16th February 2011

RURAL ACCESS ROAD PROJECT:
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 / PPT 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) and possibly municipal funding or loan funding.

B. Flow chart**:** Refer to MIG Booklet page 32 (*http://www.dplg.gov.za/subwebsites/mig/docs/3.pdf*).

C. Funder requirements:

The Department of Transport does not have a set of guidelines for a feasibility study for a rural access road. However, as a default, the MIG process for project registration should be followed. Generally, there are no further specific requirements for municipalities, although alternative funders may have their own requirements.

i. *Funding application and approval flow chart:*
MIG have a prescribed Flow Chart (page 32 of MIG Booklet), Funding Application (Project Registration Form – MIG1) (http://mig.dplg.gov.za/Content/Documents/Forms/MIG1%20Registration%20Form%20(Revision%203c).zip) and Checklist for Project Registration Forms (http://www.dplg.gov.za/subwebsites/mig/docs/Checklist%20for%20Project%20Registration%20forms.doc).

ii. *Formats and documentary requirements (including supporting 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 MIG Booklet and the guide for municipalities at http://mig.dplg.gov.za/Content/Documents/Guidelines/MIG%20-%20Unit%20Cost.pdf).

MIG require a Project Registration Form (MIG1) 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 Registration 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 MIG Checklist for Project Registration Form.) 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 Project Preparation Manager (PPM) up front.

iii. *Requirements for approval (at different stages if there are different stages).*
The MIG1 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. Notably, confirmation of submission of an application form for a Basic Assessment report is required or, if applicable, confirmation of the Scoping & EIA application submission. (An RoD is not necessarily required at this stage.)

The National MIG Management Unit (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 MIG1 form is incorporated into the MOA and funding is made available by MIG for expenditure on the project by the municipality.

D. Risk profile

i. *Time frames required for environmental investigations, applications and approvals*.
The level of environmental and socio-economic (including relocation of affected persons) input required and the assessment of any approvals required must be determined as soon as conceptual project design options are determined. In some cases a small rural access road project may not require even a basic assessment (for widths less than 4m) and application to the DAEA. Where a basic assessment or environmental impact assessment is considered necessary, the project schedule and cost estimate must be revised to allow for a minimum of 6 months from the start of the process to the approval and issuing of a Record of Decision by the Department. In some cases, the Feasibility study can be completed prior to the RoD being issued, by obtaining recommendations from the environmental assessment practitioner and local DAEA office on the likely requirements of an RoD.

ii. *Land ownership issues*.
The ownership/custodianship of land parcels across which the proposed route runs must be determined or confirmed as early in the study as possible. The land surveyor is to acquire certification from the office of the Chief Surveyor-General and forward to the municipality and the engineer. Through the municipality's public relations structures, written consent for the proposed construction is to be secured from the owners/custodians of each land parcel and is to be copied to the engineer for inclusion in the feasibility report and business plan.

Where ownership/custodianship is unclear or in dispute, delays of indefinite duration could be expected. Where this is the case, this must be highlighted in the pre-feasibility documentation as a potential 'fatal flaw' in the project and the municipality must make a decision as to whether the project is to proceed.

iii. *Social issues*.
Community expectations in terms of employment opportunities and wage rates must be addressed continuously from the initial point of contact. The skills audit must be handled in close consultation with community leaders (ward councillors, headmen, etc.) to ensure that the results of the audit have the full support of the community. Applicable wage rates must be accurately conveyed from the outset from the office of the PPM in the name of the municipal manager. The engineer is to ensure that these wage rates are used in the drafting of all cost estimates and budget proposals.

Intra-community conflicts affecting the project are to be determined and brought to the PMU's attention as early in the process as possible for addressing by the municipality. If these conflicts are deemed serious enough to prevent the successful completion of the project, this must be highlighted in the pre-feasibility documentation as a potential 'fatal flaw' in the project for the municipality to address before the project proceeds.

iv. *Level of confidence in the preliminary geotechnical information*.
Geological investigations provide indicative data based on observations made in the field and on results of standard tests carried out on samples taken from the field. Experience and both theoretical and local knowledge are paramount to producing results which will correspond closely with

the behaviour of materials during construction and the service life-span. It is therefore of utmost importance that the personnel carrying out the fieldwork and laboratory testing are closely supervised by an engineering geologist with these qualifications.

Test results produced during the construction phase must be continuously monitored against the preliminary test results upon which the preliminary design and costing was based. There is a high likelihood that variations in the quality of materials either built upon or used for construction, will be encountered, and in this case, the geologist is to be continuously consulted. Allowance must be made for consultation costs throughout the construction stage.

Care must be taken to establish what licensing requirements exist on borrow pits. This must be established by the Social Facilitator and confirmed by the geologist. Time frames for approvals may vary considerably and for this reason, these implications must be established as early in the process as possible.

v. *Geometric alignment*.
The general level of geometric design required at the conceptual stage may not be sufficient, depending on the terrain, etc. to identify localised problem areas which could have significant cost implications to the project. For this reason, the land surveyor and the civil engineer are to identify these locales during a site visit. Since access to the entire route may be difficult due to terrain and vegetation, the engineer must decide whether the information currently at his disposal may be sufficient for the assignment of a contingency amount to be built into the cost estimate and budget figures to cover any eventuality that may conceivably be encountered, or request further funding for the gaining of access to these areas. Depending on the number of instances or the scale of inaccessibility, this could have significant implications on the time frames and costs associated with the route feasibility assessment.

vi. *Counter funding availability if the Level of Service required is higher than a Basic Level of Service*.
The required or expected level of service must be determined or confirmed as early in the study as possible. This must be done using a social facilitator / consultant and with direct assistance from municipal officials and Ward Councillors. The level of service used for conceptual/preliminary design must be confirmed with the municipality before progressing further. Confirmation of possible counter-funding sources and basis for repayment must be determined and again confirmed with the municipality.

vii. *Level of confidence in traffic growth estimates*.
The level of confidence in traffic growth estimates is directly related to the level of confidence in the demographic evaluation (including future growth) of the beneficiary communities and their expectations regarding the level of service during the planning horizon. The demographic information must preferably be based on a traffic count (where a road currently exists and is to be upgraded), backed up by a comparison of a house to house survey of at least samples areas of the beneficiary villages and then related back to the most recent census information. An envelope of scenarios of high and low population (and traffic) growth must be developed.

viii. *Level of assurance of ongoing maintenance*.
MIG approval specifically for rural access roads is not conditional upon the agreement by the Municipality to maintain the infrastructure after construction. However, it is in keeping with the national policy of service delivery to ensure that such infrastructure is maintained for the length of the planning horizon. To this end, the business plan is to include an indication of projected costs, a typical maintenance regime and sources of material for maintenance.

E. Total Cost: Refer to Part B (Summary Scope of Work and Cost Norm). It is noted that, as at March 2011, the indicative preparation costs are estimated to range from between R 309,842 and R 729,624 for projects with capital values of between R6million and R12million respectively. These estimates include a provision for preparation management, travel disbursements and contingencies.

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 Roads and Sanitation personnel from the municipality, MIG / DoT, any professionals working on this or a nearby project, ward councillors, 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: Roads 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, Roads 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 councillors, 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 reports);
- Any relevant technical work on nearby projects (e.g. past geotechnical investigations on any neighbouring sites).

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 the risk profile above) and including:
    - *Municipal buy-in to project* (not just IDP inclusion, but also de-facto and apparent commitment from senior officials and politicians);
    - *Prioritization of project* – IDP / Sector Plan;
    - *Need* (including commentary on the likely accuracy of demographic data, roads demand and traffic growth assumptions, and ultimate level of intended service);
    - *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 based on MIG's Unit Costs for Basic Services document as a starting point (http://mig.dplg.gov.za/Content/Documents/Guidelines/MIG%20-%20Unit%20Cost.pdf) and applying escalation over time from the date of the publication (June 2005), as well as inflating factors for terrain, distance from a commercial centre, etc.
- 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);
- *Land ownership* - likely opposition from landowners / expropriation / servitudes / PTOs / Ingonyama Trust, 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 roads projects and their delivery within South African municipalities. Experience in the feasibility and design stage of roads projects. Civil engineers supported by professionals from other disciplines.

D. Indicative Cost Range:
Two days at a cost of approximately R15, 000 (2 days at R6, 500 per day plus R2, 000 travel costs).

NOTE: This figure is indicative only and must be reviewed in every case against the constraints of each project.

E. Indicative Duration:
Two weeks.

NOTE: This figure is indicative only and must be reviewed in every case against the constraints of each project.

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

Total duration: (This is very project specific and should be assessed only after the Preliminary Assessment has been evaluated and the project approved.)

Total cost: (This is very project specific and should be assessed only after the Preliminary Assessment has been evaluated and the project approved.)

It is necessary to investigate the project options or alternatives through a structured sequence of increasingly more detailed planning phases. This affords the opportunity to terminate the investigation of sub-optimal options before performing work investigating them to greater levels of detail than are necessary and simultaneously increasing the level of confidence in the project definition, cost estimates and implementation program.

The pre-feasibility stage is at the first level of detail and is a precursor to the feasibility stage in which the resources and constraints of the likely final project as well as the routes and final capacities and sizes are identified for final optimization. Sufficient work should be carried out in the pre-feasibility stage only to enable a choice of project options to be made.

All existing information, data and reports must be assessed and analysed and the information and data updated or revised as necessary for further use in the feasibility stage.

The first step is to perform a preliminary examination of the possible project area in order to identify likely routes for evaluation and comparison during the pre-feasibility stage. It includes confirmation of the need for and appropriateness of the project and the identification of potential fatal flaws by means of a desk top study of available mapping and existing reports and data. Only limited verification and field work is required to ensure that alternatives are examined and costed at the same level of confidence for purposes of identifying preferred options that should be examined in more detail during the second step before selecting the final option for consideration in the feasibility stage.

The second step is to evaluate and compare the preferred options, including the main project risks for each option. This will generally require some field work to obtain more reliable information and data and often requires considerable verification. Drilling and sampling are not usually required during this step. The level of detail and confidence is however, not necessarily sufficient for the purpose of the feasibility stage and detail design of the project and will require further investigation and final optimization for those purposes. (This would take place under the Feasibility Stage.) The information and analyses performed during this step provide the basis for identifying and recommending the project to be considered and investigated during the feasibility stage.

Work Package 1: Situational Analysis / Need Assessment

A. Inputs:
- By civil engineer:
  - Obtain demographic information relating to the proposed beneficiary communities from Stats SA, local municipality, etc.;
  - Obtain mapping data relating to the proposed beneficiary communities.
- By social facilitator:
  - Set up, facilitate and minute community meetings;
  - Establish lines of communication between the professional team and the community;
  - 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 councillor and sample household surveys using a basic questionnaire. The questionnaire should provide basic demographic information for the beneficiaries and include dwelling population counts (average number of people per dwelling). This process should take the form of a baseline study / needs / skills audit;
  - 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;
  - Establish with/through the municipality what legitimate and fully-licensed road building material sources exist in the area.

B. Outputs:
- By civil engineer:
  - Forward all demographic data to the social facilitator for verification in the field;
  - Based on verified data, identify various corridors as alternative routes further assessment towards a final route for the proposed access road.
- By social facilitator:
  - All the aforementioned 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.

C. Professional Skills & Knowledge Required:
- Civil engineers having knowledge and experience of rural roads projects and their delivery within the South African municipal context.
- Social facilitator with excellent communication skills and having knowledge and experience of rural roads projects and their delivery within the South African municipal context.

D. Indicative Level of Effort::
NOTE: The extent of work involved is very project specific. Costs indicated here are a baseline only, and should be escalated once the Preliminary Assessment has been carried out, according to the anticipated needs of the project.
  - Civil engineer: 1,5 to 2 days
  - Social Facilitator: 2 to 3 days
  -

E. Indicative Duration:
Two weeks.
NOTE: The extent of work involved is very project specific. The duration indicated here is a baseline only, and should be extended once the Preliminary Assessment has been carried out, according to the anticipated needs of the project.

F. Higher Level of Service:
The Need Assessment would need to confirm that level of service proposed is appropriate and in-keeping with the findings of the financial viability and socio-economic analyses (normally carried out under the Implementation Estimates & Programme work package). This is likely to increase the duration of Work Package 1 considerably, depending on the level of service considered.

Work Package 2: Geotechnical Desktop Study and Site Walk-over

A. Inputs:
- By Civil engineer:
  - Accompany the geologist to the site and indicate alternative routes for assessment.
- By Geologist:
  - Obtain a copy of the proposed route superimposed onto a contour plan from the engineer;
  - Visit the site to visually identify/confirm:
    - significant geological features affecting cost or duration of construction (eg. steep gradients, hard rock, boulders, wetlands, poor natural ground, unstable areas);
    - potential or existing borrow pits and/or commercial sources of road-building material;
    - nature and quality of in-situ material along proposed route.

B. Outputs:
- By Geologist:
  - Produce a preliminary report on the above and forward to the engineer. This report must include, though not be limited to,:
    - a broad-based geotechnical description of the area w.r.t. established mapping and known geological features;
    - a description of the site in geotechnical terms with reference to significant geological features;
    - the identification of 'fatal flaws' to proposed alternative routes.

C. Professional Skills & Knowledge Required:
- Civil engineers having knowledge and experience of rural roads projects and their delivery within the South African municipal context.
- Engineering geologists having knowledge and experience of rural roads projects within the South African context. A knowledge of local conditions is desirable.

D. Indicative Level of Effort:
NOTE: The extent of work involved is very project specific. Costs indicated here are a baseline only, and should be escalated once the Preliminary Assessment has been carried out, according to the anticipated needs of the project.
  - Civil engineer: 1 day
  - Geologist: 2 to 3 days

E. Indicative Duration:
One week.
NOTE: The extent of work involved is very project specific. The duration indicated here is a baseline only, and should be extended once the Preliminary Assessment has been carried out, according to the anticipated needs of the project.

F. Higher Level of Service:
The scope of work and the duration of this work package should not be significantly affected by variation in the level of service. However, cognizance must simply be taken of the proposed level of service and relevant comment offered.

Work Package 3: Route Assessment

A. Inputs:
- By civil engineer:
  - Refine the list of alternative routes based on Situational Analysis / Need Assessment;
  - Visit the site to visually identify areas of difficulty or any other features affecting cost or duration of construction;
- By land surveyor:
  - Obtain land ownership/servitude data from the Chief Surveyor-General for land parcels traversed by the proposed routes;
  - Obtain contour plans (5m maximum contour intervals) for use in the desktop portion of the Route Assessment;
  - Visit the site to visually identify areas of difficulty or any other features affecting cost or duration of construction;

B. Outputs:
- By civil engineer:
  - Confirm which of the preferred routes are technically feasible;
  - Identification and assessment of risks associated with each of the preferred routes;
  - Confirm through the municipality that all land ownership issues are settled and that the necessary permission has been obtained from all parties for the routes proposed;
  - Identify any features requiring further investigation/specific attention at conceptual design stage.
- By land surveyor:
  - Forward a contour plan of the area of the proposed routes to the engineer;
  - Record ground levels at locations of potential 'fatal flaws' to the technical design (as identified with the engineer in the field), and forward to the engineer;
  - Forward all land ownership/servitude data to engineer.

C. Professional Skills & Knowledge Required:
- Civil engineers having knowledge and experience of rural roads projects and their delivery within the South African municipal context.
- Senior land surveyors having knowledge and experience of rural roads projects within the South African context.

D. Indicative Level of Effort:
NOTE: The extent of work involved is very project specific. Costs indicated here are a baseline only, and should be escalated once the Preliminary Assessment has been carried out, according to the anticipated needs of the project.
  - Civil engineer: 0,5 to 1,5 days
  - Land surveyor: 2 to 5 days

E. Indicative Duration:
Two weeks.
NOTE: The extent of work involved is very project specific. The duration indicated here is a baseline only, and should be extended once the Preliminary Assessment has been carried out, according to the anticipated needs of the project.

F. Higher Level of Service:
The scope of work and the duration of this work package should not be significantly affected by variation in the level of service. However, cognizance must simply be taken of the proposed level of service and relevant comment offered.

Work Package 4: Preliminary Environmental Assessment

A. Inputs:
- By civil engineer:
  - Provide the environmental consultant with a technical description of the preliminary scope of work in the format most suitable to the environmental consultant;
- By environmental consultant:
  - 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);
  - Meet or liaise with the relevant local office of the Department of Environmental Affairs to obtain their initial assessment of the project and project area;
  - 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), Government Listing Notices No. 386 and 387, and Regulation No. 543 (18 June 2010);
  - Determine whether a Basic Impact 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, referring also to Regulation No. 543 (18 June 2010).

B. Outputs:
- By environmental consultant:

  The primary output of the preliminary investigations mentioned above must be to report to the engineer on the probable need for either a Basic Impact 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 infrastructure and/or services in or around the project area and surroundings;
  - The existing social and community structures, services and facilities in and around the project area;
  - The levels of present and possible pollution, including noise 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;
  - What mitigating measures could be implemented to reduce negative impacts and enhance positive impacts of the scope of work envisaged for the project;
  - Identify any areas which are environmentally sensitive or zoned as such (eg. wetlands, areas proclaimed as wilderness or for conservation) and comment on the implications;
  - The need for specialist studies for submission with the Basic Assessment Report or the Scoping and EIA report (as required).

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 any environmental assessment may be needed, how this would be decided, what it would consist of and at what indicative cost.

- By civil engineer:
  - Include the report in the Feasibility Study Report;

C. Professional Skills & Knowledge Required:

- Civil engineers having knowledge and experience of rural roads projects and their delivery within the South African municipal context.
- Environmental assessment practitioners that are 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.

D. Indicative Level of Effort:
NOTE: The extent of work involved is very project specific. Costs indicated here are a baseline only, and should be escalated once the Preliminary Assessment has been carried out, according to the anticipated needs of the project.
  - Civil engineer: 1 to 3 days.
  - Environmental Consultant: 1 to 3 days.

E. Indicative Duration:
One week.
NOTE: The extent of work involved is very project specific. The duration indicated here is a baseline only, and should be extended once the Preliminary Assessment has been carried out, according to the anticipated needs of the project.

F. Higher Level of Service:
A higher level of service may relate to a road alignment and surface which allow higher speeds. This would, of necessity, increase the size of structures, embankments, road widths, etc. Whereas a gravel road (basic level of service) may not trigger the need for a full EIA, the higher level of service almost undoubtedly would, and time frames must be adjusted accordingly.

Work Package 5: Pre-feasibility Report

A. Inputs:
   - By civil engineer:
     - Work Package reports from previous work packages.

B. Outputs:
   - By civil engineer:
     - Compile a brief executive report summarising the findings of the preceding work packages, advising whether the project should proceed to the Feasibility Stage.

C. Professional Skills & Knowledge Required:
   - Civil engineers having knowledge and experience of rural roads projects and their delivery within the South African municipal context.

D. Indicative Level of Effort:
   - Civil engineer: 0,5 to 1 day

E. Indicative Duration:
   One week.

F. Higher Level of Service:
   The scope of work and the duration of this work package should not be significantly affected by variation in the level of service. However, cognizance must simply be taken of the proposed level of service and relevant comment offered.

STAGE 3: Feasibility (CIDB 'Concept')

Note: In most 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 assisted by other engineers and engineering technicians and also be required to use certain information supplied by other professionals / specialists in conjunction with his / her own input where the work is outside his / her competence or experience. The toolkit has been set out by work packages which in themselves may also require the inputs of the other professionals / specialists. The engineer shall at all times however, direct the work of the other persons to ensure that it is at an adequate level of detail and confidence for the purpose of the feasibility study without unnecessary detail.

Total duration: (This is very project specific and should be assessed only after Stage 2.)

Total cost: (This is very project specific and should be assessed only after Stage 2.)

The feasibility stage is the last stage of the structured sequence of increasingly more detailed planning to increase the level of confidence in the project definition, cost estimates and implementation program. In this stage of the feasibility study the main elements of the final project are optimized, but not designed.

The information and data obtained during the pre-feasibility stage must be extended or revised as necessary for further use in the feasibility stage.

The results of this stage must be of sufficient detail and confidence to define the final layout/ design of the project. This comprises an intensive investigation, optimization and costing of the most beneficial layouts of the final project by means of the specific work packages described below, resulting in the preferred layout with final criteria of capacities of the various components and the major dimensions.

This stage must resolve any outstanding project risks and contain sufficient environmental (including socio-economic) studies and preliminary design in order to develop cost estimates of sufficient levels of detail and confidence to be able to evaluate the project sustainability and to secure project funding for implementation.

Work Package 6: Geotechnical Preliminary Investigation, Sampling and Testing

A. Inputs:

- By Geotechnical Technician:
  - Obtain a copy of the proposed alternative routes superimposed onto a contour plan from the engineer;
  - Obtain from the engineer what legitimate and fully-licensed road building material sources are available in the area;
  - Visit the site to
    - visually identify and investigate significant geological features affecting cost or duration of construction (eg. steep gradients, hard rock, boulders, wetlands, poor natural ground, unstable areas);
    - investigate potential or existing borrow pits and/or commercial sources of road-building material, and take samples of gravel wearing course and selected layer material for laboratory testing;
    - take in-situ samples of typical road subgrade material;
    - dig inspection pits to verify data contained in the Geotechnical Desktop Study;
    - identify the positions of wetlands/seepage areas;
  - Conduct laboratory tests on samples to confirm
    - nature and quality of in-situ material along proposed route;
    - nature and quality of proposed road building materials.

B. Outputs:

- By Geotechnical Technician:
  - Produce a preliminary report on the above and forward to the engineer. This report must include, though not be limited to,:
    - a description of the site in geotechnical terms with reference to significant geological features;
    - construction good-practice recommendations;
    - confirmation of the legal legitimacy of proposed sources of road building material;
    - confirmation of the geotechnical viability of the project, or recommendations with the project is not viable.
    - produce a laboratory report, including test results, with recommendations as to the materials tested and their suitability for road building;

C. Professional Skills & Knowledge Required:

Geotechnical technician (under the supervision of an engineering geologists) having knowledge and experience of rural roads projects within the South African context. A knowledge of local conditions is desirable.

A geotechnical laboratory able to conduct the full range of standard tests for road building materials, both in the field and in the laboratory, overseen by an engineering geologist having knowledge and experience of rural roads projects within the South African context. A knowledge of local conditions is desirable.

D. Indicative Level of Effort:

NOTE: The extent of work involved is very project specific. Costs indicated here are a baseline only, and should be escalated once the Preliminary Assessment has been carried out, according to the anticipated needs of the project.

- Geotechnical Technician: 3 to 7 days
- Anticipated laboratory costs range from R20,000 to R60,000.

E. Indicative Duration:
Four weeks.
NOTE: The extent of work involved is very project specific. The duration indicated here is a baseline only, and should be extended once the Preliminary Assessment has been carried out, according to the anticipated needs of the project.

F. Higher Level of Service:
A higher level of service would require a greater degree of certainty of the availability of suitable road building material. This is likely to demand additional geotechnical laboratory work, depending on the level of service considered. This could affect both the cost and duration of this work package.

Work Package 7: Conceptual/Preliminary Road Design

A. Inputs:
   - By civil engineer:
     - Based on Pre-Feasibility studies, define a preferred route for the proposed road;
     - Define a preliminary centreline alignment appropriate to nature and speed of traffic;
     - Define a preliminary road section/carriageway prism appropriate to nature and speed of traffic;
     - Define a preliminary layerworks design based on recommendations by the Geologist;
     - Calculate preliminary earthworks quantities based on proposed alignment and geotechnical report;
     - Size and design major culverts and any bridges/causeways according to DoT norms;
     - Design any unusual features such as concrete paving for steep grades, etc.

B. Outputs:
   - By civil engineer:
     - Produce a graphical preliminary design indicating the vertical and horizontal alignment,
     - Detail proposed layerworks design;
     - Detail major culverts and any bridges/causeways according to DoT norms;
     - Produce a detailed cost estimate based on the above. Include in the cost estimate an indication of the scale of contingence amount allowed for as yet unforeseen/unknown conditions.

C. Professional Skills & Knowledge Required:
   - Civil engineers having knowledge and experience of rural roads projects and their delivery within the South African municipal context.

D. Indicative Level of Effort:
   NOTE: The extent of work involved is very project specific. Costs indicated here are a baseline only, and should be escalated once the Preliminary Assessment has been carried out, according to the anticipated needs of the project.
     - Civil engineer: 3 to 6 days.

E. Indicative Duration:
   Two weeks.
   NOTE: The extent of work involved is very project specific. The duration indicated here is a baseline only, and should be extended once the Preliminary Assessment has been carried out, according to the anticipated needs of the project.

F. Higher Level of Service:
   This work package is significantly affected by a higher level of service in that a greater degree of design is required for higher service levels. Time frame adjustments should be estimated to the Client as early as possible.

Work Package 8: Logistical Assessment & Plan

A. Inputs:
   - By civil engineer:
     - Identify by consultation with municipality and community representatives what, if any, construction materials are locally produced (eg. stormwater pipes, bricks, blocks, etc.) and ascertain the quality thereof;
     - Identify any unusual road access problems that may significantly affect the cost of materials transportation;
     - Identify any other unusual logistical factors which could significantly impact on cost or duration of the project.

B. Outputs:
   - By civil engineer:
     - Produce a list of local suppliers capable of producing acceptable construction materials;
     - Assess and quantify the cost and time implications of road access and any other logistical problems, and update the cost estimate if necessary. Where these implications are considerable and cannot be dealt with within the range of unit costs for rural access roads as listed by MIG and escalated for time from the drafting thereof, the engineer is to report this to the PMU for a decision to be taken by the municipality as to whether the project is to proceed to the next stage.

C. Professional Skills & Knowledge Required:
   - Civil engineers having knowledge and experience of rural roads projects and their delivery within the South African municipal context.

D. Indicative Level of Effort:
   NOTE: The extent of work involved is very project specific. Costs indicated here are a baseline only, and should be escalated once the Preliminary Assessment has been carried out, according to the anticipated needs of the project.
     - Civil engineer: 0,5 to 1,5 days.

E. Indicative Duration:
   Three days.
   NOTE: The extent of work involved is very project specific. The duration indicated here is a baseline only, and should be extended once the Preliminary Assessment has been carried out, according to the anticipated needs of the project.

F. Higher Level of Service:
   This work package is affected by the need for anticipation of handling of greater volumes and more variety of road building materials, at least some of which are likely to be less available locally in the volumes required. However, this would be confirmed by the Geotechnical Investigation, Sampling & Testing work package.

Work Package 9: EPWP/Local Job Creation

A. Inputs:
   - By civil engineer:
     - Define the scope of work for the entire proposed project and the nature of the labour-intensive activities anticipated;
   - By social facilitator:
     - *Training, facilitation and capacity building scope of work*: Use the baseline study from Work Package 1 to develop a training / skills development plan for targeted members of the beneficiary population providing information on proposed skills development, local economic development and health and hygiene promotion if and where required;

B. Outputs:
   - By social facilitator:
     - All the aforementioned 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.
   - By civil engineer:
     - Include the skills development plan in the Feasibility Study Report;

C. Professional Skills & Knowledge Required:
   - Civil engineers having knowledge and experience of rural roads projects and their delivery within the South African municipal context.
   - Social facilitator with excellent communication skills and having knowledge and experience of rural roads projects and their delivery within the South African municipal context.

D. Indicative Level of Effort:
   NOTE: The extent of work involved is very project specific. Costs indicated here are a baseline only, and should be escalated once the Preliminary Assessment has been carried out, according to the anticipated needs of the project.
     - Civil engineer: 0,5 days.
     - Social Facilitator: 2 to 5 days.

E. Indicative Duration:
   Two weeks.
   NOTE: The extent of work involved is very project specific. The duration indicated here is a baseline only, and should be extended once the Preliminary Assessment has been carried out, according to the anticipated needs of the project.

F. Higher Level of Service:

This work package is unlikely to be greatly affected by a higher-than-basic level of service, since it is much more dependent upon the skills which are locally available, but there *could* be some minor impact on time frames for this work package in that a higher service level would create further opportunities for local sub-contracts. Time frames should be adjusted accordingly.

Work Package 10: Basic Environmental Assessment

NOTE: It is assumed that only a Basic Environmental Assessment is required based on the scale of the a typical scope of work for a rural access road. However, in the event that listed activities as present that trigger the requirement for a report of greater scale, i.e. a full Scoping and EIA, Work Package 10 would apply.

A. Inputs:
- By environmental consultant:
  - using the preliminary findings of the previous work package, compile an application to the Dept of Environmental Affairs in accordance with the requirements of the aforementioned legislation;
  - engage Interested and Affected Parties in the public participation process specified in the aforementioned legislation;

B. Outputs:
- By environmental consultant:
  - the lodging of an acceptable application to the aforementioned department;
  - the submission to the aforementioned department of an acceptable Basic Assessment report complete with supporting documentation, as laid out in Regulation 543;
  - the receipt and forwarding of requirements of the relevant authorities for approval for the project to proceed, or
  - if approval is not granted and cannot be obtained within the proposed scope of work, a report to the engineer and PPM outlining the reasons for this and recommendations.

C. Professional Skills & Knowledge Required:
- Environmental assessment practitioners that are 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.

D. Indicative Level of Effort:
NOTE: The extent of work involved is very project specific. Costs can only be established upon completion of the Preliminary Environmental Assessment work package. In the event of the project requiring only a Basic Environmental Assessment, costs may start from the range following:
  - Environmental Consultant: 7 to 15 days.

E. Indicative Duration:
4½ months, minimum.
NOTE: The extent of work involved is very project specific. Durations indicated here are a baseline only, and do not take into account delays in responses from government departments or delays due to the repeating of steps in the application process. This work package may require a simultaneous specialist study/studies, which could extend as long as a full year depending on the subject matter studied. In such cases, the completion of this work package would necessarily be extended to tie-in with the completion of the specialist study. Indicative cost ranges should be determined after the Preliminary Environmental Assessment work package. Actual time frames cannot be conclusively pre-determined.

Work Package 11: Environmental Impact Assessment

A. Inputs:
- By environmental consultant:
  - Using the preliminary findings of the earlier work packages, compile a Scoping application to in accordance with the requirements of the National Environmental Management Act, 1998 (Act No. 107 of 1998) and all other relevant legislation;
  - Engage Interested and Affected Parties in the public participation process specified in the aforementioned legislation;
  - Obtain findings from Specialist Investigations, as may be required, for inclusion in the EIA Report;
  - Based on findings of the Scoping Report, draft and submit an EIA Report to the Dept of Agriculture & Environmental Affairs.

B. Outputs:
- By environmental consultant:
  - the lodging of an acceptable Scoping application to the aforementioned department;
  - the submission to the aforementioned department of an acceptable EIA report complete with supporting documentation, as laid out in Regulation 543;
  - the receipt and forwarding of requirements of the relevant authorities for approval for the project to proceed, or;
  - if approval is not granted and cannot be obtained within the proposed scope of work, a report to the engineer and PPM outlining the reasons for this and recommendations.

C. Professional Skills & Knowledge Required:
- Environmental assessment practitioners that are 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.

D. Indicative Level of Effort:
NOTE: The extent of work involved is very project specific. Costs can only be established upon completion of the Preliminary Environmental Assessment work package. Costs may start from the range following:
  - Environmental Consultant: 15 to 25 days.

E. Indicative Duration:
11½ months, minimum.
NOTE: The extent of work involved is very project specific. Durations indicated here are a baseline only, and do not take into account delays in responses from government departments or delays due to the repeating of steps in the application process. This work package may require a simultaneous specialist study/studies, which could extend as long as a full year depending on the subject matter studied. In such cases, the completion of this work package would necessarily be extended to tie-in with the completion of the specialist study. Indicative cost ranges should be determined after the Preliminary Environmental Assessment work package. Actual time frames cannot be conclusively pre-determined.

Work Package 12: Environmental Reports (Basic/EIA) – Specialist Report 1

A. Inputs:
   - By specialist consultant:
     - Using the preliminary findings of the earlier work packages and the public participation process referred to in the preceding work packages, compile a specialist report (environmental or otherwise) for inclusion in either the Basic Impact Assessment report or the EIA report.

B. Outputs:
   - By specialist consultant:
     - the completion of a specialist report addressing the requirements and concerns of the relevant Interested and Affected Parties/government departments.

C. Professional Skills & Knowledge Required:
   - Specialist consultants who :
     - are independent;
     - have recognised expertise in conducting the required specialist study, including knowledge of any relevant national, provincial or local legislation and any codes of practice or guidelines that have relevance to the proposed study;
     - 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;

D. Indicative Level of Effort:
   NOTE: The extent of work involved is very project specific. Costs can only be established upon completion of the Preliminary Environmental Assessment work package. Costs may start from the range following:
     - Specialist Consultant: 0 to 8 days.

E. Indicative Duration:
   Two weeks to 12 months.
   NOTE: The extent of work involved is very project specific. If the specialist study is required to look at a full seasonal cycle of some aspect of the proposed site, for instance, fauna or flora, the 12 month time frame could apply. However, the possible subjects of specialist studies are extremely diverse, and could just as easily require a study lasting only a few days. Indicative cost ranges should be determined after the Preliminary Environmental Assessment work package. Actual time frames cannot be conclusively pre-determined before this step.

Work Package 13: Environmental Reports (Basic/EIA) – Specialist Report 2

A. Inputs:
   - By specialist consultant:
     - Using the preliminary findings of the earlier work packages and the public participation process referred to in the preceding work packages, compile a specialist report (environmental or otherwise) for inclusion in either the Basic Impact Assessment report or the EIA report.

B. Outputs:
   - By specialist consultant:
     - the completion of a specialist report addressing the requirements and concerns of the relevant Interested and Affected Parties/government departments.

C. Professional Skills & Knowledge Required:
   - Specialist consultants who :
     - are independent;
     - have recognised expertise in conducting the required specialist study, including knowledge of any relevant national, provincial or local legislation and any codes of practice or guidelines that have relevance to the proposed study;
     - 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;

D. Indicative Cost Range:
   NOTE: The extent of work involved is very project specific. Costs can only be established upon completion of the Preliminary Environmental Assessment work package. Costs may start from the range following:
     - Specialist Consultant: 0 to 8 days.

E. Indicative Duration:
   Up to 12 months.

   NOTE: The extent of work involved is very project specific. If the specialist study is required to look at a full seasonal cycle of some aspect of the proposed site, for instance, fauna or flora, the 12 month time frame could apply. However, the possible subjects of specialist studies are extremely diverse, and could just as easily require a study lasting only a few days. Indicative cost ranges should be determined after the Preliminary Environmental Assessment work package. Actual time frames cannot be conclusively pre-determined before this step.

Work Package 14: Implementation Estimates & Programme

A. Inputs:
   - By civil engineer:
     Based on outputs from the preceding work packages, the engineer is to:
     - Revise and update the capital cost estimate;
     - Identify non-commercial sources of suitable road building material and estimate their anticipated extent;
     - Finalise an appropriate operation and maintenance regime with associated costs for a defined service life (10 to 15 years);
     - Calculate the financial viability and a socio-economic analysis of the project over the anticipated service life;
     - Compile a detailed programme/timetable for the implementation of the project.

B. Outputs:
   - By civil engineer:
     - Collate the above information and forward it to the PPM and municipal manager for their consideration and comparison against planned and anticipated spending.

C. Professional Skills & Knowledge Required:
   - Civil engineers having knowledge and experience of rural roads projects and their delivery within the South African municipal context.

D. Indicative Level of Effort:
   NOTE: The extent of work involved is very project specific. Costs indicated here are a baseline only, and should be escalated once the Preliminary Assessment has been carried out, according to the anticipated needs of the project.
     - Civil engineer: 1,5 to 2,5 days

E. Indicative Duration:
   One week.
   NOTE: The extent of work involved is very project specific. The duration indicated here is a baseline only, and should be extended once the Preliminary Assessment has been carried out, according to the anticipated needs of the project.

F. Higher Level of Service:
   A higher level of service implies greater cost and therefore impacts on the duration and scope of the cost estimate exercise, and time frames must be adjusted accordingly.

Work Package 15: Final Report & MIG/MIS Application Form

A. Inputs:
   - By civil engineer:
     - Collate all reports and data from all preceding work packages.

B. Outputs:
   - By civil engineer:
     - Compile a coherent business plan and a Feasibility Study Report with an Executive Summary of the reports and data produced in all the preceding Work Packages, and forward it to the PPM and municipal manager for approval by the municipal council.
     - Draw up a MIG1 Project Registration Application and forward it to the PPM for submission to MIG via MIS.

C. Professional Skills & Knowledge Required:
   - Civil engineers having knowledge and experience of rural roads projects and their delivery within the South African municipal context, as well as an understanding of the MIG/MIS requirements.

D. Indicative Level of Effort:
   NOTE: The extent of work involved is very project specific. Costs indicated here are a baseline only, and should be escalated once the Preliminary Assessment has been carried out, according to the anticipated needs of the project.
     - Civil engineer: 3 to 5 days

E. Indicative Duration:
   Two weeks.
   NOTE: The extent of work involved is very project specific. The duration indicated here is a baseline only, and should be extended once the Preliminary Assessment has been carried out, according to the anticipated needs of the project.

F. Higher Level of Service:
   A successful MIG application is dependent upon the application meeting the objectives of the MIG programme, among other things. If MIG is to be a part-funder of a road project, the application will need to reflect the agreement by other parties to fund the balance of the project. Securing these agreements could delay the submission of a final report and MIG/MIS application form.

Work Package 16: Community Participation & Consultation

NOTE: This work package is not a distinct sub-stage in the Pre-Feasibility/Feasibility stages of the project. Rather, this work package provides a two-way line of communication during nearly every other work package of the process. As such, it is auxiliary to these other work packages and facilitates community and municipal 'buy-in' towards the successful implementation of the project.

A. Inputs:
- By social facilitator:
  - Periodically facilitate and minute community meetings;
  - Maintain lines of communication between the professional team and the community.

B. Outputs:
- By social facilitator:
  - Relay information affecting the community from the professional team to the community;
  - Relay information pertaining to the project from the community to the professional team..

C. Professional Skills & Knowledge Required:
- Social facilitator with excellent communication skills and having knowledge and experience of rural roads projects and their delivery within the South African municipal context.

D. Indicative Level of Effort:
NOTE: The extent of work involved is very project specific. Costs indicated here are a baseline only, and should be escalated once the Preliminary Assessment has been carried out, according to the anticipated needs of the project.
  - Social Facilitator: 5 to 10 days

E. Indicative Duration:
The extent of work involved is very project specific. The duration for this work package commences at the onset of the Pre-Feasibility stage and continues until the MIG application is submitted.

SECTION D: SPECIMEN GANTT CHARTS

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