Expanded Public Works
Support Programme
A Project of the Business Trust

EXPANDED PUBLIC WORKS PROGRAMME
CONTRIBUTING TO A NATION AT WORK

EPWSP:

LARGE PROJECT DELIVERY
&
PROCUREMENT MODEL OPTIONS
(DISCUSSION DOCUMENT)

NOVEMBER 2006

1. INTRODUCTION

1.1 Background

Whilst the Expanded Public Works Programme (EPWP) has exceeded its targets for the first year, Cabinet has raised concerns about the small size, limited impact and limited visibility of many EPWP projects and has identified a need to expand the EPWP beyond the current implementation framework.

The current context presents a number of challenges that need to be addressed if the scale of the EPWP is to be increased. The current context also presents a number of opportunities, which if realised, could significantly increase the scale of the EPWP.

The key challenges (and opportunities) that the EPWP faces are briefly noted below.

- Under-expenditure and capacity constraints of public-sector bodies responsible for infrastructure delivery.

- The predominance of small projects as a consequence of the tendency by Provinces and Municipalities to spread capital budgets across as many constituencies as possible and, further, to issue relatively small tenders in order to target small emerging contractors. These tendencies further exacerbate the pressure placed on under-resourced and under-capitalised Provincial and Local Authorities to deliver cost effective and quality infrastructure to both eradicate backlogs and meet the demands for economic growth.

- The application of the traditional (conventional) project procurement and implementation cycle approach. This necessitates the procurement of different professionals / service providers during the sequential project phases from project scoping through design to tenders and appointment of Contractors. This only increases the workload and pressures placed on a diminishing cadre of skilled staff in the Provincial and Local Governments as well as delays due to several procurement processes.

The challenge is to develop and implement a delivery model that enables allocated budgets to be spent in a manner that:

- results in the visible construction of quality buildings and infrastructure;
- provides buildings and infrastructure in response to prioritised needs;
- contributes to the national and regional social and economic agenda.

1.2 Key Considerations

Capital Infrastructure Budgets and Project Considerations:

The spending of capital budgets, where capacity and capability constraints exist, can best be achieved where:

- projects of a similar nature are grouped together within a geographic region into a single programme;

- key contracts associated with a programme are placed within a limited number of service providers and/or contractors for a period of not less than 3 years;

- single point accountability is assigned to those who are contracted for developing and overseeing the implementation of the programme;

- efficient and integrated risk management and project management practices are pursued.

In addition, to shorten the overall design and delivery period, an implementation model needs to be capable of affording the Provinces or Local Authority of procuring services in the absence of a well defined scope of work or detailed designs in the case of contractors. This would require:

- Involvement of key members of the project team at an early stage in the project.

- Embracing proactive risk management and project management processes.

- Demanding that the parties that work within a programme operate in a co-operative and collaborative manner to achieve the overriding objective of the programme.

- Embracing open book accounting procedures coupled with value engineering principles and cost reduction incentives to control costs.

- Incorporating pre-determined branding (signage, uniforms, information dissemination) requirements to ensure enhanced visibility of the project and EPWP.

- Incorporating key performance indicators to measure performance, particularly with respect to the socio-economic dimensions of a project such as the use and training of small emerging contractors for the attainment of enhanced CIDB registration levels of such contractors.

Procurement Considerations:

The Constitution of the Republic of South Africa, 1996, requires that the pubic procurement system be fair, equitable, transparent, competitive and cost effective. These requirements establish societal goals or outcomes for the procurement system. Procurement processes, procedures and methods need to be developed around these system requirements. This necessitates that the terms “fair, equitable, transparent, competitive and cost effective” be interpreted.

The above is governed by the Public Finance Management Act (PFMA) for Provinces and the Municipal Finance Management Act (MFMA) for Municipalities.

In essence, the acts and associated regulations demand of public sector to procure services through a competitive bidding process which, however, is fair, ie those tendering for contracts are afforded equal opportunity and a proper basis to price for the work.

The Construction Industry Development Board Act, 2000 (Act 38 of 2000) provides for the establishment of the Construction Industry Development Board to implement an integrated strategy for the reconstruction, growth and development of the construction industry.

The CIDB is implementing a Standard for Uniformity in Construction Procurement which requires that construction works be performed using one of the following forms of contract:

- General Conditions of Contract for Construction Works (GCC 2004);

- Conditions of Contract for Construction, Conditions of Contract for Plant and Design-Build, Conditions of Contract for FIDIC EPC / Turnkey Projects or Short Form of Contract;

- JBCC series 2000 Principal Building Agreement or Minor Works Agreement;

- NEC3 Engineering and Construction Short Contract or NEC3 Engineering and Construction Contract.

The standard further requires that the CIDB Standard Professional Services Contract or the NEC3 Professional Service Contracts be used for the appointment of professional service providers.

1.3 Summary Overview of the Procurement Options and Models

Given the abovementioned context and key considerations, it is proposed:

NEC3 Suite of Contracting Documents should be used, specifically the NEC3 Engineering and Construction Contract (ECC) as this allows for a variety of contracting strategies (construction management, design and build, develop and construct, design by Employer and management contract).

The GCC 2004 and JBCC series 2000 family of contracts are restricted as they have been specifically designed to cater for the conventional project approach and design by Employer.

The FIDIC are restricted as they do not provide for cost reimbursable and target cost pricing options.

Three Procurement Model Alternatives that can be applied:

- **Alternative 1: Programme Management Approach (Design by Employer)** where the ECC Targeted Contract is used with either an Activity Schedule or BoQ.

- **Alternative 2: Programme Management Approach (Develop and Construct)** where again an ECC Targeted Contract is used with either an Activity Schedule or BoQ.

- **Alternative 3: The ECC Management Contract** is used where the Contractor manages the design and build on a cost reimbursable basis.

All 3 alternatives allow for earlier engagement with Contractors, thus shortening the delivery periods and:

- incorporation of targeted, measurable and priced KPI's for social and developmental outputs, such as contractor training, utilisation of BEE sub-contractors, etc;

- up-front determination of risk sharing and pricing basis for future activities or items not detailed at tender stage.

Further detail on the NEC3 Suite of Contracts and the procurement model options are given in the following sections.

2. NEC3 SUITE OF CONTRACT DOCUMENTS

The NEC3 Engineering and Construction Contract (ECC) essentially comprises 3 components:

- The Core Contract Clauses which contain the essential conventional contracting terms in relation to:
    - Employers and contractors main responsibilities
    - Programme
    - Testing and defects
    - Risk and insurances
    - Termination
- Main Options Clauses for which one Option is to be applied and which determines the particular payment mechanism and associated risk sharing (Options A to F – see below).
- Secondary Options Clauses in respect of price adjustment for inflation, guarantees, phased completion, targeted outcome bonuses and similar.

The Core Contract Clauses, Main Option Clauses and Secondary Option Clauses are then combined to make up the completed Contract.

It is essentially the Main Options available that provide for different procurement (and risk sharing) models and pricing by the contractors as follows:

- **Option A (Priced Contract with Activity Schedule):** These are "conventional" priced contracts with the risk of performing the work at the agreed prices – in the form of a price list – being largely borne by the Contractor. Based on information provided by the employer or the appointed professionals in respect of the project deliverables and scope of work, the Contractor undertakes to break the scope of work down into activities and price each activity as a lump sum, which he is paid on completion of the activity. The total of the activity prices is the lump sum price for the contract work.
- **Option B (Priced Contract with BoQ):** As for Option A, the risk of performing the work at agreed schedule of rates is largely borne by the Contractor. The Employer, however, carries the risk of variations in the quantities and scope of works. The employer or his professionals prepare the BoQ which is then priced by the contractor. The Contractor is paid an amount for the item of work in the bill which is the rate for the work multiplied by the quantity completed.
- **Option C (Target Contract with Activity Schedule):** The costs of the works are targeted where the Contractor assists the employer in budgeting the defined costs, eg excavation of a trench, which defined costs are sub-sects of a priced activity, eg water supply to sites in a township. Records of these costs are kept and if the sum of the costs is less or exceeds the price for the activity, the employer and contractor share – on a pre-agreed proportion – the difference in costs to priced activity.

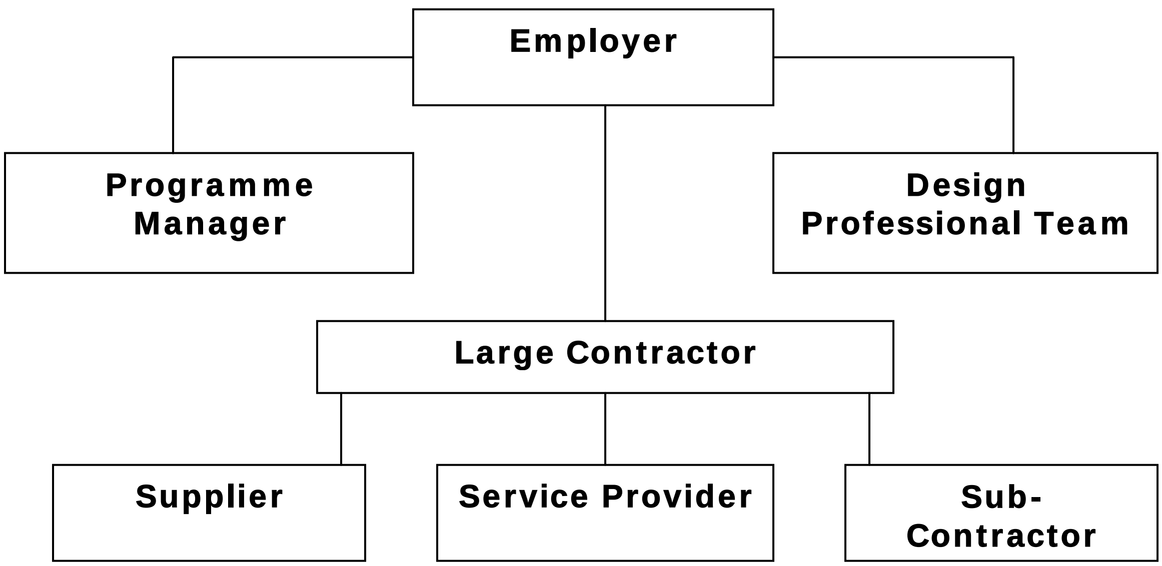
- **<u>Option D (Target Contract with BoQ)</u>:** The same as for Option C but with a BoQ instead of activity. These rates priced by the contractors for the BoQ are subject to change – based on priced actual costs.

- **<u>Option E (Cost Reimbursable Contract) and Option F (Management Contract)</u>:** All costs for the works are reimbursed to the Contractor (including margin) thus the financial risk is borne by the Employer. This would also apply to "Management Contracts", ie Option F in the ECC, where the Contractor acts as the Managing Contractor.

3. PROPOSED PROCUREMENT MODELS

3.1 Models 1 and 2: Programme Management Contracts

Contractual Arrangements:



The contractual arrangements are conventional where the employer still procures the services of professionals to prepare certain designs and, importantly, to scope the works sufficiently enough in order for the contractor to determine relevant activities for the works and price such activities or Bills of Quantities.

Design and Procurement Process

- Employer / design team define project objectives.
- Employer / design team detail scope of work (deliverables), social / BEE goals (SMME participation, EPWP goals, skills development, contractor development) and key items for contractor pricing.
- Contractor prices key items and activity schedule, delivers on socio-economic goals.
- Contractor / design team finalise target pricing in terms of activity schedule.

Contract Type: ECC, Target Cost Option (C or D):

- The target cost option is very flexible and is established on a case by case basis.
- This allows the Employer to change requirements, set new KPI, targets, etc, which would not place the contractor in a financially disadvantaged position.

- The Programme Manager has access to the Contractor's costs.

- The Project Manager has insights into the actual costs for a project and this makes the agreeing of the target cost easier with the passage of time.

Competitive Procurement:

The Contractors would have to compete:

- on the basis of quality (key personnel, quality and safety control practices and procedures, etc);

- on margins (fee) and certain priced items (such items could be common items for anticipated activities that will make up scope of works).

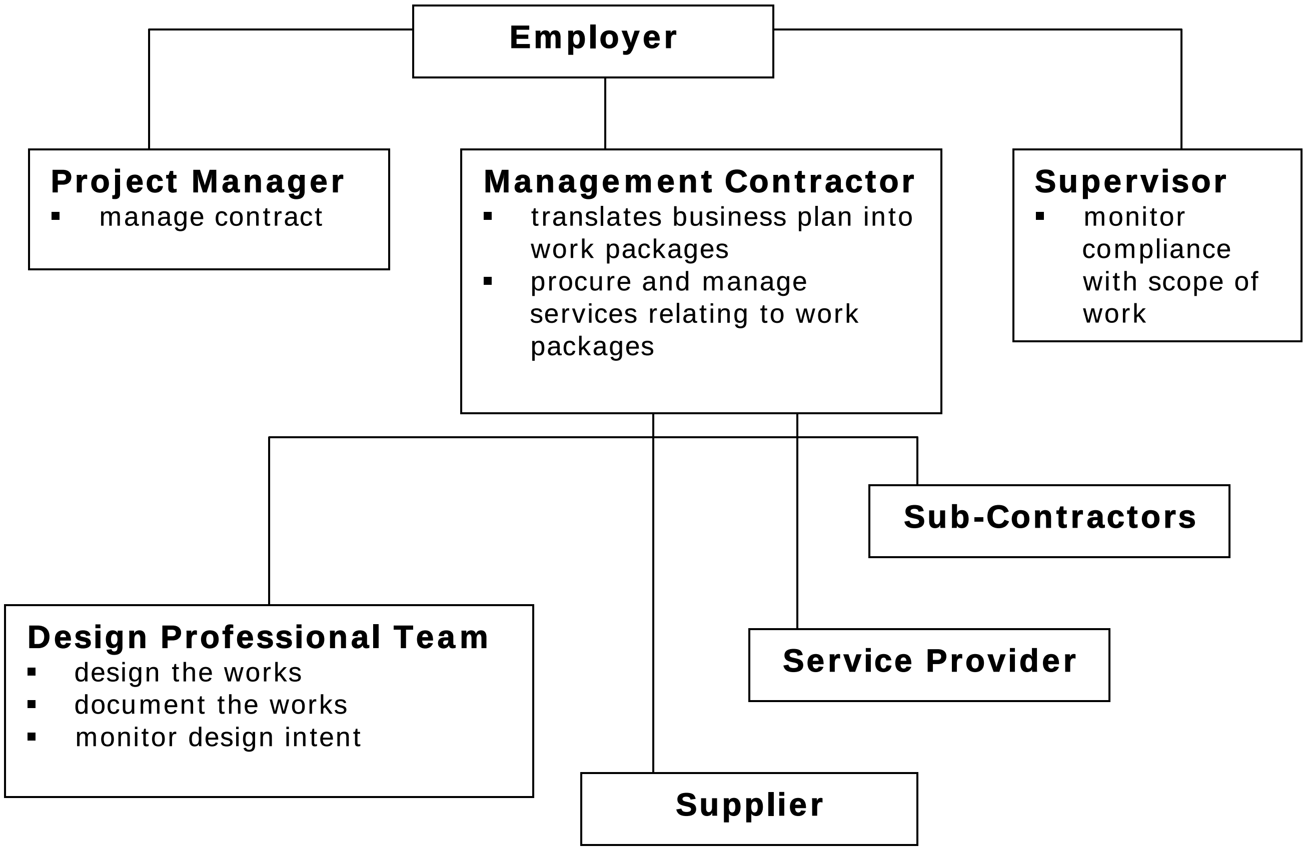
Payment:

- Contractor prices documented works in terms of an activity schedule or bills of quantities and agrees a target price with employer as well as cost saving / overrun sharing basis.

- Payment is thus on a cost plus basis (open book accounting).

3.2 Model 3: Management Contract

Contractual Arrangements:



For this alternative, the Employer outsources the entire programme to a Management Contractor whose responsibilities, in essence, are to translate the business plan into work packages and to manage the work packages. The Employer would interface with the Contractor through his appointed Project Manager. The Employer also appoints a Supervisor to ensure that the quality of the works is in accordance with the requirements of the Contract.

Contract Type: ECC Management Contract (Option F):

- The Contractor manages the design, etc, and advises the Employer / Project Manager of ultimate scope of works, technical and sub-contracting implications.

- The Contractor also forecasts the costs of works, specifically defined costs and programme and agrees these with the Employer / Project Manager.

Procurement:

- Employer / Project Manager define project objectives and project business plan.

- Employer / Project Manager prepare items to evaluate for appointment of a Management Contractor – normally functional criteria and fee / margin pricing. It would also include process the Managing Contractor would follow to procure the services of design teams, etc.

- The appointed Contractor and its design team then designs works, prepares tender / pricing documents, budgets and programme.

- Budgets (defined costs) and programme then agreed to with Employer / Project Manager.

Payment:

- Payment to the Contractor is direct costs (either open book of measured quantities with rates) for Contractors own work, and sub-contractors.

- A percentage fee (as tendered for) is also payable on total costs of work done.