

**CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN (CEMP)  
FOR TOP STRUCTURES – REVISION 1 - JANUARY 2020  
BLAAUWBERG DEVELOPMENT AREA: SANDOWN PHASES**

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## 1.1 SCOPE

The specifications contained within these construction environmental specifications shall guide all top structure construction and related activities undertaken by property owners/developers and their appointed contractors within the development.

## 1.2 INTERPRETATIONS

For the purposes of this Specification the following acronyms and definitions shall apply:

**BDA ELC:** Blaauwberg Development Area Environmental Liaison Committee.

**Bund:** Enclosure under/around a storage facility to contain any spillage.

**CCT:** City of Cape Town.

**Contractor:** The main contractor as engaged by the property owner and their subcontractors.

**Council:** The local authority, City of Cape Town.

**ECO:** Environmental Control Officer to be appointed by the Sandown Property Owners Association.

**Environment:** The biosphere in which people and other organisms live. It consists of:

- Renewable and non-renewable natural resources such as air, water (fresh and marine), land and all forms of life;
- Natural ecosystems and habitats; and
- Ecosystems, habitats and spatial surroundings modified or constructed by people, including urbanised areas, agricultural and rural landscapes. Places of cultural significance and the qualities that contribute to their value.

**Property Owner/Developer:** The registered property Owner or Purchaser who has signed an agreement of sale for the erf or erven on which the construction activity is taking place.

**Site:** The boundary and extent of the property owner's property/development area, including any areas off the main site on which works are to be carried out in order to allow the construction to proceed successfully.

**SPOA:** Sandown Property Owners Association who must ensure compliance by owners and contractors.

**Specification:** A technical description of the standards of materials, methods and workmanship that the Contractor is to use in the Works to be executed/completed.

**Works:** Building Construction operations and all related and incidental works, involved in the erection of top structures on the property, excluding bulk servicing of the plots.

## **1.3 SITE ESTABLISHMENT REQUIREMENTS**

### **1.3.1 Minimum Site Establishment Requirements**

No construction activities may commence on a site until the site establishment minimum requirements as stipulated below have been met and written approval from the Estate Manager or ECO has been obtained. Minimum site establishment requirements include:

- a) The site shall be demarcated by means of fencing with opaque shade cloth a minimum of 1.2 m high and with wooden stakes placed at 2 m intervals;
- b) Toilets;
- c) Waste disposal skip with an appropriate cover in place (i.e. covered with shade cloth). Note that the use of metal cages for waste disposal is not permitted;
- d) Storage facilities;
- e) Contractor Sign Board as per Contractors Code of Conduct; and
- f) Stormwater Drains are covered.

### **1.3.2 Construction Camp Sites**

- a) Where construction camp sites are established these shall be located within the property owner's Site/development property, unless written permission has been specifically obtained from another property owner to have the camp established on their property. This written permission is to be available on site at all times.
- b) Construction camps shall be secured/fenced and maintained in a neat condition, free of litter and oil/fuel/chemical spills.

### **1.3.3 Material Handling, Use and Storage**

- a) No materials containing invasive plant seeds, litter or contaminants may be imported to Site.
- b) All construction materials must be stored/stockpiled within the property owner's site unless written permission has been specifically obtained from another property owner to have materials stockpiled on their property. This written permission is to be available on site at all times.
- c) Loose material stockpiles must not be more than 2 m high and must be protected against wind and water erosion (for prevention of dust and other problems).

### **1.3.4 Plant and Fuel Handling**

#### **1.3.4.1 Fuel storage areas**

- a) No bulk fuel (in excess of 200 litres) shall be stored on site without a flammable substances certificate having been obtained from the CCT (Fire Department).
- b) No refuelling is to take place outside of an area demarcated for this purpose on the property.
- c) Areas for storage of fuels and other flammable materials shall comply with standard fire safety regulations.
- d) The Contractor shall ensure that all liquid fuels (petrol and diesel) are stored in impermeable containers with lids, which are kept firmly shut. These containers shall be placed within a

bund/tray that can hold a total of 110% of the capacity of the fuel storage containers stored therein.

- e) Only empty and externally clean fuel containers may be stored on the bare ground.

#### **1.3.4.2 Fuelling and servicing areas**

- a) All vehicles and equipment must be maintained in a good condition in order to minimise the risk of leakage and possible contamination of the soil or stormwater by fuels, oils and hydraulic fluids.
- b) All plant requiring servicing or which leaks e.g. generators, portable pumps and concrete mixers, are to make use of a drip tray placed strategically to avoid incidental spillage of oils and fuels onto the ground.
- c) Drip trays shall be inspected and emptied daily, and serviced when necessary. In particular, drip trays shall be closely monitored during rain to ensure that they do not overflow.
- d) All fuel, oil or hydraulic fluid spills are to be mopped up or bio-remediated immediately.
- e) Drip tray contents and materials soiled with oils/fuels are to be treated as hazardous waste (see section 1.4.1.2).

#### **1.3.5 Restriction of Working Areas**

- a) No labour access, material delivery access, stockpiling, dumping or storage of equipment or materials is allowed outside the respective erf where work is undertaken without the express permission of the property owner whose property is affected. Written permission must be obtained from the affected property owner and kept on site at all times.
- b) No adjacent council or development sidewalk/POS vegetation or trees may be damaged by construction activities.

#### **1.3.6 Toilets**

- a) The Contractor shall provide suitable sanitary arrangements at approved points around the designated work area to allow easy access to all employees on site. One chemical toilet is to be provided on site for every 15-contract personnel at each working area or alternatively one flush toilet for every 30 personnel. Portable chemical toilets must have doors and locks and shall be secured to prevent them blowing over. Toilet paper shall be provided.
- b) Chemical toilets are to be emptied prior to builders' holidays. The contractor shall ensure that no spillage occurs when the toilets are cleaned or emptied and that the contents are removed from site. Discharge of waste from toilets into the environment and burial of waste is strictly prohibited
- c) The Contractor shall keep the toilets in a clean, neat and hygienic condition at all times.

#### **1.3.7 Water Management**

- a) Wastage of water shall be avoided at all times. Only proper hoses and fittings in good repair shall be used on site. Wherever possible, pistol grip fittings should be used on the end of hoses. All taps shall remain properly closed when not in immediate use and all broken pipes/fittings shall be isolated immediately and repaired within 24hours.
- b) The Contractor shall ensure that water conservation measures such as the use of drums/buckets/bins are placed beneath all water sources (taps, tanks, etc.) on site to capture any water wastage for appropriate reuse.

- c) The contractor will be responsible for monitoring all water sources on site regularly to minimise water wastage.

## **1.4 GENERAL REQUIREMENTS**

### **1.4.1 Solid Waste Management**

#### **1.4.1.1 Refuse Control**

- a) For the purposes of this specification, refuse includes all debris and waste (e.g. litter, food waste, cable pieces, vegetation, packaging materials building rubble, etc.), including hazardous waste (e.g. oils).
- b) The Contractor shall provide labourers to clean up the working areas at the end of every day.
- c) Waste and litter shall be disposed of into covered waste skips on site. The Contractor shall insure that the size of the waste skip utilised is sufficient to accommodate the amount of wastes being generated. Skips shall not be allowed to become overfull. The Contractor shall then remove the refuse collected from the working areas, from site at least once a week.
- d) The use of metal cages as waste disposal receptacle is strictly prohibited. Should the contractor wish to utilise a different waste disposal receptacle on site, this facility must first be approved by the Estate Manager or ECO, and must be weather and animal proof. However, failure to adequately maintain such facilities will result in penalty and the Contractor will be requested to acquire proper skips.
- e) Refuse must be disposed of at a formal (licenced) landfill site. No refuse or waste material will be disposed of by burning or burying. The contractor is responsible for any waste illegally dumped by any employee or subcontractor.
- f) The Contractor shall ensure that waste and surplus food, food packaging and organic waste are not deposited by employees anywhere on the site except in their waste disposal receptacle.
- g) Recycling must be practiced whenever possible/practical.
- h) Proof of safe removal of all refuse shall be kept on site at all times.

#### **1.4.1.2 Hazardous waste**

- a) Petroleum, chemical, harmful and hazardous waste shall be stored in a sealed bin marked "Hazardous Waste" which shall be disposed of at Vissershok Hazardous Waste Disposal site or collected by a hazardous waste service provider when full/at the end of the contract. Proof of safe disposal shall be kept on record.

#### **1.4.1.3 Waste water**

- a) No paint products and chemical additives and cleaners such as thinners and turpentine or any other potentially hazardous chemical or contaminated wash water may be disposed of on site or into the stormwater or sewer systems.
- b) Each site shall have a drum/facility for washing paint tools such as brushes and empty paint containers. The Contractor shall ensure that all the paint waste is disposed of adequately at a licensed dumping site and proof of safe disposal (receipts/slips) shall be submitted to the Estate Manager.

#### **1.4.2 Prevention of Water Pollution/ Stormwater Management**

- a) The Contractor shall prevent pollution of surface or underground water as a result of construction activities. Such pollution could result from the release, accidental or otherwise, of chemicals, oils, fuels, sewage, water from excavations, construction water, water carrying soil particles or waste products etc.
- b) The Contractor shall prevent discharge of any pollutants, such as sediments, cements, concrete, lime, chemicals and fuels into the stormwater system. The water or effluent shall contain no other constituents in concentrations which are poisonous or injurious to frogs or other forms of aquatic life.
- c) Both external and internal roads of the site must be maintained in a clean and sediment free condition at all times. Roads are to be swept once a week at a minimum.

#### **1.4.3 Concrete and Cement Works**

Cement powder has a high pH. Spillage of dry cement powder and concrete slurry will affect both soil and water pH adversely.

- a) Cement is to be stored in a secure weather-proof location to avoid contamination of the environment. Used cement bags are to be stored in a wind and rainproof container for disposal. Used bags are to be removed from site at the end of every day.
- b) The mixing of cement, concrete, plaster, etc. on bare ground is strictly prohibited. Soil protection must be used at all times.
- c) All runoff from batching areas shall be controlled so that contaminated water does not enter stormwater or groundwater. Contaminated water may be disposed of on the rubble stockpile or can be reused in the batching process. Cleaning of equipment and flushing of mixers shall not result in pollution of the surrounding environment.
- d) Dagga boards, mixing trays and impermeable wash water sumps shall be used at all mixing and supply points as required to prevent pollution of the environment.
- e) All visible remains of excess concrete shall be physically removed to a formal landfill site on completion of the plaster or concrete pour section and disposed off.

#### **1.4.4 Appropriate Use of Machinery**

- a) The Contractor shall at all times carefully consider what machinery is appropriate to the task at hand while minimising the extent of environmental damage/nuisance.
- b) The Contractor shall take preventative measures, such as screening, muffling, dust control, timing and pre-notification of affected parties, to minimize complaints regarding dust, noise and vibration nuisances.

#### **1.4.5 Archaeology and Palaeontology**

- a) All artefacts over 60 years of age and all fossils are protected by law. Should a suspected artefact be excavated on site, work in the area of any artefact or fossil is to cease immediately and the SA Heritage Resources Agency (SAHRA) is to be informed. The contact details for the South African Heritage Resources Agency (SAHRA) are as follows:

Tel: (021) 462 4502  
Fax: (021) 462 4509

#### **1.4.6 Fire Control**

- a) No fires are allowed on site at any time.
- b) The Contractor shall take all reasonable and active steps to avoid increasing the risk of fire through their activities on site.
- c) The Contractor shall ensure that the basic fire-fighting equipment is available on site. All "hot" work areas (e.g. welding, gas cutting or cutting of metal) must have fire extinguishers readily at hand.
- d) The disposal of any matter by burning is prohibited.
- e) No cigarette butts may be disposed of on site. Rather these shall be extinguished/ disposed of in a sand filled container designated for the purpose on site.
- f) The Contractor shall be liable for all costs incurred by organisations called to extinguish any fires started by any person(s) under their control. The Contractor shall be liable for all costs incurred to remediate burnt areas.

#### **1.4.7 Hydrocarbon spills**

- a) In the event of any hydrocarbon or other potentially detrimental chemical spill:
  - The source of the spillage shall be isolated.
  - The contractor shall contain the spillage using sand berms, sandbags, pre-made booms, sawdust or absorbent materials.
  - Cordon off and ensure safety of the spillage area.
  - Mop the spillage and clean/remediate the area. Use a specialist spill response contractor if required.

#### **1.4.8 Working Hours/Noise Nuisance**

- a) No work by contractors that will have undue negative impact on/disruption to residents of nearby residential areas may take place outside of:  
  
07h00 to 18h00 Mondays to Fridays  
07h00 to 17h00 Saturdays
- b) No building activity shall be undertaken on Sundays or Public Holidays without prior consent of the Sandown Property Owners Association as well as the owners of the adjoining properties.
- c) Additional building restrictions may be put in place by the Sandown Property Owners Association such as over the Builder's Holiday and Easter weekend.
- d) Noise levels exceeding 85dB shall only be permitted in designated noise management zones on site where staff/visitors are issued with hearing protection.

#### **1.4.9 Excavation and Trenching**

- a) Trenches are to be closed as soon as possible after services have been laid in them, to prevent them from posing safety hazards to people, traffic and animals and to prevent rainwater erosion.
- b) Trenches shall be re-filled to the same level as (or slightly higher to allow for settlement) the surrounding land surface to minimise erosion. Excess soil shall be stockpiled in an appropriate manner.

#### **1.4.10 Transport of Materials**

- a) The Contractor is to ensure that all vehicles are in a road-worthy condition. No materials may be transported without the load being secured under a tarpaulin or similar, in order to prevent possible danger to other road users from materials falling from the back of vehicles.
- b) Should material accidentally fall off the back of a vehicle, this shall be swept up and collected immediately and not left on or at the side of the road.

#### **1.4.11 Control of Dust and/or Wind Blown Sand**

- a) The Contractor shall take appropriate measures to minimise/suppress the generation of dust as a result of construction works, operations and activities.
- b) All sand/soil stockpiles that are the cause of a windblown dust nuisance shall be covered with shade cloth or similar. Potable water may not be used as a means of dust suppression and water wastage must be strictly controlled.
- c) Excavation, handling and transport of erodible materials shall be avoided under high wind conditions or when a visible dust plume is present.

#### **1.4.12 Alien Invasive Vegetation**

- a) No alien invasive plants (as listed by the National Environmental Management Biodiversity Act) may be allowed to establish on the site and shall be controlled/removed.
- b) Specific dates will be determined by the SPOA/Estate Manager/ECO in line with alien invasive plant clearing guidelines for the removal of alien vegetation on all sites. This is to be communicated to property owners via the SPOA.

#### **1.4.13 Animals on Site**

- a) No animal may be harmed intentionally or due to negligence.

### **1.5 SITE CLEAN UP AND REHABILITATION**

#### **1.5.1 Site Clean Up**

- a) The Contractor shall ensure that all temporary structures, equipment, excess materials, waste and facilities used for construction purposes are removed upon completion of the project.

#### **1.5.2 Rehabilitation**

- a) Where appropriate, the Contractor shall employ a suitably qualified person to rehabilitate areas damaged by construction activities. CCT infrastructure damaged by the contractor's activities shall be repaired to the relevant CCT department's satisfaction.

### **1.6 CEMP COMPLIANCE**

#### **1.6.1 Legal Context**

- a) These CEMP specifications are a requirement of the CCT Planning conditions of approval for the property and there exists a legal obligation to implement them.



- b) The ECO may call for the payment of penalty fines for non-compliance with the provisions of these specifications to the BDA ELC – Sandown Property Owners Association Account, to be ring fenced for the Maintenance of the Sandown Fynbos Corridor.
- c) The Contractor shall keep an Environmental File containing a copy of this CEMP as well as all Method Statements, Waste Removal Slips, Induction Registers, etc. on site at all times.

### **1.6.2 Environmental Control Officer**

Prior to the commencement of construction, a suitably qualified and experienced Environmental Control Officer (ECO) shall be appointed by the SPOA to ensure compliance with the specifications and principles of the CEMP. Proof of such appointment shall be provided to the Regional Manager: Environment and Heritage Management Branch: Northern Region.

The duties of the ECO will include:

- a) Liaison with the Client and Environmental Authorities;
- b) Monitoring of all the Contractor’s activities for compliance with the various environmental requirements and specifications;
- c) Ensuring that the requisite remedial action is implemented in the event of non-compliance;
- d) Ensuring the proactive and effective implementation and management of environmental protection measures;
- e) Ensuring that a register of public complaints is maintained by the Contractor and that any and all public comments or issues are appropriately reported and addressed;
- f) Routine weekly recording and Monthly reporting to the Regional Manager: Environment and Heritage Management Branch: Northern Region; and
- g) Recording and reporting of environmental incidents.

### **1.6.3 SPOA, Owner and Contractor**

- a) The property owner shall issue all principal contractors with a copy of these specifications as part of their construction contracts.
- b) The property owner remains the responsible party to SPOA and council for the implementation of these specifications and payment of penalties. It is up to the property owner to delegate responsibility to agents and contractors via contractual agreements.
- c) The property owner shall make good any damage to the Environment caused as a result of non-compliance with the CEMP.
- d) The Property Owner shall insure that the contractor is responsible for conditioning environmental awareness training for all his subcontractors and staff such that all construction personnel are aware of the requirements of these environmental management specifications.

### **1.6.4 Penalties for Non-compliance with the CEMP**

- a) These penalties are applicable for non-compliances with these specifications:

Persistent and un-repaired oil leaks from machinery.	R3 000
Persistent failure to monitor and empty drip trays timeously.	R1 000
The use of inappropriate methods for refuelling.	R1 000

Failure to furnish (upon request by the ECO or Estate Manager) any written permission or proof herein stated by this CEMP.	R1 000
Failure to rehabilitate property/erf/area damaged by construction activities (in addition to the fixing cost).	R1 000
Failure to cover waste disposal skip appropriately.	R500
Use of an unsuitable waste disposal receptacle.	R1 000
Litter on site associated with construction activities.	R1 000
Deliberate lighting of illegal fires on site.	R5 000
Persistent failure to sweep up sand from public roads.	R1 000
Employees not making use of the site ablution facilities.	R2 000
Failure to implement specified noise controls/working hours.	R5 000
Failure to empty waste bins on a regular basis and illegal dumping.	R2 000
Inadequate dust control.	R5 000
Washing of paint equipment on site (spot fine).	R500
Failure to implement alien invasive plant clearing measures by specified dates.	R500
Failure to repair leaks and/or avoid wastage of water.	R2 000
Pollution of the environment (including via the stormwater system) e.g. with paints, cements, fuels/oils, chemicals ( <i>penalty depending on severity as determined by the ELC</i> )	R500 – R5 000

- b) For each subsequent similar offence the fine shall be doubled in value to a maximum value of R 30 000.

AGREED AND SIGNED by the parties upon the dates and at the places specified below.

.....

OWNER: who by his signature hereto warrants his authority to act herein

Date...../...../.....Place.....

.....

CONTRACTOR: who by his signature hereto warrants his authority to act herein

Date...../...../.....Place.....