

DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

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**THE SCOPE OF WORK FOR CATEGORIES OF REGISTRATION FOR THE  
PROFESSIONS REGULATED BY THE ENGINEERING COUNCIL OF SOUTH  
AFRICA**



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## 1. BACKGROUND

The Council for the Built Environment (the CBE) is a statutory body established in terms of the Council for the Built Environment Act, 43 of 2000 (the CBE Act). The CBE is an entity of the Department of Public Works and Infrastructure (DPWI). The CBE is an overarching body, regulating the activities of the six councils for the following built environment professions (the CBEP): engineering, architecture, landscape architecture, quantity surveying, property valuation and project and construction management.

The CBE Act impels the CBE to, after consultation with the Competition Commission (CC) and in consultation with the Councils for the Built Environment Professions (CBEP), identify the scope of work for each category of registration (section 21 of the CBE Act). The consultation with the CC was conducted. The CBE is keen to continuously engage the CC on the process of regulating the built environment professions. The CBE will also seek collaboration with the CC on the development and communication of an advocacy position on the regulation on the built environment professions.

## 2. AMBIT OF THE SCOPE OF WORK

In the context of this process, scope means “the range of work performed by a registered person in terms of a specific piece of legislation other than the legislation that created the councils for the professions, or the statutory duties which may be performed by a registered person.”

The CBEP have inter alia the statutory mandate to accredit learning programs at educational institutions, register applicants in appropriate categories of registration, exercise oversight over the professional conduct of registered persons and express the intention to have the

CBEP regulate their respective professions. The identified scope of work for each category of registration is seen as a component of a framework for such regulation.

The CBE acknowledges the mandate of the CC to ensure full and free participation in the economy, as embodied in the preamble of the Competition Act, 89 of 1998. The need for an efficient, competitive economic environment, balancing the interests of workers, owners and consumers and focussed on development to benefit all South Africans is also recognised.

The regulation of professions should therefore not:

- (i) limit the range of suppliers available
- (ii) limit the ability of suppliers to compete
- (iii) reduce the incentive for suppliers to compete

(iv) limit the choices and information available to customers

Factors (i) to (iv) above should be pro-actively addressed through information and advocacy processes.

### 3. REGISTRATION CATEGORIES

In terms of Section 18(1) of the Engineering Profession Act, 2000 (Act No. 46 of 2000, as amended) the Act empowers the Engineering Council of South African (ECSA) to register persons in certain prescribed categories of registration. The categories are: Professionals, Candidates and Specified Categories.

## The following scope of work is published for information.

### 4. Scope of work for each professional category

#### 4.1. Professional Engineer

**Definition:** A Professional Engineer is a person who is registered as such in terms of the Engineering Profession Act, 2000 (Act No. 46 of 2000, as amended).

**Entry Level** BSc/ B. Eng.

**Level Descriptor** A Professional Engineer is concerned primarily with the progress of technology through innovation, creativity and change. Their work involves the application of a significant range of fundamental principles, enabling them to develop and apply new technologies, promote advanced designs and design methods, introduce new and more efficient production techniques, marketing and construction concepts, and pioneer new engineering services and management methods.

**Scope of Work** The Scope of Work for a Professional Engineer encompasses Complex Engineering Activities (CEA) which are characterised by several or all of the following:

- a) Scope of activities may encompass entire complex engineering systems or complex subsystems;
- b) A context that is complex and varying, is multidisciplinary, requires teamwork, unpredictable, may need to be identified;

- c) Requires diverse and significant resources: including people, money, equipment, materials, technologies;
- d) Significant interactions exist between wide-ranging or conflicting technical, engineering or other issues;
- e) Are constrained by time, finance, infrastructure, resources, facilities, standards & codes, applicable laws;
- f) Have significant risks and consequences in a range of contexts.

## 4.2. Professional Engineering Technologist

**Definition:** A Professional Engineering Technologist is a person who is registered as such in terms of the Engineering Profession Act, 2000 (Act No. 46 of 2000, as amended).

**Entry Level** National Higher Diploma

**Level Descriptor** A Professional Engineering Technologist is a person who by virtue of a combination of education, training and experience have attained a level of competence, which enables them to apply engineering principles, and techniques to the solution of engineering challenges of varying complexity as required by industry. Activities include but are not limited to: design; planning; investigation and problem resolution; improvement of materials, components, systems or processes; implementation, manufacture or construction; engineering operations; maintenance; project management; research, development and commercialisation.

**Scope of Work** The scope of work for a Professional Engineering Technologist encompasses Broad-Defined Engineering Activities (BDEA) which are characterised by several or all of the following:

- a) Scope of practice area is linked to technologies used and changes by adoption of new technology into current practice;
- b) Practice area is located within a wider, complex context, requires teamwork, has interfaces to other parties and disciplines;
- c) Involve the use a variety resources (including people, money, equipment, materials, technologies);
- d) Require resolution of occasional problems arising from interactions between wide-ranging or conflicting technical, engineering or other issues;

- e) Are constrained by available technology, time, finance, infrastructure, resources, facilities, standards and codes, applicable laws;
- f) Have significant risks and consequences in practice area and in related areas.

### 4.3. Professional Certificated Engineer

<b>Definition:</b>	A Professional Certificated Engineer is a person who is registered as such in terms of the Engineering Profession Act, 2000 (Act No. 46 of 2000, as amended).
<b>Entry Level</b>	Diploma
<b>Level Descriptor</b>	A Professional Certificated Engineer is a person who holds an appointment, which requires the possession of a Government Certificate of Competency as a Manager or as an Engineer in terms of the Mines Health and Safety Act, 1996 (Act No 29 of 1996), or as an Engineer in terms of the Occupational Health and Safety Act, 1993 (Act No 85 of 1993) or as a Chief Engineer Officer – Foreign Going on a vessel with a registered power of no less than 3 000 kW in terms of the Merchant Shipping Act, 1951 (Act No 57 of 1951), or in terms of any Act preceded or superseded any of the Acts mentioned above, and which demonstrates the applicant's competence to implement and manage the provisions of these Acts, and ensure the safe operation and maintenance of plant and equipment. Activities include but are not limited to: design or design reviews; planning; incident investigation and failure analysis, analysis and synthesis of solution to production problems, operational optimisation aimed at improving of materials, components, systems or processes. Operational, construction; maintenance and project management. Development of efficiency enhancing methods of work and systems, Commissioning, decommissioning and disposal of assets, including the closure of operations.
<b>Scope of Work</b>	The scope of work for Professional Certified Engineer encompasses Broadly-Defined Engineering Activities (BDEA) which are characterize by several or all of the following:

- a) Scope of practice area is linked to technologies used and changes by adoption of new technology into current practice;
- b) Practice area is located within a wider, complex context, requires teamwork, has interfaces to other parties and disciplines;
- c) Involve the use a variety resources (including people, money, equipment, materials, technologies);
- d) Require resolution of occasional problems arising from interactions between wide-ranging or conflicting technical, engineering or other issues;
- e) Are constrained by available technology, time, finance, infrastructure, resources, facilities, standards and codes, applicable laws;
- f) Have significant risks and consequences in practice area and in related areas.

#### 4.4. Professional Engineering Technician

**Definition:** A Professional Engineering Technician is a person who is registered as such in terms of the Engineering Profession Act, 2000 (Act No. 46 of 2000, as amended).

**Entry Level** GCC – Government Certificate of Competency

**Level Descriptor** A Professional Engineering Technician is a person who recommends, control, administer and implement known or novel technology in an innovative manner in a discipline, sub-discipline or specialisation of engineering Activities include but are not limited to: design; planning; investigation and problem resolution; improvement of materials, components, systems or processes; implementation, manufacture or construction; engineering operations; maintenance; project management; research, development and commercialisation.

**Scope of Work** The scope of work for a Professional Engineering Technician encompasses Well-Defined Engineering Activities (WDEA) which are characterised by several or all of the following:

- a) Scope of practice area is defined by techniques applied; change by adopting new techniques into current practice;

- b) Practice area is located within a wider, complex context, with well-defined working relationships with other parties and disciplines;
- c) Work involves familiar defined range of resources (including people, money, equipment, materials, technologies);
- d) Require resolution of interactions manifested between specific technical factors with limited impact on wider issues;
- e) Are constrained by operational context, defined work package, time, finance, infrastructure, resources, facilities, standards and codes, applicable laws;
- f) Have risks and consequences that are locally important but are not generally far reaching.

## **5. Scope of work for Specified Categories**

In terms of Section 18 (1) (c) of the Engineering Profession Act, 43 of 2000, ECSA may prescribe specified categories. Each specified categories having its own registration requirements. The following are the specified categories accordingly prescribed:

- Lift Inspectors
- Lifting Machinery Inspectors
- Medical Equipment Maintainers
- Fire Protection Systems Practitioners
- Civil Laboratory

## **6. Scope of work per candidate category**

A person who is registered in the category of candidate must perform work in the Engineering Profession only under the supervision and control of a professional of a category as prescribed.