Sydney East Joint Regional Planning Panel
Supplementary Report
DA10/1008 (2010SYE089)

Site: 971-975 Old Princes Highway, Engadine

The JRPP considered the subject application on 19 January 2011 and resolved, inter alia, as follows:

> *"1. The Panel resolves unanimously to accept the recommendation of the planning assessment report. The Panel would approve the application if the applicant submits a satisfactory contamination report and remedial action plan, subject to the conditions recommended in the report, except for:*
>
> *a) the deletion of Condition 6, which requires a bond for the Bangalay Gum, because the condition is unlawful (however, the other conditions aimed at keeping the tree are retained);*
>
> *b) an additional condition requiring dual (pedestrian and vehicular) use of the 1.4m dedicated strip along Toms Lane.*
>
> *7. The applicant is to comply with the requirements of paragraph 14.2 on page 23 of the planning assessment report by 1 March 2011. Following satisfaction of that requirement, the Panel will communicate by electronic means to make a determination."*

Council received the information outlined in 1 above on Friday, 25 February 2011. An assessment of the information has been made by Council officers including Council's Environmental Scientist (Water Quality) who has a Bachelor of Applied Science (Geology) Hons and has ten (10) years experience working as an environmental scientist, five (5) years studying and working on contaminated land and environmental pollution including soil, surface water and groundwater and three (3) years writing contamination reports and managing contaminated land projects. She is considered to have the appropriate training and experience to assess the information submitted.

It is considered that the information submitted has a number of deficiencies as indicated below.

Contamination reports must adhere to the 'Guidelines for Consultants Reporting on Contaminated Sites' (EPA, 1997). Between the four (4) reports submitted (Phase 2 assessment, draft groundwater assessment, final groundwater assessment and remedial action plan) there are deviations from the guidelines evident that make it difficult to assess if the land can and will be made suitable for the proposed development, as is required under SEPP 55 (EPA, 1998). The following are details of the main deviations and discrepancies from each of the four (4) reports reviewed that raise doubt on the ability of the consultants to perform remediation to the level required to change the use of this site from a commercial use to a sensitive residential use:

<u>Phase II Environmental Site Assessment dated December 2010</u>

- The site plan contains no scale bar, identifiable north point, site slope, adjacent site uses or other environmentally significant features required to help discern site features that impact upon or might be impacted on by potential contamination.
- Soils were sampled from varying depths within the bore holes, however the only samples analysed for hydrocarbons were at depths between 0.3m and 0.6m below ground surface with the exception of BH1. All other samples from the other five (5) boreholes at the site

were targeted in the fill layer and that soil between 0.6m and 4.1m (which is the shallowest groundwater) and may have un-delineated hydrocarbon contamination.

- Bore logs indicate that no soil samples were collected deeper than 1.5m except during the sampling of groundwater bore BH1/GW2. A complete environmental site assessment should sample a range of depths throughout the soil profile, not just at depths less than 1.5m below ground.
- No chain of custody or sample receipt documentation for primary samples was included in this report. The lack of chain of custody or sample receipt documentation has implications for the conditions that the samples experienced between collection in the field and arrival at the laboratory. This places some doubt on the consultant's quality control procedures and therefore their data quality. Volatiles (such as hydrocarbons) evaporate quickly and therefore the samples must be placed in appropriately preserved containers, stored on ice prior to arrival at the laboratory and arrive at the laboratory within appropriate holding times for analysis. This information is reported on by the laboratory on the sample receipt.
- No legible photoionisation detector (PID) monitoring was recorded in this report. PID readings are one method of field screening that gives an indication of hydrocarbon contamination in soil so the field staff know how far to drill to delineate soil contamination. If contamination is still present (according to positive readings on the PID) then further investigation is required until lower or no readings are recorded. There is no evidence as to how field staff determined the extent of sampling and analysis required to adequately delineate soil contamination.
- This report contains no site photographs to show relevant site features.
- This report contains no evidence that a search of Work Cover's Dangerous Goods Register was conducted which would have a chance of listing the substances that were stored on the site in the past. It may have also provided a map of the underground storage tanks and the likely substances stored in each tank.
- Only one (1) underground storage tank is identified on the site map, however, throughout the report underground storage tanks are referred to as plural, indicating there may be more than one (1) on site. Evidence on site should at least give a clue to how many tanks are present and sometimes even their size, orientation and what was stored inside them, even if it is an estimate.
- This report indicates that a groundwater bore search has been carried out to determine the likely receptors of migrating contaminated groundwater. No evidence is provided.
- The nearest water body that might be impacted upon by contamination migration from the site (due to the NE direction and proximity) is Loftus Creek approximately 500m north east of the site. The report does not mention this creek or surrounding creeks.
- No groundwater contours were included and no indication that the groundwater monitoring wells were surveyed. This shows a significant lack of understanding of how important the groundwater flow direction at the site is in relation to the transportation of contaminated groundwater.
- This report contains no information on the standing water in the groundwater bores. This makes it impossible to tell if the wells are adequately constructed to take representative samples of the groundwater.
- Assumptions on pesticides not being persistent in the environment are incorrect.

<u>Letter Report Soil and Groundwater Assessment Dated 18 February 2011</u> (it is noted that this is a draft for the subsequent Groundwater Assessment dated February 2011)

- Groundwater contours have been produced for this report, which are imperative to show the flow direction of groundwater contaminants. However, Figure 2 showing groundwater contours has conflicting sample location labels on it compared with Figure 1 and figures from the previous reports. BH1/GW2 is labelled on Figure 1 whereas the same location is labelled as BH3/GW2 on Figure 2. This is an important discrepancy and results in

questioning where the soil contamination measured at sample point BH1 is actually located at the site.

- Although further investigation has been undertaken for this report, the extent of contamination has still not been delineated. Further installation of groundwater wells and soil sampling is required to delineate the extent of the groundwater contamination and possible soil contamination in a north-east direction towards Tom's Lane.
- Standing water levels in the groundwater monitoring bores, when viewed together with groundwater bore logs from Phase II Environmental Site Assessment (Aargus, 2010), show that five (5) out of the seven (7) wells are not installed to best practice. The standing water levels of GW2, GW3, GW4, GW5 and GW7 are above the slotted screen area of the well. This indicates that any phase separated hydrocarbons floating on the surface of the groundwater (as a hydrocarbon sheen or pure product) may not be sampled accurately as the screened area is too low to encounter the layer on top of the water. A hydrocarbon sheen was observed in GW2 so some hydrocarbons that float on the top of the water are being sampled from GW2 but it may not be the full extent.
- Soil samples have still not been collected between 1.5m and 4.1m (groundwater level). Only deeper samples were collected during this sampling round in the saturated zone, which is not likely to be representative of soil conditions but can be influenced or diluted by groundwater.
- Documentation is missing from this report backing up the data collected eg bore logs, lab reports etc however some of the data is provided in the following Groundwater Assessment Report dated February 2011.

<u>Groundwater Assessment dated February 2011</u>

- This investigation did not meet one (1) of its objectives by sampling off site groundwater concentrations.
- This report is missing some of the supporting documentation eg sample receipt.
- Samples from GW4, GW5, GW6 and GW7 were not analysed for PAHs even though GW1 and GW2 showed contamination with PAHs.
- Only bore logs for monitoring wells GW4, GW6 and GW7 were provided. No bore logs for GW5/BH10 were provided.
- Groundwater contours are not provided in this report - it is assumed that the previous 'draft' report Figure 2 is an accurate figure.

<u>Remediation Action Plan (RAP) dated February 2011 Ref ES3794/4</u>

- This report claims that DECC need not be notified and that no significant risk of harm exists at the site due to the fact that contaminants are not known to be migrating offsite at concentrations exceeding groundwater assessment criteria. This is an assumption and evidence has not been provided to justify this statement as no offsite investigation has been conducted.
- Multiple options for soil and groundwater remediation have been proposed in the RAP however, none has been definitively named as the proposed treatment method. The soil is proposed to be excavated and disposed of, however the groundwater remediation methodology will be decided pending further investigation works.
- This report does not identify where hotspots are located and how much excavation is required. This should be shown in a Figure so that it is clear which areas of the site will be excavated. Also the intended removal of fill from site should also be shown on a site map so that it is clear which area and what volume of this site requires removal.
- This report refers to at least five (5) underground storage tanks being present on site. These should be shown on a Figure as to their location (at least approximately) and intended excavation. The report should also detail a valid sampling regime/ratio, not just refer to the Sampling Design Guidelines (EPA, 1995) or systematic sampling pattern.

- The report refers to discharge of waste waters to Council's stormwater system assuming they meet set criteria. This is unacceptable, as a standard practice the liquid should be disposed of to a licensed waste facility.
- The Environmental Management Plan included in this report is only one (1) page long and does not cover details of how environmental impacts will be dealt with - just that they will be.
- The Site Management Plan does not adhere to Part 3 of Chapter 8 of Sutherland Shire Development Control Plan 2006 and the Sutherland Shire Environmental Specification 2007 - Environmental Site Management. Hay bales are not an acceptable sediment control.
- One of the outstanding issues that may need additional conditions relates to the tree to be retained at the rear of the site. The RAP does not make it clear whether the 'hot zone' includes the tree area and whether the tree will need to be removed. If it was to be removed, amended conditions should be imposed regarding replacement planting.

Conclusion
As detailed above, there are many inconsistencies and inadequacies in the documents produced by Aargus, including the Remedial Action Plan (RAP). The RAP is critical to ensure the remedial works are conducted to an acceptable standard and that the change in land use from commercial to residential poses no risk to future workers and occupants of the site. To ensure that this occurs, it is advised that a NSW Accredited Site Auditor should be appointed to oversee the contamination remediation works.

It is considered that this should be done as a deferred commencement consent so that the issue of contamination is completely resolved prior to approval being granted.

Proposed Conditions:

- A Site Auditor Accredited under the Contaminated Land Management Act 1997 is to be appointed to oversee the contamination remediation works for the entire site. Deferred commencement approval shall be issued following submission of a Site Audit Statement and Site Audit Report to Sutherland Shire Council's Director - Environmental Services.

- The RAP shall be amended to include that all waste water collected on site, e.g. from excavation dewatering or groundwater treatment processes, shall be classified and disposed of to a licensed waste facility and that no discharge of waste water to Council's stormwater system be permitted.

Alternatives to a deferred commencement consent are:

(a) applying conditions of consent relating to site remediation and tree replacement or
(b) giving the applicant additional time to submit further information to address the matters detailed above.

These two (2) options are not favoured by Council. They are considered less appropriate than a deferred commencement consent.

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