

## 2.6. Health and Safety in Design

The Consultant shall be aware of his statutory Health and Safety (H&S) responsibilities in carrying out a drainage project. Those responsibilities start at the inception of a project and continue until the asset is adopted by DMAT.

The Consultant shall ensure that other parties to the project are aware of their statutory H&S responsibilities.

All parties shall adhere to the Abu Dhabi Environment, Health and Safety Management System (ADEHSMS) published by OSHAD and the associated Codes of Practice, which together form the framework under which H&S is managed. Consultants should in particular take account of Code of Practice No 20 – ‘Safety in Design’.

The key requirements for Consultants are to:

- ensure they are sufficiently competent and adequately resourced to address H&S issues during design
- minimise foreseeable risks and hazards to people and property directly or indirectly involved or affected by construction work and the future use of the asset
- provide a record of all H&S considerations during the design process
- include information on the drawings of any significant risks that could be present during construction
- provide information for inclusion in the O&M Manual on design-related matters that could impact on the safety of operation and maintenance
- coordinate with others to ensure that risks are comprehensively managed
- promote a learning environment in H&S matters

## 2.7. Value Management and Value Engineering

Value Management (VM) is a means of maximizing the value of a project through the structured examination of decisions about benefits, risks and costs. The VM process requires a high degree of challenge to standard solutions and depends on a clear understanding of the problems to be solved. Maximum benefit from VM occurs in the early stages of a project.

Value Engineering (VE) is a structured process which examines the functionality of a project element and assesses whether it fulfils the required function at best value.

VM and VE are carried out through formal workshops, as well as being an integral part of the day to day design development. Formal workshops are to be run by a trained facilitator and include all relevant stakeholders.

VM reviews should be carried out throughout the project life cycle, as set out in the value management plan, and the number required will depend on the project complexity. The reviews should generally follow the following sequence:

- i. VM1 Project definition.
- ii. VM2 Concept design.
- iii. VE1 Preliminary design and engineering.
- iv. VE2 a,b,c Detailed design.
- v. VM3 Procurement and contract strategy.
- vi. VM4 Post project feedback.

The Consultant shall prepare and submit report at the end of each review summarising the scope of the review, the process adopted, the changes made and the ensuring benefits.