

The impact of the new health and safety (construction) regulations on municipal and design electrical engineers

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Construction Regulations

The construction regulations are important to municipal electrical engineering activities in that:

- All maintenance: and
- All electrical construction activities

need to comply with these regulations in terms of risk assessments and procedures to mitigate risk identified.

Construction work

Construction work is defined as :

Any work (including electrical installation and maintenance work) in connection with -

- The erection, maintenance, alteration, renovation, repair, demolition, dismantling of, or addition to a building or any similar structure; and
- The installation, erection, dismantling or maintenance of a fixed plant, which includes mechanical and electrical installations of buildings or similar structure (substations, reticulation switchgear etc.).

Application for construction work permit- will come into (7 August 2015)

3. (1) A client who intends to have construction work carried out, must at least 30 days before that work is to be carried out apply to the provincial director in writing for a construction work permit to perform construction work if the intended construction work will:

(a) exceed 180 days;

(b) will involve more than 1800 person days of construction work; or

(c) the works contract is of a value equal to or exceeding thirteen million rand or

Construction Industry Development Board (CIDB) level 6.

MUST APOINT AGENT- CR 5(1)

Design Engineers

The new construction regulations place new emphasis on design engineers responsibilities.

Design engineers responsibilities will not be limited to the design phase only but will include:

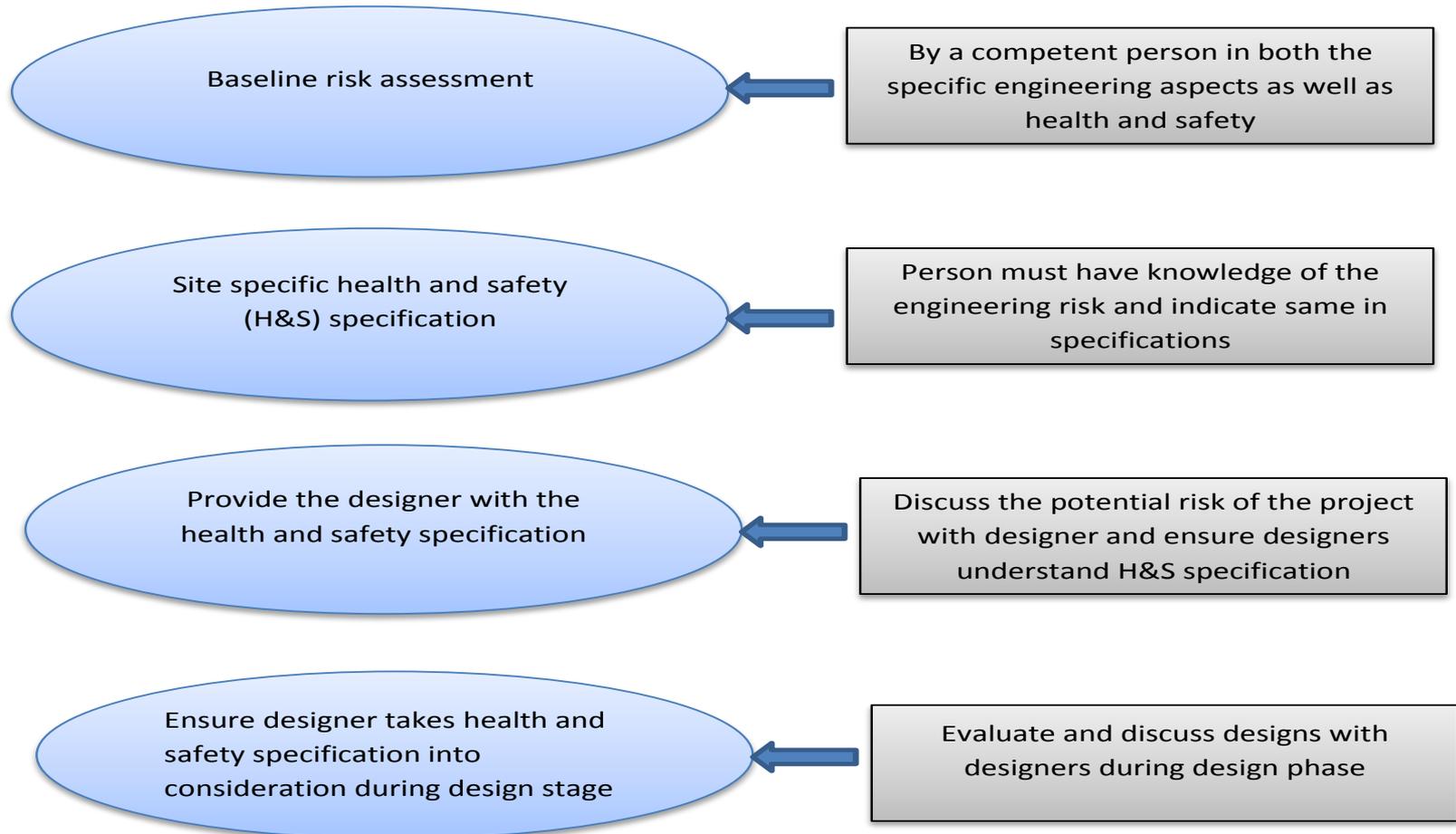
- Responsibility for the safe installation of their designs; and
- The usage and maintenance of their designs.

Design Engineers

Designers are defined as 'a competent person' who: prepares checks and approves a design and includes an architect or engineer (town electrical engineer) contributing to, or having overall responsibility for, a design.

Designers also include building service engineers who design details for fixed plant, this referring to mechanical, electrical and related service engineer.

Client Responsibility (Design phase)



Responsibilities of Design Engineers

Electrical and Mechanical engineering designers, according to Construction Regulations 6, are responsible:

- ***To ensure that the applicable safety standards*** incorporated into the construction regulations and applicable regulations ***are complied with in their designs*** (e.g. SANS 10142 for electrical installations);
- To take into consideration the ***health and safety specification submitted by the client***, before a contract is put out to tender, and make available in a report to the client all relevant health and safety information about the design and installation of the relevant structure that may affect the pricing of the construction work;

Responsibilities of Design Engineers

- ***To inform the client in writing of any known or anticipated dangers or hazards*** relating to the installation and construction work of their design, and make available all relevant information required for the safe execution of the work they designed, or any subsequently altered designed work (this includes safe work procedures for their specific installation);
- ***To refrain from including anything*** in their design ***that requires or necessitates the use of dangerous procedures*** or materials, hazardous to the health and safety of the persons doing the installation and construction work, which can be avoided by modifying the design or by substituting materials;

Responsibilities of Design Engineers

- To ***take into account the hazards relating to any subsequent maintenance*** of the relevant structure or installation and make provision in their design for that work to be performed, in order to minimize the risk of future maintenance activities required;
- When given a mandate by the client, ***to carry out necessary inspections at appropriate stages*** to verify that the construction and installation of their designs are carried out in accordance with the design's specifications; if the designer is not so mandated by the client, the client's agent, (e.g. ***Professional health and safety agent - Pr CHSA***) will be responsible to carry out such inspections;

Responsibilities of Design Engineers

- The designer or the client's agent (e.g. Pr CHSA) **must stop any contractor from executing any construction work** which is not in accordance with the relevant design's health and safety aspects: Provided that if the designer is not so mandated, the client's appointed agent (e.g. Pr CHSA) must stop that contractor from executing that construction work;
- When mandated by the client, the designer, must do a final inspection of the completed structure, in accordance with the National Building Regulations, and include the health and safety aspects of the structure. Then as far as is reasonably practicable, **declare the structure safe for use**, and issue a completion certificate to the client and a copy thereof to the contractor, and
- The designer must, during the design stage, take cognisance of ergonomic design principles in order to **minimize ergonomic related hazards in all phases of the life cycle of the structure**.

Notification of construction work

4. (1) A contractor who intends to carry out any construction work other than work contemplated in regulation 3(1), must at least 7 days before that work is to be carried out notify the provincial director in writing in a form similar to Annexure 2 if the intended construction work will-
- a) include excavation work;
 - (b) include working at a height where there is risk of falling;
 - (c) include the demolition of a structure; or
 - (d) include the use of explosives to perform construction work.

MAY APOINT AGENT- CR 6(1)

Duties of client

A client must:

(a) prepare a baseline risk assessment for an intended construction work project;

(b) prepare a suitable, sufficiently documented and coherent site specific health and safety specification for the intended construction work based on the baseline risk assessment contemplated in paragraph (a);

(c) provide the designer with the health and safety specification contemplated in paragraph (b);

Construction Health and Safety Agent

Where a construction work permit is required as contemplated in regulation 3(1), the ***client must***, without derogating from his or her health and safety responsibilities or liabilities, appoint a competent person in writing as an ***agent (Pr CHSA)to*** act as his or her representative.

Where notification of construction work is required as contemplated in regulation 4(1), the ***client may***, without derogating from his or her health and safety responsibilities or liabilities, appoint a competent person in writing as an ***agent (Pr CHSA).***

Risk assessment for construction work

A contractor must, before the commencement of any construction work and during such construction work, have ***risk assessments performed by a competent person appointed in writing***, which risk assessments form part of the health and safety plan to be applied on the site, and must include:

- (a) the identification of the risks and hazards to which persons may be exposed to;
- (b) an analysis and evaluation of the risks and hazards identified based on a documented method;
- (c) a documented plan and applicable safe work procedures to mitigate, reduce or control the risks and hazards that have been identified;
- (d) a monitoring plan; and
- (e) a review plan.

Method statements

Method statements for the safe installation of services are not generic but specific to job tasks that are not routinely conducted.

New job tasks, due to the nature of new work, require guidance on specific procedures.

Procedures may include manufacturer's installation methods and acceptable written engineering practices or international and local safety standards.

Construction Health and Safety Agent

The South African Council for the Project and Construction Management Professions (SACPCMP) do registration for:

Construction Health and Safety Agent
(Pr CHSA)

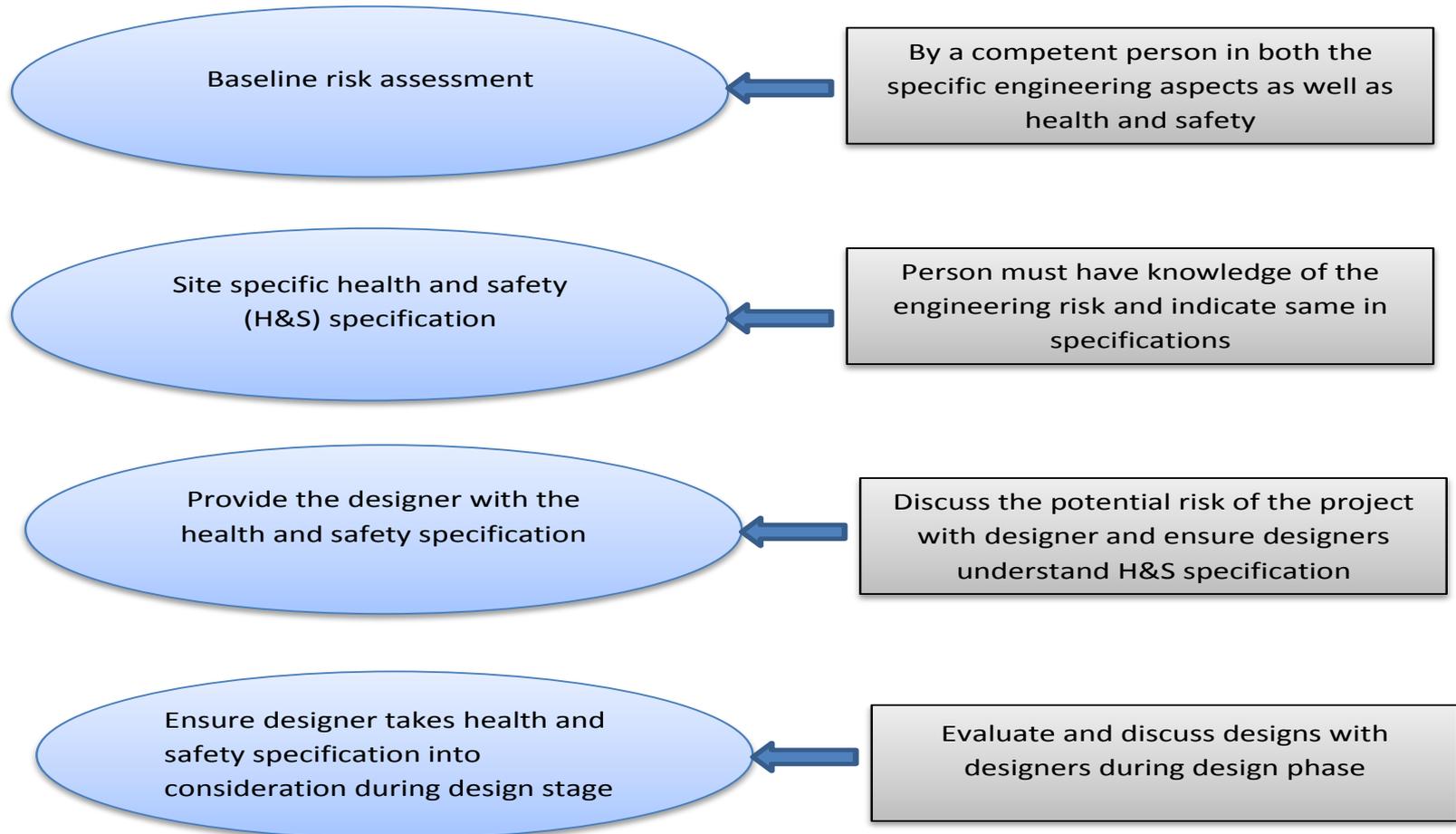
Duties of principal contractor

A ***principal contractor*** must:

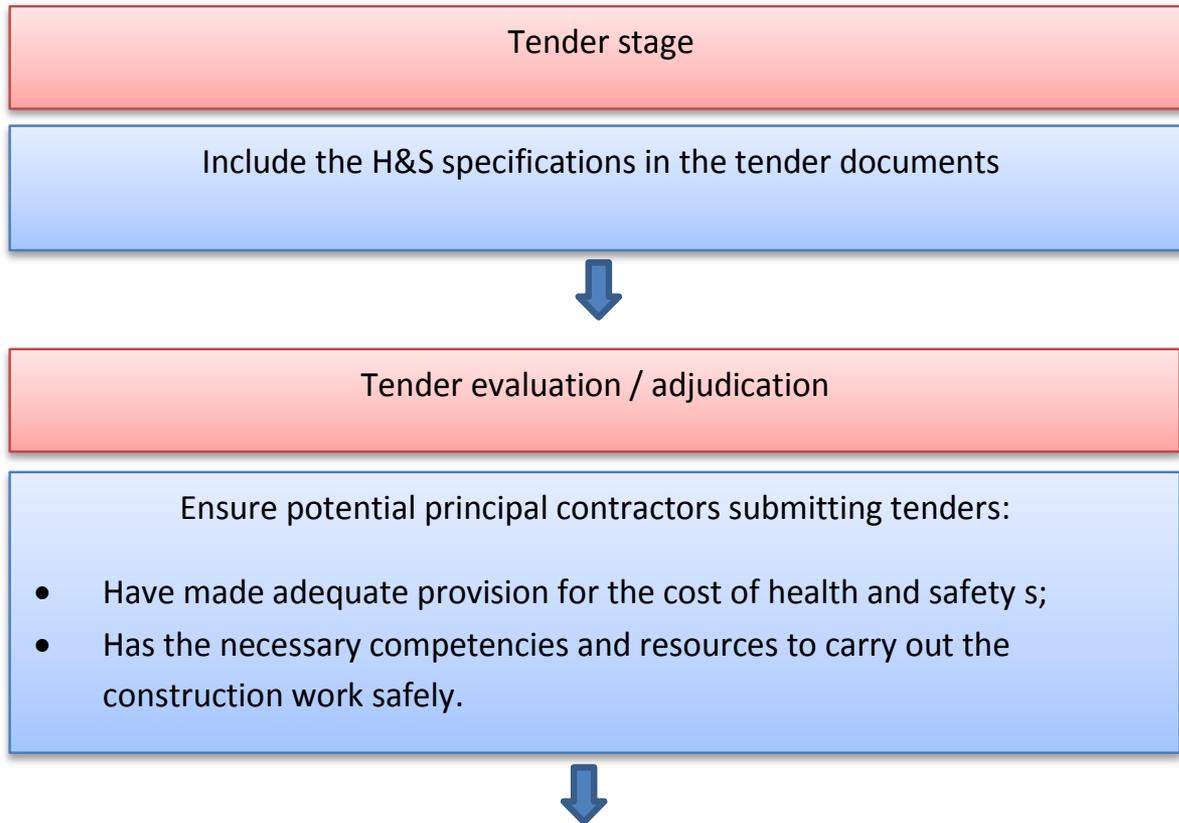
(a) Provide and demonstrate to the client a suitable, sufficiently documented and coherent site specific ***health and safety plan***, based on the client's documented health and safety specifications contemplated in regulation.

(b) Keep on site a ***health and safety file***, which must include all documentation required in terms of the Act and these Regulations.

Client Responsibility (Design phase)



Client Responsibilities- Principal Contractor appointment



Client Responsibilities- Principal Contractor appointment

Contractor Appointment

Ensure potential principal contractors submitting tenders:

- Registered and in good standing with the compensation fund Compensation for Occupational Injuries and Diseases Act, 1993;
- Appoint every principal contractor in writing;



Health and safety plan

- Discuss and negotiate with the principal contractor the contents of the principal contractor's health and safety plan;
- Ensure that each contractor's health and safety plan is implemented and maintained.

Thank you