



Example DFFE Order Closure

APRIL 2023

Part 8 Background



- In **Nov 2016** a Site Assessment Report (SAR) was submitted in line with a Part 8 Notification for one of Astron Energy (AE) sites located in Port Elizabeth.
- In the SAR, AE recommended no further action (NFA) to test DFFE's view on AE's interpretation of S-P-R linkages and risk. Regulations were relatively new at this stage.
- DFFE disagreed with a NFA approach and issued a Monitoring Order in **Nov 2017**.
- AE challenged an open-ended monitoring period and suggested a 2 year period with bi-annual sampling be considered.
- DFFE amended the condition to reflect a 3 year bi-annual sampling period **Nov 2018**.
- AE submitted Progress Reports in line with the Order for 3 years.
- **Early 2021** AE submitted a Closure Report for which a Closure letter was issued by DFFE in **Nov 2021**
- Note that some Closures requests are followed by site visits/inspections by the authorities prior to issuing the Closure letter

Location



Site Background



- The site is an operational retail facility.
- The tanks are approximately 3 years old, having been installed in June 2018.
- During sampling conducted in March 2021, PSH of approximately 10 mm in thickness was detected in MW4. Maximum reported dissolved concentration of benzene (46 µg/l) GRO (150 µg/l) and EPH (600 µg/l) in groundwater were detected in monitoring well MW3.
- The geology encountered during intrusive works at the site was characterised by medium-grained sand (backfill), cobbles and boulders (to a confirmed depth of approximately 0.13 m bgl). This was underlain by stiff clay and sandy clay (with rock fragments) to a confirmed depth of 6.0 m bgl.
- Groundwater depths from the most recent sampling round in March 2021, ranged from 0.82 m and 2.92 m bgl.
- The calculated groundwater flow direction is to the north north-east at a gradient of 0.03.
- The latest groundwater sampling round included the sampling of MW1- MW11. Although PSH is present in MW4 (10 mm), down-gradient off-site monitoring wells MW6, MW8 and MW11 (adjacent private property) returned below the detection limit for the analysed petroleum hydrocarbon compounds.
- Based on the groundwater analytical results from the broader monitoring well network (MW1, MW6, MW8, MW9, MW10 and MW11), the dissolved phase plume has been delineated to the southwest, north, north-east and southeast of the site.

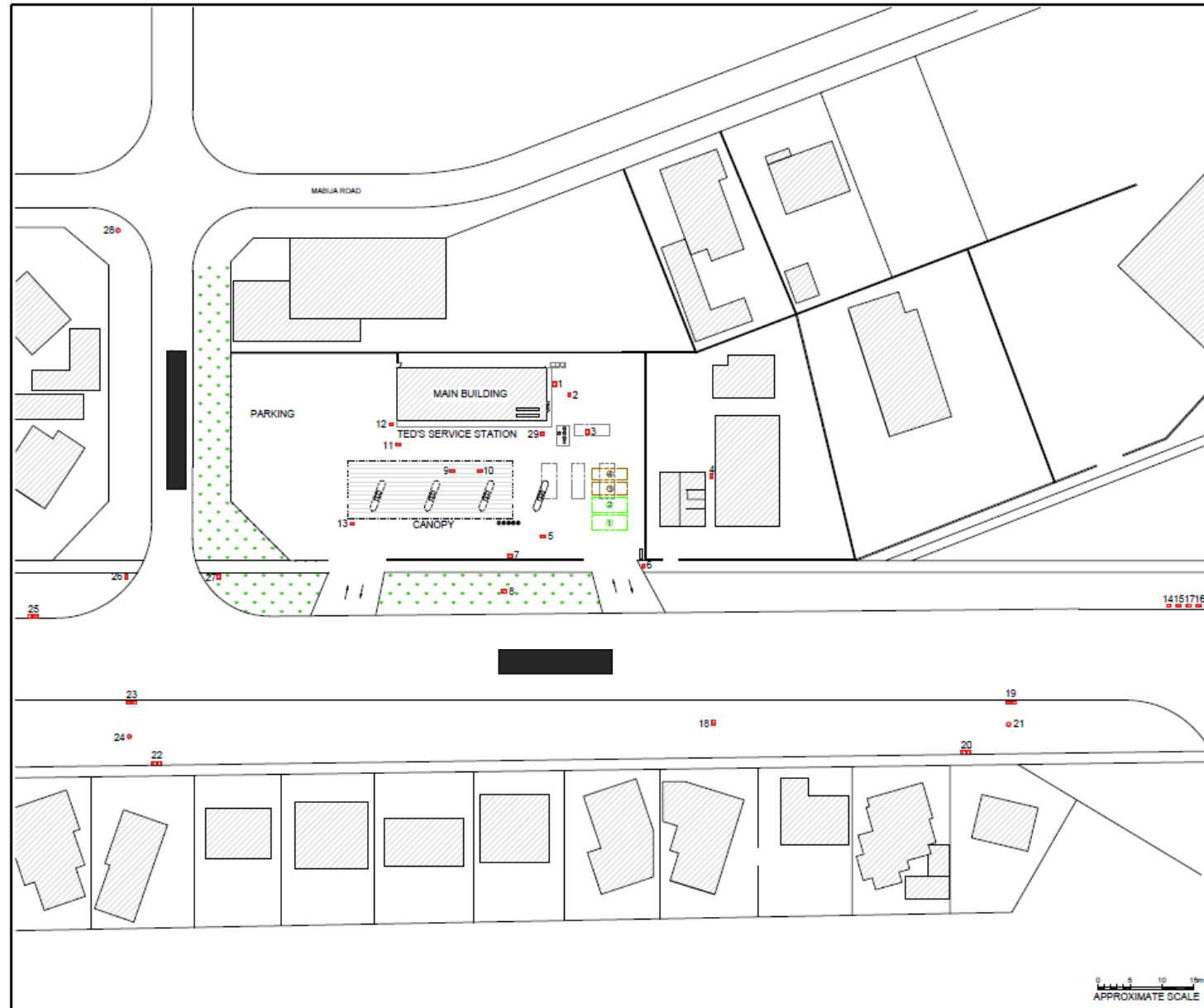
Sensitive Receptors



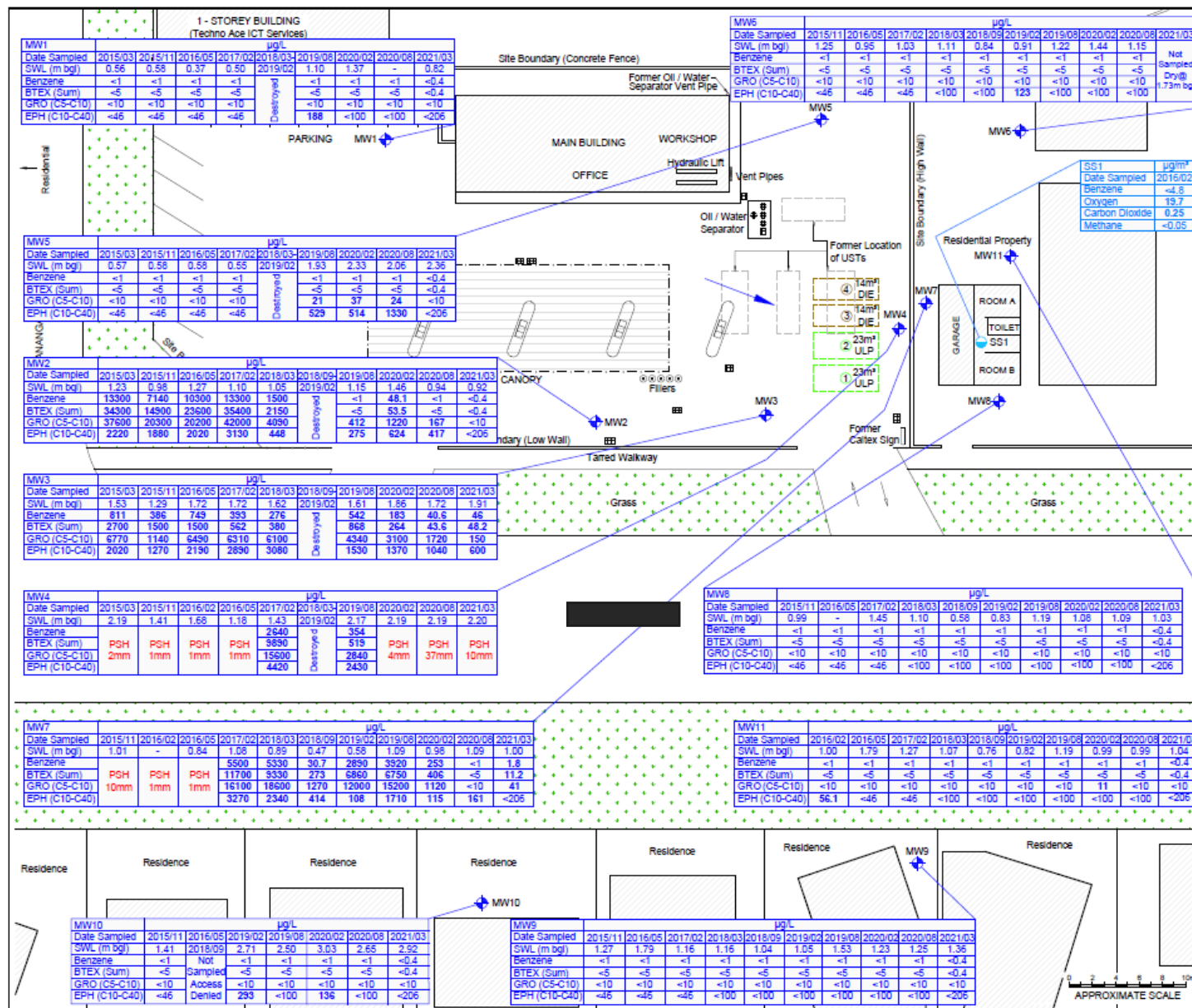
Sensitive Receptors	GW use (<800 m)	No boreholes have been identified within close proximity to the site.
	Surface water (<200 m)	No surface water bodies have been identified within close proximity to the site.
	VI	Results of groundwater sampled from monitoring wells MW1 and MW5 (nearest to the on-site building) since 2015 did not detect elevated volatile hydrocarbon concentrations, particularly for benzene. Considering that no high-strength vapour source has been observed in close proximity to the site building, the available data do not suggest an indoor vapour intrusion risk. With respect to VI risk to off-site receptors (north north-east of the site), this exposure pathway has been assessed through the collection of a sub-slab vapour sample adjacent to the residential building that adjoins the site to the north/ north east. No soil gas concentrations were detected at concentrations above the laboratory detection limit. Furthermore, results of groundwater sampled from monitoring wells MW6, MW7 and MW11 (adjacent to offsite buildings) have not recorded elevated concentrations of volatile hydrocarbon compounds, most notably benzene. Consequently, the off-site indoor inhalation vapour exposure pathway in a residential setting is considered to be incomplete.
	Other	Screening of utilities (water meter and sewer) surrounding the site, using a Photo ionisation detector (PID), showed no volatile organic carbon (VOC) detections. Utilities inspected were a maximum of 2.0 m deep which is contiguous with the range of groundwater levels measured in the 2020 and 2021 sampling rounds (between 0.82 m and 3 m bgl). This implies that the storm water network has not been impacted by the dissolved phase hydrocarbon plume or acting as a conduit for passage of VOCs.



Underground services



Soil, Groundwater, VI conditions over time





Ms Lindie Hassan
No. 05 Century Boulevard
Century City
CAPE TOWN
7441

Email: Lindie.Hassan@astronenergy.co.za

Dear Ms Hassan

**PROJECT CLOSURE FOR MONITORING AND MANAGEMENT OF CONTAMINATED LAND AT
ASTRON [REDACTED] EASTERN CAPE PROVINCE**

The above matter refers.

The Department has reviewed the Site Assessment Closure Report for Astron Energy (Pty) Ltd at [REDACTED] service station, [REDACTED], Port Elizabeth in the Eastern Cape Province.

The monitoring data collected in 2021 is consistent with the Conceptual Site Model detailed in the site assessment progress report dated 2019, in that no unacceptable exposure risks were observed nor were any new exposure risks identified. The monitoring data set supports the conclusion that the site does not pose any significant risk. Therefore, monitoring and management activities can be set aside.

Notwithstanding this decision, should any information come to light that gives the Minister or MEC reason to believe that land may be contaminated, the Minister or MEC may issue a written notice to the owner of land or a person who undertakes an activity that caused the land to be contaminated identifying the site as investigation area in terms of 36(6) of the National Environmental Management



Batho pele - putting people first

The processing of personal information by the Department of Forestry, Fisheries and the Environment is done lawfully and not excessive to the purpose of processing in compliance with the POPI Act, any codes of conduct issued by the Information Regulator in terms of the POPI Act and / or relevant legislation providing appropriate security safeguards for the processing of personal information of others.

Page 1 of 2
14/11/15/LR55/1/C

**PROJECT CLOSURE FOR MONITORING AND MANAGEMENT OF CONTAMINATED LAND AT
ASTRON [REDACTED] EASTERN CAPE PROVINCE**

Waste Act, No. 59 of 2008. Section 36(5) of the Waste Act also places a duty on the owner of land that is significantly contaminated to notify the Department of such land.

Should you have any enquiries regarding this letter do not hesitate to contact this office.

Yours sincerely

MS MISHELLE GOVENDER
CHIEF DIRECTOR: HAZARDOUS WASTE MANAGEMENT AND LICENSING
DATE: 09/11/2024



Questions?

GLENCORE | A GLENCORE COMPANY