

# SITE CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

## POOLES BAY CONNECTION PATH, HERMANUS - REV 01: 27/11/2020

### Significant Environmental Aspects of the Site

The following have been identified as significant environmental aspects for the site during the construction phase:

- ✓ The new pathway is located adjacent to private properties for much of its length – construction staff are to respect the private properties and treat them as no-go areas for access/stockpiling unless specifically authorized to the contrary by the relevant landowner.
- ✓ No vehicular access to the site is possible and the terrain is very rugged in places – this means work will need to be carried out by hand or with small portable plant and all materials will need to be carried onto and off site by hand.
- ✓ Parking and delivery of materials will need to be carefully managed, to avoid impact on private land or damage or obstruction of public land.
- ✓ Minimal erosion and dust and noise nuisance impacts are anticipated due to the rocky terrain and proximity to the sea (noise dampening).
- ✓ Works to be undertaken in the summer months to avoid winter storms and wet conditions that may hamper safety of workers and increase the risk of damage to the works.
- ✓ The wetland and stream areas will need to be protected against chemical pollution e.g. from cement or petrochemicals.



### 1. Access and Construction Traffic

- i. Construction access to this site is limited to the existing cliff path (by foot) on either end of the new path section, as accessed via Main Road and Protea Road parking areas. Access via private properties would need to be specifically negotiated between the contractors and the respective property owners. Construction vehicles are not to hinder the access of other road users in the area (public roads and public parking places) e.g. during off loading or due to obstructive parking. Maintain traffic safety at all times and station flagmen when required. All parking, delivery and access points and routes must be approved by the Principal Agent and the ECO.
- ii. Appropriately secure transported materials to ensure safe passage between destinations. This includes clearing running boards of loose debris before vehicles leave site and covering trucks carrying sand with shade/dusty canvas covers to avoid loss en-route.
- iii. Any lost materials/sand/debris on the surrounding public road network or cliff path as a result of the contractor's activities shall be cleared immediately. These shall be swept up and removed and not left on the side of the road or path.

### 2. Site Demarcation/No-Go Areas

- i. No staff, materials, equipment, damage or dumping of materials or waste is allowed outside of the agreed work site boundaries (3.5m buffer from HVM for demarcation inland and 5 meters wide seaward and approved stockpile/site storage areas, unless otherwise agreed per an approved Method Statement) except where used to specifically rehabilitate/repair an area off-site.
- ii. Private properties are considered no-go areas (unless access has been specifically negotiated and formalized in writing between the contractor and the owner) and wherever possible pegs shall be used to demarcate the extent of the work area and where the adjacent property owner to that staff have a visual guide/reminder. Two wetland areas are also located on private property.

### 3. Contractor's Camp

- i. The contractor shall obtain approval from the landowner/municipality for any area used for temporary stockpiling/deliveries, or establishing a site storage container.

### 4. Plant and Fuel Handling

- i. No bulk fuel storage (more than 50l) shall take place on the site. Jerry cans of fuel on site shall be stored in leak-proof drip trays, well away from combustible materials and at least 20 meters away from the stream and wetland areas as indicated on plan.
- ii. Maintain all vehicles and equipment in a good condition in order to minimize the risk of leakage and possible contamination of the soil, stormwater or adjacent public roads by fuels, oils and hydraulic fluids.
- iii. Mop up or treat (bio-remediate) any spills immediately.
- iv. Provide drip trays (placed strategically to avoid incidental spillage of oils and fuels onto the ground) for any plant/equipment e.g. generators and concrete mixers that leak during refueling or operation.

### 5. Housekeeping and Waste Management

- i. The Contractor shall provide for the ECO's approval a Waste Management Plan/ Register indicating the anticipated construction waste types, sorting and storage and disposal/recycling methods.
- ii. Provide sufficient bins/bags on site in which to store the solid waste. Storage facilities shall not be allowed to become overfull. Bins/bags/waste stockpiles must be covered with lids/shade cloth to prevent redistribution of the waste in high wind conditions where this is a risk due to the type of waste stored.
- iii. The site shall be kept neat and tidy. No littering on site - litter shall be collected daily into bins or more frequently as required to prevent it from blowing onto adjacent properties/areas.
- iv. Waste shall be disposed of at licensed waste disposal sites. Recyclable/re-usable waste shall be stored/bagged separately for recycling. No waste may be disposed of on site by burning or burying. Remove staff food waste from site minimum daily.
- v. The Contractor is responsible for maintaining records to demonstrate that waste has been lawfully disposed of by the Contractor – this shall be kept on the Contractor's site file and checked by the ECO. Records shall detail who removed the waste (Contractor directly or a third party service provider), date removed from site, type, quantity and destination/treatment of waste e.g. recycling/landfill, and where obtainable, receipts/proof of delivery to a licensed landfill or waste management service provider.
- vi. Stockpiles of building rubble in central locations on site and remove this as soon as it constitutes a practical load. Keep clean building rubble separate from 'soil' waste to minimize dumping costs and allow for recycling e.g. at an off-site crusher facility.
- vii. Hazardous demolition or construction waste e.g. fuel/oil contaminated waste etc., requires special handling and disposal per legislation. Store in a sealed drum and remove off the site to a hazardous waste disposal site or have collected by an accredited hazardous waste disposal service provider. Waste manifests and the related safe disposal receipt copies shall be submitted to the ECO for all hazardous wastes disposed of by the Contractor.

### 6. Emergency Procedures

- i. Fire - Advise the relevant authority of a fire as soon as one starts and do not wait until it can no longer be controlled. All site staff to be made aware of the procedure to be followed in the event of a fire.
- ii. Spills - Mop up all fuel/oil/chemical/sewage spills and keep all contaminated earth and mop up materials in a sealed drum in a hazardous waste disposal site periodically and end of contract. Alternatively, treat in situ with a bio-remedial product. Report all spills and treatment to the ECO.

### 7. Concrete and Cement Works

- i. Give preference to pre-cast concrete elements as opposed to on-site batching/casting wherever practically possible.
- ii. Store unused cement in a secure weatherproof location.
- iii. Avoid any cement contaminated runoff into the environment. Create/provide an impermeable plastic/plastic-lined sump if required to hold any cement contaminated water.
- iv. Remove any concrete spills from the surrounding area immediately.
- v. No mixing/placing concrete products on unprotected terrain – use of mixing trays/pans/boards only.
- vi. Collect empty cement bags from the working areas at the end of every day and store in a windproof container and remove from site for disposal daily.

### 8. Paints/Hazardous Substances

- i. No paint products, chemical additives or solvents such as thinners and turpentine or any other hazardous substances may be disposed of on site.
- ii. Store all hazardous substances in sealed, well labelled containers when on site and remove from site at the end of every working day. Liquid substances containers shall be placed on a drip tray/bunded area to safely contain any accidental spillages.

### 9. Toilets

- i. Provide at least one flush toilet for every 20 contract personnel or alternatively 1 chemical toilet for every 15 site personnel, within walking distance of the workers. Work may not commence/continue without adequate facilities available.
- ii. Toilets must have doors and locks and portable toilets shall be placed on level ground and secured against blowing/tipping over. Keep toilets in a clean, neat and hygienic condition. No toilets may be placed on/below the High-Water Mark of the sea. Toilet paper and hand washing facilities shall be provided at all times. Chemical toilets shall be serviced a minimum of once per week and servicing slips shall be kept on the Contractor's site file.
- iii. Any sewage leaks/spills shall be treated immediately with an appropriate bio-remedial product or lime and the cause repaired immediately. Contaminated soils shall be removed from site to a licensed landfill site.

### 10. Material Handling, Use and Storage

- i. Store materials neatly on site/at the parking area/permitted location (not outside of the approved work/camp/site/storage site boundaries and away from vegetation).
- ii. Locate stockpiles of erodible materials such as sand in sheltered positions and where required cover with plastic/shade cloth/dibdam when not in use to prevent wind/rain erosion (and costly loss of material).
- iii. Stockpiles, trenches and slopes must be stabilized/shored/ laid back to ensure that they are stable.

### 11. Noise/nuisance

- i. Working hours shall be limited to those specified in the National Building Regulations/SANS 10400-F2010 i.e. between 06h00 and 18h00 on weekdays and 06h00 and 17h00 on Saturdays. No work shall take place on public holidays and on Sundays. Working hours shall not be exceeded by the Contractor without first obtaining the express permission of the Project Manager and the municipality.
- ii. Should the occupants of any of the adjacent residences complain about excessive noise/nuisance caused by the construction activities, the Contractor shall log the complaint and investigate the cause and implement any required mitigation measures to remedy the situation as is possible, practical and reasonable

### 12. Stormwater/Erosion Controls

- i. Works or material stockpiles are not to impede stormwater drainage. No foreign substances e.g. cement contaminated water, silt, sand/aggregate/soil, paints, detergents and oils are to enter the stormwater system. All spills on site are to be cleaned up immediately before these could mobilize in rain/runoff water.

### 13. Control of Dust and/or Wind-blown Sand

- i. Avoid handling and transport of erodible materials under high wind conditions when a visible dust plume is present and is affecting neighbours/the public.
- ii. Stockpiles that may give rise to dust must be covered with bidum/shade cloth/plastic etc. where required and they will be effective. shade cloth screens shall be erected to contain dust e.g. adjacent to sensitive neighbours or around a drilling operation.

### 14. Fire Control

- i. No smoking is allowed near combustible materials e.g. stored fuel/paint/solvents. All cigarette butts shall be completely extinguished and then placed in the waste bins provided on the site (and not disposed of anywhere else).
- ii. No open fires will be allowed on site.

### 15. Water wastage

- i. The contractor shall avoid wasteful practices on site

### 16. Archaeology / Heritage

- i. Should any heritage resources, including evidence of graves and human burials, archaeological material and palaeontological material be discovered during the execution of the activities, all works must be stopped immediately, and Heritage Western Cape must be notified without delay.
- ii. Should any structures or shipwreck remains older than 60 years be uncovered during the proposed works, they must be notified immediately so that further advice can be given regarding complying with heritage legislation

### 16. Site Clean Up and Rehabilitation

- i. All temporary structures, equipment, excess materials, waste and facilities used for construction purposes are to be removed from site upon completion of the project, to the satisfaction of the Project Manager and the ECO.
- ii. Where required, the contractor shall employ a suitably qualified person to repair/rehabilitate any area, service or structure damaged by construction activities.
- iii. The ECO shall issue a report to DE&DP to confirm that all closure requirements have been met upon project closure.

### 17. Monitoring and inspection procedures

- i. The Principal Contractor's (direct client appointments) will be responsible for the implementation of the CEMP on the site during the construction phase by the Contractor's staff as well as his subcontractors.
- ii. Daily site inspections will be undertaken by the Principal Contractor's monitor to ensure that the requirements of this CEMP are implemented.
- iii. Minimum fortnightly site inspections are to be undertaken by the ECO, to monitor compliance with the CEMP and advise on remedial actions where required. The ECO will issue a monthly environmental management summary report to the project team.
- iv. The ECO will provide an initial environmental awareness training session for the Principal Contractor's permanent site management staff outlining the requirements of the CEMP and the sensitivities of the local environment. These in turn shall be included in the contractor's SHE inductions with site labour staff and subcontractors.
- v. The CEMP is to be included in all tender/contract documentation (including sub contracts) for the construction project.
- vi. The ECO may request additional method statements to address any further mitigation measures not currently covered in this CEMP.

### 18. Non-Compliance

- i. Should the conditions in this CEMP not be upheld, the ECO and Project Manager may take whatever reasonable steps to enforce such conditions, including recommending the issue of penalties or a stop works order for the Project Manager to impose for breach of this approved CEMP (which is part of the construction contract).
- ii. Significant contraventions must be reported by the ECO to the DE&DP (Compliance Management) for further action.

### 19. Penalties Schedule

- i. The Principal Contractor is responsible for the payment of any penalties for CEMP contraventions as a result of his staff's activities or those of his subcontractors.
- ii. All collected penalties shall be accounted for and shall either be retained from the contract fees or paid directly by the contractor, as a donation to the Cliff Path Action Group NGO for the maintenance of the Hermanus cliff path.
- iii. Penalty amounts shall be guided by the following table. Amounts are per incident, unless otherwise indicated. Where there are ranges, the penalty amount depends on the severity of the contravention and will be established by the ECO and Principal Agent

a	Failure to have an oil leak from machinery/vehicle repaired.	R500 – R 2000
b	Inadequate litter control/waste management on site	R100 – R 1000 p/ day
c	Per incident - contractor worker/s not making use of the abatement facilities or littering on site	R100
d	Per incident - making a fire on site	R200 – R5000
e	Causing injury to or undertaking unauthorized capture of animals on site (apart from search, rescue and relocation)	R 100 – R 5000
f	Releasing a pollutant into the environment e.g. by cement or petrochemicals through negligence	R200 – R10 000
g	Undue contamination of soil or water with cement products	R200 -R1000
h	Failure to implement adequate dust control leading to complaints	R100 – R 1000 p/day
i	Inadequate erosion control (wind/water) or negative erosion related impact on neighbouring areas	R100 – R 2000 per day
j	Failure to mop up/treat a fuel/chemical spill	R200 – R5000
k	Causing undue noise/ nuisance/traffic/parking disruption to residents/users of the surrounding area	R500 per hour
l	Damage to an area/feature outside of the designated working area (site/camp boundaries) e.g. vegetation, private property	R200 – R10 000
m	Damage to feature or environment where repair is required by external contractors	Cost of repair
n	Failure to clean a spill/load loss on a public road/path	R100 – R 2000 p/day

### 20. Contact Numbers

**Environmental Control Officer (ECO)** – monitoring and reporting of significant environmental impacts/incidences. Updating the CEMP if required and seeking approval of such changes from the DE&DP.

\_\_\_\_\_ (insert details)

**Project Manager** – responsible party to be contacted by DE&DP in terms of non-compliance issues during the construction phase, responsible for enforcement of CEMP requirements by all appointed contractors through site instructions, penalties etc.

\_\_\_\_\_ (insert details)

**DE&DP Case Officer** – approval of significant departures from CEMP requirements / to be advised of significant environmental impacts/incidences.

\_\_\_\_\_ (insert details)