households. This ensures holistic “source-to-tap” planning, recognising that revenue sustainability is only achieved once water services reach end users.

The overarching objectives of this assignment are to:

- Develop a comprehensive, integrated Water Services Masterplan that consolidates all WSA planning and establishes a regionally optimised bulk water supply configuration for the Ntabelanga Dam scheme.
- Produce a prioritised, fully funded pipeline of bulk and reticulation infrastructure projects aligned to confirmed or credible funding streams and incorporated into WSA Water Services Development Plans (WSDPs).
- Prepare a revised BFI application package or equivalent Treasury funding motivation, supported by demonstrated WSA readiness, a quantified demand analysis and an integrated demand case.
- Support National Treasury's confirmation of multi-year MTEF allocations for Stages 2 and 3 of the MWP.
- Facilitate and conclude Memoranda of Agreement (MoAs) and off-take agreements with all key implementing entities, confirming roles, responsibilities and committed water volumes.
- Advance the Mzimvubu Water Project to full fiscal approval and implementation readiness.

The study is therefore intended not only to establish an integrated, economically optimised water services infrastructure framework but also to resolve these identified gaps to ensure the bankability, readiness, and long-term sustainability of the Mzimvubu Water Project.

1.5 PROJECT LOGISTICS

The Consultant will be required to communicate and work well with TCTA, DWS, and the relevant Water Board, Water Services Authorities, District Municipalities and all other key stakeholders and perform all the Services using a comprehensive programme (**Appendix 4: Time Schedule for Services**) and cost (**Appendix 3: Remuneration and Payment**). The Consultant must provide their own quality assurance measures.

TCTA will establish and manage a Project Committee, which will have Project Partners' (DWS, and Water Users) participating in developing and implementing the most cost-effective solutions to their water needs. This will be undertaken in a transparent and consultative manner.

The study area comprises the water services footprint of the Mzimvubu Water Project, encompassing the Alfred Nzo, OR Tambo and Joe Gqabi District Municipalities in the Eastern Cape Province. The primary project infrastructure is the Ntabelanga Dam on the Tsitsa River, a tributary of the Mzimvubu River, located in the Alfred Nzo District Municipality. The study will assess bulk and reticulation infrastructure requirements across all three district municipality areas to enable the full uptake and distribution of water from the Ntabelanga Dam to the communities within the project footprint.

The appointed bidder must work closely with the benefitting Water Services Authorities to do a detailed analysis of the planning and investigations of planned and existing local water supply schemes that have potential to overlap with the footprint of the Ntabelanga Dam Project. The appointed bidder must also work closely with the PSPs appointed for the development of the Five-Year Reliability Plans in the various District Municipalities to ensure alignment with their water services development planning and also work closely with the PSPs that have been appointed by the DMs to undertake the project planning for the various planned projects within their jurisdiction.

The appointed bidder will also work strictly under the guidance of the Provincial Programme Managers from DWS.

The project will effectively be implemented through TCTA, Project Managers, but closely monitored by the DWS Provincial Office and managed in concurrence with the DWS Provincial Infrastructure Development and Maintenance Unit. All meetings, introduction sessions and progress report back sessions will be chaired by the TCTA and co-chaired by the DWS Provincial representative, and all correspondence related to this study should be routed through the TCTA and copy DWS Provincial Programme Managers. The appointed PSP is responsible for the preparation and distribution of minutes of meeting and meeting agendas.

The National DWS will consider all recommendations by the TCTA and the Provincial DWS and make final recommendations for approval of the planning documents.

Proper reporting structures will be put in place to ensure that the appointed bidder reports on progress throughout the implementation of any specific stage of the project.

The appointed Bidder will complete monthly progress reporting documentation as specified. These monthly progress reports must be submitted with each payment certificate, including the approved deliverables being claimed for.

Meetings will be held on site, virtually and /or in the Mthatha Mzimvubu PMO facilities, King Williams Town or East London DWS offices.

1.6 STANDARDS AND SPECIFICATIONS

All dimensions and quantities shall be expressed in the SI system of units. The standards shall be those of the Department of Water and Sanitation (DWS), the International Standards Organisation (ISO), and the national standards and applicable national legislation, including:

- National Water Act (Act 36 of 1998)
- Water Services Act (Act 108 of 1997)
- Public Finance Management Act (Act 1 of 1999) and Treasury Regulations
- Municipal Systems Act (Act 32 of 2000) and Municipal Finance Management Act (Act 56 of 2003)
- National Treasury Infrastructure Planning and Appraisal Guidelines
- DWS Guidelines for the preparation of Water Services Development Plans (WSDPs)
- TCTA Supply Chain Management Policy

1.7 REFERENCE MATERIAL FROM PREVIOUS STUDIES

Department of Water Affairs and Forestry, South Africa. 2006. Surface Water Resources. Prepared by J R Hansford and A K Bailey as part of the Olifants River Water Resources Development Project. DWA Report No. WMA 04/B50/00/1704.

Pitman, W V. 1973. A mathematical model for generating monthly river flows from meteorological data in South Africa. Hydrological Research Unit. Report No. 2/73. Pretoria: HRU.

Department of Water Affairs, South Africa. 2010a. Groot Letaba River Water Development Project (GLeWaP): Technical Study Module: Water Resource Analysis : Volume 5. Prepared by Aurecon for the Options Analysis Directorate. DWA Report No.: P 02/B810/00/0608/5.

Department of Water Affairs, South Africa 2010b. Groot Letaba River Water Development Project (GLeWaP): Technical Study Module: Review of Water Requirements : Volume 2. Prepared by Aurecon for the Options Analysis Directorate. DWA Report No.: P02/B810/00/0608/2.

Department of Water Affairs, South Africa 2010b. Groot Letaba River Water Development Project (GLeWaP): Technical Study Module: GROOT LETABA RIVER WATER DEVELOPMENT PROJECT (BRIDGING STUDIES). Prepared by Aurecon for the Options Analysis Directorate. DWA Report No.: WMA 02/8810/00/0608/1.

The reports and documents are available on the websites: <https://www.dws.gov.za/iwrb/mzimvubu/Detailed.aspx> Copies not available on these websites will be made available by TCTA per the Consultant's or bidder's request.

2. DESCRIPTION OF CONSULTANT'S SERVICES

The Consultant shall assemble a multidisciplinary team of engineers, economists, financial modellers, planners, and stakeholder engagement specialists experienced in integrated water services planning, bulk infrastructure design, funding alignment, and inter-governmental coordination.

The required Services have been divided into the following tasks:

- Task 1: Inception Report (inclusive of Infrastructure Gap Assessment and Water Demand Analysis)
- Task 2: Options Analysis Report
- Task 3: Mzimvubu Integrated Water Services Masterplan
- Task 4: Fundable Implementation Programme for the Prioritised Pipeline of Projects
- Task 5: Cost and Affordability Report and Funding Model
- Task 6: Stakeholder Engagement and Institutional Alignment
- Task 7: Project Management
- Task 8: Skills Development as per CIDB B.U.I.L.D. Programme

The detailed requirements, obligations and responsibilities for each tasks (and sub-tasks) are specified below.

3. SCOPE OF SERVICES

The Consultant shall assemble a team of engineers, economists, financial modellers, planners, and specialists experienced in integrated bulk water supply and water services planning, options analysis, lifecycle costing, funding alignment, and inter-governmental stakeholder facilitation.

3.1 TASK 1: INCEPTION REPORT

3.1.1 REVIEW OF EXISTING PLANNING AND BASELINE DATA COMPILATION

- Compile and consolidate all existing planning studies, Water Services Development Plans (WSDPs), designs and investigations prepared by or for the relevant WSAs across the OR Tambo, Alfred Nzo and Joe Gqabi District Municipality areas into a unified baseline.
- Review the MWP Reconfiguration Report (June 2023) and the National Treasury BFI-1712 Technical Assessment Letter (22 February 2024) to confirm the gaps that this study is required to address.
- Identify where existing WSA planning is adequate, where it requires revision or augmentation, and where planning has not yet commenced.
- Assess all previous planning studies and reports for the MWP and confirm their adequacy and currency for the purposes of this study.

3.1.2 INFRASTRUCTURE GAP ASSESSMENT

- Conduct a comprehensive assessment of existing bulk water supply and reticulation infrastructure across all WSA service areas within the MWP footprint.

- Benchmark current infrastructure capacity against the projected demand for treated water arising from the commissioning of the Ntabelanga Dam.
- Quantify all infrastructure gaps and deficits at both bulk conveyance and reticulation levels that must be addressed to enable full uptake of the dam's water yield.
- Identify the greenfields-to-brownfields transition requirements for integrating the Ntabelanga Bulk Distribution System with existing municipal schemes.

3.1.3 WATER DEMAND ANALYSIS

- Collect the latest census data from Statistics South Africa and other reliable sources for the project area and develop updated water demand projections.
- Prepare a Water Demand Analysis Report quantifying multi-sector water demand per municipality, per sector (domestic, industrial, agricultural, inter-basin transfer) and per decade, with explicit linkage to the scale and timing of each project component including the Ntabelanga Dam.
- Project water demand for beneficiaries over a minimum 25-year planning horizon, disaggregated between social and commercial users.
- Assess current and projected assurance of supply, current tariff structures and user profiles across the project footprint.

3.1.4 COMPLIANCE WITH NATIONAL TREASURY INFRASTRUCTURE PLANNING GUIDELINES

- Evaluate the existing project documentation against the latest National Treasury Infrastructure Planning and Appraisal Guidelines and identify all gaps requiring resolution.
- Confirm and document the project's status as SIP 19 under the National Infrastructure Plan.

3.1.5 STAKEHOLDER IDENTIFICATION AND ENGAGEMENT INITIATION

- Develop a comprehensive stakeholder register identifying all water users, WSAs, implementing entities, funding bodies and community representatives within the project footprint.
- Initiate engagement with all key stakeholders to validate baseline data, confirm infrastructure requirements, and identify any additional planning inputs required.
- Meeting with stakeholders including the affected district municipalities as the responsible Water Services Authorities, to establish the status of existing and planned water supply infrastructure projects in the potential supply areas.
- Conducting onsite investigations to gather first-hand information on the locality and condition of any existing water supply infrastructure.
- Contacting PSPs currently working on projects in the area to access detailed information on the status, scope of works, cost-estimates, programme and phasing of projects in the area.

Deliverable: Inception Report inclusive of Infrastructure Gap Assessment Report, Water Demand Analysis, Consolidated WSA Planning Baseline, and Stakeholder Register.

3.2 TASK 2: OPTIONS ANALYSIS REPORT

The PSP shall conduct a structured options analysis, underpinned by full lifecycle costing, to determine the most technically sound and financially viable water supply configuration for the scheme. The analysis shall evaluate, at minimum, the following principal configurations:

- A centralised Water Treatment Works (WTW) model, under which raw water from the Ntabelanga Dam is treated at a single regional facility and potable water distributed to WSAs for onward reticulation to communities.
- A decentralised model, under which raw water is conveyed via a shared bulk main to individual WSAs, who treat and distribute potable water within their respective areas of supply.
- A hybrid configuration combining elements of both models, where technically or economically justified.

The options analysis shall also:

- Assess the technical feasibility and cost of upgrading existing Water Treatment Works across the three district municipalities to replace the current 'R0 placeholder' in the reconfigured project budget with a credible, independently verified cost estimate.
- Assess institutional capacity among the relevant WSAs to operate and maintain the proposed infrastructure under each configuration.
- Develop comparative lifecycle cost models for each option covering capital, operating, maintenance and replacement costs over a minimum 25-year horizon.
- Recommend a preferred configuration supported by the lifecycle cost analysis, demand projections and institutional capacity assessment.

Deliverable: Options Analysis Report with Lifecycle Cost Comparison; WTW Upgrade Feasibility Assessment; Updated Cost Estimates.

3.3 TASK 3: MZIMVUBU INTEGRATED WATER SERVICES MASTERPLAN

On the basis of the infrastructure assessment completed under Task 1 and the preferred supply configuration identified under Task 2, the PSP shall develop an integrated Masterplan for the bulk water supply and reticulation infrastructure required to serve all WSAs within the MWP footprint. The Masterplan shall:

- Define the full suite of infrastructure projects — both bulk and reticulation — required for implementation by the relevant Water Board, WSAs, or nominated Implementing Agents.
- Present all identified projects in a prioritised, sequenced pipeline linked to the construction and commissioning timeline of the Ntabelanga Dam.
- Define each project by scope, estimated capital cost, implementation responsibility, indicative timeline, and the funding stream for which it qualifies.
- Demonstrate a clear and credible pathway from dam commissioning to full potable water service delivery across all communities within the project footprint.
- Incorporate all existing WSA planning, designs and investigations as the confirmed baseline.
- Address the greenfields-to-brownfields integration of existing municipal schemes with the Ntabelanga Bulk Distribution System.
- Assist the three district municipalities in aligning their local planning and WSDPs with the MWP programme and Masterplan recommendations.

Deliverable: Mzimvubu Integrated Water Services Masterplan; Prioritised Project Pipeline.

3.4 TASK 4: FUNDABLE IMPLEMENTATION PROGRAMME FOR THE PRIORITISED PIPELINE OF PROJECTS

The PSP shall align the prioritised project pipeline developed under Task 3 to available funding streams, including the Municipal Infrastructure Grant (MIG), Regional Bulk Infrastructure Grant (RBIG), Water Services Infrastructure Grant (WSIG), Budget Facility for Infrastructure (BFI), and internal revenue sources of the relevant WSAs and DWS. This process shall:

- Produce a fully funded project pipeline in which each project is matched to a confirmed or credible funding source.
- Develop a phased implementation plan that aligns capital requirements to anticipated funding allocations over the applicable Medium-Term Expenditure Framework (MTEF) cycles.
- Facilitate direct incorporation of the funded pipeline into the WSDPs of the respective WSAs, consistent with the requirement that DWS grant funding approvals be based exclusively on projects reflected in approved WSDPs.
- Identify the appropriate Implementing Agent (IA) for each project and the level of planning and documentation required to support funding applications under the relevant funding streams.
- Provide recommendations regarding implementation actions, including assistance with funding applications and support documentation.

Deliverable: Funded Project Pipeline; Phased Implementation Plan; Funding Alignment Matrix.

3.5 TASK 5: COST AND AFFORDABILITY REPORT AND FUNDING MODEL

The PSP shall develop the financial models necessary to demonstrate the affordability, fiscal sustainability and value proposition of the reconfigured MWP. This shall include:

- A Consolidated Full-Cost and Affordability Report covering capital, operating, maintenance and financing costs across all project stages over the full lifecycle of the scheme, suitable for presentation to the MTEC and National Treasury.
- A revised multi-year funding model for all project stages, incorporating confirmed sources for RBIG, MIG, WSIG, Augmentation Fund, BFI and potential bridge financing.
- A revised BFI application package or Treasury-equivalent funding motivation for Stages 2 and 3, incorporating updated cost estimates, cash flow projections, and the outcomes of the infrastructure assessment, options analysis and funded pipeline as evidence of WSA readiness and integrated demand.
- Engagement with National Treasury's BFI unit and the Infrastructure Fund to explore and document all viable funding pathways.
- Sensitivity analysis on water tariff scenarios, energy revenue and funding stream assumptions.

Deliverable: Revised BFI Application Package; Multi-Year Funding Model; Consolidated Full-Cost and Affordability Report; Fiscal Risk Register.

3.6 TASK 6: STAKEHOLDER ENGAGEMENT AND INSTITUTIONAL ALIGNMENT

The PSP shall facilitate structured engagement with all relevant WSAs, the relevant Water Board, District Municipalities, DWS and TCTA throughout the study to consolidate planning inputs, validate infrastructure assessments, confirm institutional roles and responsibilities, and progress the conclusion of the required agreements. Specifically:

- Facilitate and conclude Memoranda of Agreement (MoAs) with OR Tambo, Alfred Nzo and Joe Gqabi District Municipalities, Amatola Water, and DALRRD, covering roles, responsibilities, cost-sharing, and implementation timelines.
- Negotiate and conclude off-take agreements (water supply agreements) with each of the three District Municipalities (OR Tambo, Alfred Nzo, Joe Gqabi), specifying committed water volumes, tariff principles and payment obligations. These agreements are a specific requirement of the BFI-1712 technical assessment and are essential to demonstrating committed demand for the Ntabelanga Dam.
- Prepare FOCAC-compliant project documentation in coordination with DIRCO to respond to outstanding Presidency requests and establish a formal FOCAC implementation timeline.
- Develop a Stakeholder Engagement Plan covering all implementing entities, affected communities and national government stakeholders.

Deliverable: Signed MoAs (minimum 4); Off-take Agreements with OR Tambo, Alfred Nzo and Joe Gqabi District Municipalities (minimum 3); FOCAC Project Brief; Stakeholder Engagement Plan.

This information will then be populated into a report, which information will then be captured in the DWS GeoDatabase structure.

3.7 TASK 7: PROJECT MANAGEMENT

This section covers the tasks required to comply with the project management requirements and applies to all the other tasks, i.e. Services. The objectives of the task:

- i) Distribution of information, good communication, and coordination and integration of all activities related to the Services, including presentations to dignitaries, PoE and TCTA visitors.
- ii) Successful administration and management of the Agreement and all the contracts regarding the scope, programme, costs, quality and risks associated with the Project and Services.
- iii) Recruitment and participation of qualified and experienced personnel, e.g. engineers, environmental managers, programmers, scientists, administrators, etc.
- iv) Timeous procurement of goods, equipment and services from consultants.
- v) Fulfilment of any instructions issued by TCTA from time to time.

It should be noted that the Consultant will be required to render comprehensive and full-time Services under project management to ensure successful administration and management of the Services, including other contracts.

The Consultant shall manage and administer all the Services in this Agreement per the FIDIC Conditions of the Client/Consultant Model Services Agreement (White Book) (fourth edition, 2006).

3.7.1 Sub-Task 7.1: Integration Management

The Consultant's Project Manager shall be responsible for the proper performance and management of all Project activities per the Agreement, including processes and control methods to progress, monitor and control the Services, integrated change control, and

completing the Services. The Consultant's Project Manager shall report directly to the TCTA's Project Manager.

The Consultant will be responsible for integrating all disciplines within their team throughout the Services per the Agreement.

The governance structure of the study will mainly consist of the committees discussed in the following sub items:

3.7.1.1 Study Administration Committee (SAC)

The SAC comprise of the TCTA Study Manager, DWS and the PSP Study leader and team. The committee is responsible for the day-to-day administration and management of the study. The SAC meetings are to be held on a six weekly basis, commencing with a Mobilisation Meeting and a meeting at the end of the Inception Phase. SAC meetings will normally be scheduled to coincide with Technical Support Group Meetings described in the following item.

3.7.1.2 Technical Support Group (TSG)

The TSG comprise of the TCTA Study Manager, the PSP Team, DWS Technical Teams and other external technical teams that provide input into the first order detailed assessments and analysis of the strategy. As already mentioned in the item above, the TSG will hold meetings on a six-weekly basis, commencing with a Mobilisation Meeting and a meeting at the end of the Inception Phase. A meeting of this committee will be held just before the Study Steering Committee (SSC) meeting in a form of a Dry Run to that specific SSC meeting.

3.7.1.3 Study Steering Committee (SSC)

The Study Steering Committee (SSC) is a forum for stakeholder consultation and public participation. The SSC, comprising of senior representatives of TCTA, relevant DWS Directorates, the Eastern Cape Provincial Offices, other relevant National and Provincial Government Departments, relevant district and local municipalities, the proto CMA, the all affected municipalities and other interested parties identified during the course of the study, will provide high-level direction and guidance with support of the SAC and TSG. It will monitor the progress with the Study, recommend adjustments to the Study when required and communicate to all stakeholders and the public about the progress with the implementation of the Study findings recommendations.

3.7.2 Sub-Task 7.2: Scope Management

The Consultant shall define, develop a work breakdown structure, monitor, control and ensure that the scope of Services complies with all the requirements of the Project, and keep a detailed record of all the scope changes.

3.7.2.1 Scope Variance Analysis

The Consultant shall continuously review the scope of the Services and bring to the attention of TCTA any discrepancies, errors, omissions or problems, and make recommendations supported by relevant details for remedial action for the approval of TCTA.

3.7.3 Sub-Task 7.3: Time Management

The Consultant shall use a programme to review, monitor and manage the progress of the Services.

3.7.3.1 Programme

The Consultant shall review TCTA's programme (**Appendix 4: Time Schedule for Services**) when bidding and planning for the Services and prepare and submit a comprehensive programme with activities, tasks and dates for approval by TCTA.

3.7.3.2 Updating the Programme

The Consultant shall monitor the programme and update it monthly. Variances must be highlighted, and corrective measures must be proposed in case of delays. If the redevelopment of the programme is required, a revised programme shall be prepared and submitted for approval.

3.7.3.3 Programme Variance Report

In the monthly progress reports, the Consultant shall provide variance reports explaining changes and revisions of the programme.

3.7.4 Sub-Task 7.4: Cost Management

3.7.4.1 Cost Control

The Consultant shall be responsible for preparing, reviewing and monitoring all the costs and approved budgets related to the Services (i.e. Consultant's personnel by task, all the direct reimbursable costs, provisional sums, escalation, etc.). Forecasted cash flows must be prepared, considering the effect of escalation, additional scope and variances, claims and notices thereof, resources, programme etc., every month. All cost reports, statements and accruals are due to TCTA by the 1st day of every month.

The Consultant shall also prepare a comprehensive report on the financial status and the estimated cost of completing the Services and all other contracts. The cost estimate for the Services shall be resource-based and up to the end of the Services. The comprehensive report figures need to be kept live and updated monthly and be viewed by TCTA when requested at any given time. The report must be submitted in August of each year.

The Consultant shall ensure that there is no unauthorised expenditure as per National Treasury instruction note 3 of 2016, i.e. actual costs exceeding the approved budgets, at all times, and advise TCTA in advance of any additional funds required.

The format and structure are to be agreed upon with TCTA.

3.7.4.2 Assistance to TCTA

This task allows TCTA to instruct, or agree to, Additional or Exceptional Services that may be required due to unforeseen and other circumstances such as expanding available

information and data. The extent cannot be reasonably defined on or before the bidding/tender process. A Provisional Sum for these Additional or Exceptional Services is provided in **Appendix 3 of the Agreement**.

The probable Additional and Exceptional Services that may be required include but are not limited to the following (subject to approval by TCTA):

- i) Further or additional surveys, studies, tests or investigations identified by the Consultant or TCTA.
- ii) Lessons learnt workshop, i.e. venue hire and consumables.

3.7.4.3 Cost Estimate and Cashflow

In consultation with TCTA, the Consultant shall prepare and submit a detailed cost estimate and cash flow for the Project considering the requirements below.

- i) Format to be suitable for presenting to financial institutions.
- ii) The cost of the Services per the Agreement.
- iii) Prepared using resource-based costing as far as possible. The Consultant may use rates and prices from similar projects where resource-based costing cannot be used. The use of such rates must be highlighted.
- iv) Cashflow prepared from cost estimates and includes escalation.

3.7.5 Sub-Task 7.5: Quality Management

The Consultant shall prepare a Quality Plan for the Services. The plan should include, among other things, the following and be submitted to TCTA for approval before commencement of any Services:

- i) Management and supervision, administration, monitoring, document control, procurement, engineering, environmental, social and quality assurance per the latest recognised standards (ISO 9001).
- ii) Deal with aspects of contract management, including variation orders and claims to ensure compliance to national and local statutes with particular emphasis on the Public Finance Management Act (Act 1 of 1999) and contract documents.
- iii) The minimum sign-offs on all the reports and documents (all draft and final revisions) must be by the Consultant's project manager, senior engineer(s) of the relevant discipline(s), environmental manager/specialist(s) and health and safety manager/specialist(s). This requirement aims to ensure integration across all disciplines and superior quality management Services.
- iv) Signing or certifying of reports, documents and agreements shall be digital on softcopy files such as Portable Document Format (PDF). In general, signing, initialling or certifying hard copy reports, documents and agreements using wet signatures will not be permitted. To this end, Adobe Acrobat Pro (or similar software, but compatible with Adobe Acrobat) certificate-based electronic/digital signatures must be used. This type of signature shall have the actual signature including labels ("digitally signed by"), identity (name and surname), and date and time stamp.

The Quality Plan shall be audited every six months by an independent auditor, and the report submitted to TCTA. The Consultant must make provision for an independent auditor. TCTA, or its representative, may, on an ad-hoc basis, audit the Consultant's quality management system.

3.7.6 Sub-Task 7.6: Human Resource Management

The Consultant shall provide adequately qualified and competent human resources or personnel such as engineers, environmental managers, a project manager, and other specialists experienced in the general modelling and water resource evaluation services for allocable water quantification and to support integrated water resource planning. Some of the particular skills that would be required are:

- Experience in integrated bulk water supply and water services infrastructure planning and masterplanning.
- Experience in developing water requirement scenarios and multi-sector demand projections for municipalities, Water Services Authorities, industries and irrigators.
- Experience in conducting structured options analyses for bulk water supply configurations, including lifecycle costing.
- Experience in aligning project pipelines to public sector funding streams (MIG, RBIG, WSIG, BFI) and preparing multi-year funded implementation plans.
- Experience in preparing BFI applications or equivalent National Treasury funding submissions.
- Experience in financial modelling for large-scale public sector infrastructure projects, including multi-year financial models, affordability assessments and fiscal risk registers.
- Experience in stakeholder facilitation, inter-governmental engagement, and drafting of Memoranda of Agreement and off-take agreements.
- Ability to interact with and successfully manage multidisciplinary teams.
- Ability to communicate and interact with senior government officials, decision makers and the public.

The Consultant will be required to provide a dedicated full-time Project Manager for the duration of the study. The Consultant's approved Project Manager will be required to compose and manage the entire team to ensure the successful implementation of the Project and execution of all the Services. It should be noted that the Consultant will be required to provide a dedicated full-time project manager that is approved by TCTA as per study leader requirements **Stage 3: Functionality**.

The Consultant's human resources must be presented in an organogram and submitted to TCTA before or soon after the commencement of the Services. All the changes to the organogram must also be submitted to TCTA, i.e. revised organogram. The organisational structure (organogram) must conform to, amongst other things, the following:

- i) The representative details (refer to Clause 14 of the FIDIC Client/Consultant Model Services Agreement).
- ii) An organisational chart that indicates interfaces between the Consultant's team and:
 - its own home office;
 - survey and mapping team;

- draftspersons;
 - sub-consultants and sub-contractors; and
 - the TCTA.
- iii) The organisational and functional relationships between all members of the joint venture or consortium (if relevant).
- iv) The exact manner in which any members of the joint venture or consortium would participate in the Services and contribute to the work, including their respective percent participation numerically stated. The mere fact of a joint venture or consortium will not be considered an adequate response in this respect.
- v) The following data should be submitted for each member entity of the joint venture or consortium and the entity:
- Name and designation of persons who will be authorised to represent the Consultant.
 - Name of entity/company auditor(s).
 - A signed joint venture or consortium agreement.

3.7.7 Sub-Task 7.7: Communication Management

The Consultant shall ensure that there is appropriate and timeous planning, collection, creation, distribution, storage, retrieval, management, control and monitoring of Project information:

- i) between the Consultant and TCTA.
- ii) within the Consultant's organisation(s).

All hardcopy records and documents must be scanned into suitable electronic format and be kept/filed in a fire-resistant facility.

3.7.7.1 Reporting

At pre-determined milestones, the Consultant shall submit two hard copies and one soft copy (original format and pdf) of all deliverables to TCTA. The Consultant shall identify the report milestones in its programme. The preparation of these reports shall be carried out as part of the tasks, and no separate remuneration shall be made to produce such information.

The Consultant shall prepare and present to TCTA, amongst other things, the following reports:

Item	Description
0	Literature Review and Baseline Data Compilation
1	Inception Report (inclusive of Infrastructure Gap Assessment and Water Demand Analysis)
2	Options Analysis Report (inclusive of WTW Upgrade Feasibility Assessment and Updated Cost Estimates)

3	Mzimvubu Integrated Water Services Masterplan (inclusive of Prioritised Project Pipeline)
4	Funded Implementation Programme for the Pipeline of Projects
5	Consolidated Full-Cost and Affordability Report; Multi-Year Funding Model; Revised BFI Application Package
6	Stakeholder Engagement Plan; Signed MoAs (minimum 4); Off-take Agreements (minimum 3); FOCAC Project Brief
7	Quarterly Progress Reports
8	Study Management Committee meeting reports and minutes
9	Technical Support Group meeting reports and minutes
10	Study Steering Committee meeting reports and minutes
11	Stakeholder Engagement Workshop reports
12	Monthly Progress Reports
13	Final Consolidated Integrated Water Services Masterplan and Implementation Readiness Report

3.5.7.1.1 Monthly Progress Reports

The Consultant shall provide monthly progress reports summarising the status, risks, and progress during the month on a quantitative and cost basis (including variation orders, issues/disputes, and claims) with appropriate graphical presentations. Progress shall be compared with the programmes and provide updates in the report. Reasons shall be given for any discrepancies, anomalies and delays. Furthermore, recommendations on the proposed remedial measures and action must be included.

In addition to the above, the Consultant shall monitor and report accurately on the skills development obligations throughout the Project.

The Consultant shall submit monthly progress reports to TCTA on the 1st day of each month, followed by a monthly progress meeting with TCTA. Reports on unusual occurrences should be submitted promptly to appropriate higher levels of management/supervision personnel or TCTA.

3.7.7.2 Meetings

The Consultant shall arrange and attend regular and ad-hoc meetings as requested by TCTA or the Consultant (see table below) to ensure good communication. Per the table below, these meetings may be in-person (TCTA offices in Centurion and at construction sites in KZN) or virtual (audio-visual telecommunication).

Meeting	Frequency	Responsibility for Minutes/Notes	Chairperson
Project Committee	Monthly	TCTA	TCTA
Management Meetings	Quarterly or as required	Consultant	TCTA

Meeting	Frequency	Responsibility for Minutes/Notes	Chairperson
SAC	Six weekly	Consultant	Consultant
TSG	Six weekly	Consultant	TCTA
SSC	Quarterly or as required	Consultant	TCTA
Note * The meetings are for coordination and to ensure integration of requirements and the scope of work in this Agreement.			

The Consultant shall prepare minutes or notes of the relevant meetings and distribute them within seven (7) calendar days from the meeting date.

3.7.8 Sub-Task 7.8: Risk Management

In consultation with TCTA, the Consultant shall develop (i.e. identify/determine, analyse and control), maintain and continuously update a risk register for the Services and implementation of the Project. The risk register must also include a list or log of assumptions. The updated or revised register for the Services must be included in the monthly progress report.

The format and structure are to be agreed upon with TCTA.

3.8 TASK 8: SKILLS DEVELOPMENT AS PER CIDB B.U.I.L.D PROGRAMME

3.8.1 Training and Skills Development: South African Black People

The Consultant shall achieve in the performance of this Agreement, the Contract Skills Development Goal (CSDG) established in the CIDB standard for developing skills through infrastructure contracts. As such, the Consultant's skills development shall be in accordance with the Government Gazette No. 48491 of 28 April 2023: CIDB Standard for Developing Skills through Infrastructure Contracts (31 March 2023) and comply with the set requirements and contract skills development goals. The Consultant shall achieve the credits towards CSDG by using the one or a combination of methods 3 and 4 in the CIDB standard above.

The Consultant must develop and submit to TCTA a detailed and comprehensive training baseline plan(s) to develop the skills of South African people, which must be implemented for the period of this Agreement. The plan(s) must cover the entire duration of the Project and prioritise skills development of South African black people.

3.8.2 Non-Conformance Penalties

The penalty (low performance damages) for Skills Development will be calculated as follows:
 Penalty amount = (Contracted Target hours - Actual hours) ÷ 150".

3.8.3 Monitoring and Reporting

In addition to the above, the Consultant shall comply with the requirements under sections 4 (Compliance with Requirements) and 5 (Records) of **Government Gazette No. 48491 of 28 April 2023: CIDB Standard for Developing Skills through Infrastructure Contracts (31 March 2023)**. All the training baseline plans and reports shall be submitted to TCTA for review

and acceptance. The Consultant shall incorporate all the queries and comments by TCTA, before submitting the plans and reports to CIDB.

The Consultant must use the relevant CIDB forms for compliance reports and training baseline plans, which are available on the CIDB website. Forms not available on CIDB website will be made available by TCTA per the Consultant's or bidder's request.

3.8.4 Non-Conformance Penalties

The Consultant will be penalised if he/she fails to achieve the specified skills development targets for each category/sub-task at the Services' completion date. The penalty amounts shall be calculated based on the individual category per sub-task spent and their respective targets.

The penalty for **Training and Skills Development: South African Black People** will be R450,000.00 for each person not registered as a professional.

3.8.5 Monitoring and Reporting

For interim monitoring, the Consultant shall submit to TCTA, on the 1st day of each month, throughout the Agreement, a progress report on the implementation of skills development programmes and targets stipulated above. The format and structure of the progress report shall be agreed upon with TCTA. The Consultant shall sign the progress report and ensure that the information is accurate and correct. The progress report shall also include the participation of South African black people (including female, youth and persons with disabilities) – the number and percent of person-months thereof in the following categories: specialist; MANCO; internal review panel; environmental; engineering (natural and social) and project management.

Within 60 days after the completion of the Services, an audited statement verifying that agreed targets for each skills development programme and category have been met shall be submitted to TCTA. During the execution of the Agreement, the same shall also be audited annually and submitted to TCTA, including the participation of South African black people.

The auditing shall be carried out by an independent external auditor appointed and paid by the Consultant. However, TCTA reserves the right to appoint an independent external auditor at the Consultant's cost should the Consultant fail to appoint an independent external auditor in time or if TCTA is not satisfied with the independent external auditor's qualifications or independence. The terms of reference for the independent external auditor shall be agreed upon with TCTA before the appointment.

The derived data will be the figures by which final penalties, if any, will be calculated after the Services.

The prospective bidders must submit a methodology related to the descriptive notes below:

3.8.6 Measurement and Payment

The costs for complying with the Consultant's obligations regarding implementing and managing all the skills development requirements shall be allowed in the Consultant's bid submission, i.e. price returnable and **Appendix 3: Remuneration and Payment**. The Consultant shall also include the costs for a dedicated part-time skills development manager to manage this aspect and ensure compliance with and enforcement of the specified requirements.