



TERMS OF REFERENCE FOR A DIRECTED WRC PROJECT

KEY STRATEGIC AREA	KSA 3: Water Use and Waste Management
THRUST	4: Saniti
PROGRAMME	3: Municipal Sludge Valorisation
TITLE	The Development of a Framework for the Review Of The Sludge Management Guidelines

Objectives:

General:

Sludge generation is a key component associated with sustainable wastewater management. In order for sludge to be disposed or used, sludge need to be characterised or classified. Historically, sludge has been classified in three main categories in a decreasing order of potential to cause odour nuisances and fly-breeding as well as to transmit pathogenic organisms to the environment. These categories are described in the guide *Permissible Utilisation and Disposal of Sewage Sludge* (PUDSS) published by the *Water Research Commission* (WRC) in 1997 (Edition 1). This was later replaced by the *WRC Sludge Management Guidelines* of 2006 and 2009, which are currently used in Authorisations by the Authorities responsible for water and environmental affairs to stipulate the regulatory requirements for sludge management. To date, only Volume 2 on the utilisation and disposal of wastewater sludge has been updated with an addendum.

It has been over decade since the publication of the Sludge Management Guidelines. There has been significant progress in water, sanitation and environmental policy and guidelines and in research, development and innovation over the years. There is risk that one of the WRC's most used sector products may become outdated. A revision of the Sludge Management Guidelines is necessary to take into account developments since 2009, including circular economy principles, emerging contaminants and SABS for non-sewered systems.

The revision and update of the guidelines would provide improved long-term sustainability planning and management approaches. As first step in the process, a framework will be developed for the revision of guidelines and in doing so, describe a way forward for and identify key theme areas which would be defined through stakeholder engagement. The framework would outline the vision, narrative and key themes and strategy for the revised guidelines.

Specific Aims:

1. Develop a framework for revising and updating the Sludge Management Guidelines.
2. Provide a comprehensive literature review of sludge policy, regulation, standards, etc. from the publication of the Sludge Guidelines in the 2000s and after publication.
3. Undertake a series of stakeholder consultations (including regulators, municipalities, consultants) in developing the framework for revision. Through the consultative process, the

framework would outline the vision, narrative and key themes and strategy for the revised guidelines. The consultative process would also elucidate which aspects of the current guidelines “worked” and which didn’t and provide recommendations as part of the framework development.

4. Produce dissemination material linked to outputs of study, including a Policy Brief.

Rationale:

The WRC Sludge Management Guidelines is a key product that is currently used in Authorisations for sludge handling and disposal. The guidelines have seen little revision for over a decade. There is a need to update a key WRC sector product to take into account new policy, guidelines and standards, practicality, and the latest in research, development and innovation. As part of the first step of the process of revising the guidelines, a framework is required – guided by the sector - which would provide the vision, narrative and key themes and strategy.

Deliverables:

1. Reports on key aspects researched as per specific aims.
2. Draft a Policy Brief based on the framework development including consultative processes undertaken.
3. Draft Final Report.
4. Final Report.

Lighthouse:

- Water Sensitive Design; Water-Energy-Food Nexus, Water Quality

Impact Areas:

- Water and the Economy; Water and the Environment; Water and Society

Knowledge Tree

- Inform Policy and Decision-Making
- Sustainable Development Solutions

Time Frame: 2-years

Total Funds Available: R750,000.00 (Year 1: R375,000, Year 2: R375,000) (VAT Inclusive)