MINISTRY OF WATER, SANITATION AND IRRIGATION (MWSI)

ATHI WATER WORKS DEVELOPMENT AGENCY(AWWDA)

In partnership with

DANIDA SUSTAINABLE INFRASTRUCTURE FINANCE

PREQUALIFICATION DOCUMENT

for

Procurement of

CONSTRUCTION WORKS FOR THIKA AND GITHUNGURI WATER AND SANITATION PROJECT

IPC no.: AWWDA/DSIF/TGWSP/W/01/2025

Project: THIKA AND GITHUNGURI WATER AND SANITATION PROJECT

Employer: ATHI WATER WORKS DEVELOPMENT AGENCY

Country: KENYA

Issued on: 25th March 2025

PREQUALIFICATION DOCUMENT

for

Procurement of

Construction Works for Thika and Githunguri Water and Sanitation Project

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Issued on: 25th March 2025

Invitation for Prequalification

IPC no.: AWWDA/DSIF/TGWSP/W/01/2025

Project: THIKA AND GITHUNGURI WATER AND SANITATION PROJECT

Employer: ATHI WATER WORKS DEVELOPMENT AGENCY

Country: KENYA

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SPECIFIC PROCUREMENT NOTICE

INVITATION TO PREQUALIFICATION

Date: 25th March 2025

THIKA AND GITHUNGURI WATER AND SANITATION PROJECT

Prequalification No: AWWDA/DSIF/TGWSP/W/01/2025

The Government of Kenya has received Financing from the Danida Sustainable Infrastructure Finance towards the cost of Thika and Githunguri Water and Sanitation Project.

The Employer, Athi Water Development Works Agency, intends to prequalify firms for The Thika and Githunguri Water and Sanitation Project.

Athi Water Development Works Agency, therefore, invites sealed Expressions of Interest ("Applications") from interested Danish and/or Danish-Led Joint Venture firms for the prequalification of works and supply of goods under the contract for Thika and Githunguri Water and Sanitation Project.

Prequalification will be conducted through the procedures as specified in the DSIF's Rules for Procurement dated June 2019 ("Procurement Regulations"), published at https://www.ifu.dk/wp-content/uploads/2020/01/DSIF-Rules-for-Procurement-FINAL-June-2019.pdf , and is open to all eligible Applicants as defined in the Procurement Regulations.

Interested parties may obtain further information from the appended Invitation to Prequalification and inspect the Prequalification documents at the address below:

Applications must be delivered to the above office on or before **12:00 pm East African Time on 3rd June 2025.**

Bids will be opened in the presence of bidders' representatives who choose to attend at **12:00 pm East African Time on 3rd June 2025** at the offices of Athi Water Works Development Agency indicated above.

Electronic Tenders **WILL NOT** be permitted.

Chief Executive Officer,
Athi Water Works Development Agency,
Athi Water Plaza, Muthaiga North Road, Off Kiambu Road
P.O. BOX 45283-00100, Nairobi, Kenya.
Tel: 254-715 688272;
Email: info@awwda.go.ke**,**

Invitation to Prequalification

Country	**Republic of Kenya**
Name of Project	**Thika and Githunguri Water and Sanitation Project**
Contract Title	**Thika and Githunguri Water and Sanitation Project**
Prequalification Reference No.	**AWWDA/DSIF/TGWSP/W/01/2025**

The Government of Kenya has received financing from Danida Sustainable Infrastructure Finance (DSIF) toward the cost of Thika and Githunguri Water and Sanitation Project, and intends to apply part of the proceeds toward payments under the contract for Thika and Githunguri Water and Sanitation project and Procurement process will be under DSIF's Procurement Guidelines.

Athi Water Development Works Agency (AWWDA) intends to prequalify firms from interested Danish and/or Danish-Led Joint Venture firms for the prequalification of works and supply of goods under the contract for Thika and Githunguri Water and Sanitation Project comprising of:

Thika Infrastructure works:

i) Construction 40 m High, 14.6 million cubic meters capacity Thika3A Dam (zoned Earth Dam) with, including bridge and road relocation, raw water abstraction structure and outlet structure, spillway and Hydroelectric power generation facility of capacity of 400KW.
ii) Construction of raw water pipeline, approximately 8.2 km in length DN1000 gravity main, from Thika 3A Dam to WTP.
iii) Construction of a 70,000 m³/day drinking Water Treatment Plant (WTP),
iv) Rehabilitation of existing Water Treatment Plant, 36,000 m³/day, including upgrading filtration systems and pump stations.
v) Construction of water Transmission Mains, approximately 25 km in length DN600-OD400, ferrous and HDPE pipes.
vi) Construction of treated water primary and secondary distribution pipelines, approximately 73.4 km in length and diameters ranging from DN100-OD600, ferrous and HDPE pipes.
vii) Customer water connections – 20,000 new water connections, with DN25-DN50 associated HDPE pipes, approximately 300km.
viii) Construction of 3No Ground Level Reinforced Concrete Tanks (1No. 15,000 m³,2No 5,000 m³) 2No Elevated Steel Tanks (500 m³ each).
ix) Construction of 36 km of new sewers in Thika area (OD200-1000mm diameter DWC pipes)
x) Connection of 6,785 new last Mile Connections to Sewers with associated pipeline length approximately 40.71 km.
xi) Construction of wastewater treatment plant with a capacity of 14,000 m³/day in Thika
xii) Supply of Goods; Spare parts and O&M Equipment as per schedules and specifications.
xiii) Establishment and Installation of Meters for the of District Meter Areas (DMAs) within the water supply zones of Thika Town.

Githunguri infrastructure works:

i) Construction of 6.5m high Ruiru Intake to produce 6,500 m³/day
ii) Construction of approximately 6.05km, DN350 Raw Water Pipeline from Ruiru Intake to the WTP.
iii) Construction of approximately 4.15km OD160mm Raw Water Pipeline from Mukuyu Intake to WTP
iv) Construction of a 7,620 m³/day, Water Treatment Plant (WTP),
v) Construction of a 3000m³ capacity ground level Reinforced Concrete storage tank.
vi) Construction of approximately 95 km of treated water transmission and distribution water network (OD32-90mm diameter, HDPE)

vii) Construction of 4000 last mile water connections with OD25-OD50mm associated HDPE pipes, approximately 80km.
viii) Construction of 6No elevated steel tanks, combined capacity of approximately 500 m^3,
ix) Construction of a Wastewater treatment plant, 4,231 m^3/day capacity,
x) Construction of 3,496 last mile sewer connections, with associated pipeline length approximately 20.98 km.
xi) Approximately 25.73 km of new sewer networks (OD200-500mm diameter DWC pipes)
xii) Supply of Goods; Spare parts and O&M Equipment as per schedules and specifications
xiii) Establishment and Installation of Meters for the District Meter Areas (DMAs) within the water supply zones of Githunguri Town.

Miscellaneous works, supply of goods and technical assistance

i) Non-revenue water management equipment
ii) Provision of vehicles typical for a water service provider
iii) Provision of software's
iv) Water and five wastewater analyses laboratories
v) One office building at Githunguri
vi) Operation and maintenance training and other trainings

It is expected that the Request for Bids will be made in ***August 2025.***

Prequalification will be conducted through the procedures as specified in the DSIF's Rules for Procurement dated June 2019 ("Procurement Regulations"), published at https://www.ifu.dk/wp-content/uploads/2020/01/DSIF-Rules-for-Procurement-FINAL-June-2019.pdf , and is open to all eligible Applicants as defined in the Procurement Regulations.

Interested eligible Applicants may obtain further information from the AWWDA at the address below during their office hours 0800 to 1700.

A complete set of the prequalification documents in **English language** may be purchased by interested Applicants on the submission of a written application to the address below and upon payment of a nonrefundable fee of ***Kshs. 1,000 (Kenya Shilling One Thousand Only)***. The method of payment will be **cash payment or bank transfer**. The Bidding Documents will be collected from the address given below upon production of a purchase receipt.

Documents can also be downloaded from the AWWDA website: www.awwda.go.ke, PPIP Portal www.tenders.go.ke, for free. Bidders who download the bidding document from the website MUST forward their particulars immediately to procurement@awwda.go.ke, for records and any further clarifications and addenda.

Applications for prequalification should be submitted in sealed envelopes, delivered to the address below by **12:00 pm East African Time on 3rd June 2025** and be clearly marked "**Application to Prequalify for Thika and Githunguri Water and Sanitation Project. IPC No.: AWWDA/DSIF/TGWSP/W/01/2025"**

Electronic applications are not permitted. Late applications may be rejected. Applications will be opened in the presence of Bidders' representatives who choose to attend **at 12:05 pm East African Time 12:00 pm East African Time on 3rd June 2025** at the address given below:

The Chief Executive Officer
Athi Water Works Development Agency (AWWDA)
Athi Water Plaza, Muthaiga North Road, Off Kiambu Road
P.O. Box 45283 - 00100, Nairobi, Kenya
Telephone: +254 20 2724292/3
Email: info@awwda.go.ke; website: www.awwda.go.ke

PART 1 – PREQUALIFICATION PROCEDURES

Section I - Instructions to Applicants (ITA)

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SECTION I – INSTRUCTIONS TO APPLICANTS

A. General

1. Scope of Application

1.1. In connection with the invitation for Prequalification indicated in Section II (Prequalification Data Sheet) (PDS), the Employer, as defined in the PDS, issues this Prequalification Document (“Prequalification Document”) to prospective applicants (“Applicants”) interested in submitting applications (“Applications”) for prequalification to bid for the Works described in Section VII (Scope of Works). In case the works are to be bid as individual contracts (i.e. the slice and package procedure), these are listed in the PDS. The International Procurement Competition ("IPC") number corresponding to this prequalification is also provided in the PDS.

2. Source of Funds

2.1 The Employer indicated in the PDS has applied for or received financing (hereinafter called "funds") from Danida Sustainable Infrastructure Finance (DSIF) (hereinafter called "DSIF") towards the project named in the PDS. The Employer intends to apply a portion of the funds to eligible payments under the contract(s) resulting from the bidding for which this prequalification is conducted.

3. Fraud and Corruption

3.1 Danida upholds zero tolerance towards corrupt, facilitating, fraudulent, collusive and coercive practises and requires the same from Employers, as well as Tenderers, Contractors, Sub-Contractors, and Consultants under contracts supported by DSIF. In pursuXXit of this policy DSIF:

3.1.1 defines, for the purposes of this provision, the terms set forth below as follows:

i. "corrupt practices” means the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence the action of a public official in the procurement process or in contract execution,

ii. "facilitating practices" is a form of corruption offering payments in order to expedite or facilitate the performance by a public official of a routine governmental action and not to obtain or retain business or any other improper advantage.

iii. "fraudulent practices" means a misrepresentation or omission of facts in order to influence a procurement process or the execution of a contract,

iv. "collusive practices" means a scheme or arrangement between two or more tenderers, with or without the knowledge of the Employer, designed to establish tender prices at artificial, non-competitive levels,

v. "coercive practices" means harming or threatening to harm, directly or indirectly, persons, or their property to influence their participation in a procurement process, or affect the execution of a contract.

3.1.2 will reject a proposal for award if it determines that the preferred Tenderer, directly or through an agent, engaged in corrupt, facilitating, fraudulent, collusive or coercive practices in competing for the Contract in question,

3.1.3 will cancel the support for the project if it determines at any time that representatives of the Employer engaged in corrupt, facilitating, fraudulent, collusive or coercive practices during the procurement or the execution of that contract, without the Employer having taken timely and appropriate action satisfactory to the Danida to remedy the situation,

3.1.4 will sanction a firm or individual, including declaring them ineligible, either indefinitely or for a stated period of time, to be awarded contracts supported by DSIF, if it at any time determines that they have, directly or through an agent, engaged in corrupt, facilitating, fraudulent, collusive or coercive practices in competing for, or in executing, a contract supported by DSIF.

3.2 DSIF requires compliance with the Ministry of Foreign Affairs of Denmark Anti-Corruption Policy as set forth at:

https://um.dk/en/-/media/websites/umen/danida/about-danida/danida-transparency/anti-corruption-policy-english-version-2018.ashx

3.3 In further pursuance of this policy, Applicants shall permit and shall cause their agents (where declared or not), subcontractors, subconsultants, service providers, suppliers, and personnel, to permit the DSIF to inspect all accounts, records and other documents relating to any initial selection process, prequalification process, bid submission (in case prequalified), proposal submission, and contract performance (in the case of award), and to have them audited by auditors appointed by DSIF.

3.4 The Employer as indicated in the PDS may, if it determines applicants/tenderers engaged in corrupt, facilitating, fraudulent, collusive or coercive practices during the tender process, exclude such applicants/ tenderers from participating, or cancel the tender or contract as appropriate, and take such additional actions (civil and/or criminal) as the Employer finds appropriate.

4. Eligible Applicants

4.1 Participation in the prequalification and tender process is open to Danish single contractors and Danish-led joint ventures only.

4.1.1 Danish single contractor

The Danish single contractor shall have a substantial turnover in Denmark and proof thereof shall be provided in the form of annual audited accounts for the past five years. Verification may be required by DSIF.

4.1.2 Danish-led Joint Ventures

A Danish led joint venture (JV) may be formed between minimum two entities called Partners - one Leader and one Member) with no limitation on the maximum number of Members.

4.1.2.1 The Leader shall:

a) Lead the JV during the pre-qualification and tender periods and, in the event of a successful tender, during contract execution.

b) be responsible (together with its sub-contractors) for undertaking minimum 60 % of the Contract Value. Proof hereof shall appear in a letter of intention to form a joint venture to be signed by all joint venture members and included in the prequalification application.

4.1.2.2 All

(a) Members shall not be subject to any nationality requirements.

(b) Partners shall authorise the Leader to incur liabilities and receive instructions for and on behalf of any and all members of the joint venture, this authorization shall be evidenced by submitting a power of attorney signed by legally authorised signatories of all the members.

4.1.2.3 The JV Members shall

a/ Be legally liable, jointly and severally, during the tender process and for the execution of the contract in accordance with the contract terms, and a statement to this effect shall be included in the authorisation mentioned under ITA 4.1.2.2 b. above.

b/ Not tender individually or as a member in any other joint venture or association.

c/ Satisfy the criteria of laid out within Section III - Qualification Criteria and Requirements collectively or individually as the case may be. For this purpose:

Each JV Member may be added together to meet the following qualifying criteria

3.2 Average Annual Construction Turnover
3.4 Available liquidities
4.2 Specific design and construction experience
5.2 Specific personnel requirements, specialist positions
6. Equipment
7.2 ESHS Specific Experience

and

Each JV member must satisfy the following criteria individually:

1.2 Conflict of interest
2. Historical contract non-performance
3.1 Historical Financial Performance
5.1 General personnel requirements

and in addition to the above

The Leader of the JV must satisfy the following criteria individually:

1.1 Danish nationality
3.3 Danish average annual Construction Turnover
4.1 General Construction experience
4.2 Specific design and construction experience – only selected sub-criteria
5.2 Specific personnel requirements – specialist positions – only selected sub-criteria
7.1 Certifications

4.1.2.4 A Letter of Intent to execute a joint venture-agreement in the event of a successful tender shall be signed by all members and submitted with the Application.

4.2 The Danish company or Danish-led joint venture, i.e. the Applicant may subcontract parts of the works subject to ITA 24.

4.3 A firm may participate as a subcontractor in more than one Application, but only in that capacity. Applications submitted in violation of this procedure will be rejected.

4.4 Applicants shall not have a conflict of interest. Any Applicant found to have a conflict of interest shall be disqualified. An Applicant may be considered to have a conflict of interest for the purpose of this prequalification process, if the Applicant:

4.4.1 Directly or indirectly controls, is controlled by or is under common control with another Applicant; or

4.4.2 Receives or has received any direct or indirect subsidy from another Applicant; or

4.4.3 Has the same legal representative as another Applicant; or

4.4.4 Has a relationship with another Applicant, directly or through common third parties, that puts it in a position to influence the application of another Applicant, or influence the decisions of the Employer regarding this prequalification process; or

4.4.5 Any of its affiliates participated as a consultant in the preparation of the design or technical specifications of the works that are the subject of the prequalification; or

4.4.6 Any of its affiliates has been hired (or is proposed to be hired) by the Employer as Engineer for the Contract implementation; or

4.4.7 Has a close business or family relationship with a professional staff of the Employer (or of the project implementing agency, or of a recipient of a part of the loan) who:

4.4.7.1 (i) are directly or indirectly involved in the preparation of the prequalification documents or specifications of the contract, and/or the prequalification evaluation process; or

4.4.7.2 (ii) would be involved in the implementation or supervision of such contract unless the conflict stemming from such relationship has been resolved in a manner acceptable to DSIF throughout the procurement process and execution of the contract.

4.5 An Applicant shall not be under suspension from bidding by the Employer as the result of the execution of a Bid-Securing Declaration.

4.6 An Applicant shall provide such evidence of eligibility satisfactory to the Employer, as the Employer shall reasonably request.

4.7 Applicants may be ineligible if they are nationals of ineligible countries as indicated in 4.1. The countries, persons or entities are ineligible if (a) as a matter of law or official regulations, the Borrower's country prohibits commercial relations with that country, provided that the Bank is satisfied that such exclusion does not preclude effective competition for the supply of goods or the contracting of works or services required; or (b) by an act of compliance with a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations, the Borrower's country prohibits any import of goods or contracting of

works or services from that country, or any payments to any country, person, or entity in that country

5.	**Eligible Materials, Equipment, and Services**	5.1	The materials, equipment and services to be supplied under the Contract may have their origin in any country subject to the restrictions specified in 4.7. Eligibility Criteria, and all expenditures under the Contract will not contravene such restrictions.

B. Contents of the Prequalification Document

6.	**Sections of Prequalification Document**	6.1	This Prequalification Document consists of Parts 1 and 2 which comprise all the sections indicated below, and which should be read in conjunction with any Addendum issued in accordance with ITA 8.

PART 1 Prequalification Procedures

- Section I – Instructions to Applicants (ITA)
- Section II – Prequalification Data Sheet (PDS)
- Section III – Qualification Criteria and Requirements
- Section IV – Application Forms
- Section V – Important Information
- Section VI – Anti Corruption and Procurement Guidelines

PART 2 Works Requirements

- Section VII – Scope of Works
- Section VIII – Construction Period
- Section IX – Site Data
- Section X – Other data

6.2 Unless obtained directly from the Employer, the Employer accepts no responsibility for the completeness of the document, responses to requests for clarification, the minutes of the pre-Application meeting (if any), or Addenda to the Prequalification Document in accordance with ITA 8. In case of any discrepancies, documents issued directly by the Employer shall prevail.

6.3 The Applicant is expected to examine all instructions, forms, and terms in the Prequalification Document and to furnish with its Application all information or documentation as is required by the Prequalification Document.

7.	**Clarification of Prequalification Document and Pre-Application Meeting**	7.1	An Applicant requiring any clarification of the Prequalification Document shall contact the Employer in writing at the Employer's address indicated in the PDS. The Employer will respond in writing to any request for clarification provided that such request is received no later than fourteen (14) days prior to the deadline for submission of the applications. The Employer shall forward a copy of its response to all prospective Applicants who have obtained the Prequalification Document directly from the Employer, including a description of the inquiry but without identifying its source. If so indicated in the PDS, the Employer shall also promptly publish its response at the web page identified in the PDS. Should the Employer deem it necessary to amend the Prequalification Document as a result of a clarification, it shall do so following the procedure under ITA 8 and in accordance with the provisions of ITA 17.2
8.	**Amendment of Prequalification Document**	8.1	At any time prior to the deadline for submission of Applications, the Employer may amend the Prequalification Document by issuing an Addendum.
		8.2	Any Addendum issued shall be part of the Prequalification Document and shall be communicated in writing to all Applicants who have obtained the Prequalification Document from the Employer. The Employer shall promptly publish the Addendum at the Employer's web page identified in the PDS.
		8.3	To give Applicants reasonable time to take an Addendum into account in preparing their Applications, the Employer may, at its discretion, extend the deadline for the submission of Applications in accordance with ITA 17.2.

C. Preparation of Applications

9.	**Cost of Applications**	9.1	The Applicant shall bear all costs associated with the preparation and submission of its Application. The Employer will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the prequalification process.
10.	**Language of Application**	10.1	The Application as well as all correspondence and documents relating to the prequalification exchanged by the Applicant and the Employer, shall be written in the language specified in the PDS. Supporting documents and printed literature that are part of the Application may be in another language, provided they are accompanied by an accurate translation of the relevant passages in the language specified in the PDS, in which case, for purposes of interpretation of the Application, the translation shall govern

11. Documents Comprising the Application

11.1 The Application shall comprise the following and any other document required as specified in the PDS:

11.1.1 The Application Submission Form, indicating the Applicant's name, address, telephone, fax and email. If the Applicant is an association, the Application Submission Letter shall also describe the form of association and list the association members;

11.1.2 A Power of Attorney authorizing the representative of the Applicant, designated to submit the Application on behalf of the Applicant. If the Applicant is a JV, the Power of Attorney shall be provided by the Lead Member nominated in the JV Agreement / Declarations of Association, Power of Attorney issued in accordance with ITA 4.1.2.2.

11.1.3 Presentation of the Applicant relevant to the Scope of Works listed in Part 2 of this document. The Applicant will also include the type of entity, ownership structure and organization chart. Maximum 10 pages with no brochures.

11.1.4 All Application forms and required attachments, provided in Section IV, Application Forms. If the Applicant is a single entity, in accordance with ITA 4.1, it should not include form ELI 1.2 in its Application.

11.2 The Applicant shall furnish information on commissions and gratuities, if any, paid or to be paid to agents or any other party relating to this Application

12. Application Submission Form

12.1 The Applicant shall complete an Application Submission Form as provided in Section IV (Application Forms). This Letter must be completed without any alteration to its format.

13. Documents Establishing the Eligibility of the Applicant

13.1 To establish its eligibility in accordance with ITA 4, the Applicant shall complete the eligibility declarations in the Application Submission Letter and Forms ELI (eligibility) included in Section IV (Application Forms).

14. Documents Establishing the Qualifications of the Applicant

14.1 To establish its qualifications to perform the contract(s) in accordance with Section III, Qualification Criteria and Requirements, the Applicant shall provide the information requested in the corresponding Information Sheets included in Section IV (Application Forms).

15. Signing of the Application and Number of Copies

15.1 The Applicant shall prepare one original of the documents comprising the Application as described in ITA 11 and clearly mark it "ORIGINAL". The original of the Application shall be typed

or written in indelible ink and shall be signed by a person duly authorized to sign on behalf of the Applicant.

In case the Applicant is a JV, the Application shall be signed by an authorized representative of the JV on behalf of the JV and so as to be legally binding on all the members as evidenced by a power of attorney signed by their legally authorized signatories. If a JV has not been formalized and a letter of intent to form a JV is presented, then the Application shall be signed by every member of the intended JV.

15.2 The Applicant shall submit copies of the signed original Application, in the number specified in the PDS, and clearly mark them "COPY". In the event of any discrepancy between the original and the copies, the original shall prevail.

D. Submission of Applications

16. Sealing and Marking of Applications

16.1 The Applicant shall enclose the original and the copies of the Application in a sealed envelope that shall:

(a) bear the name and address of the Applicant;

(b) be addressed to the Employer, in accordance with ITA 17.1; and

(c) bear the specific identification of this prequalification process indicated in the PDS 1.1.

16.2 The Employer will accept no responsibility for not processing any envelope that was not identified as required in ITA 16.1 above.

17. Deadline for Submission of Applications

17.1 Applicants may either submit their Applications by mail or by hand. Applications shall be received by the Employer at the address and no later than the deadline indicated in the PDS. When so specified in the PDS, Applicants have the option of submitting their Applications electronically, in accordance with electronic Application submission procedures specified in the PDS.

17.2 The Employer may, at its discretion, extend the deadline for the submission of Applications by amending the Prequalification Document in accordance with ITA 8, in which case all rights and obligations of the Employer and the Applicants subject to the previous deadline shall thereafter be subject to the deadline as extended.

18.	**Late Applications**	18.1	The Employer reserves the right to accept applications received after the deadline for submission of applications, unless otherwise specified in the PDS.
19.	**Opening of Applications**	19.1	The Employer shall open all Applications at the date, time and place specified in the PDS. Late Applications shall be treated in accordance with ITA 18.1. Applications submitted electronically (if permitted pursuant to ITA 17.1) shall be opened in accordance with the procedures specified in the PDS. The Employer shall prepare a record of the opening of Applications to include, as a minimum, the name of the Applicants. A copy of the record shall be distributed to all Applicants.

E. Procedures for Evaluation of Applications

20.	**Confidentiality**	20.1	Information relating to the Applications, their evaluation and results of the prequalification shall not be disclosed to Applicants or any other persons not officially concerned with the prequalification process until the notification of prequalification results is made to all Applicants in accordance with ITA 28.
		20.2	From the deadline for submission of Applications to the time of notification of the results of the prequalification in accordance with ITA 28, any Applicant that wishes to contact the Employer on any matter related to the prequalification process may do so only in writing.
21.	**Clarification of Applications**	21.1	To assist in the evaluation of Applications, the Employer may, at its discretion, ask an Applicant for a clarification (including missing documents) of its Application, to be submitted within a stated reasonable period of time. Any request for clarification from the Employer and all clarifications from the Applicant shall be in writing.
		21.2	If an Applicant does not provide clarifications and/or documents requested by the date and time set in the Employer's request for clarification, its Application shall be evaluated based on the information and documents available at the time of evaluation of the Application.
22.	**Responsiveness of Applications**	22.1	The Employer may reject any Application which is not responsive to the requirements of the Prequalification Document.
23.	**Domestic Applicant Margin of Preference**	23.1	Unless otherwise specified in the PDS, a margin of preference for domestic Applicants shall not apply in the bidding process resulting from this prequalification.
24	**Subcontractors**	24.1	Percentage Subcontracted:

The Applicant shall not propose to subcontract the whole of the Works.

The Applicant shall declare their intention to subcontract more than 30% of the value of the contract in the application for prequalification together with a tentative list of the elements in question.

24.2 Nominated Subcontractors

At this time, the Employer does not intend to execute certain specific parts of the Works by subcontractors selected in advance by the Employer (Nominated Subcontractors) unless otherwise stated in the PDS.

24.3 Specialist Subcontractors

If an applicant intends to subcontract any highly specialized elements of the Works to specialist subcontractors, such elements and the proposed subcontractors shall be clearly identified.

Applicants shall specify, in the Application Submission Letter, the activity(ies) or parts of the Works proposed to be subcontracted along with details of the proposed subcontractors including their qualification and experience. The specialist subcontractors experience shall be considered for evaluation as per the Evaluation and prequalification criteria.

F. Evaluation of Applications and Prequalification of Applicants

25. Evaluation of Applications

25.1 The Employer shall use the factors, methods, criteria, and requirements defined in Section III, Qualification Criteria and Requirements, to evaluate the qualifications of the Applicants, and no other methods, criteria, or requirements shall be used. The Employer reserves the right to waive minor deviations in the qualification criteria if they do not materially affect the capability of an Applicant to perform the contract.

25.2 Subcontractors proposed by the Applicant shall be fully qualified for their parts of the Works. Qualifications of the Specialist Subcontractor proposed by the Applicant may be added to the qualifications of the Applicant for the purpose of the evaluation.

25.3 Only the qualifications of the Applicant shall be considered. The qualifications of other firms, including the Applicant's subsidiaries, parent entities, affiliates, subcontractors (other than Specialized Subcontractors in accordance with ITA 25.2 above)

or any other firm(s) different from the Applicant shall not be considered.

25.4 In case of multiple contracts, the Employer shall prequalify each Applicant for the maximum number and types of contracts for which the Applicant meets the appropriate aggregate requirements of such contracts, as specified in Section III, Qualification Criteria and Requirements.

26. Employer's Right to Accept or Reject Applications

26.1 The Employer reserves the right to accept or reject any Application, and to annul the prequalification process and reject all Applications at any time, without thereby incurring any liability to the Applicants.

27. Prequalification of Applicants

27.1 All Applicants whose Applications substantially meet or exceed the specified qualification requirements will be prequalified by the Employer.

27.2 An Applicant may be "Conditionally prequalified". That is, qualified subject to the applicant submitting or correcting certain specified documents or deficiencies that do not materially affect the ability of the applicant to perform the proposed contract, to the satisfaction of the Employer

27.3 The Employer shall determine the fulfilment of minimum requirements on a pass/fail basis as per Section III, Qualification Criteria and requirements.

27.4 An Applicant shall be considered prequalified if its Application has met the pass/fail requirements in accordance with ITA 27.2

28. Notification of Prequalification

28.1 The Employer shall notify all Applicants in writing of the names of those Applicants who have been prequalified or conditionally prequalified. In addition, those Applicants who have been disqualified will be informed separately.

28.2 Applicants that have not been prequalified may write to the Employer to request, in writing, the grounds on which they were disqualified.

29. Request for Bids

29.1 After the notification of the results of the prequalification, the Employer shall invite Bids from all the Applicants that have been prequalified or conditionally prequalified.

29.2 Bidders may be required to provide a Bid Security or a Bid Securing Declaration acceptable to the Employer in the form and an amount to be specified in the Bidding Documents, and the successful Bidder shall be required to provide a Performance Security to be specified in the Bidding Documents.

29.3 Bidders shall be required to provide a Code of Conduct which will apply to their and sub-contractors' personnel that includes the minimum requirements specified in the bidding document.

30. Changes in Qualifications of Applicants

30.1 Any change in the structure or formation of an Applicant after being prequalified in accordance with ITA 27 and invited to bid (including, in the case of a JV, any change in the structure or formation of any member and also including any change in any specialized subcontractor whose qualifications were considered to prequalify the Applicant) shall be subject to the written approval of the Employer prior to the deadline for submission of Bids. Such approval shall be denied if (i) a prequalified applicant proposes to associate with a disqualified applicant or in case of a disqualified joint venture, any of its members; (ii) as a consequence of the change, the Applicant no longer substantially meets the qualification criteria set forth in Section III (Qualification Criteria and Requirements); or (iii) in the opinion of the Employer, the change may result in a substantial reduction in competition. Any such change should be submitted to the Employer not later than fourteen (14) days after the date of the Request for Bids.

SECTION II – PREQUALIFICATION DATASHEET

A. General

ITA 1.1	The Employer is: ***Chief Executive Officer*** ***Athi Water Works Development Agency*** ***Athi Water Plaza, Muthaiga North Road, off Kiambu Road, Nairobi, Kenya*** ***P.O box 45283-00100*** ***Telephone :+254 202724292/3, Mobile :+254 (0) 715 688 272;*** ***Email Address: info@awwda.go.ke;*** ***Website: https://www.awwda.go.ke/*** The contract is: Contract name: **Thika and Githunguri Water and Sanitation Project** Contract number: **AWWDA/DSIF/TGWSP/W/01/2025**
ITA 2.1	The Financer is Danida Sustainable Infrastructure Finance
ITA 2.1	The name of the Project is: *Thika and Githunguri Water and Sanitation Improvement Project*
ITA 4.1	Maximum number of members in the JV shall be: *Three (3)*

B. Contents of the Prequalification Document

ITA 7.1	For **clarification purposes only,** the Employer's address is: Attention: ***Chief Executive Officer*** ***Athi Water Works Development Agency*** ***Athi Water Plaza, Muthaiga North Road, off Kiambu Road, Nairobi, Kenya*** ***P.O box 45283-00100*** ***Telephone :+254 202724292/3, Mobile :+254 (0) 715 688 272;*** ***Email Address: info@awwda.go.ke;*** ***Website: https://www.awwda.go.ke/***
ITA 7.1 & 8.2	Web page: https://www.awwda.go.ke

C. Preparation of Applications

ITA 10.1	This Prequalification document has been issued in the *English language* All correspondence exchange shall be in the English language. The Application as well as all correspondence shall be submitted in the English language. Language for translation of supporting documents and printed literature is the English language.
ITA 15.2	In addition to the original, the number of copies to be submitted with the Application is: ***Three (3)*** *paper copies (with one clearly marked original)* ***and one (1)*** *digital copy (flash disk)*

D. Submission of Applications

ITA 17.1	**The deadline for Application submission is:** Date: **3rd June 2025** Time: ***12:00 Pm East African Time*** Applicants **Shall not** have the option of submitting their applications electronically. For application submission purposes only , the Employer's address is: *Attention****: Chief Executive officer, Athi Water Works Development Agency*** *Address:* ***Athi Water Plaza, Muthaiga North Road, off Kiambu Road,*** *City:* ***Nairobi,*** *Country:* ***Kenya***
ITA 18.1	Late Applications will be rejected.
ITA 19.1	The opening of the Applications shall be at Date: **3rd June 2025** *Time:* ***12:05 Pm East African Time*** *Place:* ***Athi Water Plaza, Muthaiga North Road, off Kiambu Road, Nairobi, Kenya***

E. Procedures for Evaluation of Applications

ITA 24.3	At this time the Employer does not intend to execute certain specific parts of the works by subcontractors selected in advance (nominated subcontractors).

SECTION III – QUALIFICATION CRITERIA AND REQUIREMENTS

This section contains all the methods, criteria, and requirements that the Employer shall use to evaluate Applications.

Wherever an Applicant is required to state a monetary amount, Applicants should indicate the EUR equivalent using the rate of exchange determined as follows:

- For construction turnover or financial data required for each year - Exchange rate prevailing on the last day of the respective calendar year.
- Value of single contract - Exchange rate prevailing on the date of the contract.

Exchange rates shall be taken from the publicly available rates published by the Central Bank of the Employer's country. Any error in determining the exchange rates in the Application may be corrected by the Employer.

- In chapter 7 of this section the environmental, social, health and safety (ESHS) requirements are defined in accordance with the specific ESHA challenges of the contract.

Contents

Eligibility and Qualification Criteria			Compliance Requirements				Document/ form Submission requirement
No.	Criterion	Requirement	Single Entity	Joint venture (existing or intended)			
				All members combined	Leader/One member	Each of the other members	
1.	**Eligibility**						
1.1	**Nationality**	Nationality in accordance with ITA 4.1	Must meet requirement	N/A	Must meet requirement	N/A	Forms ELI -1.1 and 1.2, with attachments
1.2	**Conflict of interest**	No conflicts of interest in accordance with ITA 4.4	Must meet requirement	Must meet requirement	Must meet requirement	Must meet requirement	Application submission form
1.3	**United Nations resolution or Borrower's country law**	Not having been excluded as a result of prohibition in the Borrower's country laws or official regulations against commercial relations with the Applicant's country, or by an act of compliance with UN Security Council resolution, both in accordance with ITA 4.7	Must meet requirement	Must meet requirement	Must meet requirement	N/A	Forms ELI -1.1 and 1.2, with attachments
2	**Historical contract non-performance**						
2.1	**History of Non-Performing Contracts**	Non-performance of a contract[1] did not occur within the last three (3) years prior to the deadline for application submission based on all information on fully settled disputes or litigation. A fully settled dispute or litigation is one that has been resolved in accordance with the Dispute Resolution Mechanism under the respective contract, and where all	Must meet requirement	Must meet requirement	Must meet requirement	N/A	Form CON - 2

[1] Non performance, as decided by the Employer, shall include all contracts where (a) non performance was not challenged by the contractor, including through referral to the dispute resolution mechanism under the respective contract, and (b) contracts that were so challenged but fully settled against the contractor. Non performance shall not include contracts where Employers decision was overruled by the dispute resolution mechanism. Non performance must be based on all information on fully settled disputes or litigation, i.e. dispute or litigation that has been resolved in accordance with the dispute resolution mechanism under the respective contract and where all appeal instances available to the applicant have been exhausted.

Eligibility and Qualification Criteria			Compliance Requirements				Document/ form Submission requirement
No.	Criterion	Requirement	Single Entity	Joint venture (existing or intended)			
				All members combined	Leader/One member	Each of the other members	
		appeal instances available to the applicant have been exhausted.					
2.2	**Failure to Sign Contract/ Suspension Based on Execution of Bid securing Declaration by the employer**	Not being under execution of a Bid Securing Declaration in accordance with ITA 4.5	Must meet requirement	Must meet requirement	Must meet requirement	N/A	Application Submission form
2.3	**Pending Litigation**	All pending litigation shall in total not represent more than hundred percent (100%) of the Applicant's net worth and shall be treated as resolved against the Applicant.	Must meet requirement	N/A	Must meet requirement	N/A	Form CON - 2
2.4	**Litigation History**	No consistent history of court/arbitral award decisions against the Applicant[2] since 1st January 2020	Must meet requirement	Must meet requirement	Must meet requirement	N/A	Form CON - 2
3.	**Financial situation and capability**						
3.1	**Financial Performance**	(i) The Applicant shall demonstrate that it has access to, or has available, liquid assets, unencumbered real assets, lines of credit, and other financial means (independent of any contractual advance payment) sufficient to meet the	Must meet requirement	Must meet requirement	N/A	N/A	Form FIN - 3.1 withattachments and Fin 3.4 (a) and (b)

[2] The Applicant shall provide accurate information on the related Application Form about any litigation or arbitration resulting from contracts completed or ongoing under its execution over the last five years. A consistent history of awards against the Applicant or any member of a joint venture may result in failure of the application.

Eligibility and Qualification Criteria			Compliance Requirements				Document/ form Submission requirement
No.	Criterion	Requirement	Single Entity	Joint venture (existing or intended)			
				All members combined	Leader/One member	Each of the other members	
		construction cash flow requirements estimated as EUR. 10,000,000 (Euro Ten Million only) for the subject contract(s) net of the Applicants other commitments;			N/A	N/A	
		(ii) The Applicant shall also demonstrate, to the satisfaction of the Employer, that it has adequate sources of finance to meet the cash flow requirements on works currently in progress and for future contract commitments;	Must meet requirement	Must meet requirement	N/A	N/A	Form FIN - 3.1 withattachments and Fin 3.3
		(iii) The audited balance sheets or if not required by the law of the applicant's country, other financial statements acceptable to the Employer, for the last **three (3) years** shall be submitted to demonstrate the current soundness of the Applicants financial position and its prospective long term profitability. The Applicant's financial position will be deemed sound if at least three (3) of the following four (4) criteria are met:	Must meet requirement	Must meet requirement			Form FIN - 3.1 withattachments and Fin 3.3

Eligibility and Qualification Criteria			Compliance Requirements				Document/ form Submission requirement
No.	Criterion	Requirement	Single Entity	Joint venture (existing or intended)			
				All members combined	Leader/One member	Each of the other members	
		a. **Average earnings before interest, taxes, depreciation, and amortization (EBITDA) for the last three (3) years > 20 Million Euros** b. **Total equity (net worth) for the last three (3) years > 0;** c. **Average liquidity ratio for the last three (3) years > 1**((Current assets) / (Current liabilities) > 1); d. **Average indebtedness ratio for the last three (3) years < 6**((Total financial liabilities) / (EBITDA) < 6).					
3.2	**Average Annual Construction Turnover**	Average annual construction turnover of minimum EUR 30,000,000 for a single contractor or joint-venture in the last 5 years.	Must meet requirement	Must meet requirement	N/A	N/A	Form FIN - 3.2
4	**Experience**						
4.1	**General Construction experience**	Experience under construction contracts in the role of main/prime contractor, leader of joint-venture, member of joint-venture or management contractor in civil infrastructure works contracts during the past five years starting 1st January 2020.	Must meet requirement	Must meet requirement	Must meet requirement	N/A	Form EXP-4.1
4.2	**Specific design and construction experience**	Participation in the role of main contractor, leader of joint-venture or sub-contractor in the following similar[3] type of contracts -					Form EXP 4.2

[3] Similarity shall be based on the physical size, complexity and technicity of the works.

Eligibility and Qualification Criteria			Compliance Requirements				Document/ form Submission requirement
No.	Criterion	Requirement	Single Entity	Joint venture (existing or intended)			
				All members combined	Leader/One member	Each of the other members	
		successfully[4] or substantially[5] completed - during the past fifteen (15) years:					
4.2.1	Dam Design and Construction	Design and construction of at least one (1) dam with a height of no less than 35m with an embankment volume of at least 0.8Mm³	Must meet requirement	Must meet requirement	N/A	N/A	
4.2.2	Hydropower	Design and construction of at least one hydropower project with a minimum installed capacity of 400KW	Must meet requirement	Must meet requirement	N/A	N/A	
4.2.3	Water treatment plants	Design and construction of at least one water treatment plant with ≥ 70,000 m³/day capacity, including lamella plate settlers and installation of SCADA systems	Must meet requirement	Must meet requirement	N/A	N/A	
4.2.4	Wastewater treatment plants	Design and construction of at least one wastewater treatment plant with ≥ 20,000 m^3/d Capacity with biological treatment, biogas storage and energy generation.	Must meet requirement	Must meet requirement	N/A	N/A	
4.2.5	Pipelines – water Supply	Experience in the Construction of at least 220 km (HDPE, Ductile Iron, Steel,) in total of water supply networks and transmission mains containing:	Must meet requirement	Must meet requirement	N/A	N/A	

[4] Successfully completed means Taking Over Certificate for the Works – not to be provided during prequalification stage – but auditable if required.
[5] Substantially completed means Taking Over Certificates for parts of the Works amounting to more than 80% of the Works – not to be provided during prequalification stage – but auditable if required.

Eligibility and Qualification Criteria			Compliance Requirements				Document/ form Submission requirement
No.	Criterion	Requirement	Single Entity	Joint venture (existing or intended)			
				All members combined	Leader/One member	Each of the other members	
4.2.5.1	Transmission mains	a)At least 40 Km of diameters ≥ 1000mm and PN ≥ 16 (DI, HDPE, Steel)	Must meet requirement	Must meet requirement	N/A	N/A	
4.2.5.2	Distribution networks	b) 180 Km diameters over 300mm Ranging from PN 10- PN 25	Must meet requirement	Must meet requirement	N/A	N/A	
4.2.6	Networks - wastewater	Experience in Construction of at least 120 km of sewerage networks containing diameters over 800 mm with at least 3,500 sewer household connections	Must meet requirement	Must meet requirement	N/A	N/A	
4.3	**Specific technical assistance experience**	Participation in the role of main contractor, leader of joint-venture, member of joint-venture or sub-contractor in contracts involving technical assistance and training in the operation and maintenance of at least one of each of the following: dam, water treatment plant, wastewater treatment plant, sewerage network, water supply network during the past fifteen (15) years	Must meet requirement	Must meet requirement	N/A	N/A	Form EXP 4.3
5.	**Personnel requirements**						
5.1	**General personnel requirements**	Applicants shall provide evidence that they have management and overall personnel resources within the following areas: administration, financial, technical, quality assurance etc. required for	Must meet requirement	Must meet requirement	Must meet requirement	N/A	Form PER 5.1

Eligibility and Qualification Criteria			Compliance Requirements				Document/ form Submission requirement
No.	Criterion	Requirement	Single Entity	Joint venture (existing or intended)			
				All members combined	Leader/One member	Each of the other members	
		execution of a contract of comparable size and complexity					
5.2	**Specific personnel requirements – specialist positions**[6]	Applicants shall provide evidence that they have suitably qualified personnel to fill the positions below and choose a main candidate and an alternate, each of whom should meet the experience requirements specified below:					Form PER 5.2 (a) And Form PER 5.2 (b)
5.2.1	Project manager	BSC Civil Engineering Has overall experience 20 years general experience in civil infrastructure work Has experience in 2 finished contracts of a similar nature Similar Experience; 15Yrs . Proof of Fluency in written and Spoken English. Experience in the implementation of water and sewerage infrastructure using FIDIC Red and Yellow Conditions of Contract Registered professional with recognised professional body.	Must meet requirement	Must meet requirement	N/A	N/A	Form PER 5.2 (a) And Form PER 5.2 (b)
5.2.2	Mechanical, electrical and automation engineers	Bachelor's degree in Electrical/ Mechanical Has 10 years general experience in Mechanical/Elector mechanical	Must meet requirement	Must meet requirement	N/A	N/A	Form PER 5.2 (a) And Form PER 5.2 (b)

[6] CVs and additional staff will be required from the successful Applicants at Tender stage.

Eligibility and Qualification Criteria			Compliance Requirements				Document/ form Submission requirement
No.	Criterion	Requirement	Single Entity	Joint venture (existing or intended)			
				All members combined	Leader/One member	Each of the other members	
		works and 6 years specific experience. Has worked on at least 1 contract of a similar nature and Has experience in mechanical, electrical and automation design Registered professional with recognised professional body.					
5.2.3	Wastewater process engineers	Bachelors Degree in Civil Engineering with 10 years overall experience and 6 years specific experience Have worked on at least 2 contracts of a similar nature and Have experience in design with particular emphasis on trickling filters type process. Registered professional with recognised professional body.	Must meet requirement	Must meet requirement	N/A	N/A	Form PER 5.2 (a) And Form PER 5.2 (b)
5.2.4	Water Process Engineers	Bachelor's Degree in Civil Engineering with 10 years overall experience and 6 years specific experience Has worked on at least 2 contracts of a similar nature and Have experience in design with particular emphasis on lamella settlers.	Must meet requirement	Must meet requirement	N/A	N/A	Form PER 5.2 (a) And Form PER 5.2 (b)

Eligibility and Qualification Criteria			Compliance Requirements				Document/ form Submission requirement
No.	Criterion	Requirement	Single Entity	Joint venture (existing or intended)			
				All members combined	Leader/One member	Each of the other members	
		Registered professional with a recognised professional body					
5.2.5	Health and Safety Manager	Bachelor's Degree in relevant field & Occupational Health and Safety Certification with overall of Experience: 6 Yrs and Similar Experience: 3 Yrs Proof of Fluency in written and Spoken English. and Knowledge of Kiswahili Has experience in 2 contracts of a similar nature. Certified by NEBOSH	Must meet requirement	Must meet requirement	N/A	N/A	Form PER 5.2 (a) And Form PER 5.2 (b)
5.2.6	Dam Engineer	Bachelor's Degree in Civil Engineering or related field from a recognized institution. At least 15 years of overall experience in civil engineering. Minimum 10 years of specific experience in dam engineering, including design, construction, and supervision. Should have participated in the design of dams and supervision or construction of at least two (2) dams of similar nature; Proof of Fluency in written and Spoken English. Registered professional with an internationally recognised	Must meet requirement	Must meet requirement	N/A	N/A	Form PER 5.2 (a) And Form PER 5.2 (b)

Eligibility and Qualification Criteria			Compliance Requirements				Document/ form Submission requirement
No.	Criterion	Requirement	Single Entity	Joint venture (existing or intended)			
				All members combined	Leader/One member	Each of the other members	
		professional body including International Commission on Large Dams (ICOLD).					
5.2.7	Materials engineer	Bachelor's Degree in Civil Engineering or a higher national diploma 10 Years General Experience with 5 years specific experience . Has experience in one contracts of a similar nature.	Must meet requirement	Must meet requirement	N/A	N/A	Form PER 5.2 (a) And Form PER 5.2 (b)
5.2.8	Structural engineer	Bachelor's Degree in Civil Engineering with 10 years overall experience and 5 years specific experience Experience in the design of dams and supervision or construction of at least two (2) water and sewerage projects of similar nature and magnitude Registered professional with an recognised professional body.	Must meet requirement	Must meet requirement	N/A	N/A	Form PER 5.2 (a) And Form PER 5.2 (b)
5.2.9	Geotechnical Engineers	B.Sc. Civil/Geotechnical Engineering At least 15 years of overall experience in civil or geotechnical engineering. Minimum 10 years of specific experience in geotechnical investigations, soil and rock	Must meet requirement	Must meet requirement	N/A	N/A	Form PER 5.2 (a) And Form PER 5.2 (b)

Eligibility and Qualification Criteria			Compliance Requirements				Document/ form Submission requirement
No.	Criterion	Requirement	Single Entity	Joint venture (existing or intended)			
				All members combined	Leader/One member	Each of the other members	
		mechanics, foundation engineering, and slope stability analysis Experience in the geotechnical design and analysis for at least two (2) large dam projects of similar nature and magnitude. Registered professional with a recognised professional body					
5.2.10	Site Agents (6)	B.Sc. Civil/Geotechnical Engineering 15 Years General Experience 10 years' experience is similar projects Experience in at least two contracts of similar complexity as site managers (contractor position) or inspectors (supervision position); Proof of Fluency in written and Spoken English. Registered professional with a recognised professional body	Must meet requirement	Must meet requirement	N/A	N/A	Form PER 5.2 (a) And Form PER 5.2 (b)
5.2.11	Engineering Surveyors	Bachelor's Degree in Surveying, Geomatics Engineering, Geospatial Engineering, or a related field from a recognized institution.	Must meet requirement	Must meet requirement	N/A	N/A	Form PER 5.2 (a) And Form PER 5.2 (b)

Eligibility and Qualification Criteria			Compliance Requirements				Document/ form Submission requirement
No.	Criterion	Requirement	Single Entity	Joint venture (existing or intended)			
				All members combined	Leader/One member	Each of the other members	
		At least 8 years of overall experience in land and engineering surveying. Minimum 5 years of specific experience in surveying for dam projects, water infrastructure, or large-scale civil engineering works. Experience in at least two contracts of similar nature Must be a registered and active member of a recognized professional body such as Institution of Surveyors of Kenya (ISK)					
5.2.12	Hydropower engineer	B.Sc. Electrical/Mechanical Engineering 10 Years General Experience 6 years' experience is similar projects Experience in hydromechanical components design/ construction for at least 2 assignments of similar nature and magnitude. Registered professional with a recognised professional body	Must meet requirement	Must meet requirement	N/A	N/A	Form PER 5.2 (a) And Form PER 5.2 (b)
5.2.13	Environmental officer (3)	Bsc Degree in Environmental Science or related field	Must meet requirement	Must meet requirement	N/A	N/A	Form PER 5.2 (a) And

Eligibility and Qualification Criteria			Compliance Requirements				Document/ form Submission requirement
No.	Criterion	Requirement	Single Entity	Joint venture (existing or intended)			
				All members combined	Leader/One member	Each of the other members	
		- NEMA Lead Expert certification - Total Experience: 10 Yrs and Similar Experience: 5 Yrs with experience in urban and peri-urban setups. Fully conversant with Kenyan environmental law Expert should have local Kenyan experience and be fully conversant in English and Kiswahili. Registered professional with a recognised professional body					Form PER 5.2 (b)
5.2.14	Sociologist (6)	Bsc Degree in sociology, community development or any other social science discipline with at least ten (8) years general experience and four (4) years relevant experience in urban and peri-urban setups. Must have held similar position in at least 2 similar assignments (dams, water supply, and sewerage construction) of similar Expert should have local Kenyan experience and be fully conversant in English and Kiswahili.	Must meet requirement	Must meet requirement	N/A	N/A	Form PER 5.2 (a) And Form PER 5.2 (b)

Eligibility and Qualification Criteria			Compliance Requirements				Document/ form Submission requirement
No.	Criterion	Requirement	Single Entity	Joint venture (existing or intended)			
				All members combined	Leader/One member	Each of the other members	
5.2.15	Computer aided design and building information modelling Specialist	Diploma or certificate in Building Technology or equivalent related field 5 years demonstrated CAD and BIM experience. Expert should have local Kenyan experience and be fully conversant in English.	Must meet requirement	Must meet requirement	N/A	N/A	Form PER 5.2 (a) And Form PER 5.2 (b)
6.	**Equipment[7]t[8]**						
6.1	**Excavators for earth works, 75 to 90 hp(15-50 Tons)**	Minimum 8 units With Trenching Bucket and Rock breaker attachments	Must meet requirement	Must meet requirement	N/A	N/A	Form EQ 6
6.2	**Wheel Loaders for earth works**	Minimum 6 Units with 3-5 m3 bucket capacity	Must meet requirement	Must meet requirement	N/A	N/A	Form EQ 6
6.3	**Dump trucks**	Minimum Ten 10 units minimum 25-40 Ton,	Must meet requirement	Must meet requirement	N/A	N/A	Form EQ 6
6.4	**Water Bowsers**	Minimum 6 Units with Capacity of 10 to 18 m^3	Must meet requirement	Must meet requirement	N/A	N/A	Form EQ 6
6.5	**Concrete Batching Plant**	Minimum 2 No. of minimum capacity 40 m^3/h	Must meet requirement	Must meet requirement	N/A	N/A	Form EQ 6
6.6	**Truck Concrete mixer**	Minimum 6 Units of Capacity not less than 6m^3	Must meet requirement	Must meet requirement	N/A	N/A	Form EQ 6

[7] The Applicant will be required to demonstrate ownership, lease agreements, or subcontracting arrangements for the equipment necessary to execute the contract during tender.

[8] Additional equipment will be required from the successful Applicants at Tender stage. All equipment must be new or less than 5 years old. Equipment must comply with relevant Kenyan and international construction standards. Contractor to provide maintenance schedule and spare parts inventory during the tender stage.

Eligibility and Qualification Criteria			Compliance Requirements				Document/ form Submission requirement
No.	Criterion	Requirement	Single Entity	Joint venture (existing or intended)			
				All members combined	Leader/One member	Each of the other members	
6.7	**Graders**	Minimum 4 units (200-250 hp)	Must meet requirement	Must meet requirement	N/A	N/A	Form EQ 6
6.8	**Compactors/Rollers**	Minimum 8 units of 10-15 Ton Vibratory capacity	Must meet requirement	Must meet requirement	N/A	N/A	Form EQ 6
6.9	**Boob Placers (Concrete Pumps)**	Minimum 3 units with 36m + reach	Must meet requirement	Must meet requirement	N/A	N/A	Form EQ 6
6.10	**Dewatering Pumps**	Minimum 8 units of 8-inch, High-Flow, 500-1000 m^3/hr	Must meet requirement	Must meet requirement	N/A	N/A	Form EQ 6
6.11	**Sludge/Slurry Pumps**	Minimum 4 units of (4-inch, Heavy-Duty, 150-400 m^3/hr)	Must meet requirement	Must meet requirement	N/A	N/A	Form EQ 6
6.12	**Mobile cranes Tuck**	Minimum 4 units of 20-40 Tons	Must meet requirement	Must meet requirement	N/A	N/A	Form EQ 6
6.13	**Generators**	Minimum 6 units 500 —1000 kVA	Must meet requirement	Must meet requirement	N/A	N/A	Form EQ 6
6.14	**Bulldozer D8/D10 Class**	Minimum 6 Units,	Must meet requirement	Must meet requirement	N/A	N/A	Form EQ 6
6.15	**Tower Cranes**	2 units with 40 m reach and 10 Ton Capacity	Must meet requirement	Must meet requirement	N/A	N/A	Form EQ 6
6.16	**Forklifts**	Minimum 4 units of 3-5 Tons	Must meet requirement	Must meet requirement	N/A	N/A	Form EQ 6
6.17	**Crawler Loaders**	Minimum 4 units of (30-50 Ton, 3-5m^3 bucket capacity) –	Must meet requirement	Must meet requirement	N/A	N/A	Form EQ 6
6.18	**Air compressor for 5 jack hammers/pneumatic tools**	Minimum 5 units	Must meet requirement	Must meet requirement	N/A	N/A	Form EQ 6
6.19	**Drilling rig for piled foundation,**	Minimum 2 units of min. diameter=500 mm,	Must meet requirement	Must meet requirement	N/A	N/A	Form EQ 6

Eligibility and Qualification Criteria			Compliance Requirements				Document/ form Submission requirement
No.	Criterion	Requirement	Single Entity	Joint venture (existing or intended)			
				All members combined	Leader/One member	Each of the other members	
6.20	**Complete pipe jacking equipment**	Minimum 2 units of Max Diameter = 800mm, Suitable for Earth & Rock	Must meet requirement	Must meet requirement	N/A	N/A	Form EQ 6
7.	**Environmental, Social, Health and Safety Requirements**						
7.1	**Certifications**	Availability of a valid ISO certification or internationally recognized equivalent (equivalency to be demonstrated by Applicant) and applicable to the worksite. ✓ Quality management certificate ISO 90019; ✓ Environmental management certificate ISO 1400110; ✓ Health and safety management certificate ISO 4500111.	Must meet requirement	Must meet requirement	N/A	N/A	Form CER 7.1
7.2	**ESHS Documentation**	Availability of in-house policies and procedures acceptable to the Employer for ESHS management: 1. Existence of an Ethics Charter; 2. Existence of a system for monitoring compliance with ESHS commitments for the Applicant's subcontractors and all its partners; 3. Existence of official company procedures for the management of the following relevant points:	Must meet requirement	Must meet requirement	N/A	N/A	1. The ESHS Ethics Charter of the company or equivalent must be provided. 2. A procedure or information on how the Bidder ensures that all members of the Joint Venture, subcontractors, suppliers and temporary labor (i)

Eligibility and Qualification Criteria			Compliance Requirements				Document/ form Submission requirement
No.	Criterion	Requirement	Single Entity	Joint venture (existing or intended)			
				All members combined	Leader/One member	Each of the other members	
		✓ ESHS resources and facilities and ESHS monitoring organization; ✓ Project Areas management (base camps, quarries, borrow pits, storage areas); ✓ Health & Safety on worksites; ✓ Local recruitment and ESHS trainings of local staff (capacity building), ESHS trainings of subcontractors and local partners (transfer of knowledge); ✓ Relations with stakeholders, information and consultation of local communities and authorities; ✓ Traffic management; ✓ Atmospheric emissions, noise and vibrations; ✓ Erosion and sedimentation;					are aware and (ii) meet ESHS requirements must be provided. 3.Official internal procedure documents on the topics indicated must be provided.
7.2.1	**ESHS Experience**	The Applicant must demonstrate that it has fulfilled two construction contracts over the last 5 years where major ESHS measures were carried out or are on progress satisfactorily and incompliance with international standards	Must meet requirement	Must meet requirement	N/A	N/A	Form ESHS 7.2 (a)

Eligibility and Qualification Criteria			Compliance Requirements				Document/ form Submission requirement
No.	Criterion	Requirement	Single Entity	Joint venture (existing or intended)			
				All members combined	Leader/One member	Each of the other members	
7.2.2	Social and Environmental challenges	With major S&E challenges and in which the S&E measures were carried out satisfactorily in compliance with relevant standards.	Must meet requirement	Must meet requirement	N/A	N/A	Form ESHS 7.2 (a)
7.2.3	ESHS Dedicated personnel	Availability of in-house personnel dedicated to ESHS issues: Environmental and Social Manager, and/or Health and Safety Manager.	Must meet requirement	Must meet requirement	N/A	N/A	Organizational chart evidencing filled ESHS position(s)
7.2.4	Work in low-income areas	Involving works in low income areas.	Must meet requirement	Must meet requirement	N/A	N/A	Form ESHS 7.2 (b)

SECTION IV – APPLICATION FORMS

Application submission letter

TO ATHI WATER WORKS DEVELOPMENT AGENCY
ATHI WATER PLAZA, MUTHAIGA NORTH ROAD OFF KIAMBU ROAD
NAIROBI, P.O BOX 45283-00100 NAIROBI.

ATT. TO CHIEF EXECUTIVE OFFICER

DATE [DD] [MM] [YEAR]

Project Name: Thika and Githunguri Water and Sanitation Project

Subject: Application for Prequalification

Thika and Githunguri and Water Sanitation Project

1. Being duly authorized to represent and act on behalf of *(insert name and address of applicant)* (hereinafter referred to as "the Applicant"), and having reviewed and fully understood all the pre-qualification requirements and information provided, the undersigned hereby applies for pre-qualification to tender for the contract indicated above:
2. Attached to this letter are copies of original documents defining:
   a) the applicant's legal status,
   b) the principal place of business, and
   c) the place of incorporation (for applicants that are corporations), or the place of registration and the nationality of the owners (for applicants that are partnerships or individually owned firms).
   d) Power of attorney, authorizing the Applicant's representative to act for and on behalf of the Applicant, in accordance with ITA 11.1.2.
3. With reference to ITA 24.1, it is our intention to subcontract approximately (insert approximate percentage) percentage of the Contract Price details of which are provided herein.

   [PROVIDE DETAILS]
4. With reference to ITA 24.3, it is our intention to subcontract the following parts of the works to the following specialised subcontractors (list the parts of the works and specialised subcontractor):

Part of the works	**Specialist subcontractor details**

   Details of our specialist subcontractors are found in Form SSC.
5. We, including any subcontractors or suppliers for any part of the contract resulting from this prequalification do not have any conflict of interest, in accordance with ITA 4.4;
6. Your Agency and its authorized representatives are hereby authorised to conduct any inquiries or investigations to verify the statements, documents, and information submitted in connection with this application, and to seek clarification from our bankers and clients regarding any financial and technical aspects.

   This Application Submission Letter will also serve as authorisation to any individual or authorized representative of any institution referred to in the supporting information to provide such information

deemed necessary and as requested by yourselves to verify statements and information provided in this application, such as the resources, experience, and competence of the Applicant.

7. Your Agency and its authorized representatives may contact the following persons for further information:

   (insert name)

   (insert address and communication facilities)

   (insert name)

   (insert address and communication facilities)

8. This application is made with the full understanding that:

   e) tenders by pre-qualified applicants will be subject to verification of all information submitted for pre-qualification at the time of tendering,

   f) your Agency reserves the right to

      i. amend the scope and value of the Contract to be tendered for, in which event, tenders will be invited only from those applicants who meet the resulting amended pre-qualification requirements, and

      ii. reject or accept any application, cancel the pre-qualification process, and reject all applications.

   g) your Agency shall not be liable for any such actions under 6 (e) above.

9. Applicants who are not joint ventures should delete paragraphs 8 and 9 and initial the deletions. The attention of applicants who are joint ventures is drawn to Instructions to Applicants, ITA 4.1.2.4 regarding Letters of Intent.

10. Appended to this application, we give details of the participation of each member, including capital contribution and profit/loss agreements, in the joint venture. We also specify the financial commitment in terms of the percentage of the value of the Contract, and the responsibilities for execution of the Contract.

11. We confirm that if we tender, the tender, as well as any resulting Contract, will be:

    h) signed so as to legally bind all members, jointly and severally, and

    i) submitted with a joint venture agreement providing the joint and several liability of all members in the event the contract is awarded to us.

12. The undersigned declare that the statements made and the information provided in the duly completed application are complete, true, and correct in every detail.

Date

Signed	Signed
Name	Name
For and on behalf of *(name of applicant or leader of a joint venture)*	For and on behalf of *(name of member of joint venture*
Signed	Signed
Name	Name
For and on behalf of *(name of member of joint venture)*	For and on behalf of *(name of member of joint venture)*

Form ELI 1.1 – Applicant Information Form

Date: *[insert day, month, year*]
PQD No. and title: *[insert PQD number and title]*
Page *[insert page number]* of *[insert total number]* pages

Applicant's name *[insert full name]*
In case of Joint Venture (JV), name of each member: *[insert full name of each member in JV]*
Applicant's actual or intended country of registration: *[indicate country of Constitution]*
Applicant's actual or intended year of incorporation: *[indicate year of Constitution]*
Applicant's legal address [in country of registration]: *[insert street/ number/ town or city/ country]*
Applicant's authorized representative information Name: *[insert full name]* Address: *[insert street/ number/ town or city/ country]* Telephone/Fax numbers: *[insert telephone/fax numbers, including country and city codes]* E-mail address: *[indicate e-mail address]*
1. Attached are copies of original documents of ☐ Articles of Incorporation (or equivalent documents of constitution or association), and/or documents of registration of the legal entity named above, in accordance with ITA 4.5. ☐ In case of JV, letter of intent to form JV or JV agreement, in accordance with ITA 4.2. ☐ 2. Included are the organizational chart, a list of Board of Directors, and the beneficial ownership.

Form ELI 1.2(a) – Applicant's JV Information Form

[The following form is additional to Form ELI – 1.1., and shall be completed to provide information relating to each JV member (in case the Applicant is a JV)

Date: *[insert day, month, year]*
PQD No. and title: *[insert PQD number and title]*
Page *[insert page number]* of *[insert total number]* pages

Applicant name: *[insert full name]*
Applicant's JV Member's name: *[insert full name of Applicant's JV Member]*
Applicant's JV Member's country of registration: *[indicate country of registration]*
Applicant JV Member's year of constitution: *[indicate year of constitution]*
Applicant JV Member's legal address in country of constitution: *[insert street/ number/ town or city/ country]*
Applicant JV Member's authorized representative information Name: *[insert full name]* Address: *[insert street/ number/ town or city/ country]* Telephone/Fax numbers: *[insert telephone/fax numbers, including country and city codes]* E-mail address: *[indicate e-mail address]*
1. Attached are copies of original documents of ☐ Articles of Incorporation (or equivalent documents of constitution or association), and/or registration documents of the legal entity named above, in accordance with ITA 4.5. ☐ In case of a state-owned enterprise or institution, documents establishing legal and financial autonomy, operation in accordance with commercial law, and they are not under the supervision of the Employer, in accordance with ITA 4.8. 2. Included are the organizational chart, a list of Board of Directors, and the beneficial ownership.

Form ELI 1.2(b) – Applicant's JV Information Form

Declaration of Association

[The following form shall be provided by each member of a Joint Venture]

Date: _____

Procurement document number and title: _____

Page _____ of _____ pages

We hereby declare our intent to associate with the following firms for the purpose of forming a

[insert here “joint venture”]:

[Insert the names of the other JV Members here]

[Insert the name of the Lead Member] shall be the Lead Member.

We hereby confirm that we have not associated with any other firms for the purposes of this assignment and that we will not submit an Application separately from the firms listed above.

Further, we understand that if one of the above JV Members appears as a member in more than one Application, all Applications in which the Member appears shall be disqualified.

In the event that this JV is awarded a Contract, we shall perform the works in the composition and in the form of cooperation described above.

[Signature of the authorised representative of the Member]

Form SSC – Specialist subcontractors' details

On separate pages, using the format below the Applicant is requested to list each specialist subcontractor with the following details:

Name of Specialist Subcontractor	
Activity subcontracted	

Relevant experience of Specialist Subcontractor

1.	Number of contract	
	Name of contract	
	Country	
2.	Name of Employer	
3.	Employer address	
4.	Nature of works and special features relevant to the contract, carried out by the specialist subcontractor [DESCRIBE]	
5.	Contract role (check one) ☐ Prime contractor ☐ Management contractor ☐ Subcontractor ☐ Member in a joint venture	

Form CON 2 – Historical contract non-performance, pending litigation and litigation history

[The following table shall be filled in for the Applicant and for each member of a Joint Venture]

Applicant's Name: *[insert full name]*
Date: *[insert day, month, year]*
Joint Venture Member's Name: *[insert full name]*
PQD No. and title: *[insert PQD number and title]*
Page *[insert page number]* of *[insert total number]* pages

Non-Performed Contracts in accordance with Section III, Qualification Criteria and Requirements			
☐ Contract non-performance did not occur since *[insert date]* specified in Section III, Qualification Criteria and Requirements, Sub-Factor 2.1. ☐ Contract(s) not performed since 1st January *[insert year]* specified in Section III, Qualification Criteria and Requirements, requirement 2.1			
Year	**Non-performed portion of contract**	**Contract Identification**	**Total Contract Amount (current value, currency, exchange rate and EUR equivalent)**
[insert year]	*[insert amount and percentage]*	Contract Identification: *[indicate complete contract name/ number, and any other identification]* Name of Employer: *[insert full name]* Address of Employer: *[insert street/city/country]* Reason(s) for non-performance: *[indicate main reason(s)]*	*[insert amount]*
Pending Litigation, in accordance with Section III, Qualification Criteria and Requirements			
☐ No pending litigation in accordance with Section III, Qualification Criteria and Requirements, Sub-Factor 2.2. ☐ Pending litigation in accordance with Section III, Qualification Criteria and Requirements, Sub-Factor 2.2 as indicated below.			

Form FIN 3.1 – Financial situation and performance

[The following table shall be filled in for the Applicant and for each member of a Joint Venture]

Applicant's Name: *[insert full name]*
Date: *[insert day, month, year]*
Joint Venture Member Name: *[insert full name]*
PQD No. and title: *[insert PQD number and title]*
Page *[insert page number]* of *[insert total number]* pages

1. Financial data

Type of Financial information in (currency)	**Historic information for previous** *_[insert number] years, [insert in words]* **(amount in currency, currency, exchange rate, EUR equivalent)**				
	Year 1	Year 2	Year 3	Year4	Year 5
Statement of Financial Position (Information from Balance Sheet)					
Total Assets (TA)					
Total Liabilities (TL)					
Total Equity/Net Worth (NW)					
Current Assets (CA)					
Current Liabilities (CL)					
Working Capital (WC)					
Information from Income Statement					
Total Revenue (TR)					
Profits Before Taxes (PBT)					
Cash Flow Information					
Cash Flow from Operating Activities					

2. Sources of Finance

[The following table shall be filled in for the Applicant and all parties combined in case of a Joint Venture]

Specify sources of finance to meet the cash flow requirements on works currently in progress and for future contract commitments.

No.	Source of finance	Amount (US$ equivalent)
1		
2		
3		

3. Financial documents

The Applicant and its parties shall provide copies of financial statements for *[number]* years pursuant Section III, Qualifications Criteria and Requirements, Sub-factor 3.1. The financial statements shall:

(a) reflect the financial situation of the Applicant or in case of JV member, and not an affiliated entity (such as parent company or group member).

(b) be independently audited or certified in accordance with local legislation.

(c) be complete, including all notes to the financial statements.

(d) correspond to accounting periods already completed and audited.

☐ Attached are copies of financial statements[9] for the *[number]* years required above; and complying with the requirements

[9] If the most recent set of financial statements is for a period earlier than 12 months from the date of Application, the reason for this should be justified.

Form FIN 3.2 – Average annual construction turnover

[The following table shall be filled in for the Applicant and for each member of a Joint Venture]

Applicant's Name: *[insert full name]*
Date: *[insert day, month, year]*
Joint Venture Member Name: *[insert full name]*
PQD No. and title: *[insert PQD number and title]*
Page *[insert page number]* of *[insert total number]* pages

Annual turnover data (construction only)			
Year	**Amount** **Currency**	**Exchange rate***	**EUR equivalent**
[indicate calendar year]	*[insert amount and indicate currency]*	*[insert exchange rate used to calculate EUR equivalent]*	
YEAR 1			
YEAR 2			
YEAR 3			
YEAR 4			
YEAR 5			
		Average Annual Construction Turnover	

Total EUR equivalent for all years divided by the total number of years. See Section III, Qualification Criteria and Requirements, 3.2.

Form FIN 3.4 (a) – Sources of finance

[The following table shall be filled in for the Applicant and for each member of a Joint Venture]

Applicant's Name: *[insert full name]*
Date: *[insert day, month, year]*
Joint Venture Member Name: *[insert full name]*
PQD No. and title: *[insert PQD number and title]*
Page *[insert page number]* of *[insert total number]* pages

Financial Resources			
NO	**Amount**	**Exchange rate***	**EUR equivalent**
	[insert amount]	*[insert exchange rate used to calculate EUR equivalent]*	

Form FIN 3.4 (b) – Sources of finance

[The following table shall be filled in for the Applicant and for each member of a Joint Venture]

Applicants and each member to a JV should provide information on their current commitments on all contracts that have been awarded, or for which a letter of intent or acceptance has been received, or for contracts approaching completion, but for which an unqualified, full completion certificate has yet to be issued.

Applicant's Name: *[insert full name]*
Date: *[insert day, month, year]*
Joint Venture Member Name: *[insert full name]*
PQD No. and title: *[insert PQD number and title]*
Page *[insert page number]* of *[insert total number]* pages

Current contract commitments

No	Name of Contract	Employer's Contact Details	Value of Outstanding Work in Eur	Estimated Completion date	Average monthly invoicing over the last 6 months in EUR
1					
2					
3					
4					
5					
6					
7					
8					
9					

Exchange rate = [_____]

Form EXP 4.1 - General construction experience

[The following table shall be filled in for the Applicant and in the case of a JV Applicant, each Member]

Applicant's Name: *[insert full name]*
Date: *[insert day, month, year]*
Joint Venture Member Name: *[insert full name]*
PQD No. and title: *[insert PQD number and title]*
Page *[insert page number]* of *[insert total number]* pages

[Identify contracts that demonstrate continuous construction work over the past [number] years pursuant to Section III, Qualification Criteria and Requirements, Sub-Factor 4.1.List contracts chronologically, according to their commencement (starting) dates.]

Starting Year	**Ending Year**	**Contract Identification**	**Role of Applicant**
[indicate year]	*[indicate year]*	Contract name: *[insert full name]* Brief Description of the Works performed by the Applicant: *[describe works performed briefly]* Amount of contract: *[insert amount in currency, mention currency used, exchange rate and EUR equivalent]* Name of Employer: *[indicate full name]* Address: *[indicate street/number/town or city/country]*	*[insert "Prime Contractor" or "JV Member" or "Sub-contractor" or "Management Contractor"]*
		REPLICATE AS NEEDED	
		REPLICATE AS NEEDED	
		REPLICATE AS NEEDED	

Exchange rate = [_____]

Form EXP 4.2 – Specific design and construction experience

[The following table shall be filled in for contracts performed by the Applicant and each member of a Joint Venture]

[This form should be replicated for each of the requirements laid out in 4.3.1 – 4.3.6 of Section 3]

Applicant's Name: *[insert full name]*
Date: *[insert day, month, year]*
Joint Venture Member Name: *[insert full name]*
PQD No. and title: *[insert PQD number and title]*
Page *[insert page number]* of *[insert total number]* pages

Contract No. *[insert number]* of *[insert number of contracts required]*	**Information**			
Contract Identification	*[insert contract name and number, if applicable]*			
Award date	*[insert day, month, year, e.g., 15 June, 2015]*			
Completion date	*[insert day, month, year, e.g., 03 October, 2017]*			
Role in Contract *[check the appropriate box]*	Prime Contractor ☐	Member in JV ☐	Management Contractor ☐	Sub-contractor ☐
[insert roles and responsibilities]				
Employer's Name:	*[insert full name]*			
Address: Telephone/fax number E-mail:	*[indicate street / number / town or city / country]* *[insert telephone/fax numbers, including country and city area codes]* *[insert e-mail address, if available]*			

Form EXP 4.3 – Specific technical assistance experience

[The following table shall be filled in for contracts performed by the Applicant and each member of a Joint Venture]

Applicant's Name: *[insert full name]*
Date: *[insert day, month, year]*
Joint Venture Member Name: *[insert full name]*
PQD No. and title: *[insert PQD number and title]*
Page *[insert page number]* of *[insert total number]* pages

Contract No. *[insert number]* of *[insert number of contracts required]*	**Information**			
Contract Identification	*[insert contract name and number, if applicable]*			
Award date	*[insert day, month, year, e.g., 15 June, 2015]*			
Completion date	*[insert day, month, year, e.g., 03 October, 2017]*			
Role in Contract *[check the appropriate box]*	Prime Contractor ☐	Member in JV ☐	Management Contractor ☐	Sub-contractor ☐
[insert roles and responsibilities]				
Employer's Name:	*[insert full name]*			
Address: Telephone/fax number E-mail:	*[indicate street / number / town or city / country]* *[insert telephone/fax numbers, including country and city area codes]* *[insert e-mail address, if available]*			

Form PER 5.1 – General personnel capabilities

[The following table shall be filled in by the Applicant and each member of a Joint Venture]

Applicant's Name: *[insert full name]*
Date: *[insert day, month, year]*
Joint Venture Member Name: *[insert full name]*
PQD No. and title: *[insert PQD number and title]*
Page *[insert page number]* of *[insert total number]* pages

Own full-time manpower resources		Average number
1	General management	
2	Technical management	
3	Financial management	
	hereof relevant for the direct execution of the Contract	
3A	[key specialist]	
4	Quality assurance staff	
	hereof relevant for the direct execution of the Contract	
4A	[QA manager]	
5	Administrative staff	
6	Professional technical staff, total	
	hereof relevant for the direct execution of the Contract	
6A	[contract managers]	
6B	[site managers]	
6C	[key specialist, trade]	
6D	[key specialists, trade]	
6E	[Technicians and technical support staff]	
6F	[Foremen]	
6G	[Mechanics]	
6H	[Operators]	
6J	Other skilled and unskilled staff	

Form PER 5.2 (a) – Specific personnel capabilities

[The following table shall be filled in by the Applicant]
[If one candidate meets two/ multiple positions this should be indicated in Form 5.2.(b)

Applicant's Name: *[insert full name]*
Date: *[insert day, month, year]*
PQD No. and title: *[insert PQD number and title]*
Page *[insert page number]* of *[insert total number]* pages

Position	**Name of main candidate**	**Name of alternate candidate**
	[Insert name of main candidate]	*[Insert name of alternate candidate]*
Project manager		
Project planner		
Mechanical, electrical and automation engineers		
Water and wastewater process engineers		
Health and Safety Manager		
Dam Engineer		
Materials Engineer		
Structural engineer		
Hydropower engineer		
Environmental officer		
Public-relations expert		
Pipe jacking/ microtunelling engineer		
Computer aided design and building information modeling Specialist		
O&M and training Specialist		
Tax and duties advisor		
Site Manager 1		
Site Manager 2		
Site Manager 3		
Site Manager 4		

Position	**Name of main candidate**	**Name of alternate candidate**
	[Insert name of main candidate]	*[Insert name of alternate candidate]*
Site Manager 5		
Site Manager 6		

Form PER 5.2 (b) – Specific personnel capabilities

[The following table shall be filled in by the Applicant]
[If one candidate meets two/ multiple positions this should be indicated]

[Form to be replicated for each candidate]

Applicant's Name: *[insert full name]*
Date: *[insert day, month, year]*
PQD No. and title: *[insert PQD number and title]*
Page *[insert page number]* of *[insert total number]* pages

Position		Candidate ☐ Prime ☐ Alternate
Candidate information	Name of candidate	Date of birth
	Professional qualifications	
Present employment	Name of employer	
	Address of employer	
	Telephone	Contact (manager / personnel officer)
	Fax	Telex
	Job title of candidate	Years with present employer
Short CV		
Details/ description as to how candidate fits the proposed role in the Project		

FORM EQ 6 – Equipment

[The following table shall be filled in by the Applicant]

Applicant's Name: *[insert full name]*
Date: *[insert day, month, year]*
PQD No. and title: *[insert PQD number and title]*
Page *[insert page number]* of *[insert total number]* pages

Equipment	**Number of**	**Age of**
	[Insert number of equipment]	[Insert age of equipment]
Excavators for earth works, 75 to 90 hp		
Loaders for earth works		
Dump truck for earth works, 14 m3		
Water tank truck for earth works, 10 to 18 m3		
Central batch plant for construction works, minimum capacity 10 m3/h		
Truck mixer for construction works		
Concrete Pump for construction works		
Mobile crane 60 tons for construction works		
Generators 150 to 250 kVA		
Bulldozer D8/D10		
Truck with crane 15 tons		
Excavators for earth works, 75 to 90 hp		
Air compressor for 5 jack hammers		

FORM CER 7.1 – Certifications

[The following table shall be filled in by the Applicant]

[To be replicated for each certificate]

Applicant's Name: *[insert full name]*

Applicants role: [either single entity or JV Leader]

Date: *[insert day, month, year]*
PQD No. and title: *[insert PQD number and title]*
Page *[insert page number]* of *[insert total number]* pages

Description	Information
Identification of the certificate	*[insert full name of the certificate]*
First award date	*[insert day, month, year of first certificate award]*
Last update of the certificate	*[insert day, month, year of latest renewal, if any]*
Valid to	*[insert day, month, year of validity]*
Issuers Name	
Issuers Address	
Issuers Telephone/fax number	
Issuers E-mail	
Compliance with international standards	*[This certificate is [select ISO 9001 / ISO 14001:2004 / OHSAS 18001]*
If no, proof of conformity with the international standard by the Applicant	*[The Applicant shall demonstrate the equivalency of their certificate with the international standards].*

Form ESHS 7.2 (a) – ESHS specific experience, social and environmental challenges

[The following table shall be filled in for contracts performed by the Applicant and each member of a Joint Venture]

Applicant's Name: *[insert full name]*
Date: *[insert day, month, year]*
Joint Venture Member Name: *[insert full name]*
PQD No. and title: *[insert PQD number and title]*
Page *[insert page number]* of *[insert total number]* pages

Contract No. *[insert number]* of *[insert number of contracts required]*	**Information**			
Contract Identification	*[insert contract name and number, if applicable]*			
Award date	*[insert day, month, year, e.g., 15 June, 2015]*			
Completion date	*[insert day, month, year, e.g., 03 October, 2017]*			
Role in Contract *[check the appropriate box]*	Prime Contractor ☐	Member in JV ☐	Management Contractor ☐	Sub-contractor ☐
Employer's Name:	*[insert full name]*			
Address: Telephone/fax number E-mail:	*[indicate street / number / town or city / country]* *[insert telephone/fax numbers, including country and city area codes]* *[insert e-mail address, if available]*			
ESHS Challenges	*[describe the ESHS challenges faced in project implementation, including indication of scales/size by reference, if applicable project E&S categorization as per development bank categorization]*			
[insert brief description or, if applicable, short abstract of the documentation annexed]				
ESHS measures implemented	*[description of measures implemented, incl. supporting documentation, if available]*			
[insert brief description or, if applicable, short abstract of the documentation annexed]				

ESHS know-how transfer to local staff, local partners and subcontractor	*[description of know how transfer and capacity building measures implemented, incl. supporting documentation, if available]*
[insert brief description or, if applicable, short abstract of the documentation annexed]	

Form ESHS 7.2 (b) – ESHS specific experience, work in low-income areas

[The following table shall be filled in for contracts performed by the Applicant and each member of a Joint Venture]

Applicant's Name: *[insert full name]*
Date: *[insert day, month, year]*
Joint Venture Member Name: *[insert full name]*
PQD No. and title: *[insert PQD number and title]*
Page *[insert page number]* of *[insert total number]* pages

Contract No. *[insert number]* of *[insert number of contracts required]*	**Information**			
Contract Identification	*[insert contract name and number, if applicable]*			
Award date	*[insert day, month, year, e.g., 15 June, 2015]*			
Completion date	*[insert day, month, year, e.g., 03 October, 2017]*			
Role in Contract *[check the appropriate box]*	Prime Contractor ☐	Member in JV ☐	Management Contractor ☐	Sub-contractor ☐
Employer's Name:	*[insert full name]*			
Address: Telephone/fax number E-mail:	*[indicate street / number / town or city / country]* *[insert telephone/fax numbers, including country and city area codes]* *[insert e-mail address, if available]*			
Low-income areas challenges	*[describe the low-income areas challenges faced in project implementation]*			
[insert brief description or, if applicable, short abstract of the documentation annexed]				
Mitigation measures	*[description of measures implemented, incl. supporting documentation, if available]*			
[insert brief description or, if applicable, short abstract of the documentation annexed]				

SECTION V – IMPORTANT INFORMATION

This section details important information for applicants with regards to working in Kenya in general and working on the Project in particular.

Some of the data included herein be it technical, social administrative or otherwise will help the Applicants selected via the prequalification procedure to put together their technical and financial proposals for the future tender.

Taxes and duties in Kenya

Applicants are advised to familiarize themselves with the taxation requirements in Kenya, including corporate income tax, withholding tax, VAT, import duties, and other statutory obligations. This information is accessible through the Kenya Revenue Authority (KRA) portal at www.kra.go.ke

Additionally, applicants are encouraged to review the Double Taxation Agreement (DTA) between Kenya and Denmark:

Danish version (in Danish): Danish Tax Authority Website

Kenyan version (in English): National Treasury Website

Requirement for Local Branch Registration

Prior to contract award, successful bidders will be required to register a Kenyan branch locally to ensure full compliance with local tax and regulatory requirements. This process includes:

- ✓ Registration with the Kenya Registrar of Companies and obtaining a Certificate of Compliance.
- ✓ Registration with the Kenya Revenue Authority (KRA) and obtaining a KRA PIN for tax compliance.
- ✓ Compliance with local statutory tax deductions for employees,

The successful applicant will be encouraged to engage qualified tax consultants or legal advisors to ensure their tax obligations are met in accordance with Kenyan tax laws and avoid potential compliance issues.

Registration of foreign contractors at the NCA

Foreign contractors will be advised to registration with the National Construction Authority after issuance of an award letter and before signing the contract.

The National Construction Authority (NCA) is empowered by law to register all foreign contractors seeking to undertake construction works in Kenya.

Some of the foreign contractors' registration requirements are:

- › A valid KRA tax compliance certificate.
- › A certified copy of current business license.
- › If applying for electrical engineering works, attach a license from the Energy and Petroleum Regulatory Authority (EPRA).
  The Project has a significant electrical component.
- › If applying for communications engineering works, attach a license from Communications Authority of Kenya (CAK).

This requirement is relevant with regards to permanent site security for some of the works included in the Project.

› **An undertaking, in writing, stating that the foreign firm shall subcontract or enter into a joint venture with a local contractor for not less than 30% of the value of contract work for which temporary registration is sought;**

Registration procedures for foreign contractors can be found at the following link: https://nca.go.ke/foreign-contractors

Low-income areas

It needs to be understood from the outset that service within the low-income communities and areas is a primary target for the Project and such areas are envisaged to be catered – in as much as possible - with water supply and sewerage infrastructure. Applicants seeking pre-qualification for the Works need be cognisant of where these areas are located.

Thika town

Thika town has a number of delimited informal settlements which houses a significant number of residents. Other isolated informal smaller settlements are scattered across the town neighbouring various middle- and high-income estates. The key low-income areas are listed in the table below and their approximate location is shown in the next figure.

Table 0-1 List of low-income areas in Thika with specifications

Name	Pop.	Location
Gachagi	2,544	Eastern outskirts of Thika Town near Thika leather industry.
Kiandutu	13,383	Right of Thika-Garissa highway opposite Gatitu junction and close to Thika industrial area
Umoja	1,264	Pilot area along the Starehe grounds road.
Matharau	1,084	Along BAT road within Vine Park area (inside Thika industrial area)
Wakimbizi	1,795	Within Ngoingwa estate near St. Bernadette Catholic church
Wendano	640	Within Kilimambogo area and is dominated by quarry and farm workers

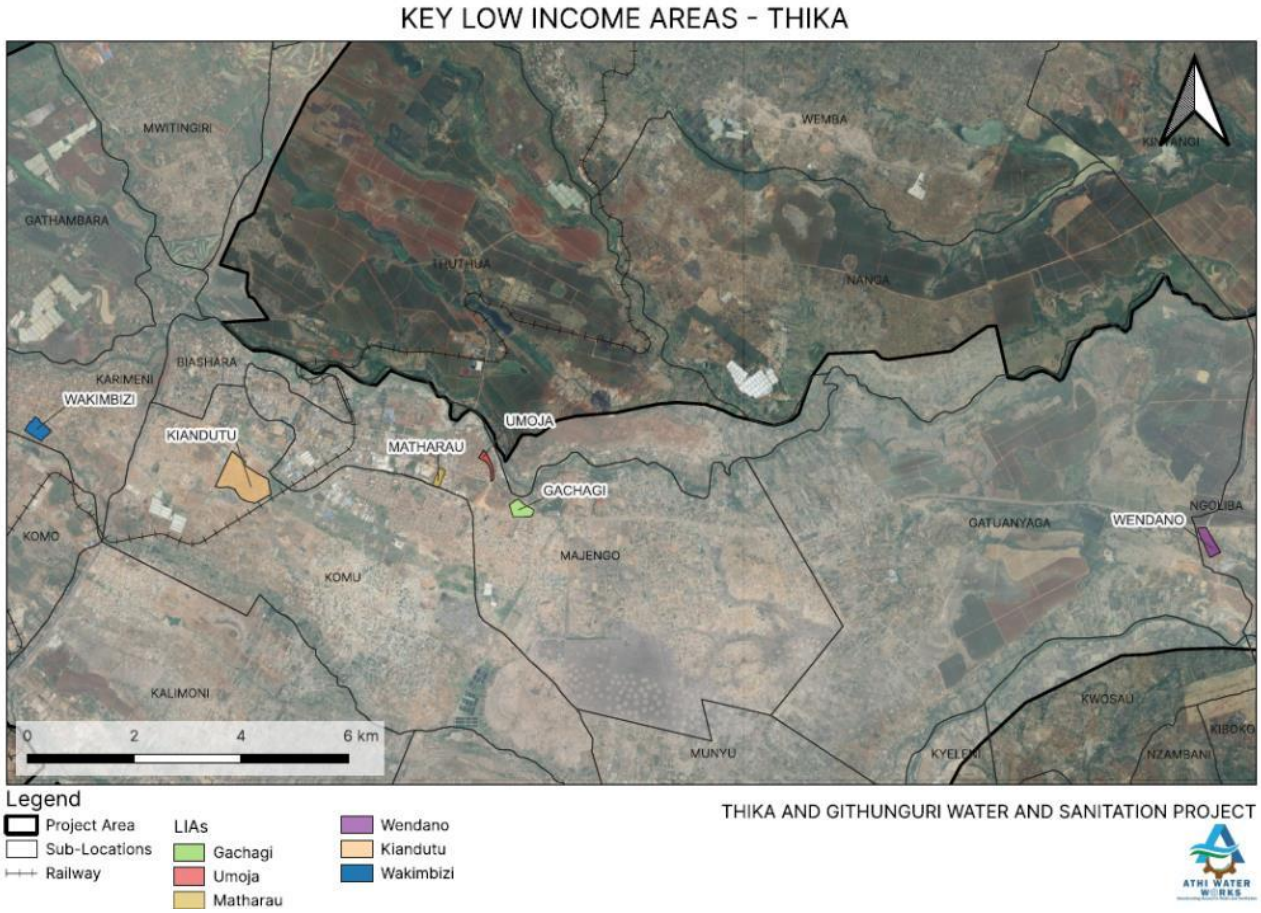

Figure 0-1 Low-income areas in Thika

Githunguri town

There are no defined residential estates within Githunguri town, however, buildings used for commercial and residential purposes is an emerging trend.

A few pockets of low-income earners dwelling structures are spread across the township. The semipermanent structures are usually built-to-rent by locals in order to provide affordable housing to those working in the neighbouring farms and in the commercial and processing sectors within the town. In most case, the landlord and the tenants share the compound and use the same entrance gates. They also share water connections (where available), same shallow wells and often also same sanitation facilities (toilets and septic tanks).

Since the town has no physical or spatial plan with no clear demarcation for residential, commercial, industrial, institutional and administrative areas the lower-income earners live together or within the same areas as the higher-income earners, with no physical boundaries.

Because the low-income population is diffusely spread in “pockets” around the higher-income population areas, no specific delineation of low-income areas is identified under the project area in Githunguri.

Built-up areas and existing services

A significant part of the existing services/ utilities is unchartered in both towns. These utility services include electrical lines, water pipes, gas lines, telecommunication lines, and much more. Often, when

infrastructure is improved as it was the case in past projects in the towns, many of these services are moved or completely replaced, leaving the old service in the ground.

Whereas the Employer has conducted surveys with the aid of third parties and will provide all the information available to the future Contractor, the Applicants should confidently assume that this data, whilst reasonably accurate, may not be complete.

Training component

It is important to note that training for the Water Service Providers is a significant component of the Project. Both THIWASCO and GIWASCO will benefit from new assets with new technologies that they will have to operate in the future. Additionally, to this, both WSPs will hire new staff commensurate with their Project extended mandate. Consequently, both WSPs need capacity building to (i) maintain their rehabilitated assets (refreshers for existing staff and training for new staff) and (ii) operate the new assets. A list of trainings is indicated below and will be refined at tender stage:

Table 0-2 Basic training needs for THIWASCO and GIWASCO

O&M training Thika	O&M training Githunguri
Dam	Intakes
Rehabilitated water assets (all)	Rehabilitated and new boreholes
New water and wastewater treatment plant	New water and wastewater treatment plant
Hydropower turbine	Solar plants
	Chlorination stations at boreholes.
Biogas generation facility at new WWTP	Biogas generation facility at new WWTP
Desludging existing wastewater treatment plant	
Cleaning and CCTV inspections of sewer lines	Cleaning and CCTV inspections of sewer lines
DMA monitoring	DMA monitoring
New pumping stations	Pumps at boreholes
New reservoirs	New reservoirs
Water and wastewater sampling and laboratory training	Water and wastewater sampling and laboratory training
HSE training	HSE training

SECTION VI – ANTI CORRUPTION AND PROCUREMENT GUIDELINES

Anti-corruption policy

Ministry of Foreign Affairs of Denmark Anti-Corruption Policy can be downloaded at:

https://um.dk/en/-/media/websites/umen/danida/about-danida/danida-transparency/anti-corruption-policy-english-version-2018.ashx

Procurement guidelines

The financer's procurement rules can be downloaded at:

https://www.ifu.dk/wp-content/uploads/2020/01/DSIF-Rules-for-Procurement-FINAL-June-2019.pdf

PART 2 – WORKS REQUIREMENTS

SECTION VII – SCOPE OF WORKS

1 Introduction

Access to safe water and reasonable standards of sanitation services are key pillars for Kenya's development in tandem with the United Nations' Sustainable Development Goal (SDG) No. 6 and Kenya's Vision 2030. They define the policy framework under which water services have to be performed in-country.

The Government of Kenya's (GOK) National Water Policy (1999) envisaged 100% access to safe water for the country's population by 2010. The SDG envisaged access to safe water and improved sanitation of 70% and 93% respectively by 2015. Current coverage figures for access to water and sewerage are 57% and 16% respectively.

At the National level, Athi Water Works Development Agency (AWWDA) is mandated to develop sustainable water and sanitation bulk infrastructures within its jurisdiction comprising Kiambu, Nairobi and Murang'a Counties.

At the county level, Thika Water and Sewerage Company (THIWASCO) and Githunguri Water and Sewerage Company (GIWASCO) are responsible for the provision of efficient and economical water and sewerage services and the development of county assets for water service provision.

The two Project towns (Thika and Githunguri) comprise of fast-growing urban developments in Kenya. The Thika and Githunguri Water and Sanitation Improvement Project was initially formed as a result of the Thika Superhighway, which connects Thika and Githunguri to Nairobi, and thereby more people decided to reside in these towns, which have increased the water demand and need for adequate sanitation.

2 Thika town scope of works

The tables below show applicants summarised data of the expected infrastructure works and supply of goods components selected for the Project, complete with the contractual arrangements on which such are to be provided.

Any diligent/competent applicant is therefore informed since this pre-qualification stage of the Employer's expectation regarding the selected applicants' tender proposals and ultimately briefed upon the selected contractor's responsibilities, deliverables and risks during implementation.

Water Infrastructure

Table 2-1 Summary of proposed works in Thika – water supply component

Proposed works	Size/ Details	Contract type
One zoned earth fill dam at Thika 3A estimated embarkment volume of 0.8Mm3, including bridge and roads relocation, raw water abstraction structure and outlet structure. The dam shall also be used to generate hydroelectric power.	Reservoir capacity 14.6 million m³, height 40 m (35m top water level), width 400 m, estimated hydroelectric power generation capacity of 400KW since the river can support more than 9,800 m³/h with a head of 16 metres.	Fidic Yellow
One raw water transmission pipeline	Length ~8.2 km, Diameter 1000 mm pipes, from Thika 3A Dam to Water Treatment Plant (WTP)	Fidic Red
Rehabilitation of existing water treatment plant (WTP)	36,000 m³/day, including upgrading filtration systems and pump stations.	Fidic Yellow
New water treatment plant	One train of 70,000 m³/day including lamella plate settlers, filtration units with Anthracite, and chlorination gas facilities or other proposed similar or equivalent technology subject to approval by the Client and pump stations.	Fidic Yellow
Rehabilitation of existing reservoirs	18,000 m³	Fidic Yellow
New Water Reservoirs	Construction of, 3No Ground Level Reinforced Concrete Tanks (1No. 15,000 m³, 2No 5,000 m³) and 2No Elevated Steel Tanks (500 m³ each).	Fidic Yellow
Existing water supply network rehabilitation and Extension of water supply network incl. house connections	Construction of treated water Transmission Mains, approximately 25 km in length DN600-OD400, ferrous steel and HDPE pipes.New Transmission Lines Construction of treated water primary distribution mains, approximately 25.6 km in length DN600-OD400, ferrous steel and HDPE pipes. Construction of treated water secondary distribution pipelines, approximately 47.8 km in length DN300-OD100, ferrous steel and HDPE pipes. Customer water connections – 20,000 new water connections, with DN25-DN50 associated HDPE pipes, approximately 300km. Establishment of District Meter Areas (DMAs) within the water supply zones of Thika Town, with 43No total estimated DMAs. (Details of connection components	Fidic Red

	like number of water meters are to be developed by the Contractor upon further data collection and actual DMA establishments).	
Kiandutu low income area	New water supply network to supply the kiosks – 3.2 km. Rehabilitation of 5 no. Kiosks and Construction of 7 no. new Kiosks Rehabilitation of the existing borehole at 235 m depth and pump sets with flows at 25 m³/h Construction of one new Ablution Block	Fidic Yellow and Fidic Red
Three old pumping stations rehabilitation		
High lift 1 (newer pump house)	Four pump sets with flows between 540 m³/h and 600 m³/h and heads of 10 m	Fidic Yellow
High lift 2 (older pump house)	Three pump sets with flows between 158 m³/h and 312 m³/h and heads between 43 m and 57 m	
Low lift	Six pump sets	
Four new pumping stations		
WTP to Ngoingwa	Total Head 124m, 8 pumps, flow per pump 492 m³/h, soft starter	Fidic Yellow
Transmission Main 2	Total Head 117m, 3 pumps, flow per pump 362 m³/h, variable frequency drive	
New water pumping station 3 (Bendor Tank, Recirculation and Backwash)	Bendor Tank: Total Head 67m, 2 pumps, flow per pump 316 m³/h, variable frequency drive Recirculation: Total Head 20m, 1 pumps, flow 89 m³/h, variable frequency drive Backwash: Total Head 88m, 2 pumps, flow per pump 900 m³/h, variable frequency drive	
Transmission Main 4	Total Head 88m, 5 pumps, flow per pump 386 m³/h, variable frequency drive	
New hydropower station	400 kW, gross head 32 m, flow 5,200 m³/h	Fidic Yellow

Wastewater Infrastructure

Table 2-2 Summary of proposed works in Thika – wastewater component

Proposed works	Size/ Details	Contract type
New sewers including house connections	Length ~approximately 35.5 km, diameters between 200 mm and 1000 mm Additional house connections of 6,785	Fidic Red
New wastewater treatment plant trickling filter type with chlorination and energy co-generation by digester with biogas production and gas holders	Construction of wastewater treatment plant with a capacity of 14,000 m³/day, including trickling filters, clarifier tanks, sludge treatment with anaerobic digesters, and disinfection units or other proposed similar or equivalent technology subject to approval by the Client. The estimated biogas power	Fidic Yellow

Proposed works	Size/ Details	Contract type
	generation from the WWTP is 26,103 kWh per month but is to be verified by the contractor.	
Partial rehabilitation of existing Kiganjo waste stabilization ponds sewage treatment plant	Inlet works, screens automation, grit removal systems, 2 incinerators adjacent to the inlet works, interconnection of the two inlets, replacing the existing flow dividing chamber between the existing ponds, other civil works	Fidic Yellow

Miscellaneous works and supply of goods

Table 2-3 Summary of proposed supply of goods in Thika

Proposed miscellaneous works and goods supply	Size/ Details	Contract type
Non-revenue water management equipment	Smart metres, bulk metres, metre testing bench.	Fidic Yellow
Provision of vehicles	Sewer flushing vehicles/ floating auger dredger (ex. mud cat), sewer flushing vehicle/ exhauster/ vacuum truck, satellite jet unit, sewer cleaning tools	Fidic Yellow
Provision of software	WaterGEMS, SewerGEMS	Fidic Yellow
Ablution blocks	10	Fidic Yellow
Water analysis laboratory equipment	Complete standard laboratory	Fidic Yellow
Wastewater analysis laboratory equipment	Complete standard laboratory	Fidic Yellow
Operational training water supply and sewerage		Fidic Yellow

Note All of the above miscellaneous items are provisional. They will be firmly set in place within the Employer's requirements at tender stage.

The detailed description of works is in the sub-chapters below:

2.1 Rehabilitation component

2.1.1 Existing water treatment plant

The existing water treatment plant has a capacity of 36,000 m³/day and is split into two sections:

- One section dating from the 1960s of 16,000 m³/day
- One section dating from the 1990s of 20,000 m³/day

Both sections need to be rehabilitated. Rehabilitation measures are proposed to the following standards:

Table 2-4 Summary of performance target for rehabilitation of the treatment plant

Component	Present Performance	Objective/Target
Flow Distribution	› 16MLD- 40% of Incoming Raw Water › 20MLD – 60% of Incoming Raw Water	› Same
Sedimentation	› 16MLD- Surface Area= 465 m²- Clarification Rate- 1.41 m/h	› 16MLD - Clarification Rate - 1.5 m/h › 20MLD - Clarification Rate - 1.5 m/h

Component	Present Performance	Objective/Target
	› 20MLD - Surface Area= 700 m^2 Clarification Rate- 1.21 m/h	
Filters	› 16MLD- Surface Area= 166 m^2- Clarification Rate- 3.95 m/h › 20MLD - Surface Area= 184 m^2 Clarification Rate- 4.60 m/h	› 16MLD - Clarification Rate - 5-6 m/h › 20MLD - Clarification Rate - 5-6 m/h
Wash water Recirculation	› Not done	› Achieve 10-15% recirculation of incoming Raw water
Chemical Mixing	› Manual Mixing and Dosing	› Full Automation
Water Quality	› Problem with Colour	› Achieve KS and WHO Standards
Pumps and Flow Control	› Manual operation	› Semi Automation

Photo 2-1 Raw / Treated water pumping station house and WTP dosing plant

Photo 2-2 Filter gallery and alum tank stirrers

2.1.2 Existing water reservoirs

All of the storage reservoirs need "standard" rehabilitation comprising (i) ladders and safety cages; (ii) general site clearance, landscaping and regular site cleaning and (iii) improved access for maintenance equipment. Specific rehabilitation measures are proposed as follows:

Table 2-5 Rehabilitation Measures of Existing Reservoirs

Reservoir	Rehabilitation required
Chania Ward, Ground Reinforced Concrete Tank, 15,970m³.	› Standard
Maryhill, Ground Reinforced Concrete Tank, 700m³	› Standard
Section 9, Elevated Reinforced Concrete Tank, 48m³.	› Standard
Town Centre, Elevated Reinforced Concrete Tank, 48m³	› Standard
Kimathi Twin, Elevated Steel Tank 448m³ (Combined)	› Standard plus: › Dismantle all tank panels and replace › Replace all the connection bolts › Replace the access platform with railing › Replace vents and provide bug screens › Clean all the surfaces and repaint › The welds need to be further accessed to ascertain its conditions › Repair the boundary structure and the access gates › Install a locking anti-climb system
Makongeni, Elevated Steel Tank, 224m³	› Same as Kimathi
Kimatus, Elevated Steel Tank, 16 m³	› Same as Kimathi
Bendor, Elevated Steel Tank, 36m³	› Same as Kimathi minus welds
Githingiri/ Golfview, Elevated Steel Tank, 224m³	› Same as Kimathi minus welds
Gatundu/ Landless, Elevated Steel Tank, 192m³	› Same as Kimathi minus welds
Kilimambogo/ Makutano, Elevated Steel Tank, 50m³	› Same as Kimathi minus welds
Chania Ward, Ground R/C Tank, 15,970m³	› Standard
Maryhill, Ground Reinforced Concrete Tank, 700m³	› Standard
Section 9, Elevated Reinforced Concrete Tank, 48m³	› Standard
Town Centre, Elevated Reinforced Concrete Tank, 48m³	› Standard plus › Assess cladding for defects

The selected contractor shall carry out further condition concrete tests on the foundation structure to ascertain the current concrete strength.

2.1.3 Existing water supply networks

The water supply network in Thika town comprises of various materials including asbestos cement, uPVC, HDPE, galvanised iron, ductile iron and PPR pipes. The network comprises of old pipe systems that are prone to breakages causing interruptions as well as newly laid systems to increase coverage to new consumers. The total pipe length is approximately 260 km out of which 20 km are to be rehabilitated on the Project.

2.1.4 Kiganjo existing wastewater treatment plant

The facilities proposed for rehabilitation at Kiganjo WWTP are presented in the table below:

Table 2-6 Rehabilitation Measures Kiganjo WWTP

Structure		Rehabilitation measures
Inlet manhole		› *Rehabilitation works ongoing*
Inlet Works	Screens	› Replace with mechanically raked screens › Install mechanically raked screens on bypass channel › Automate screens operations › Provide SCADA
	Grit Chambers	› Replace the penstocks

Structure		Rehabilitation measures
		› Automate the grit removal system › Provide SCADA › Construct grit drying beds
Incinerator & screenings management		› Provide a new incinerator to ensure controlled burning of waste
Interconnection of inlet works		› Rehabilitation works ongoing
Distribution chamber		› Rehabilitation works ongoing
Ponds	Old Ponds System	› Desludging and rehabilitate remaining 2 series i.e., 6 ponds
	Hybrid Ponds System	› Repair of faults on embankments › Embankment lining with concrete slabs for erosion protection
Faecal sludge reception		› Design and construct a faecal sludge reception bay with capacity to accommodate at least 2No. trucks at a time
Inlet manhole		› None
Inlet Works	Screens	› Replace with mechanically raked screens › Install mechanically raked screens on bypass channel › Automate screens operations › Provide SCADA
	Grit Chambers	› Replace the penstocks › Automate the grit removal system › Automation of the grit removal system › Provide SCADA
Incinerator & screenings management		› Provide a new incinerator to ensure controlled burning of waste
Distribution chamber		› None
Ponds		› Desludging
Outlet		› None
Chain-link fence		› Rehabilitate the chain-link fence Install double leaf gate at the Old Ponds Series › Replace the existing gate at the New Ponds Series
Operations building		› Plumbing repairs and connection to water › Wiring and power connection to the building › Replacement of the toilets › Equipping the laboratory › Provide shower rooms for gents and ladies › Repair cracks and paint the walls as necessary › Furnish with the necessary facilities such as chairs, tables etc.
Desludging Equipment		› Provide a remote-controlled auger dredge system equipped with a dredge (slurry) pump and a floating discharge hose › Provide a floating platform (pontoon) to mount the slurry pumps

2.2 New infrastructure assets component

2.2.1 Dam at Thika 3A

The main features of the Thika 3A Dam and reservoir are summarized in the table below:

Table 2-7 Principal Features of the Thika 3A Dam

Item	Unit	Data
1. Hydrology		

Item	Unit	Data
› Catchment Area	km²	288
› Design Flood (500 year)	m³/sec	100
› Design Flood (PMF)	m³/sec	367
2. Reservoir		
› Normal Water Level (NWL)	m	EL. 1,535.0
› Flood Water Level (HWL)	m	EL. 1,530.0
› Dead Water Level (DWL)	m	EL. 1,516.0
› Effective Storage Capacity	MCM	10.6
› Dead Storage Capacity	MCM	4.0
3. River Diversion		
› Design Flood (25 year)	m³/sec	50.3
› Diversion Conduit		
› Width x Height	m	2.8 x 2.8
› Length	m	250
› Approach Channels		
› Upstream	m	88
› Downstream	m	77
4. Dam		
› Type	-	Zoned earth fill dam
› Maximum Height	m	40
› Embankment Volume	m³	780,000 (Including coffer dam)
› Crest Elevation	m	EL.1,535.00
› Crest Length	m	400
› Crest Width	m	8.0
› Upstream Slope		1:3.0
› Downstream Slope		1:2.5
5. Spillway		
› Spillway Type	-	Side channel type
› Design Discharge	m³/sec	100.2 (500 years return period)
› Weir Crest Length	m	30
› Over flow depth	m	2.5
› Transition channel		
› Width	m	15
› Length	m	50
› Chute		
› Width	m	15
› Length	m	240
› Energy Dissipation		Stilling Basin (Sab dam type)
› Width	m	15
› Length	m	55
› eight of Sab dam	m	3.5
6. Outlet Works		
› Intake Type	-	Multi-Level Intake Tower
› Steel Pipe		
› Diameter	m	1,000mm (2 Nr.)
› Length		360
› Regulating Valves and Gates (Two Types)	mm	Main 1,000 mm & Service 500 mm
7. Road Works		Access Road to Dam, Spillway & Outlet
› Pavement	-	Gravel
› Width and Length		Width=8.0m Length = 600 m Width=6.0m Length = 900 m

2.2.2 New water treatment plant

The proposed water treatment plant has a capacity of 70,000 m³/day. The following is a summary of the components at the new WTP.

Table 2-8 Brief description of components designed at the new WTP

Component	Description
Aeration - Circular stepped cascade aerator	› 4 steps › Maximum weir perimeter = 100m and › Flow rate/m weir length of 35 m³/h x m. › Cascade diameter rings range between 2m at the top to 9.8 m at the bottom of the tray. › Average flow = 1,735.5 m³/day per aerator,
Inlet chamber - stilling well	› Detention time = 1.25 minutes › Dimensions (LxWxH) = 3x3x2
Chemical Mixing Buildings	› PAC, alum, and soda ash building size = 765 m² footprint › Hypoclorite building size = 150 m² › **Dosing in the respective section of the report**
Flocculation basin	› Tapered flocculation via 2 compartments › **Further details in the respective section of the report**
Sedimentation basin	› Process Type = Sedimentation in Vertical tanks with Lamella › Settling Rate = 1 m/h › Detention Time = 2 hours › Plate L x W x t = 3m x 1.5m, 5mm thick [t] › Surface Loading Rate = 17.9 m/h › Flow between Plates = Reynolds = 144, Froude = 0.0015 › length occupied by plates in basin = 119 m › Basin Design geometry = L: W ratio-Rectagular-1:1.5 › 6nr basins with Surface Area 9 m x 16 m x 4.5 m depth. › Distance Between Plates = 50 mm › Minimum number of Plates = 1,970 plates › Flow Velocity between plates = Vmax 1.62 m³/h › Basin dimensions = based on a detention period of 2 hours for a flow rate of 3182 during 22 hours of operation › Channel Covering = Precast concrete slabs › Sludge Removal = Pipe-400mm HDPE. › Fitted with Automation and controls
Filtration – 12 rapid sand filters	› Dimensions (each filter) = 5mx8m › Flow rate = 7-8 m³/m²/h › Layers = 100mm anthracite, 500mm sand, 300mm gravel
Backwashing system	› backwash rate of 50 m³/m2/h in 7-8 minutes › backwash water tank is sized for backwashing of only one filter unit at a time and is sized to 600m³. › The air recirculation is provided for initial air injection during the backwashing process. › **Further details in respective chapter**
Treated water flow measurements	› Electromagnetic meter Woltman type
Launders and flow distribution Channel	› placed on top of lamella settlers at least 125mm

Component	Description
	› flow between 100-200 m³/m- length of weir per day › V-notches 50mm deep and 150-300mm › settled water distribution channel is designed to a maximum depth of 1 m
Water Treatment Pipelines	› HDPE 8 bar rating › general criteria for velocity are: 0.5 to 1.5 m/s in flow; 1 - 2 m/s, in pumping stations
Sludge Removal and Treatment	› sludge thickeners and sludge drying beds › filter wash waste recycled back to inlet › sludge from basins discharged to the sludge drying beds.
SCADA at	› Flow Measurement › Chemical Dosage › Flocculators Control › Sedimentation Control › Filters › Chlorine Dosing › Recirculation System
Other facilities	› access road and parking › Landscaping and green spaces. › storm water drainage › fencing and security › fire safety equipment and systems › designated area for equipment maintenance, workshops, and service facilities

2.2.3 Raw water gravity mains and transmission lines

The raw water gravity mains from Thika dam and Chania intake to WTP and the transmission mains from WTP to new tanks are as follows:

Table 2-9 Brief description of raw water mains sizing

Component	Description
Thika 3A dam to new WTP	› L = 8.22 km › Hdrop = 21 m › D = 1000 mm
Mains distribution from WTP to Thika	› TM1 to new Ngoingwa tank › TM2A to Kimathi Twin and from Kimathi Twin to Majengo › TM2B to Section 9 › TM2C to Town Centre › TM3 to Golfview › TM4 to Mary Hill

2.2.4 New pumping stations

Raw water to the treatment plant shall flow by gravity. From the water treatment plant there will be three pump stations and three major transmission lines to tanks (as above). The pumping stations have the following characteristics:

Table 2-10 Pumping Stations

Name of Pump Station	Total Power (kW)	Flow Rate (m^3/hr)	Head	Quantity	Duty
WTP to Ngoingwa (TM1)	1187.5	492	124	8	5
TM2	329.8	362	117	3	2
Bendor Tank	82.4	316	67	2	1
Recirculation	11	89	20	1	1
Backwash	45	900	10	2	1
TM4	397	386	88	5	2

2.2.5 Hydropower plant

Details of the turbine are as follows:

Table 2-11 Turbine Details

Item	Selected
Type of turbine	Francis
No. of Units	1
Rating of Each Unit (KW)	400
Gross Head	32
Flow per Unit (m^3/hr)	5200
Rated Speed	600
Rated Efficiency	88

2.2.6 New storage reservoirs

Additional storage will be provided with the following maximum capacities:

Table 2-12 Existing and Proposed Storage Tanks

Name	Number	Existing Capacity [m^3]	Exisiting Type	Proposed Additional Tanks [m^3]
Ngoingwa/Chania Ward	1	15,970	Ground RC Tank	20,000
Mary Hill	1	700	Ground RC Tank	5,000
Section 9	1	48	Elevated RC Tank	500
Kimathi Twin	2	448	Elevated Steel Tank	500
South Tank-Waiteithie	0	-		2,500
Mwitingiri Tank	0	-		15,000
East Tank	0	-		500
WTP Tanks - Circular	1	2,272	Underground RC Tank	-
WTP Tanks - Rectangular	1	9,090	Underground RC Tank	7,500
Makongeni	1	224	Elevated Steel Tank	500
Bendor	1	36	Elevated Steel Tank	500
Kimatus	1	16	Elevated Steel Tank	500
Gatundu/Landless	1	192	Ground RC Tank	500
Githingiri/Golf view	1	224	Ground L RC Tank	250
Kilimambogo/Makutano	1	50	Ground L RC Tank	500
Muguga (Gatuanyaga)	0	-		250
Town Centre	1	48	Elevated RC Tank	250
Total		**29,318**		**54,750**

Applicants are advised that capacities of these storage reservoirs may decrease by tender stage.

2.2.7 Kiandutu low-income area works

The works in Kiandutu LIA consist of the following:

› New water supply network to supply the kiosks – 3.2 km.

› Rehabilitation of 5 no. Kiosks and Construction of 7 no. new Kiosks

› Rehabilitation of the existing borehole at 235 m depth and pump sets with flows at 25 m³/h

› Construction of one new Ablution Block

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2.2.8 New sewer networks

The catchments and sublocations considered are Mwitingiri, Gathambara, Karimeni, Biashara/Thuthua with a length of pipeline of 78 km and diameters between 200 mm and 800 mm. All of these networks converge to the new wastewater treatment plant at "Pilot" site.

2.2.9 New wastewater treatment plant "Pilot"

The treatment operations and processes include pre-treatment (screening, grit removal, flow equalization, flow measurement), primary clarifiers, trickling filters, intermediate clarifiers and chlorination. Sludge management includes blending, gravity thickening, anaerobic digestion and drying beds, the resultant biogas being initially used for heat recovery.

The inlet works will be constructed for the ultimate flows in 2047 while the subsequent treatment units will initially be constructed third their capacities (2037).

The new plant has average and peak flows of 40,966 m³/day and 2,984 m³/h respectively all sized for 2047 loads.

Components-wise Pilot is catered with the following:

Table 2-13 Pilot WWTP Components

Component	2037	2047, Extension of 2037
Preliminary and Primary Treatment	› Two coarse screens; › One fine screen; › Two coarse screens for by-pass; › Two aerated grit and grease chambers; › One equalization basin; › Flow measurement flume; and › One primary sedimentation tanks.	› Two coarse screens; › One fine screen; and › One primary sedimentation tank.
Secondary Treatment	› Intermediate pumping station and recirculation pumps; › One trickling filter; › Two secondary clarifiers;	› Recirculation pumps; › One trickling filters › Two secondary clarifiers;
Post Treatment (2047 load)	› Gas chlorination plant with one contact tanks; › Post aerator; and	

Component	2037	2047, Extension of 2037
	› Flow measurement flume.	
Sludge Treatment	› One gravity thickener; › One anaerobic digester; › One gas holding tank; › Flare; › Boiler station and heat exchangers; and › 22 sludge drying beds.	› One anaerobic digester; › Boiler station and heat exchangers; › 21 sludge drying beds.
Others	› Buildings including offices, laboratory, staff facilities, workshops, storage. › Access and drainage › SCADA system with main station, operator station and printers. › Emergency generator	

The potential energy generation from the biogas tank is in the range of 26,103 kWh per month.

2.3 Miscellaneous Works and Supply of Goods Component

Further details will be provided to the selected bidders at tender stage via Employer's Requirements.

It is important to note at this stage that comprehensive training will have to be carried out by the selected Contractor to THIWASCO for both water supply and sewerage assets rehabilitation including inspection and cleaning of existing pipelines.

3 Githunguri town scope of works

The tables below show applicants summarised data of the expected infrastructure works and supply of goods components selected for the Project, complete with the contractual arrangements on which such are to be provided.

Any diligent/competent applicant is therefore informed since this pre-qualification stage of the Employer's expectation regarding the selected applicants' tender proposals and ultimately briefed upon the selected contractor's responsibilities, deliverables and risks during implementation.

Water Infrastructure

Table 3-1 Summary of proposed works in Githunguri – water supply component

Proposed works	Size/ Details	Contract type
One weir intake (Ruiru)	Flow 6,500 m^3/day, weir height 6.5 m	Fidic yellow
Two raw water transmission pipelines	Ruiru Raw Water Gravity Main: Length ~ 6.05 km, diameter350 mm, Steel pipe to the water treatment plant Mukuyu Raw Water Gravity Main: Length ~ 4.15 km, diameter OD160 mm, HDPE pipe to the water treatment plant	Fidic Yellow
New water treatment plant	7,620 m^3/day, including coagulation, flocculation, lamella plate settlers, filtration systems or other proposed similar or equivalent technology subject to approval by the Client and a new 3000m3 capacity ground level Reinforced Concrete storage tank.	Fidic Yellow
New Water Reservoirs	Construction of 6No new elevated steel tanks, combined capacity of approximately 500 m^3, with inlet and outlet control valves.	Fidic Yellow
Network Expansion incl. additional last mile connections	Construction of approximately 39 km of new treated water transmission lines (OD40-90mm diameter, HDPE), and approximately 56.14 km of new primary and secondary water distribution pipelines (OD32-40) mm diameter, HDPE) Provision for last-mile connections corresponding to water distribution – 4000 new water connections with OD25-OD50mm associated HDPE pipes, approximately 80km. Establishment of District Meter Areas (DMAs) within the water supply zones of Githunguri Town, with 7 No. total estimated DMAs. (Details of connection components like number of water meters are to be developed by the Contractor upon further	Fidic Red
Groundwater Sources		
Rehabilitation of six existing boreholes	Flows between 60 m^3/day and 354 m^3/day and dynamic heads between 60 m and 90 m	Fidic Yellow

Proposed works	Size/ Details	Contract type
Four new boreholes	Flows between 100 m³/day and 216 m³/day and dynamic heads between 60 m and 80 m	Fidic Yellow
Solar plants per each well field	10 solar plants	Fidic Yellow
Chlorination stations per each well field	10 stations	Fidic Yellow

Note *55km water supply networks may include re-laying of some of the old asbestos cement existing networks.*

Wastewater Infrastructure

Table 3-2 *Summary of proposed works in Githunguri – wastewater component*

Proposed works	Size/ Details	Contract type
New sewers including last mile connections	Connections to Sewers-3,496 new sewer connections, with associated pipeline length approximately 20.98 km Approximately 25.73 km of new sewer networks (OD200-500mm diameter DWC pipes)	Fidic Red
One new wastewater treatment plant trickling filter type with chlorination and energy co-generation by digester with biogas production and gas holders	Wastewater treatment plant, 4,231 m³/day capacity, with trickling filters, clarifier tanks, sludge treatment with anaerobic digesters, and final disinfection units or other proposed similar or equivalent technology subject to approval by the Client. The estimated biogas power generation from the WWTP is 12,219 kWh per month but is to be verified by the contractor	Fidic Yellow

Miscellaneous works and supply of goods

Proposed miscellaneous works and goods supply	Size/ Details	Contract type
Provision of vehicles	Sewer flushing vehicles/ sewer flushing vehicle/ exhauster/ vacuum truck, satellite jet unit, sewer cleaning tools	Fidic Yellow
Provision of software	Sewer gems	Fidic Yellow
Ablution blocks	2	Fidic Yellow
Water analysis laboratory equipment	Complete standard laboratory	Fidic Yellow
Wastewater analysis laboratory equipment	Complete standard laboratory	Fidic Yellow
Githunguri office block	Complete office building for GIWASCO	Fidic Yellow
Operational training water supply and sewerage		Fidic Yellow

Note *All of the above miscellaneous items are provisional. They will be firmly set in place within the Employer's requirements at tender stage.*

The detailed description of works is in the sub-chapters below:

3.1 Rehabilitation component

Githunguri's water supply rehabilitation component is composed of selected asbestos cement (A/C) pipes of the existing distribution networks and a number of 6 boreholes.

More details on A/C pipes replacement will be provided to the selected bidders at tender stage and rehabilitation of boreholes is discussed below within the new assets subchapter as all of the mechanical and electrical equipment has to be changed anew.

Githunguri's wastewater collection and treatment is non-existent as the town has no existing sanitation provisions with the exception of five privately owned faecal sludge collection companies that empty septic tanks on a "on-call" basis.

3.2 New infrastructure assets component

3.2.1 Boreholes and pumping, chlorination and solar arrangements

Boreholes

The flows and levels in the table below are an indication for all boreholes:

Table 3-3 Q and H at all Githunguri boreholes

Nr	Borehole	Type Rehab/ new	Max. Production (m3/Day)	Pump Set Level (m)	Estimated dyamic level [m]	Estimated static level	Total Drilled Depth
1	Kianjogu	Rehab	60	180	90	60	280
2	Mukua 2	New	100	120	80	40	180
3	Ngochi	Rehab	350	180	90	55	259
4	Thakwa	Rehab	277	78	60	47	118
5	Thakwa 2	New	100	90	60	47	120
6	BH1	Rehab	319	114	90	27	120
7	BH2	Rehab	181	114	90	27	120
8	BH3	Rehab	354	96	60	23	107
9	Kiairia	New	100	200	60	20	280
10	Getehi	New	216	160	80	64	200
	TOTAL		**2,054**				

Pumping

The table below indicates pumping arrangements at all boreholes.

Table 3-4 Pumping at Boreholes

Item	Borehole Name	BH Type Rehab/ new	Pump Installation Depth (mbgl)	Dynamic Water Level (mbgl)	Flowrate (m3/hr)	Total Head (metres)	Motor Rating (KW)
1	Kianjogu	Rehab	180	90	3	99	2.2
2	Mukua 2	New	120	80	5	94	3.0
3	Ngochi	Rehab	180	90	27.5	106	11
4	Thakwa	Rehab	78	60	13.85	68	5.5
5	Thakwa 2	New	90	60	5	72	2.2

Item	Borehole Name	BH Type Rehab/ new	Pump Installation Depth (mbgl)	Dynamic Water Level (mbgl)	Flowrate (m3/hr)	Total Head (metres)	Motor Rating (KW)
6	Borehole 1	Rehab	114	90	16	101	11
7	Borehole 2	Rehab	114	90	9.05	103	5.5
8	Borehole 3	Rehab	114	60	18	72	7.5
9	Kiaria	New	200	60	5.0	79	2.2
10	Getehi	New	160	80	10.8	101	5.5

Chlorination

Chlorination stations are proposed to be located at the wellfields next to each borehole and will indicatively include: (i) 2 wall-mounted vacuum regulators, 1 for each inlet line, including liquid trap and gas absorption cylinders; (ii) 3+1 wall-mounted chlorinators, 1 for each inlet line and one stand-by on a 3+1 principle; (iii) 1 safety valve; (iv) 4 (3+1) ejectors; (v) 1 changeover manual 3-way valve; (vi) Pipe work and accessories, 1 injection point for each inlet line before the inlet; (vii) Pressure control on chlorinator inlet valve; (viii) Alarm and manual switch to the standby tank.

Solar

A combination between solar power and grid is proposed. The following table shows the indicative grid sizes and equipment for the various boreholes in Githunguri.

Table 3-5 Grid Sizes and Equipment - Githunguri Boreholes

Item	Borehole Name	Pump Motor Size (KW)	Panel Size (Watts)	Panel Voltage	Panel No.	Inverter Size (KW)
1	Kianjogu	2.2	150	12	24	3
2	Mukua 2	3.0	150	12	32	4
3	Ngochi	11.0	310	24	56	15
4	Thakwa	5.5	310	24	28	8.4
5	Thakwa 2	2.2	150	12	24	3
6	Borehole 1	11.0	310	24	56	15
7	Borehole 2	5.5	310	24	28	8.4
8	Borehole 3	7.5	310	24	77	10
9	Kiaria	2.2	150	12	24	3
10	Getehi	5.5	310	24	28	8.4

3.2.2 Ruiru Intake Weir

The weir characteristics and details are as below:

Table 3-6 Ruiru intake Weir Characteristics and Details

Characteristic	Detail	Remarks
Crest length (m)	24.0 m	Maximum available at site after allowing for intake chambers.
Height of weir (m)	3.5 m	Required to store the design daily maximum water service volume of 6,500 m^3/day (7,920 m^3 stored)
Off-take level	2039.00 masl	1.0 m above river bed
Invert level	2038.00 masl	Centre line level for the off-take pipeline
Design Water Level	2041.45 masl	0.05m below the crest level

Characteristic	Detail	Remarks
HWL U/S	2042.57 masl	Highest flood level upstream considering the 1 in 100 year flood flow of 217.5 m^3/s
HWL D/S	2039.07masl	Highest flood level downstream considering the 1 in 100 year flood flow of 42.2 m^3/s

Only Ruiru intake is discussed in this document as Mukuyu weir is an existing structure that currently does not need rehabilitation.

3.2.3 New Water Treatment Plant

The proposed water treatment plant takes water from Mukuyu and Ruiru intakes in an amount of 7,620 m^3/day. The following is a summary of the components proposed at the new WTP:

Table 3-7 Brief description of components designed at the new WTP

Component	Description
Aeration - Circular stepped cascade aerator	› 3 steps › Maximum weir perimeter = 19m and › Flow rate/m weir length of 20 m^3/h x m. › Cascade diameter rings range between 2m at the top to 4.4 m at the bottom of the tray.
Inlet chamber - stilling well	› Detention time = 1.25 minutes › Dimensions (LxWxH) = 2x2x1.6
Chemical Mixing Buildings	› PAC, alum, and soda ash building size = 60 m^2 footprint › Hypoclorite building size = 18 m^2 › **Dosing in the respective section of the report**
Flocculation basin	› Tapered flocculation via 3 compartments › **Further details in the respective section of the report**
Sedimentation basin	› Process Type = Sedimentation in Vertical tanks with Lamella › Settling Rate = 0.9 m/h › Detention Time = 2 hours › Plate L x W x t 2.5m x 1.5m, 5mm thick [t] › Surface Loading Rate = 18 m/h › Flow between Plates = Reynolds = 128, Froude = 0.0012 › length occupied by plates in basin = 12.83 m › Basin Design geometry = L: W ratio-Rectagular-1:1.5 › 4nr basins with Surface Area 20 m^2. › Distance Between Plates = 50 mm › Minimum number of Plates = 1,970 plates › Flow Velocity between plates = 1.44 m3/h › Basin dimensions = based on a detention period of 2 hours for a flow rate of 346 during 22hours of operation › Channel Covering = Precast concrete slabs › Sludge Removal = Pipe-400mm HDPE. › Fitted with Automation and controls
Filtration – 12 rapid sand filters	› Dimensions (each filter) = 3m x 4.5m › Flow rate = 7-8 $m^3/m^2/h$ › Layers = 100mm anthracite, 500mm sand, 300mm gravel
Backwashing system	› Process Type Gravity or Pump Flow= 232 m3/ hr

Component	Description
	› backwash rate of 50 m3/m2/h in 7-8 minutes › Estimated volume of Backwash 60 m^3 for 1 Filter. › Estimated size of Backwash manifold = 250mm › **Further details in respective chapter**
Treated water flow measurements	› Electromagnetic meter Woltman type
Launders and flow distribution Channel	› placed on top of lamella settlers at least 125mm › flow between 100-200 m3/m- length of weir per day › V-notches 50mm deep and 150-300mm › settled water distribution channel is designed to a maximum depth of 0.9 m
Sludge Removal and Treatment	› sludge thickeners and sludge drying beds › filter wash waste recycled back to inlet › sludge from basins discharged to the sludge drying beds.
SCADA at	› Flow Measurement › Chemical Dosage › Flocculators Control › Sedimentation Control › Filters › Chlorine Dosing › Recirculation System
Other facilities	› access road and parking › Landscaping and green spaces. › storm water drainage › fencing and security › fire safety equipment and systems › designated area for equipment maintenance, workshops, and service facilities

3.2.4 Raw Water Gravity Mains and Transmission Lines

The raw water gravity mains from Mukuyu and Ruiru intake to WTP are sized as follows:

Table 3-8 Brief description of raw water mains sizing

Component	Description
Mukuyu weir to new WTP	› L = 4.15 km › Hdrop = 39m › D ~160 mm, HDPE
Ruiru intake to new WTP	› L = 6.05 km › Hdrop = 27m › D ~ 350 mm, Steel
Transmission from WTP to tank	› D=400mm, Steel › L=0.077km
Transmission 4 from Ngeteti to tank	› D= 63mm, HDPE › L=0.234km
Transmission 5 from Ngochi to tank	› D= 90mm, HDPE › L=0.248km
Transmission 6A from Thakwa to tank	› D= 75mm, HDPE › L=0.100km

Component	Description
Transmission 6B from Thakwa to tank	› D= 50mm, HDPE › L=0.064km
Transmission 7 from Mukua to tank	› D= 50mm, HDPE › L=0.079km
Transmission 8 from Kiairia to tank	› D= 50mm, HDPE › L=0.332km
Transmission 9 from Kianjogu to tank	› D= 40mm, HDPE › L=0.188km
Transmission 10 from WTP to tank A	› D=125mm, HDPE › L=2.06km

3.2.5 New Storage Reservoirs

Additional storage will be provided with the following maximum capacities:

Table 3-9 List of tanks in Githunguri with capacities

Nr.	Location	Existing volume (m^3)	New Volume (m^3)
1	WTP Tank	None	3,600
2	BH-1	24	500
3	BH-2	24	250
4	BH3	24	500
5	Getehi	None	250
6	Thakwa	10	250
7	Balancing tank	None	250
8	Ngochi	24	250
9	Mukua	24	250
10	Kiairia	None	250
11	Kianjogu	24	250

The old tanks will be decommissioned. Applicants are advised that capacities of these storage reservoirs may decrease by tender stage.

3.2.6 New sewer networks

The catchments and sublocations considered are Githunguri, Githunguri-Kanjai and Githunguri-Kanjai-Kiairia with a length of pipeline of 30 km and diameters between 150 mm and 300 mm. All of these networks converge to the new wastewater treatment plant site.

3.2.7 New wastewater treatment plant

The treatment operations and processes include pre-treatment (screening, grit removal, flow equalization, flow measurement), primary clarifiers, trickling filters, intermediate clarifiers and chlorination. Sludge management includes blending, gravity thickening, anaerobic digestion and drying beds, the resultant biogas being initially used for heat recovery.

The inlet works will be constructed for the ultimate flows in 2047 while the subsequent treatment units will initially be constructed half their capacities (2037).

The new plant has average and peak flows of 4,231 m^3/day and 412 m^3/h respectively all sized for 2047 loads.

Components-wise the wastewater treatment plant is catered with the following:

Table 3-10 Concept Design of Wastewater and Sludge Treatment Improvement Measures

Component	2037	2047, Extension of 2037
Preliminary and Primary Treatment	› Two coarse/ intermediate screens;	› Two coarse/ intermediate screens
	› One fine screen;	› One fine screen
	› Two coarse screens for by-pass;	
	› Two aerated grit and grease chambers;	
	› One equalization basin;	
	› Flow measurement flume; and	
	› One primary sedimentation tank.	› One primary sedimentation tank
Secondary treatment	› Intermediate pumping station and recirculation pumps;	› Recirculation pumps
	› One trickling filter;	› One trickling filter
	› One secondary clarifier;	› One secondary clarifier
Post Treatment (2047 load)	› Gas chlorination plant with one contact tank;	
	› Post aerator;	
	› Flow measurement flume.	
Sludge Treatment	› One gravity thickener;	› One gravity thickener;
	› One anaerobic digester;	› One anaerobic digester
	› One gas holding tank;	›
	› Flare;	›
	› Boiler station and heat exchangers; and	› Boiler station and heat exchangers
	› 11 sludge drying beds	› 8-10 sludge drying beds
Others	› Buildings including offices, laboratory, staff facilities, workshops, storage. › Access and drainage › SCADA system with main station, operator station and printers. › Emergency generator	

The potential energy generation from the biogas tank is 12,219 kWh per month if the tankered flow is factored in.

3.3 Miscellaneous Works and Supply of Goods Component

Further details will be provided to the selected bidders at tender stage via Employer's Requirements with the exception of the office, detailed below.

GIWASCO offices are expected to cater for the 48 members of staff of GIWASCO. The indicative overall footprint of the proposed building is around 608 m². It is anticipated that the building will be provided with parking for 10 vehicles and 30 motorbikes. The building shares compound with the Githunguri court of law.

It is desired that the selected bidder will provide an innovative solution in terms of energy self-reliance and environmental friendliness for this office.

SECTION VIII – CONSTRUCTION PERIOD

The construction period is 36 months and 24 months defects notification period and Technical Assistance.

SECTION IX – SITE DATA

This chapter details the site data for rehabilitation works and new assets infrastructure works. Northing-Easting coordinates for each of the sites are indicated at the end of the chapter in the points of interest section.

1 Thika town

1.1 Service area and sublocations

The town is located in Kiambu County, 40 km north-east from Nairobi. The Municipality borders Muranga County to the North, Kangundo Sub-County to the South, Gatundu to the West and Machakos County to the East. In the Figure below, the project location is highlighted in yellow. The project area lies between 1,600-1,150 metres above sea level.

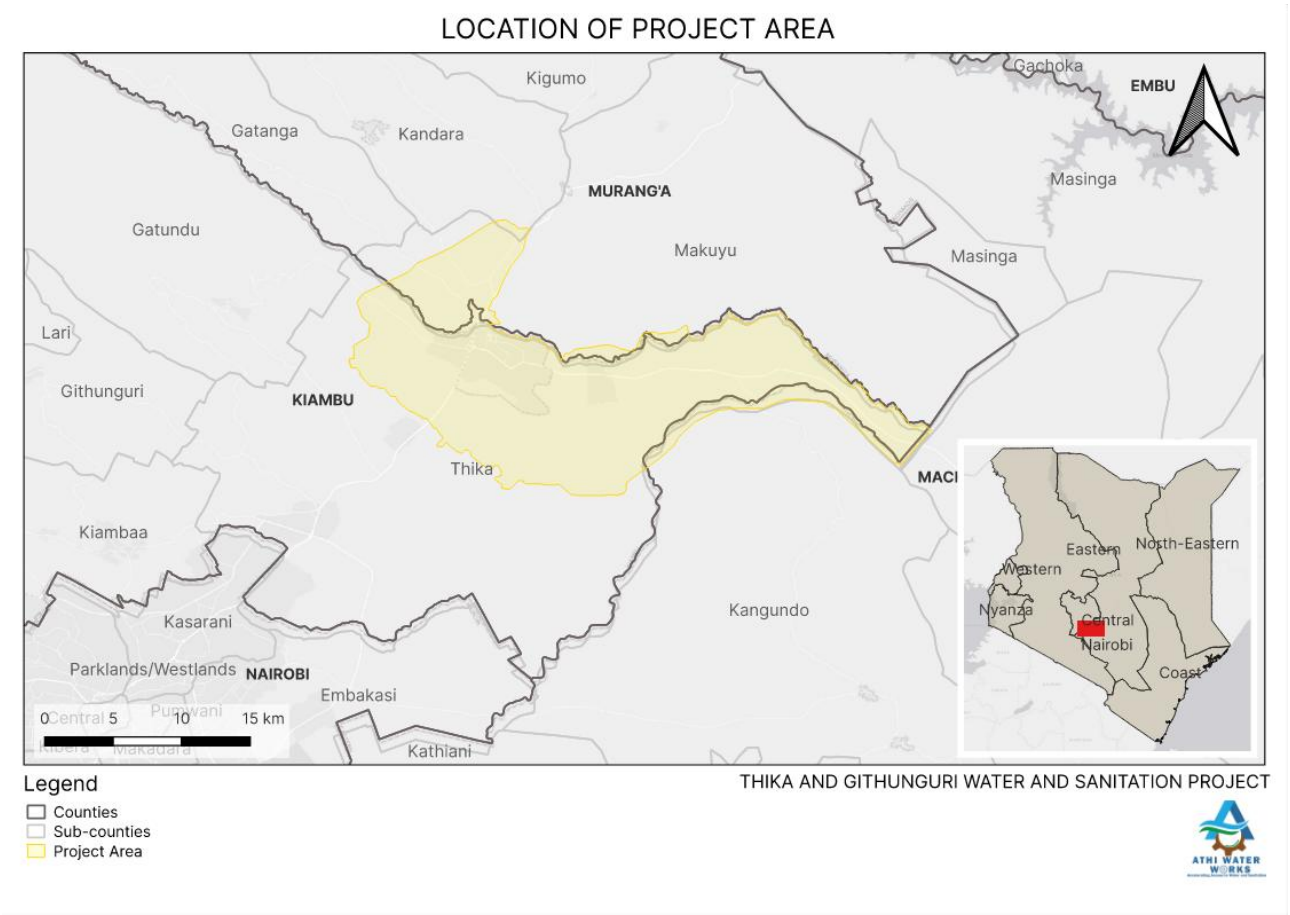


Figure 1-1 Location of Project Area

Thika's service area and its sublocations are shown below for the applicants' convenience:

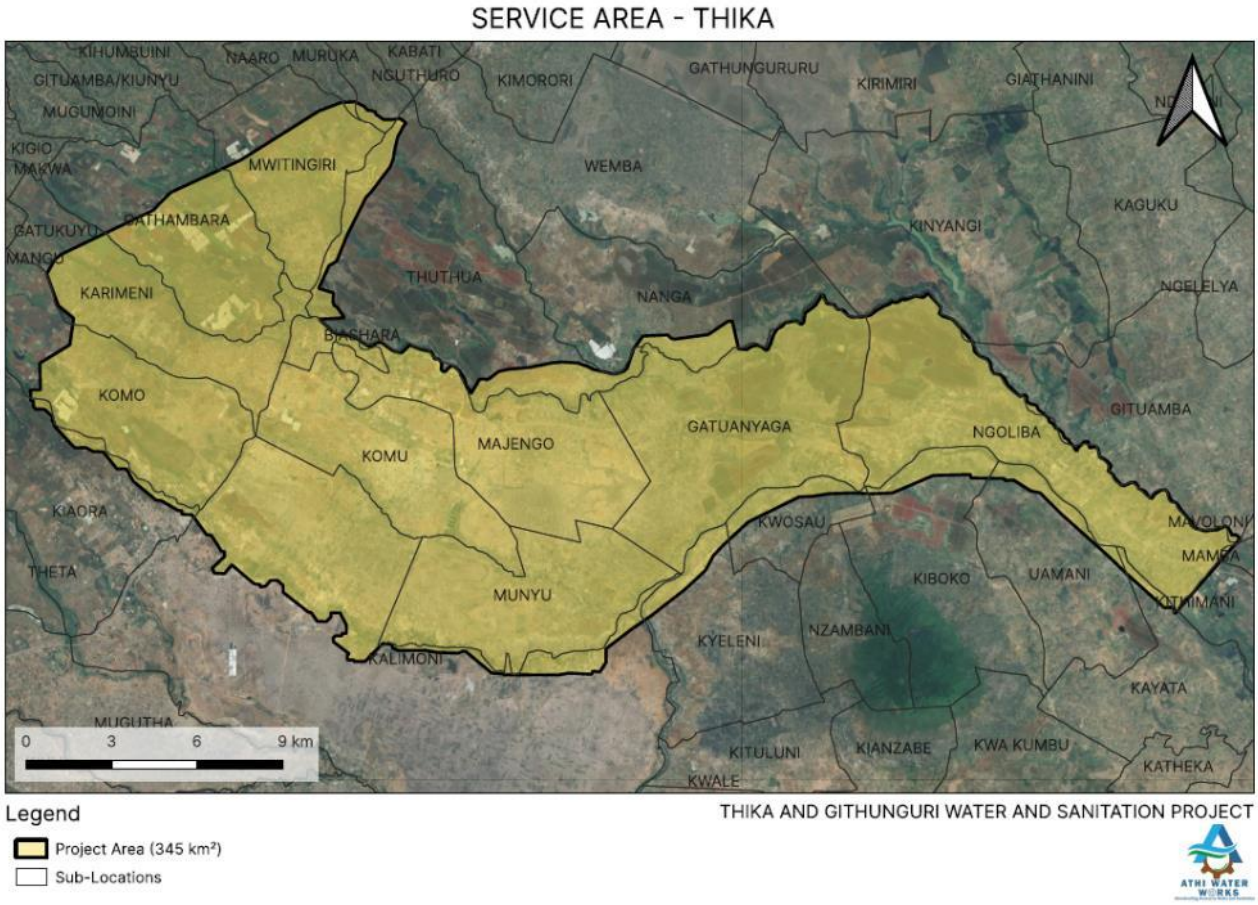


Figure 1-2 Thika town service area

1.2 Rehabilitation component site data

The rehabilitation component of the works is located on sites that are in the possession of Thika Water and Sewerage Company (THIWASCO). Access to site concerning existing assets is not an issue.

The existing water distribution networks, old reservoirs, existing sewerage networks (with a view to sewers inspection and cleaning training component), existing Kiganjo wastewater treatment plant and other assets are shown below for the applicants' convenience.

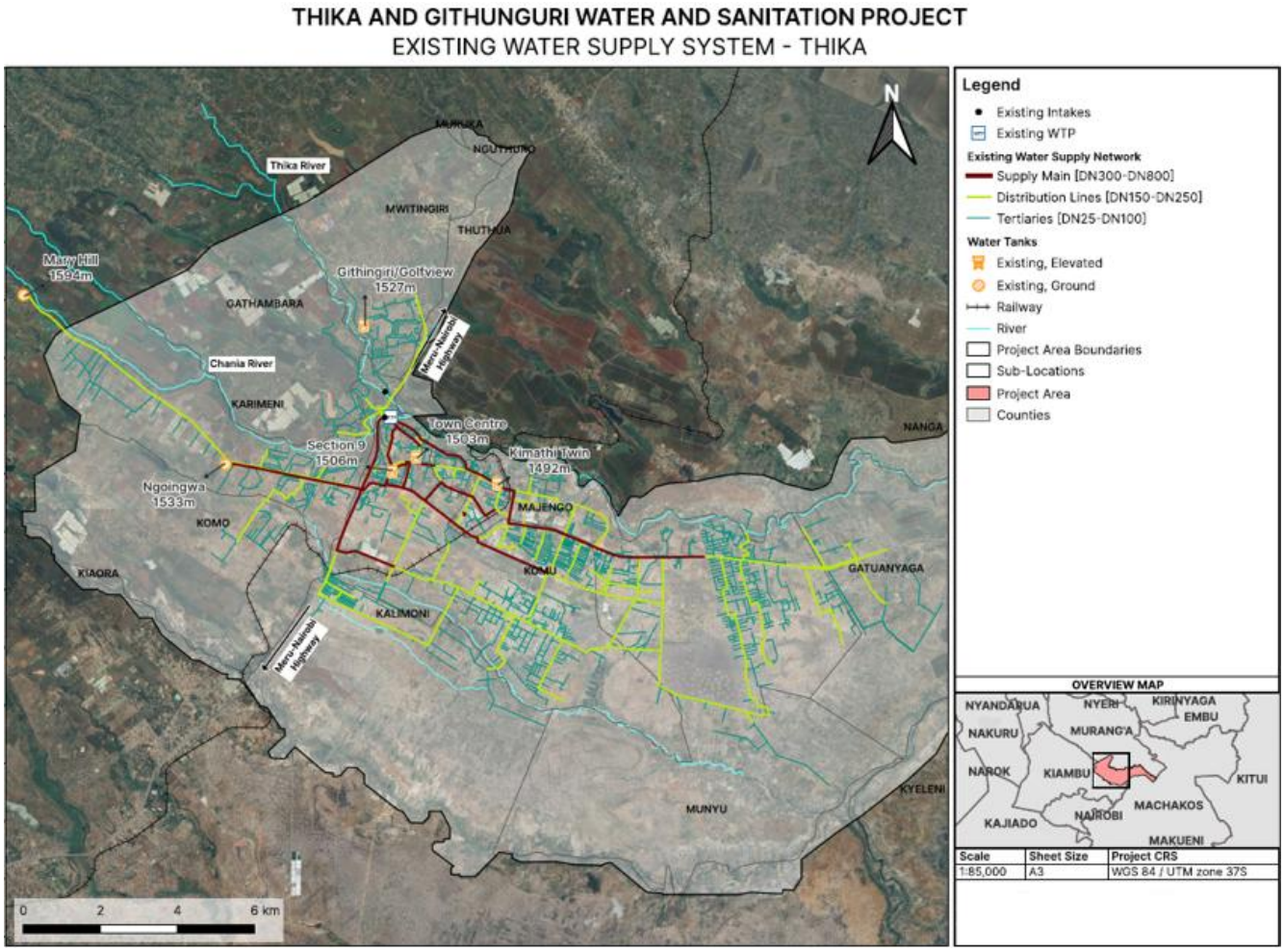


Figure 1-3 Existing water supply Thika

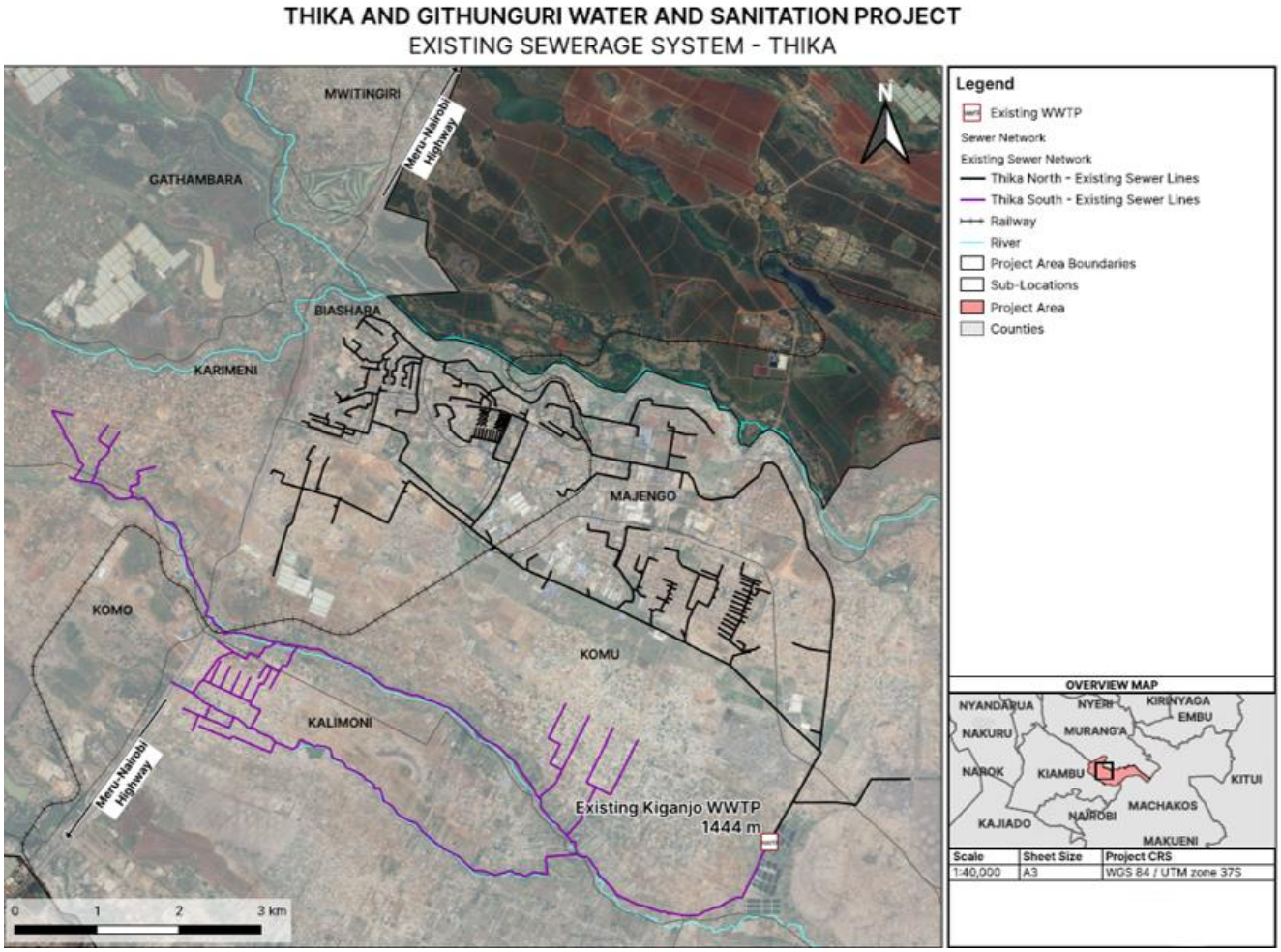


Figure 1-4 Existing sewerage collection and treatment Thika

1.3 New infrastructure assets component site data

1.3.1 Thika 3A dam and raw water main

Thika 3A dam is to be located on Thika River, at the confluence with River Kiama. This site can be accessed through Thika Kandara all-weather road. The dam is to be constructed in private land.

Raw water pipelines will convey the water from Thika 3A dam to the new water treatment plant. The mains are to be constructed in a combination between public and private land.

The applicant will consider within their EOI that they have to provide their own access roads to site both for the dam and raw water mains.

The location of Thika 3A dam (and raw water main) is shown below for the applicants' convenience.

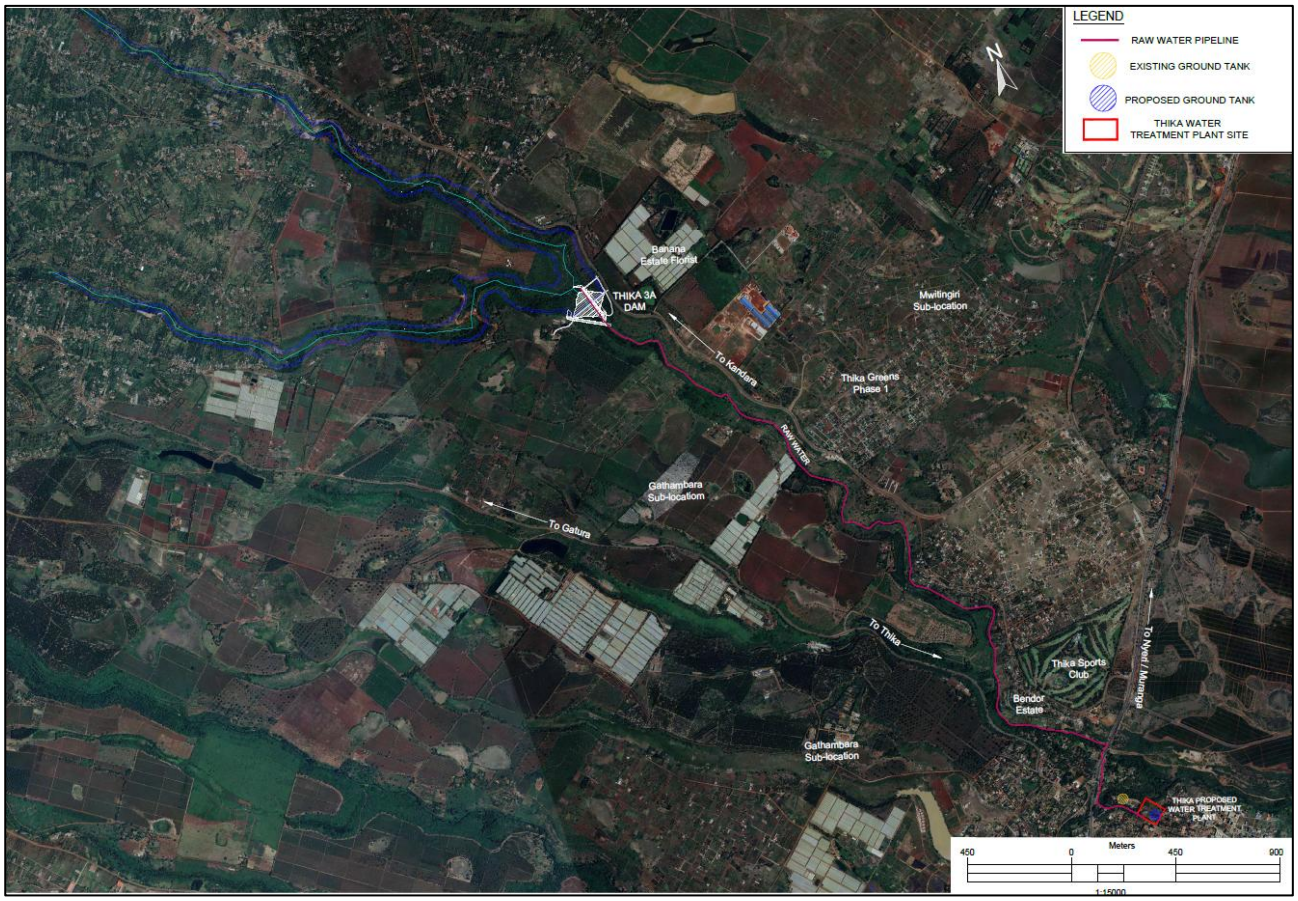


Figure 1-5 Thika 3A dam and its raw water transmission main leading to the new WTP.

1.3.2 New water treatment plant

The new water treatment plant is located in THIWASCO's compound adjacent to the existing water treatment plant. A layout of the new WTP is below:

Figure 1-6 New WTP 70MLD / Train Footprint

1.3.3 Treated Water Transmission Mains

The treated water will be transmitted from the newly constructed treatment plant to the various water tanks via four transmission mains (TMs). Specifically, TM1, connecting to the existing Line C, will transport the treated water to Ngoingwa Water Tank. Moreover, through TM4, water is boosted from the existing Ngoingwa Tank site to Mary hill, where it is later gravitated to parts of Komo and Karimenu, as shown below. Moreover, TM2A will branch off to Kimathi Twin Water Tanks, TM 2B connects the WTP to Section 9 Water Tank, and TM 2C conveys treated water to Town Centre Water Tank. Finally, TM3 will convey water from the new WTP to the Githingiri/Golfview Tank.

Figure 1-7 Transmission Lines from the WTP

1.3.4 New Pumping Stations, Reservoirs and Distribution Networks

Estimated locations of the new pumping stations and reservoirs are indicated at the end of the chapter in the points of interest section.

Maps of the above were presented in the figure above. Updated layouts with the distribution networks will be provided to the selected applicants at tender stage within the Drawings.

1.3.5 New sewers and wastewater treatment plant at Pilot

Layouts of the sewage collection networks will be provided to the selected applicants at tender stage within the Drawings.

It is to be noted that the future pipe laying works will entail major transport infrastructure crossings in - Thika-Garissa expressway; Thika superhighway and at least one railway crossing with a projected trunk main.

It is therefore advisable that the applicants provide pipe-jacking and microtunelling accounts within their expressions of interest since either of these technologies are a certitude.

Pilot wastewater treatment plant is in the vicinity of an operational stone quarry. In this regard the selected Contractor will have to carry out his own topographical investigations because the landscape is changing due to exploitation of the stone quarry near the site.

As an additional constraint the sludge drying beds projected for 2047 are a tight fit on Pilot's available/surveyed land and in this regard the selected Contractor will have to carry out his own topographical investigations to arrange the best fit of the drying beds.

The location of Pilot WWTP is shown below for the applicants' convenience.

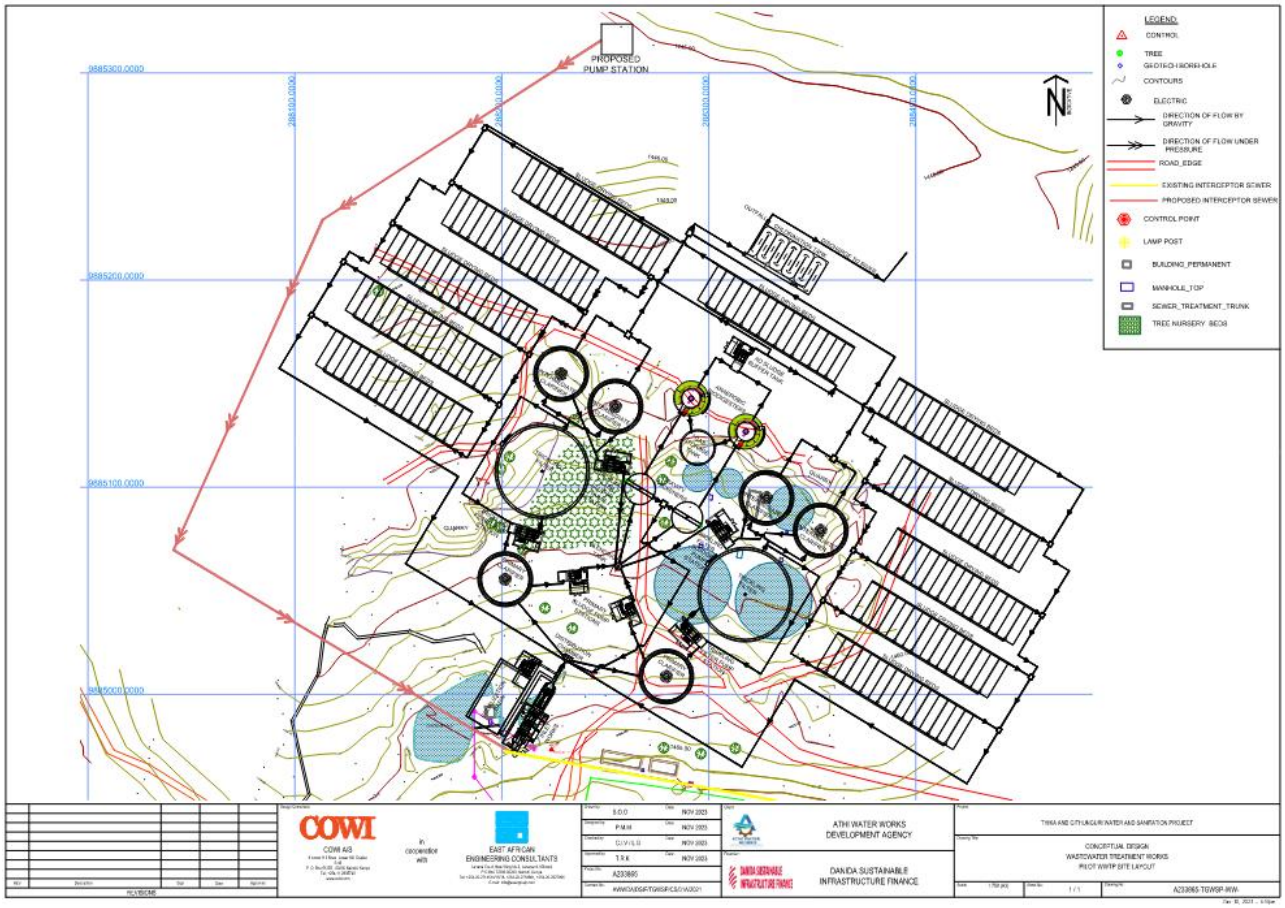


Figure 1-8 Thika Pilot wastewater treatment plant location

1.4 Thika points of interest

Below, the list of all infrastructure assets for the applicants' own layouts.

Table 1-1 List of points of interest in Thika with coordinates

Nr.	Point of Interest	Existing	Proposed	Latitude	Longitude
1	WTP		X	-1.027775	37.069733
2	WTP	X		-1.026784	37.068131
3	Thika 3A Dam Site		X	-0.974952	37.041167
5	WTP Rectangular Storage Reservoir	X		-1.026796	37.068604
6	WTP Circular Storage Reservoir	X		-1.026457	37.067932
7	Town Centre Storage Reservoir	X		-1.035581	37.073967
8	South Tank Storage Reservoir		X	-1.069706	37.075563
9	Section 9 Storage Reservoir	X		-1.039374	37.068315
10	Ngoingwa/Chania Ward Storage Reservoir	X		-1.037883	37.029639

Nr.	Point of Interest	Existing	Proposed	Latitude	Longitude
11	Mary Hill Storage Reservoir	X		-0.998202	36.982620
12	Makongeni Storage Reservoir	X		-1.05345	37.105597
13	Kimatus Storage Reservoir	X		-1.019867	37.060817
14	Kimathi Twin Storage Reservoir	X		-1.042418	37.092972
15	Gandutu/Landless Storage Reservoir	X		-1.067014	37.151053
16	East Tank Storage Reservoir		X	-1.059534	37.136470
17	Bendor Storage Reservoir	X		-1.017172	37.064229
18	Golfview Storage Reservoir	X		-1.01263	37.068305
19	Kilimambogo Storage Reservoir	X		-1.06266	37.23722
20	Pilot WWTP		X	-1.040042	37.096885
23	Kiganjo WWTP	X		-1.089540	37.115090

2 Githunguri town

2.1 Service area and sublocations

The proposed project target area is located in Kiambu County within the constituency of Githunguri. The area is traversed by Komothai, Bathi, Wanjura, Ruiru, Kimaiti, Matimbei, Kasima and Nduriria rivers which merge and drain into the larger Athi rivers. Part of the rivers drain into the Ruiru dam. The project area lies to the South and to the East of the Aberdare ranges. The Project area is highlighted in yellow, in the figure below.

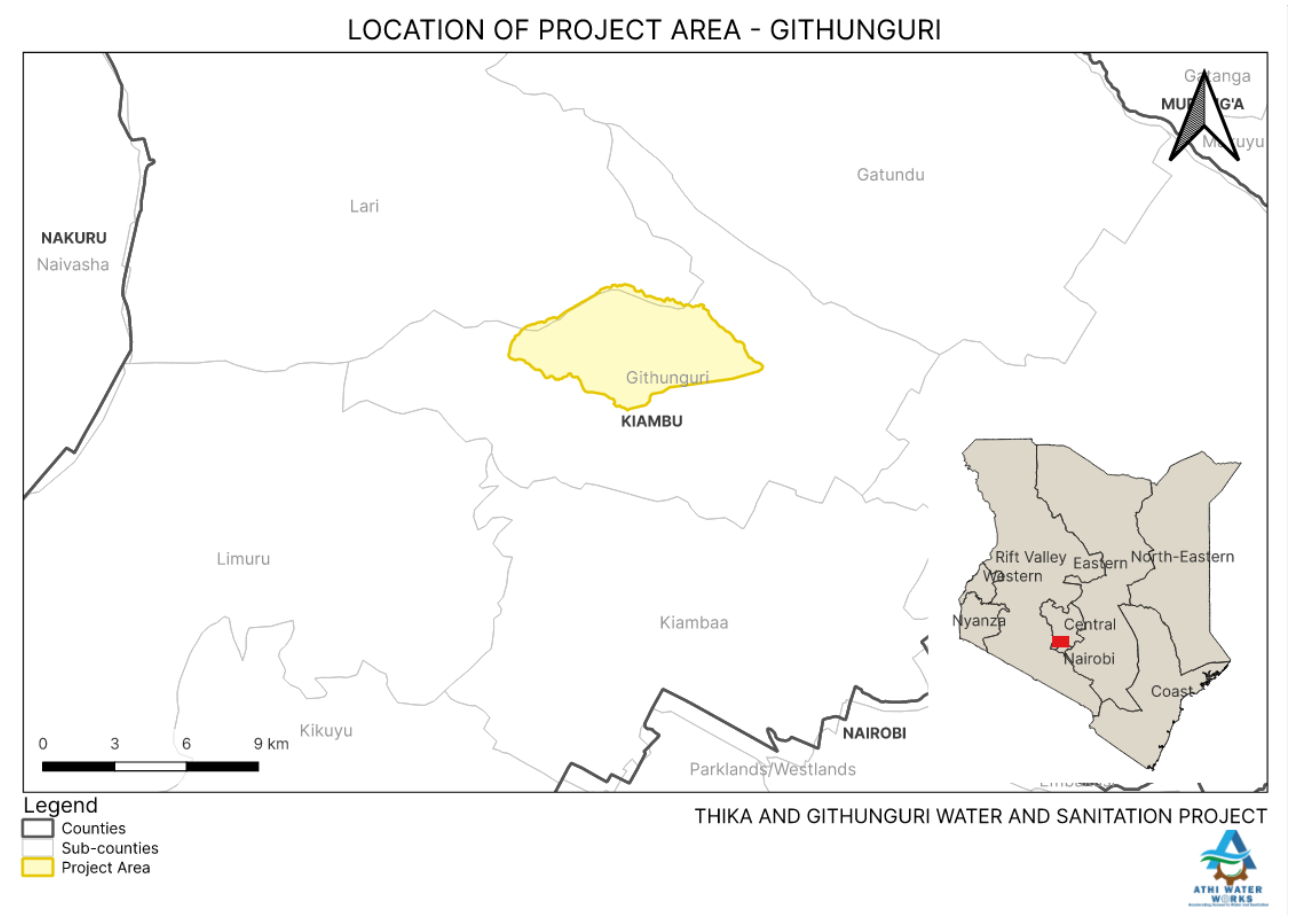


Figure 2-1 Location of the Project

Githunguri's service area and its sublocations are shown below for the applicants' convenience:

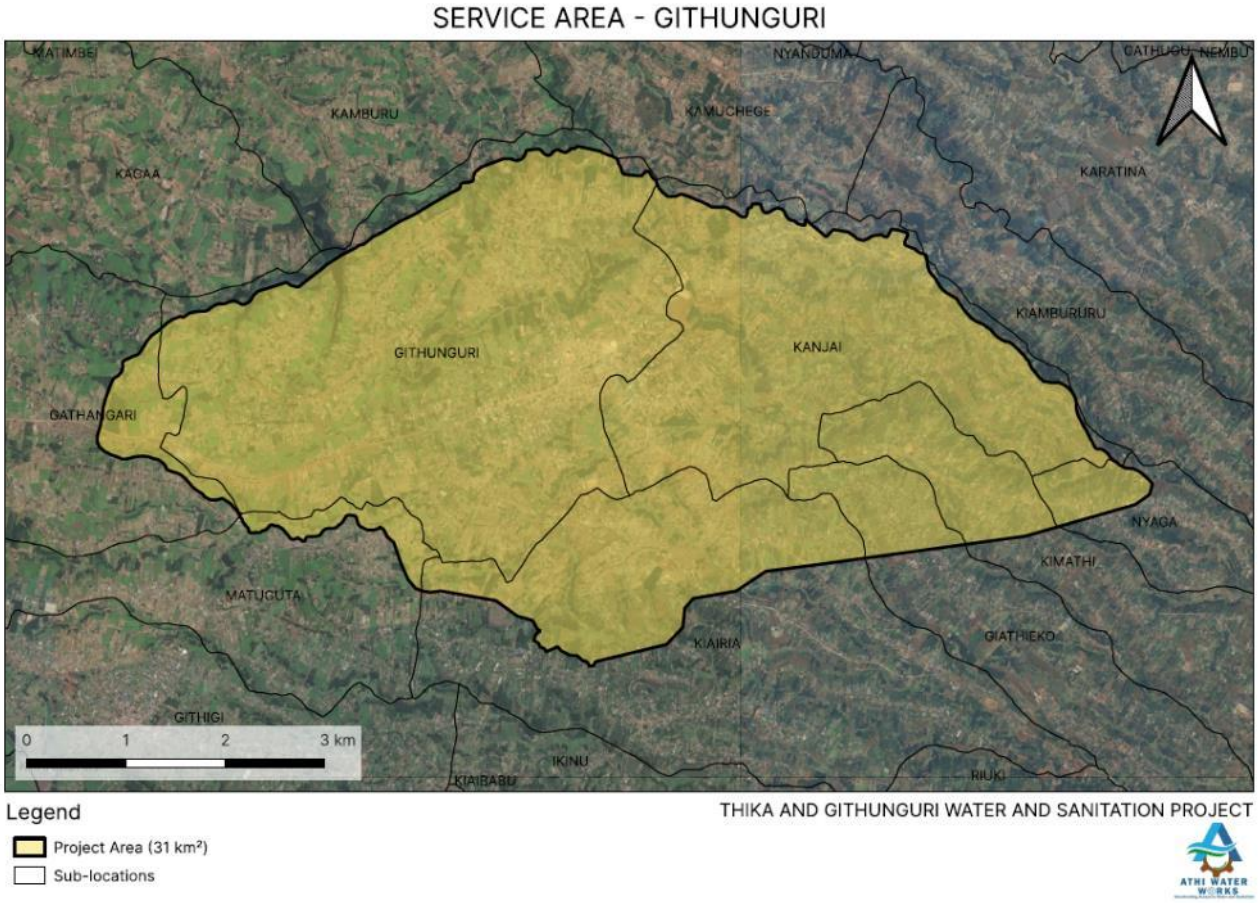


Figure 2-2 Githunguri service area

2.2 New water infrastructure assets site data

2.2.1 Boreholes and pumping, chlorination and solar arrangements

The figure below represents the locations of all Githunguri's boreholes, both existing and proposed.

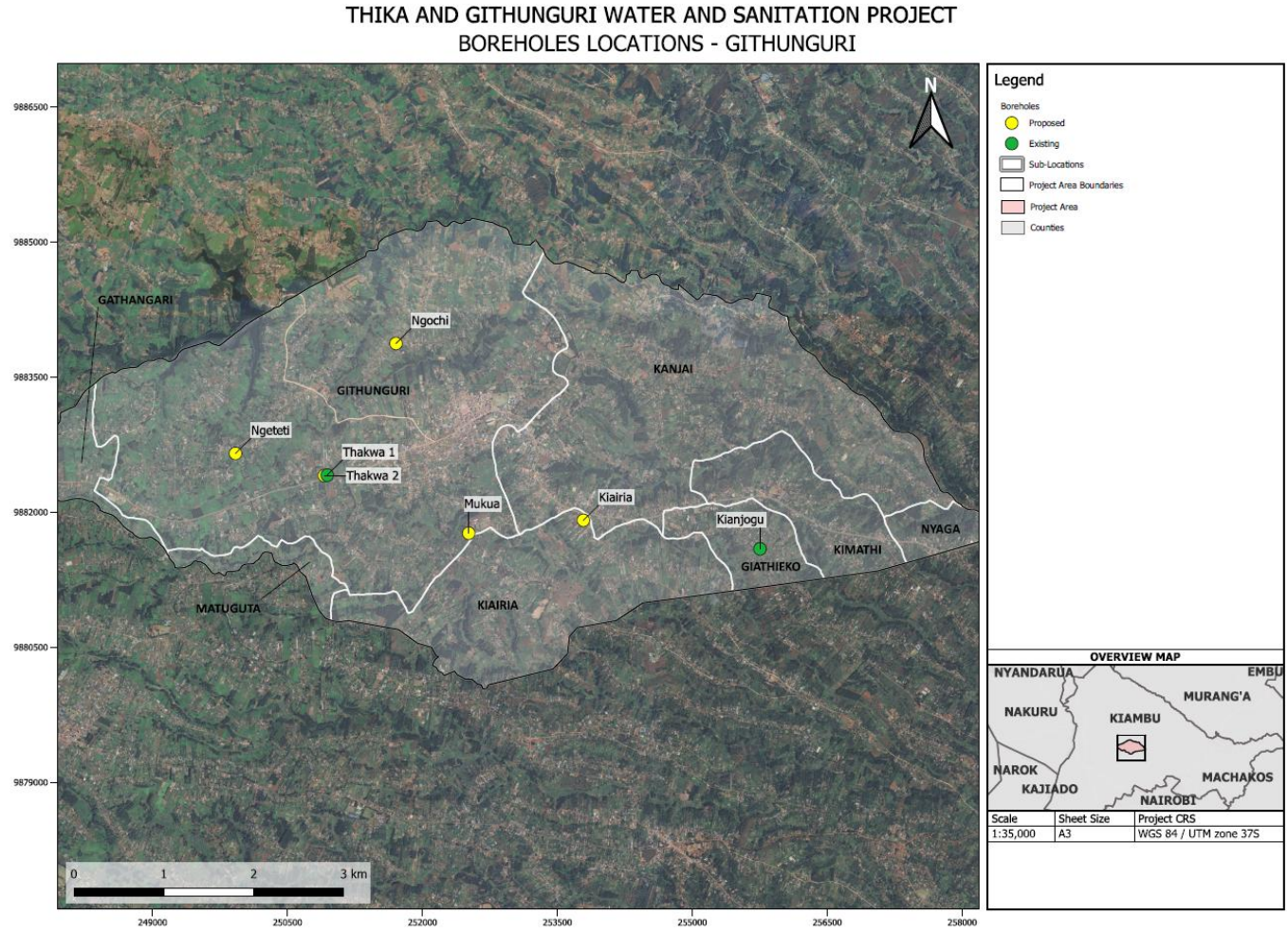


Figure 2-3 Proposed and existing boreholes locations in Githunguri

2.2.2 Weir intakes – Mukuyu and Ruiru and their raw water transmission mains

Surface water will be drawn from Mukuyu and Ruiru rivers via the existing weir at Mukuyu and a new weir at Ruiru and in turn conveyed to the new water treatment plant. Mukuyu weir at this stage does not need any rehabilitation works and it is not envisaged that it will by the tender stage.

The transmission pipelines are to be constructed in a combination between public, private and Kenya forest services administered land.

The figure below represents the indicative locations for the two intake sites and their raw water pipelines.

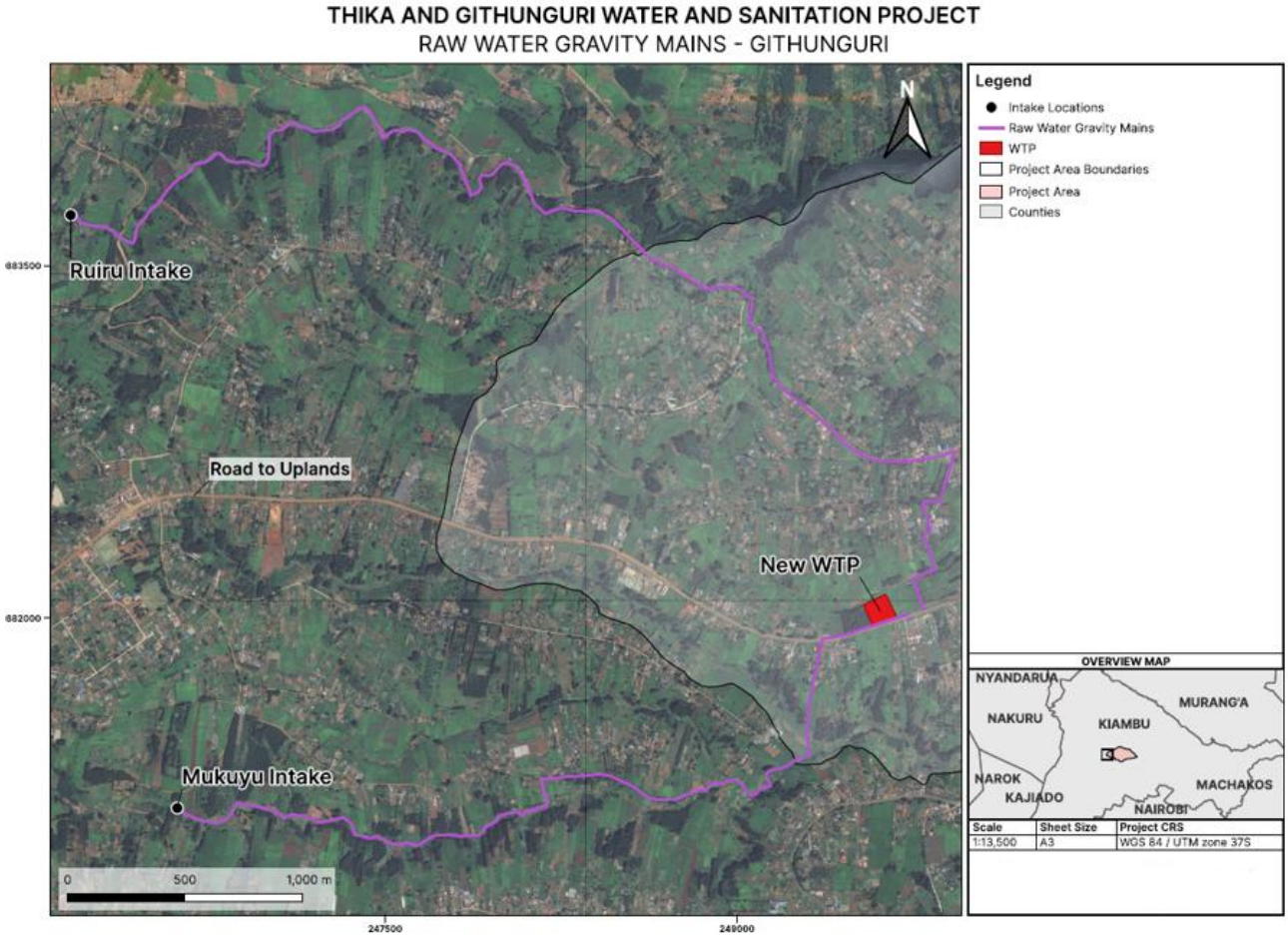


Figure 2-4 Intakes locations and raw water main routes in Githunguri

2.2.3 New Water Treatment Plant

The new water treatment plant is located in private land near Thakwa site.

The plot accommodates two treatment trains of 7620 m³/day but only one is needed for the Project. An indicative layout of the new WTP is below:

Figure 2-5 New water treatment plant indicative layout - Githunguri

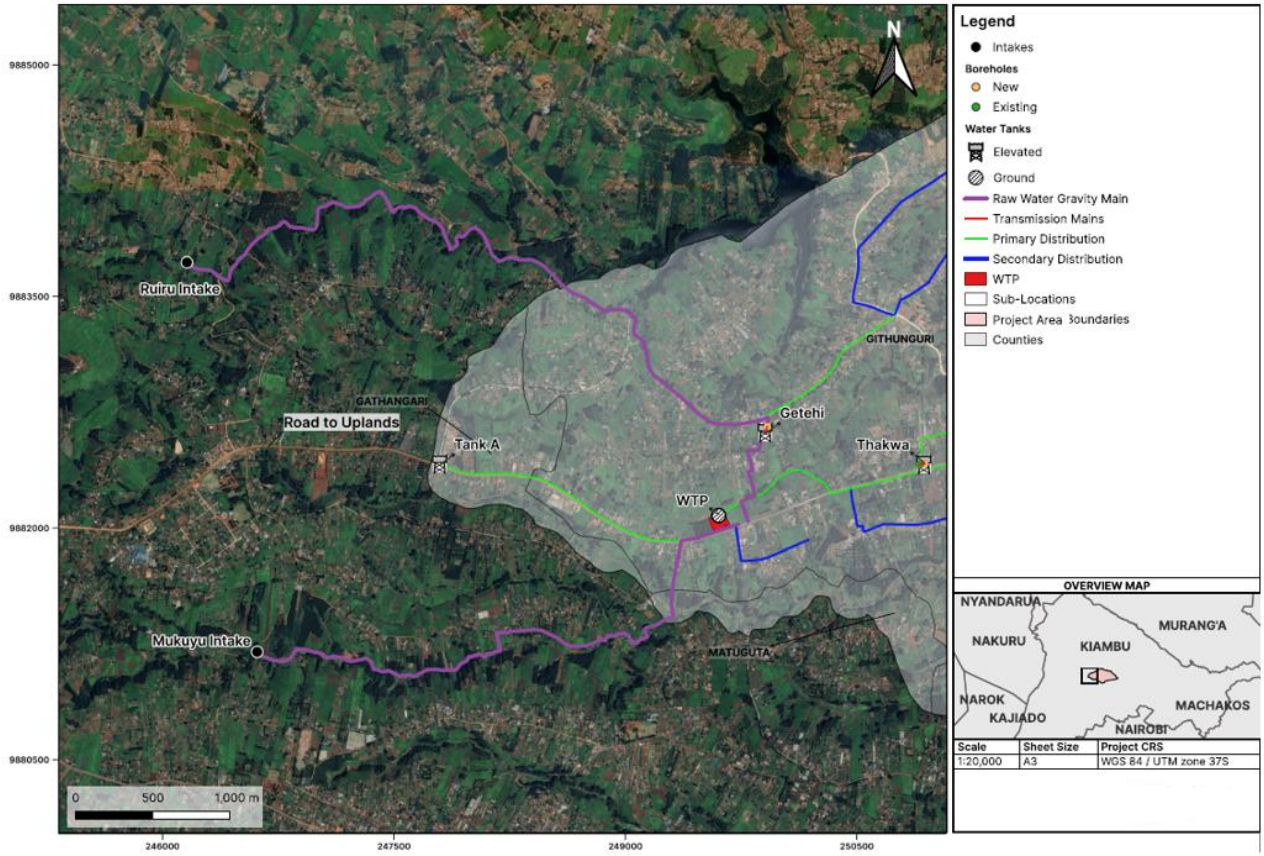
2.2.4 Reservoirs and Distribution Networks

Indicative locations of the new reservoirs as well as a provisional layout of the distribution networks are indicated in the maps below.

The layout of the distribution networks will be finalised at tender stage and included in the Drawings.

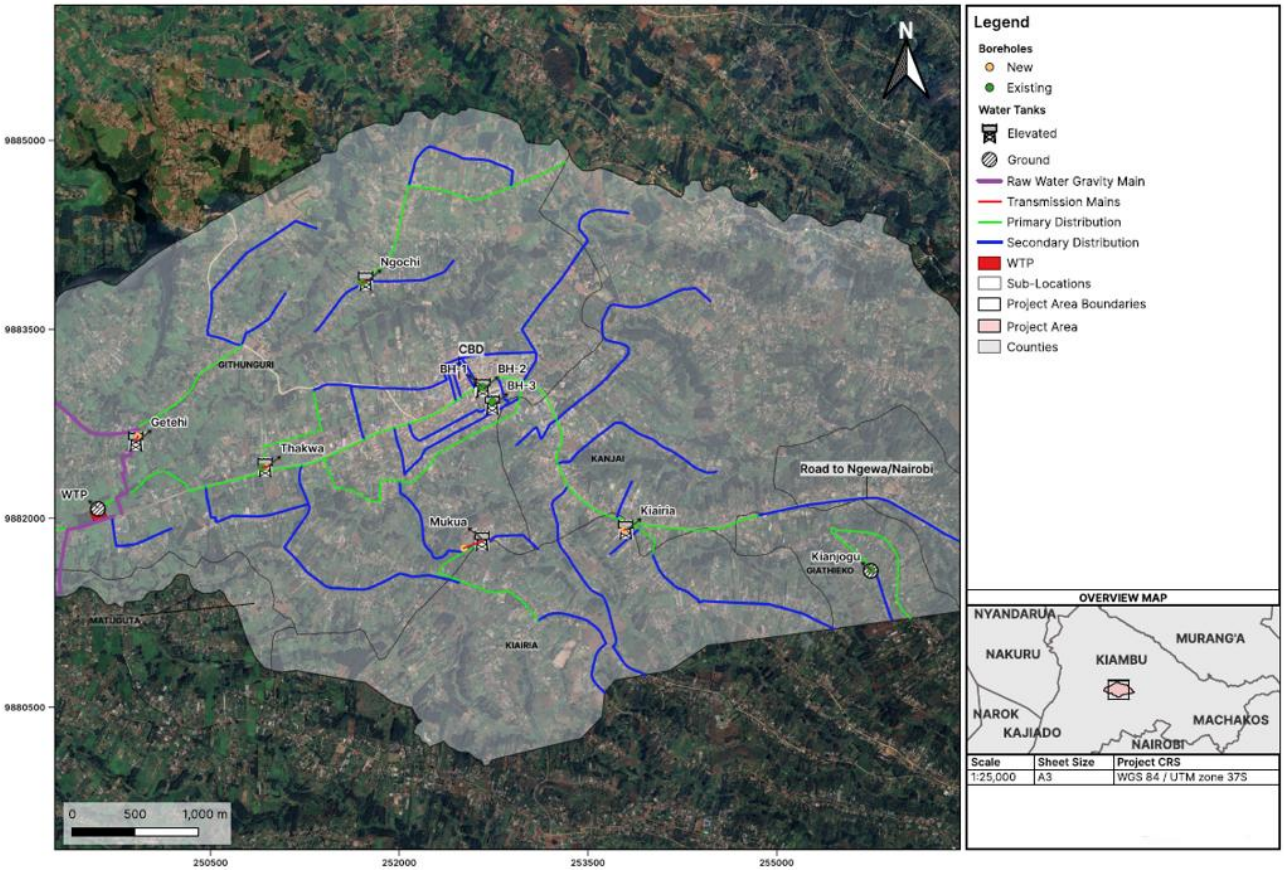
THIKA AND GITHUNGURI WATER AND SANITATION PROJECT

WATER SUPPLY SYSTEM - GITHUNGURI WEST



THIKA AND GITHUNGURI WATER AND SANITATION PROJECT

WATER SUPPLY SYSTEM - GITHUNGURI CENTRAL



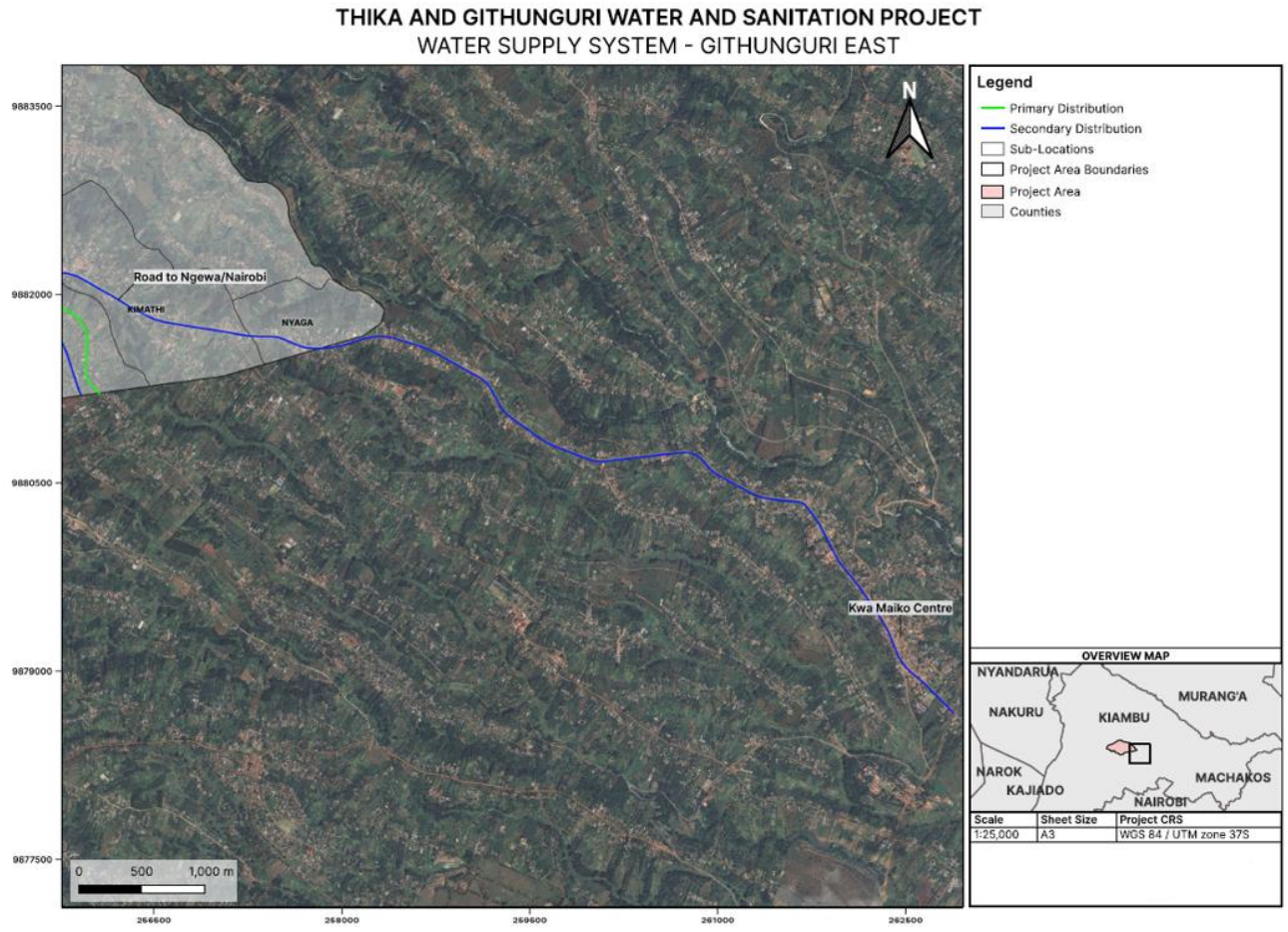


Figure 2-6 Indicative layouts of water supply system in Githunguri

2.3 New wastewater infrastructure assets site data

2.3.1 New sewers and wastewater treatment plant

Sewage collection networks layouts will be provided to the selected applicants at tender stage within the Drawings.

Topography in Githunguri is formed mostly by ridges and, outside the CBD roads are elevated and houses located at a much lower elevation than these roads. As pumping would be entirely uneconomical, some trunk mains are provisioned to be laid in valleys with mixed land ownership in order to ensure the maximum number of connection and gravity flow towards the wastewater treatment plant.

There are no major crossings that require trenchless methods as opposed to Thika. Location of the wastewater treatment plant and the provisional layout of the sewer networks are indicated in the map

below.

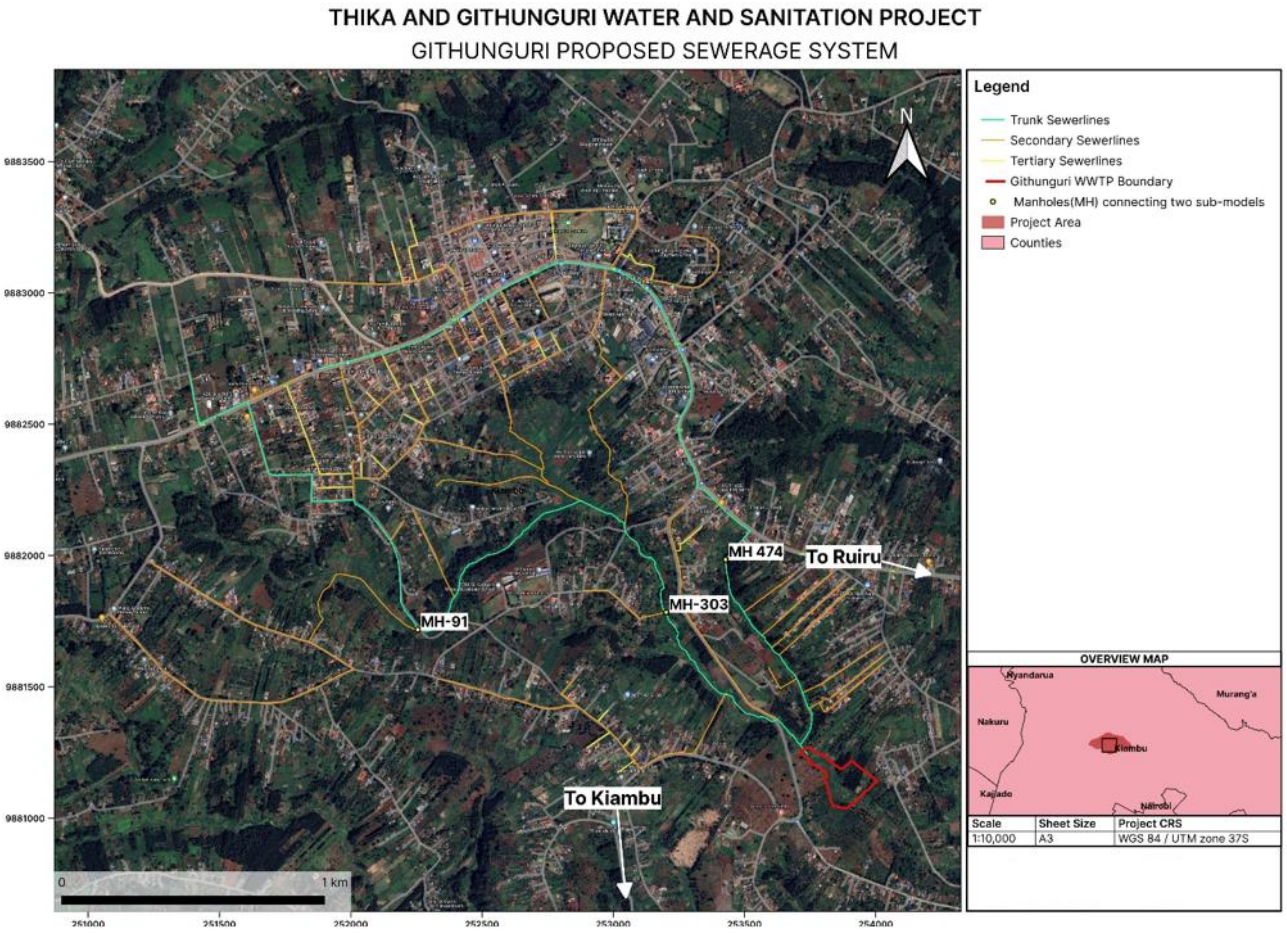


Figure 2-7 WWTP Location and indicative layout of the sewer network in Githunguri Project Area

2.4 New GIWASCO office

The proposed GIWASCO offices site is located on the premises of Githunguri law courts. The land plot became available and was surveyed in August 2023. The expected land size is around 3,500 m², including all facilities and amenities.

The location of the offices is shown in the figure below.

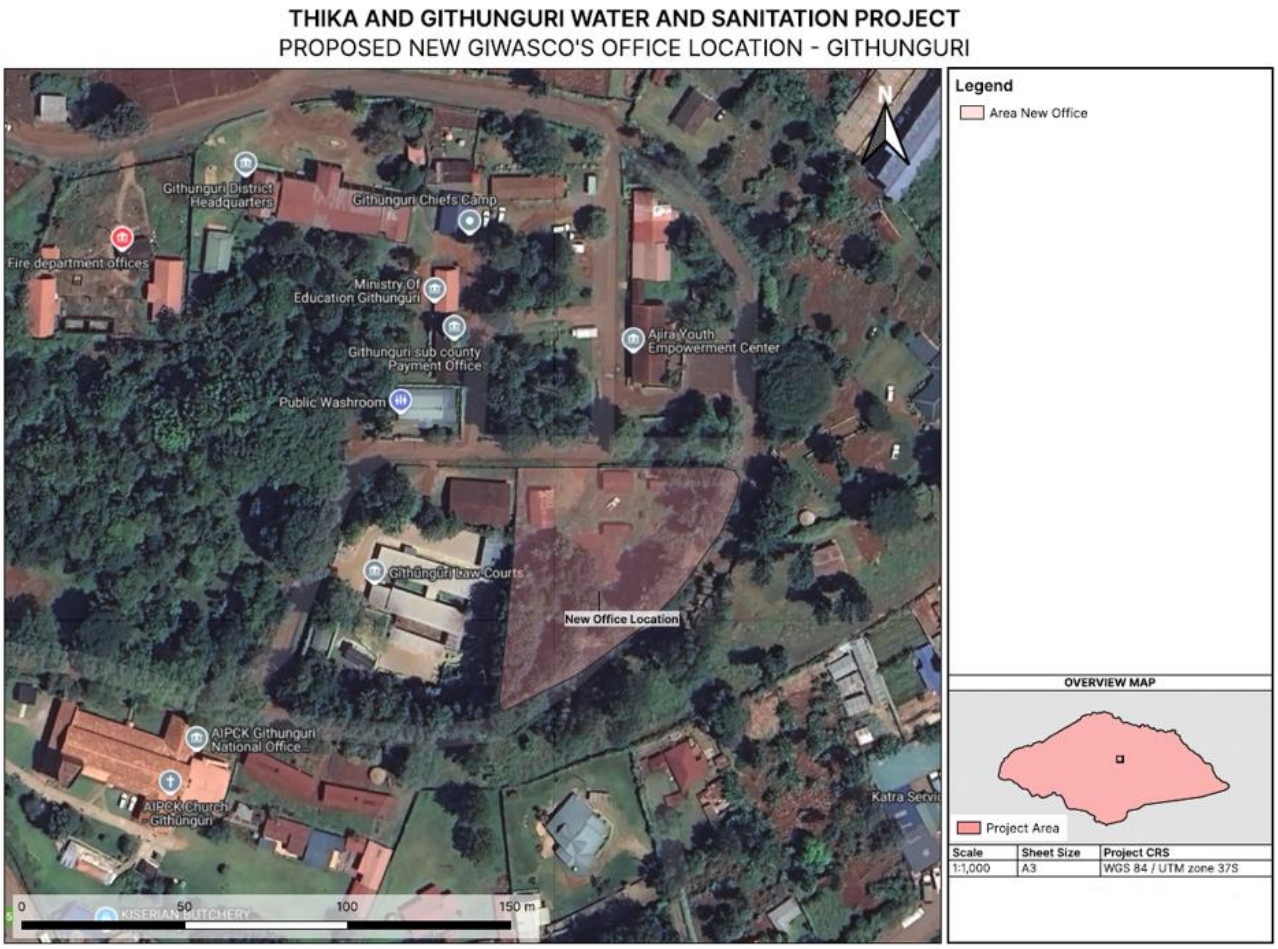


Figure 2-8 GIWASCO Offices Location

2.5 Githunguri points of interest

Table 2-1 List of points of interest in Githunguri with coordinates

Nr.	Point of Interest	Existing	Proposed	Latitude	Longitude
1	WTP		X	-1.065832	36.750552
2	Ruiru Intake		X	-1.050829	36.718172
3	Mukuyu Intake		X	-1.074092	36.722946
4	WTP Storage Reservoir		X	-1.065820	36.751000
5	Storage Reservoir	X		-1.057389	36.777371
6	BH-1 Borehole	X		-1.057398	36.777447
7	BH-2 Borehole	X		-1.057381	36.777403
8	BH-3 Borehole	X		-1.058429	36.778121
9	Thakwa Borehole	X		-1.063089	36.761939
10	Kianjogu Borehole	X		-1.070589	36.799786
11	Getehi Borehole		X	-1.060908	36.752800
12	Mukua Borehole		X	-1.070542	36.775764
13	Kiaria Borehole		X	-1.067596	36.787638
14	WWTP		X	-1.073131	36.786972

Nr.	Point of Interest	Existing	Proposed	Latitude	Longitude
15	New Office		X	-1.056736	36.782621

SECTION X – OTHER DATA

The applicants may wish to familiarise themselves from this early stage in the procurement process with other relevant data such as Project core values and Project stakeholders

1 Project core values

The core value of the Project remains to improve quality of life, health and livelihoods of people as well as the environment in the towns of Thika and Githunguri by improving access to water and sanitation, a recognized human right.

This is reflected not only during the course of the works but also during all stages of the procurement process. All participants to the procurement process will consider the following guiding principles:

1 Water to the poorest is the first priority

2 IFC performance standards are to be adhered to during the course of the construction works[10]

3 Life cycle cost must be a consideration of the applicants' EOIs and later, an integral part of the selected applicants' proposal with a core focus on:

- Cost effectiveness of energy and water efficiency
- Green technology e.g., energy efficiency/Use of renewable energy
- Innovation and state of the art works

[10] https://www.ifc.org/content/dam/ifc/doc/mgrt/ifc-performance-standards.pdf

2 Project stakeholders

It is important for the applicant to understand the entities and stakeholders involved in the Project that may or may not influence either the Works or Progress thereof. There are four categories of stakeholders on the Project:

Category A stakeholders with high interest and high influence involved in activities related to consultation, collaboration, and delegation of responsibilities.

Category B stakeholders with low interest but with large influence that have the potential to oppose the project intervention.

Category C Stakeholders with high interest but with small influence likely to be closely involved in the Project and with the potential to be empowered with Project responsibilities.

Category D Stakeholders with low interest and small influence unlikely to be closely involved in the Project.

Table 2-1 Stakeholder's details

Stakeholder	Area of Interest	Project Phase	Cat.
AWWDA, DSIF, WSPs, COWI	Project implementation	All phases	A
Environmental department	Environmental monitoring	All phases	B
Local Administration	Community mobilization Local impacts & opportunities	All phases	A
County Government	Development of or impacts on infrastructures and approvals	All phases	A
National land commission and ministry of lands	Land acquisition and resettlement	All phases	C
Local Communities	Local support, impacts and opportunities	All phases	B
Project affected persons	Resettlement processes	All phases	A
Targeted services consumers/ beneficiaries	Sensitization, needs assessment	All phases	A/C
The political elites	Policy issues, Comm Mobilization, sensitization & impacts	All phases	C
NGOs and civil societies	Information	All phases	D
Government Agencies	Infrastructure facility relocation or impacts, Safety & Health,	Implementation phase	C/ D
Project workers	Staff welfare and grievances	Implementation phase	A