

CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN (CEMP) FOR TOP STRUCTURES: BLAAUWBERG DEVELOPMENT AREA

PROJECT:

OWNER:

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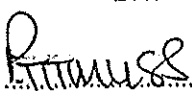

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City of Cape Town Environmental Resource Management Dept. Environmental and Heritage Management	
APPROVED	
2015 -09- 15	
 Name	 Signature

1.1 SCOPE

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

1.2 INTERPRETATIONS

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

CCT: City of Cape Town

ELC Blaauwberg Development Area Environmental Liaison Committee

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

Batch plant: Machinery used on site for the mixing and production of concrete or plaster, and associated equipment and materials.

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

Council: The local authority, City of Cape Town

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.

Owner: is 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 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.

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 (previously undertaken by ASKA Properties).

1.3 SITE ESTABLISHMENT REQUIREMENTS

1.3.1 Construction Camp Sites

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

1.3.2 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.
- c) No delivery vehicle may use adjacent property's for access unless written permission has been specifically obtained from that property owner.
- d) Loose material stockpiles must be protected against wind and water erosion (for prevention of dust and other problems).

1.3.3 Plant and Fuel Handling

1.3.3.1 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.

1.3.3.2 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).

1.3.4 Restriction of Working Areas

- a) No labour 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.
- b) No adjacent council or development sidewalk/POS vegetation or trees may be damaged by construction activities.

1.3.5 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.

1.4 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. Waste and litter shall be disposed of into bins. The Contractor shall provide sufficient bins with lids on Site to store the solid waste produced on a daily basis. Bins 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.
- c) Refuse must be disposed of at a formal (licenced) landfill site. No refuse or waste material will be disposed of by burying. The contractor is responsible for any waste illegally dumped by any employee or subcontractor.
- d) 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 refuse bins for removal on a daily basis by the Contractor.
- e) Recycling must be practiced whenever possible/practical.

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.

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.

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) 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.
- c) Dagma 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.
- d) 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) The Contractor shall take all reasonable and active steps to avoid increasing the risk of fire through their activities on Site.
- b) 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.
- c) The disposal of any matter by burning is prohibited.
- d) No cigarette butts may be disposed of on site, rather these shall be extinguished/ disposed of at a sand filled container designated for the purpose on Site.
- e) 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) 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. Water may not be used to damp these down (water wastage and not allowed in terms of the CCT Water Use By-Law).
- 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.

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.
- b) All solid waste/builders rubble shall be disposed of off site at an approved landfill site where certificates of disposal shall be provided.
- c) All damaged kerbs and associated Civil infrastructure shall be repaired to the satisfaction of CCT.

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 and there exists a legal obligation for the owner to implement them.
- b) The Council may call for the payment of penalty fines for non compliance with the provisions of these specifications as administered by the Blaauwberg Development Area Environmental Liaison Committee (ELC).

1.6.2 Contractor and Staff Training

- a) The owner shall issue all principal contractors with a copy of these specifications as part of their construction contracts.
- b) The owner remains the responsible party to council and the area ELC for the implementation of these specifications and payment of penalties. It is up to the owner to delegate responsibility to agents and contractors via contractual agreements.
- c) The contractor will be 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.

1.6.3 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.	R 3 000
Persistent failure to monitor and empty drip trays timeously.	R 1 000
The use of inappropriate methods for refuelling.	R 1 000
Litter on site associated with construction activities.	R 1 000
Deliberate lighting of illegal fires on site.	R 5 000
Persistent failure to sweep up sand from public roads.	R 1 000
Employees not making use of the site ablution facilities.	R 2 000
Failure to Implement specified noise controls/working hrs	R 5 000
Failure to furnish Certificates of disposal	R 2 000

Damage to kerbs and associated Civil infrastructure	R 5 000
Failure to remove waste on a regular basis and illegal dumping	R 2 000
Inadequate dust control.	R 5 000
Washing of paint equipment off of site	R 500
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>	R 500 – R 5 000

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