



Chief Executive Officer
City of Greater Geraldton

Att: Phil Meling, Director, Development and Community Services

By email: council@cgg.wa.gov.au

Dear Phil

POINT MOORE RESIDENTIAL ONSITE EFFLUENT TREATMENT AND DISPOSAL STUDY REPORT

I refer to your letter dated 23 December 2016 to the Department of Environment Regulation (DER) regarding a recent study conducted at Point Moore. DER understands that you are seeking advice on the potential risks posed to the environment and local community by the existing effluent treatment and disposal systems, at Point Moore.

The study area, as depicted in the report¹, includes Greys Beach which was classified as *possibly contaminated – investigation required* under the *Contaminated Sites Act 2003 (CS Act)* on 19 August 2016. The classification was based on the presence of fragments of asbestos-containing-material in dunes of the site.

DER notes that under regulation 5(c) of the *Contaminated Sites Regulations 2008*, sites where sewage, effluent or liquid waste that is being treated by domestic sewage apparatus are operating in compliance with the *Health (Treatment of Sewage and Disposal of Effluent and Liquid Waste) Regulations 1974*, are not considered to be contaminated.

DER understands that the study area comprises mainly of residential dwellings with individual effluent treatment systems, such as septic tanks with leach drains or soakwells. Groundwater beneath the study area discharges into the adjacent marine environment and the standing water level ranges from 1-2 metres below ground level.

To assist with characterisation of groundwater the report detailed the installation of three groundwater monitoring wells across the study area, which were sampled in August, September and October 2016. These investigations detected coliforms, ammonia, nitrogen and phosphorous in groundwater beneath the study area at concentrations above the relevant human contact or ecological trigger levels.

DER notes that ammonia was present in groundwater at concentrations exceeding Aquatic Ecosystems– Marine guidelines specified in 'Assessment and management of contaminated sites' (DER, 2014). The toxicity of ammonia is dependent on pH, temperature and ionic composition of the receiving environment. Given the limited data available, DER considers that a risk assessment should be undertaken to assess whether the concentrations of ammonia present in groundwater pose a risk to the receiving marine environment.

¹ Point Moore, Residential Onsite Effluent Treatment and Disposal Study (GHD, November 2016)

Coliforms were also detected in groundwater exceeding primary and secondary contact recreation guidelines (ANZECC, 2000). DER considers the presence of coliforms in groundwater exceeding public health criteria to be primarily an issue for the Department of Health's consideration.

DER concurs that nutrients discharging from the study site are unlikely to have a measurable impact on the near shore marine environment. However, recommends that further consideration be given to the potential ecological risk posed by ammonia in the near shore benthic environment.

Based on the information provided, the study site does not appear to require reporting under section 11 of the CS Act at this time.

If you have any further queries, please contact Contaminated Sites Officer, Hannah Sumner on 9333 7593.

Yours sincerely

A handwritten signature in black ink, appearing to read 'PN', followed by a long horizontal line that tapers off to the right.

Paul Newell
**A/SENIOR MANAGER
CONTAMINATED SITES**

30 January 2017