23rd March 2011

RURAL SANITATION SCHEME:
UPPF PROJECT PREPARATION TOOLKIT

Notes and Disclaimer:

1) *Whilst these toolkits have been made available by UPPF for external consumption, including use in support of the CIDB's 'Gateway' process for preparing infrastructure projects, it is emphasized that these toolkits are a work-in-progress and should not be used in a prescriptive fashion. UPPF will update these toolkits from time to time based on experience gained in preparing specific projects. Any suggestions for improvements or refinements should be emailed to UPPF for the attention of the National Co-ordinator on pptrust@worldonline.co.za*
2) *With respect to cost norms and professional rates, it is recognized that these will vary depending on such factors as locality, project complexity, level of experience, and local skills scarcities. The rates and cost norms provided should therefore be regarded as an indicative guideline only.*
3) *Municipalities or Government Departments may find these toolkits useful in: a) determining the main risk factors associated with a particular project; b) benchmarking budgetary requirements for project preparation; c) issuing RFP's or tenders for project preparation; d) determining whether professional work rendered meets an appropriate specification.*
4) *UPPF preparation managers must refer to UPPF's internal UPPF Standard Operating Procedures including; Preparation Flow Chart; Detailed Project Preparation Methodology; specimen letters of appointment for professionals; specimen RFP's for procurement.*
5) *UPPF is a joint venture between Project Preparation Trust of KZN (PPT) and the Infrastructure Finance Company Ltd (INCA). It was established through the Support Programme for Accelerated Infrastructure Delivery (SPAID) with funding provided by the Business Trust. UPPF's core business is to assist Municipalities in preparing a range of infrastructure projects and to thereby assist in addressing service delivery backlogs.*

CONTENTS:

ANNEXURES:

SECTION A: GENERAL INFORMATION

A. Targeted capital funder: Municipal Infrastructure Grant (MIG). It is however noted that due to the comprehensive historical role of the Department of Water Affairs (DWA *formally DWAF*) (pre- MIG), several DWA documents are still relevant and DWA still has a role in the policy and project decision making process via MIG.

Note that this document refers to MIG as the targeted capital funder and municipalities are the implementing agents. However, rural sanitation could be undertaken by other implementing agents (e.g. Department of Public Works) and funded by other capital funders (e.g. Department of Education for a school sanitation upgrade project). In such cases, the capital funder could have other requirements and the implementing agents other processes requiring additional work packages. Cognisance needs to be taken of these variances, which need to be established as the first step in the exercise of establishing the feasibility of a project and the subsequent project registration.

Furthermore, the density of a settlement could have implications on, for instance, the environmental requirements of the registration of a project, even within the MIG paradigm. Similarly, imminent formalisation or upgrade of a beneficiary community's infrastructure could impact on the timeframes and degree of complexity of the work packages associated with the registration of a project. This toolkit must be read, therefore, with the understanding that some degree of flexibility is required when dealing with contexts outside the 'base model' used here of a sparsely-populated rural community.

B. Flow chart: Refer to MIG Booklet page 32 (**Annexure C**)

C. Funder requirements:

i. *Funding application and approval flow chart:*
MIG have a prescribed Flow Chart (page 32 of **Annexure C**), funding application (project registration) form (**Annexure D**) and Project Registration Checklist (**Annexure E**).

ii. *Formats and documentary requirements (including support documents required) for applications for capital funding / project business plans*.
MIG have detailed guidelines on processes, procedures, levels of service and unit costs (refer to **Annexures C & F**). In addition DWA's detailed format for a feasibility report (**Annexure F**) is a valuable resource which adequately covers all of the work packages and broad specification for a rural water supply scheme.

MIG require a Project Registration Form (see **Annexure D** -) to be completed and submitted via the internet based Management Information System (MIS). The project preparation manager (or whoever is responsible for completing this form) will need to liaise with the client municipality in order to obtain access to the MIS on behalf of the municipality. This will be in the form of a user name and password. This level of access will usually be limited to inputting the required project information but exclude any level of project approval. In the MIS the project application form is completed and then submitted for approval by the municipality and thereafter the provincial MIG management unit (PMMU) with final project approval being provided by the national MIG management unit (NMMU). (see attached MIG checklist for Project Registration Forms). It should be noted, however, that some municipalities complete the MIG

/ MIS forms and process internally and therefore do not require assistance from the project consultant. This must be verified by the PPM up front.

For sanitation projects approval of the project by the DWA is required prior to the project being approved by the PMMU. A DWA technical report or sanitation project feasibility report is required and this is submitted directly to the provincial DWA office preferably prior to the completion and submission of the MIG 1 form.

The DWA (KZN) has developed a generic Water and Sanitation Project Feasibility Report Format (**Annexure F**) and the inputs into this report will form the basis of the feasibility stage work packages on this type of project.

iii. *Requirements for approval (at different stages if there are different stages)*.
The MIG 1 project registration form includes a section indicating approval of the project application by the municipal council (Council Resolution) and the municipal manager prior to submission of the form to the PMMU.

DWA approval of the project is required prior to the PMMU approving the MIG 1 project registration form. DWA approves the Project Feasibility Report with feed-back provided to the municipality. The final DWA approval process is also managed via the MIS.

The NMMU considers and approves the project registration once it has been approved and submitted by the PMMU.

iv. *Formats and documentary requirements for funding approvals (e.g. committee resolution, budget vote number, agreement between funder and municipality etc)*.
Once the project has been approved by the NMMU, a memorandum of agreement (MOA) is drafted by the MIG office for signature between MIG and the municipality. The MIG 1 form is incorporated into the MOA and funding is made available by MIG for expenditure on the project by the municipality.

v. *How preparation is currently funded, permissible allocation to preparation – e.g. % of fee scale + feedback from funders on this issue, potential flexibility & how to achieve it.*
For small to medium sized projects project preparation funding usually forms part of the total project cost as estimated and indicated in the MIG 1 project registration form. Project preparation consultants are usually appointed to carry out the feasibility stage work and project funding application at risk. The cost of the work comprising these aspects / stages should be incorporated into the total project cost and can then be recovered via the municipality once funding is approved and released for expenditure. However for large projects the municipality may motivate and obtain MIG funding for the feasibility study as a stand-alone MIG-funded 'project'.

The cost norms for project preparation will vary quite considerably depending on the magnitude and complexity of the project. This is discussed in more detail below.

D. Risk profile:

i. *Technical design of VIP Latrines:*
The basic design of the VIP latrines top structure, and to a lesser degree the pit linings, is often stipulated by the Municipality and this may also be linked to already established material supply contracts which the Municipality has set up specifically for the provision of

materials for the preferred top structures designs. In this case there is little or no apparent direct risk to the approval of the project. However, the acceptability of the prescribed latrine design with the DWA must be established up front to mitigate any risk of the feasibility study being rejected on the basis of a technically unsuitable latrine design.

In addition the ground conditions within the project area may require an innovative approach to the design of the VIP particularly where shallow rock or very wet clayey ground is encountered.

The DWA technical guidelines for VIP design should be considered as the basis for any designs.

ii. *Geology of the project area*
Where soil / ground conditions within the project area are problematic due to shallow rock/clays/high water table this may require consideration of alternative technologies or design other than standard ventilation improve pit (VIP) latrines. This may prove to be time consuming and expensive and therefore require more effort in order to gain municipal agreement and buy-in from the DWA.

iii. *Accuracy of demographic information*.
Due to the fact that generally every household in most villages rural / peri-urban communities will be eligible for a VIP latrine, the accuracy of the house count is important. This must be done using a social facilitator / consultant and with direct assistance from municipal officials and the Ward Councillor. Assistance through the use of recent aerial photography is invaluable.

SECTION B: SUMMARY SCOPE OF WORK AND COST NORMS

Please refer to the separate excel spreadsheet provided which identifies the work packages for the various stages of project preparation, summary scope of work, and indicative professional time inputs and cost norms.

SECTION C: DETAILED SCOPE OF WORK

STAGE 1: Preliminary Assessment

A. Inputs:
It is noted that the preliminary assessment will be carried out by either the NC or a Project Preparation Manager appointed by PPT. It focuses on three main elements: a) the project; b) the Municipality (in most cases the District Municipality or Metro); c) the capital funder.

- Telephonic interviews / meetings with Water and Sanitation personnel from municipality, MIG / DWA, any professionals working on this or a nearby project, ward councillor, community leadership;
- Face to face meeting with relevant municipal personnel (as broad-based as possible and including senior municipal officials, PMU Manager and preferably also the Municipal Manager in medium sized municipalities or the Manager: Water and Sanitation and PMU Manager in metros);
- Provision of standard PPT Preparation Services Agreement to Municipality, explanation of its main terms and conditions, and acquisition of verbal feedback;
- Municipal plans – in particular: IDP, Water Services Development Plan, Spatial Development Plan.
- Telephonic discussions / meetings with prospective capital funder(s);
- Interviews / meetings with professionals working on this or other nearby projects, relevant provincial government departments, ward councillor, community leadership, District Municipality where relevant;
- Site visit;
- Assessment of availability of suitable project preparation professionals;
- Any existing technical work already completed (e.g. past feasibility report);
- Any relevant technical work on nearby projects (e.g. past geotech investigations on a neighbouring site).

B. Outputs:
Preliminary Assessment Report indicating:

- Confirmation of *Municipal prioritization* and acceptability of terms of PPT project preparation services and Preparation Services Agreement terms.
- Appraisal of project based on the above inputs and generation of preliminary *project risk profile*. This would need to cover a range of project issues / potential risks (as outlined in **D** above) and including:
    - *Municipal buy-in to project* (not just IDP inclusion, but also de-facto and apparent commitment from senior officials and politico's);
    - *Prioritization of project* – IDP / WSDP / Sector Plan;
    - *Need* (including commentary on the likely accuracy of demographic data, existing health and hygiene problems, etc);
    - *Source of targeted capital funding* (e.g. MIG / MIG-loan funding mix etc);
    - *Availability of capital funding* for the project (e.g. existing municipal MTEF budget allocation / IDP priority / MIG approval);
    - *Socio-political dynamics* (e.g. any problematic dynamics between the traditional authority and municipality, recent history of community unrest etc);
    - *Availability of project professionals* required to undertake project preparation.
    - *Professional conflicts* (e.g. any existing professionals with 'turf' issues / 'entrenched service providers' which lack competence / proven track record / willingness to work constructively with PPT)

- Recommendations within the following options:
    - Category 'A' = low risk, no apparent material risks detected, project viable and should proceed rapidly into pre-feasibility and feasibility stages;
    - Category 'B' = medium risk, some potential material risks which require careful mitigation during next pre-feasibility stage, project potentially viable subject to further assessment during pre-feasibility stage, project should not move into feasibility stage before re-assessment at the completion of the pre-feasibility stage to ensure that the identified risks have been adequately mitigated or eliminated;
    - Category 'C' = high risk, material risks detected with limited reasonable prospects for mitigation, no further preparation should occur.
- Detailed budget estimate for project preparation.
- Projected timetable (programme) for project preparation.

In addition, comment on the following would be desirable:

- *Environmental issues* (any obvious and very apparent environmental issues such as in a nature conservation area, wetland or gravesites etc);
- Confirmation of in principle support from capital funder (e.g. MIG).
- Recommendations on project professional team.
- Record of people interviewed, positions and contact details.
- Attendance registers

C. Professional Skills & Knowledge Required:
Knowledge of rural sanitation projects and their delivery within South African Municipalities. Experience in the feasibility and design stage of rural sanitation projects. Preferably a civil engineer or experienced construction project manager.

D. Indicative Level of Effort:
Approximately 2 to 3 days. (Refer also to Summary Scope and Cost Norms.)

E. Indicative Duration:
Two weeks.

STAGE 2: Pre-feasibility (CIDB 'Assessment')

Not generally required for this type of project. A feasibility study and report is generally adequate.

STAGE 3: Feasibility (CIDB 'Concept') *(Refer to **Annexure F** DWAF KZN pro-forma feasibility study report)*

Note: In normal circumstances a civil engineer will be appointed to compile the feasibility study report (i.e. as the lead consultant and team member responsible for most tasks). However, the engineer will usually be required to use certain information supplied by other professionals / specialists in conjunction with his / her own input.

The following components make up the project feasibility study as defined in Annexure F

Annexure F: DWAF KZN pro-forma feasibility study report

1. *Introduction*
2. *Need Determination*
3. *Engineering viability*
4. *Institutional Viability*
5. *Economic/Socio Economic Analysis*
6. *Financial Viability*
7. *Environmental Viability*
8. *Conclusion*
9. *Recommendation*
10. *Project Approval*

Total duration: Approximately 6 to 8 weeks.

Total cost: Approximately R111,700 to R279,900 depending on project complexity and scale. If a hydrological specialist study is required for an assessment of surface extraction potential, additional costs may be incurred.

A. Civil Engineer: Feasibility Study for Rural Sanitation Project

i. Inputs

The inputs for this appointment are defined in **Annexure F**, with the exception of those tasks, which are defined below for the other members of the professional team (i.e. environmental, social, and geo-hydrological). The civil engineer is required, to carry out all the necessary tasks and responsibilities which are his / her own responsibility and in addition to monitor and manage the work required to be done by other service providers and professionals identified above. The Civil Engineer assumes overall responsibility for the project's feasibility.

Specifically, the inputs for this work package are as follows:

- Engage the PPM to obtain the Preliminary Assessment Report;
- Engage the PPM or other relevant municipal officials to obtain any pre-designed/pre-approved VIP designs;
- Engage the municipality to obtain demographic and other community information as a basis for the Social consultant to begin their study;
- Obtain the Groundwater Protocol Report from the Geo-hydrologist;
- Obtain the Preliminary Environmental Assessment from the Environmental Consultant;
- Obtain the relevant community data/demographics/profile/awareness levels/skills levels in a report form, along with the minutes and signatures of community meetings from the Social Consultant;

ii. Outputs

The outputs of this appointment are defined in **Annexure F**, listed briefly here as follows:

- Compile a report in the required DWAF format, including an Executive Summary of the findings and inputs by other professional service providers, along with the following;
- Determine sanitation needs/demands with reference to the Basic Level of Service;
- Report on engineering viability w.r.t. the options considered and the corresponding configuration/infrastructure;
    - Include, where necessary, a Groundwater Protocol Report by the geohydrologist, and comment thereon;
    - Outline the engineering considerations in terms of:
        - Planning norms and design parameters
        - Existing infrastructure
        - Proposed infrastructure
- Comment on Institutional Sustainability, drawing on the Social and Environmental Consultants' reports, including:
    - Community Structures
    - The Water Service Authority
    - The Water Service Provider
    - Legal requirements
- Conduct an economic/socio-economic analysis drawing on the Social and Environmental Consultants' reports, as per the requirements of Annexure F;

- Report on financial viability in accordance with Annexure F, specifying funding sources and a cash flow forecast, supplemented with a breakdown of milestones in the form of a timeline schedule in an acceptable format;
- Include and summarize the environmental consultant's report specifically drawing conclusions on the environmental acceptability of the project;
- Define and clarify the optimal project choices with respect to design parameters and final specification, and make clear recommendations to the municipality;

Facilitate and record project approval by the municipal structures (and Water Services Authority if this is not the municipality).

iii. Professional Skills Requirements

Civil engineer with experience in preparing, planning, designing and preferably also implementing rural sanitation projects.

iv. Indicative Level of Effort

Approximately 11 to 21 days. (Refer also to Summary Scope and Cost Norms.)

v. Duration

6 – 8 weeks (this will vary depending on the size and complexity of the project).

B. Social Consultant: Social Facilitation, Communications and Health & Hygiene Training:

i. Inputs

The inputs for this appointment are defined in **Annexure F**, with the exception of those tasks which are defined below for the other members of the professional team (i.e. environmental, civil, and geo-hydrological). The social consultant needs to work closely with and under the instruction of the Civil Engineer who assumes overall responsibility for the project's feasibility.

Community liaison and communications: The Social consultant will be primarily responsible for assisting the project preparation team (mainly via the appointed Civil Engineer) with the communication and liaison with the beneficiary community / communities which will include:

Set-up, facilitate and minute community meetings particularly at the start of the planning phase and towards the end once the study is nearing completion and conclusions and recommendations are being developed. It is noted that these meetings may need to involve other members of the professional team (e.g. Civil Engineer).

Obtain regular updates on the development of the feasibility study being carried out by the civil engineer and to communicate this accurately to the beneficiary community.

Inputs relating directly to the DWA scope of work / feasibility requirements as defined in **Annexure F**:
Section 2. Need Determination: Obtain demographic information from the Civil Engineer and verify the information on the ground. This will include meetings with the beneficiary community representatives, Ward councilor and household surveys using a basic questionnaire. The questionnaire should provide dwelling population counts (average number of people per dwelling) and request information on current latrine facilities. This process should take the form of a baseline study / needs / skills audit which will also provide input into section 5.3 below.
Section 4. Institutional sustainability: The baseline study should obtain information from each family on the level of community awareness and development, income levels (per family / dwelling) and the sources of income.
Section 5.3. Training, facilitation and capacity building scope of work: Use the baseline study to develop a training / skills development plan for targeted members of the beneficiary population providing information on proposed skills development and local economic development. A major requirement for the Social Facilitator is to develop a Health and Hygiene training module and schedule as this is considered to be a key aspect to the success of a rural sanitation project. However, the consultant must verify what other health and hygiene interventions may be taking place through the Department of Health or other government or non-government agencies.
Section 7. Environmental Acceptability: Assist the appointed environmental consultant with the social impact assessment of the project.

ii. Outputs

The inputs listed above which relate specifically to the DWA feasibility report are are more clearly defined in **Annexure F** (although it is noted that only certain tasks as outlined below are the responsibility of the social consultant).

All the abovementioned information should be drafted into a report and submitted to the engineer for inclusion in the Feasibility Study Report with a copy to the project preparation manager. The report needs to include signed attendance registers and minutes of meetings held.

To be included in the report is a strategic programme/schedule for the education of the members of the beneficiary community (the roll-out of the Health and Hygiene training module) to ensure the beneficiaries understand the operation and maintenance requirements of the VIP system proposed.

iii. Professional Skills Requirements

Social facilitation qualifications / experience / skills requirements are:
Excellent communication skills;
Experience in social facilitation particularly in the context of rural sanitation projects;
An understanding of the requirements in terms of social input to the standard DWA feasibility study report.

iv. Indicative Level of Effort

Approximately 8 to 21 days. (Refer also to Summary Scope and Cost Norms.)

It is suggested that the payment structure be either: a) half payment halfway through, full payment upon submission of final feasibility report; or b) monthly payments approved by the Civil Engineer and PPM / NC.

v. Duration

6 to 8 weeks.

C. Geohydrologist: Groundwater Protocol Study

i. Inputs

The geohydrologist will be required to work closely with and under the instruction of the Civil Engineer who assumes overall responsibility for the project's feasibility.

In terms of the DWA requirements for VIP latrine projects, the geohydrologist will be required to carry out a Ground Water Protocol Study in accordance with the "*Protocol to Manage the Potential of Groundwater Contamination from On-site Sanitation*" published by the Department of Water Affairs and Forestry (DWAF) in 1997 (see Annexure I)

The geotechnical implications for the proposed VIP design(s), particularly in terms of the pit lining, must be considered; therefore, the geotechnologist/geo-hydrologist must obtain the proposed designs from the civil engineer.

ii. Outputs

The outputs for the overall project are broadly defined in **Annexure F** (although it is noted that only certain tasks as outlined below are the responsibility of the geohydrologist). The study findings and recommendations are to be drafted into a report to be submitted to the engineer for inclusion as an annexure to the Feasibility Study Report with a copy to the project preparation manager and should include at least the following:

- Overview of investigative work carried out;
- Findings of the groundwater protocol study;
- A map of the project area illustrating the zonation plan of inferred VIP pit lining construction requirements; and
- estimates of numbers of various pit lining types

iii. Professional Skills Requirements

A minimum BSc or B.Tech qualification in geohydrology, geophysics, geology or related field is required. Particular experience in groundwater protocol investigations as defined by the DWA is a minimum requirement. An understanding of municipal rural sanitation requirements should also be available.

iv. Indicative Level of Effort

Approximately 2 to 10 days. (Refer also to Summary Scope and Cost Norms.)

It is suggested that full payment be made upon submission of final feasibility report approved by the Civil Engineer and PPM / NC.

v. Duration

The duration of this work is expected to be between 2 to 4 weeks and should take place as early on in the study as possible.

D. Environmental Assessment Practitioner (EAP): Preliminary Environmental Assessment

i. Inputs

Generally a rural sanitation project does not require an environmental assessment to be conducted. However, it is considered prudent to obtain a preliminary assessment of the project in order to highlight any issue pertaining mainly to the construction phase of the project where access to various areas may raise some environmental concern. The environmental practitioner will be required to work closely with and under the instruction of the Civil Engineer who assumes overall responsibility for the project's feasibility. A social consultant will also be employed as part of the project preparation team and will be instructed to work closely with the EAP assisting with providing information and introductions to the beneficiary community.

The inputs envisaged will cover but not necessarily be limited to the following:

- Consider the preliminary project scope of work as provided by the civil engineer.
- Carry out a site visit, preferably with the engineer, and conduct a preliminary inspection of the project area.
- Meet with the beneficiary community or at least the community representatives (PSC).
- Obtain any other information required to complete a preliminary assessment of the environmental impact that the proposed project may have on the community, land and surroundings.
- Assess the preliminary findings with regard to the National Environmental Management Act, 1998 (Act No. 107 of 1998) together with Regulation No. 385 (21 April 2006) and the Government Listing Notices No. 386 and 387.
- Determine whether a Basic Assessment, as contemplated in the Environmental Regulations No. 385 Sections 22 to 26 will be required or whether a Scoping and Environmental Impact Assessment will be required as stipulated in the Environmental Regulations No. 385 Sections 27 to 36.

ii. Outputs

The outputs for the overall project are defined in **Annexure F** (although it is noted that only certain tasks as outlined below are the responsibility of the EAP). The primary output of the preliminary investigations mentioned above must be to report to the engineer on the possible need for either a Basic Assessment or full Environmental Impact Assessment in terms of the Act and regulations. This report is to include a brief overview on the following:

- The physical and landscape characteristics of the land development area and its surroundings;
- The ecological characteristics of the land development area and its surroundings;
- The current and potential land – uses of the land development area;
- Existing significant archaeological, historical and cultural sites in the project area and its surroundings;
- The social and economic impact on communities in the project area and its surroundings;
- The existing status of domestic sanitation facilities;
- The existing social and community structures, services and facilities in and around the project area;
- The levels of present and possible pollution in the future as a result of the proposed project;
- Any risks or hazards to the environment posed by the project;
- The health and safety of the public;
- The social costs of the proposed project;
- The effect of the proposed project on different groups or individuals;
- Identify any areas, which are environmentally sensitive or zoned as such (eg: areas proclaimed as wilderness or for conservation) and comment on the implications.

Based on the preliminary assessment, identify whether or not there appear to be any material barriers to the proposed project from an environmental impact perspective, what the barriers are, and the viability of overcoming them. Comment on whether further environmental assessment may be needed, how would this be decided, what would it consist of and at what indicative cost.

iii. Professional Skills Requirements

The environmental assessment practitioner must be approved and comply with the General requirements for EAPs, as contemplated in National Environmental Management Act, 1998 (Act No. 107 of 1998) together with Regulation No. 385 (21 April 2006), clause 18 as follows:

An EAP appointed in terms of regulation 17(1) must –

- be independent;
- have expertise in conducting environmental impact assessments, including knowledge of the Act, these Regulations and any guidelines that have relevance to the proposed activity;
- perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant;
- comply with the Act, these Regulations and all other applicable legislation;
- take into account, to the extent possible, the matters listed in regulation 8(b) when preparing the application and any report relating to the application; and
- disclose to the applicant and the competent authority all material information in the possession of the EAP that reasonably has or may have the potential of influencing – (a) any decision to be taken with respect to the application by the competent authority in terms of these Regulations; or (b) the objectivity of any report, plan or document to be prepared by the EAP in terms of these Regulations for submission to the competent authority.

iv. Indicative Level of Effort

Approximately 2 to 3 days. (Refer also to Summary Scope and Cost Norms.)

It is suggested that full payment be made upon submission of the preliminary findings report approved by the Civil Engineer and PPM / NC.

v. Duration

The duration of this work is expected to be between 2 to 4 weeks and should take place as early on in the study as possible.

STAGE 4: Funding Application *(Refer to **Attachments D & E**)*

Total cost: Approximately R13,000

Total timeframe: 1 week

A. Civil Engineer: Funding Application for Rural Sanitation Project

Note that this stage may be carried out in-house by some municipalities

i. Inputs
The inputs for this appointment will originate primarily from the DWA feasibility study report. The MIG funding application is basically in the format of the MIG 1 Project Registration Form provided in ***Annexure D*** and using the guidelines / checklist in ***Annexure E***. The application must be carried out using the MIS[1] and a user name and password should be obtained through the municipality.

ii. Outputs
The output will be a successfully submitted MIG registration form using the MIS.

iii. Professional Skills Requirements
Civil engineer with experience in preparing, planning, designing and preferably also implementing rural sanitation projects, and preferably with experience in compiling feasibility study reports and submitting MIG applications.

iv. Indicative Level of Effort
Approximately 1 to 2 days. (Refer also to Summary Scope and Cost Norms.)

v. Duration
1 week

[1] MIS is an Internet based project management tool developed by the MIG

SECTION D: SPECIMEN GANTT CHARTS

Please refer to the separate document provided for specimen Gantt charts for the preparation of this project type (timetables).