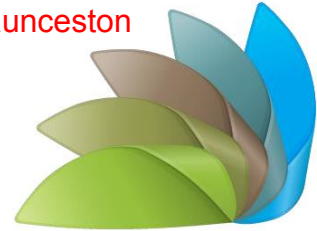


Environmental Service & Design

ABN: 97 107 517 144



15 December 2017

Stay Tasmania
PO Box 210
Newstead
TAS 7210

Dear Chloe,

RE: Updated Site Assessment, 69-71 Cimitiere St and 44-50 Tamar St, Launceston

Environmental Service and Design (ES&D) has investigated the site at 69-71 Cimitiere St and 44-50 Tamar St, Launceston in relation to the potentially contaminating activities formerly conducted at the site or nearby.

The assessment was guided by the principles and requirements contained within the National Environmental (Assessment of Site Contamination) Measure, 1999 (as amended) (NEPM) according to its status as a state policy.

The investigation comprised a Preliminary Site Investigation as defined in NEPM Schedule B2, Section 2.1:

“Preliminary site investigations (PSIs) usually include a desktop study to collect basic site information and identify the site characteristics (site location, land use, site layout, building construction, geological and hydrogeological setting, historical land uses and activities at the site), a site inspection and interviews with current and past owners, operators and occupiers of the site and nearby sites.

The preliminary investigation should be sufficient to:

- identify potential sources of contamination and determine potential contaminants of concern;
- identify areas of potential contamination;
- identify potential human and ecological receptors;
- identify potentially affected media (soil, sediment, groundwater, surface water, indoor and ambient air).

If thorough preliminary investigation shows a history of non-contaminating activities and there is no other evidence or suspicion of contamination, further investigation is not required.”

Site Investigation - 69-71 Cimitiere St and 44-50 Tamar St, Launceston

Introduction

A Preliminary Site Investigation (PSI) was conducted at 69-71 Cimitiere St and 44-50 Tamar St, Launceston. The land was flagged by Launceston City Council as having had UPS storage and potentially contaminating activities. As such, any development application submitted in relation to the land would be required to address this issue. As a result, the investigation was initiated at the request of the site owner as a DA for office and accommodation development.

The Launceston Interim Planning Scheme 2015 specifies that environmental site assessments in relation to potentially contaminating activities must be prepared by a suitably qualified person. Council indicated that suitably qualified persons include Site Contamination Practitioners Australia (SCPA) certified practitioners. Consequently, Mr Rod Cooper of Environmental Service and Design (SCPA certification no. 15020) was engaged to perform the assessment.

Scope of Works

The scope of works included:

- examination of the site's history, including
 - oral history;
 - a search of WorkSafe Tasmania's (WST) general records management system, which holds information pertinent to potentially contaminating activities on land in Tasmania, including storage of dangerous goods (fuel storage), Environment Protection Authority (EPA) Environmentally Relevant Land Use Register, and Council database information;

a site visit to check for any visual evidence that may indicate contamination of the site (addressed above), and investigation of nearby properties.

- identification of potential human and ecological receptors and consideration of risks to identified receptors as a result of exposure to any contamination;
- construction of a preliminary Conceptual Site Model (CSM);
- conclusions and recommendations

Basis for Assessment

As a State Policy for the purposes of State policies and Procedures Act 1993, the National Environmental Protection (Assessment of Site Contamination) Measure 1999 (NEPM) was the guideline used for the assessment.

The assessment included elements of a Preliminary Environmental Site Assessment as defined in NEPM Schedule B2. NEPM advises that if a thorough preliminary investigation shows a history of non-contaminating activities and there is no other evidence or suspicion of contamination, further investigation is not required (Schedule B2, Section 2.1).

Note that the scope is defined under the LCC Planning scheme (E2.6.2):

Contaminants of Concern

In relation to the possible motor vehicles and workshop activities, contaminants of potential concern could include hydrocarbons, heavy metals, poly aromatic hydrocarbons, phenols and solvents / chlorinated hydrocarbons.

Site Visit

ES&D visited the site on 9/6/2017 and again for tank location 13/12/2017. With a big expanse of bitumen, there was no evidence hydrocarbon staining on the site. The bitumened area was noted to be very sound (interview dated this near 15 years old), and any historic staining would be easily visible. There does not appear to have been any specific drainage onto the property from surrounding properties and no contaminations evident on the surface. There exists some storm water drainage on the site, with at least 2 sump drains taking the storm water away, presumably to Council storm water, located near the middle and north of the block.

Interviews with the few surrounding business owners are summarised in the discussion.

The site visit concluded that there was no evidence of petroleum staining or surface areas impacted by hydrocarbons, other than minor oil staining from vehicle parking. Due to the groundwater flow direction to the northwest / west, both the onsite potential contamination and any potentially contaminated sites on Cimitiere Street should they contaminate the groundwater would flow directly away from the development. This effectively breaks any contamination pathways to the development.

Potential Receptors and Final Conceptual Site Model

The final Conceptual Site Model (CSM) is provided below as Figure 9. Potential receptors considered are shown, together with potential contaminating sources and pathways. Because there is no evidence that contamination has occurred, nor any reason to suspect it has occurred, there are no actual receptors at risk as indicated by the model. Precautionary measures are required to prevent dermal contact with soil near the removed UPSS. The sites of the old UPS systems would be a potential source of ongoing contamination concern, but records show it was removed and groundwater flow is away to the northwest and not towards the proposed development. The area was scanned in December 2017 confirming that all old infrastructure was removed. Thus there is no perceived concern to the development and future occupants from vapour. With an update of the building design some subsurface work will occur close to where the UPS tank was removed. Thus there may be risk to subsurface workers from dermal contact. The groundwater flow direction is away from the site and so any groundwater contamination would not impact the development and so other impacts are not required to be considered. There is no risk to the construction workers, nor future office workers or accommodation guests at the development.

Discussion

The site visit included interviews with the surrounding businesses where potential contamination could have occurred, or originated.

#52-54 Tamar St. – Tas Foods / Bellamy's offices some 5 years now. This is a converted old domestic dwelling and had been surrounded by small industry, a hardware store, in previous days. There were no obvious contaminants from this site, occupants were unaware of any UPS or large volumes (>20L) of chemical on the sites nearby.

#46-50 Tamar St – currently only front gate and fence from previous business, (see Figure 3) with bitumen sealed car parking area across the remainder of the site. This is the site of the proposed Hotel Verge structure. (See Attachment 2 and Figure 6) No obvious contaminants on or from this site.

#40 Tamar St – AK Consultants, Agri and Resource Management Consultants. Spoke with Scott Livingston whose has conducted business at the site for some 20 years. He remembers the area as open/scrub parking in disarray for many years, and then bitumen sealed for approximately the last 15 years. There had been a hardware store to the south (~ #48 Tamar St). Again any contamination would flow away from the development on the groundwater.

#63 Cimitiere St – PCs 4U. This business has been there for some 6 years. No comment or information on contamination, suggesting the business does not produce volumes of contamination.

#65 Cimitiere St – Kai Zen Restaurant. Closed.

#73-75 Cimitiere St – More carparking. No buildings.

A full search of the Worksafe database concluded that all tanks and pumps from the region (Cameron and Cimitiere St) had been removed by 1985. It is now noted that works will occur close to where the UPSS was (see attached plans).

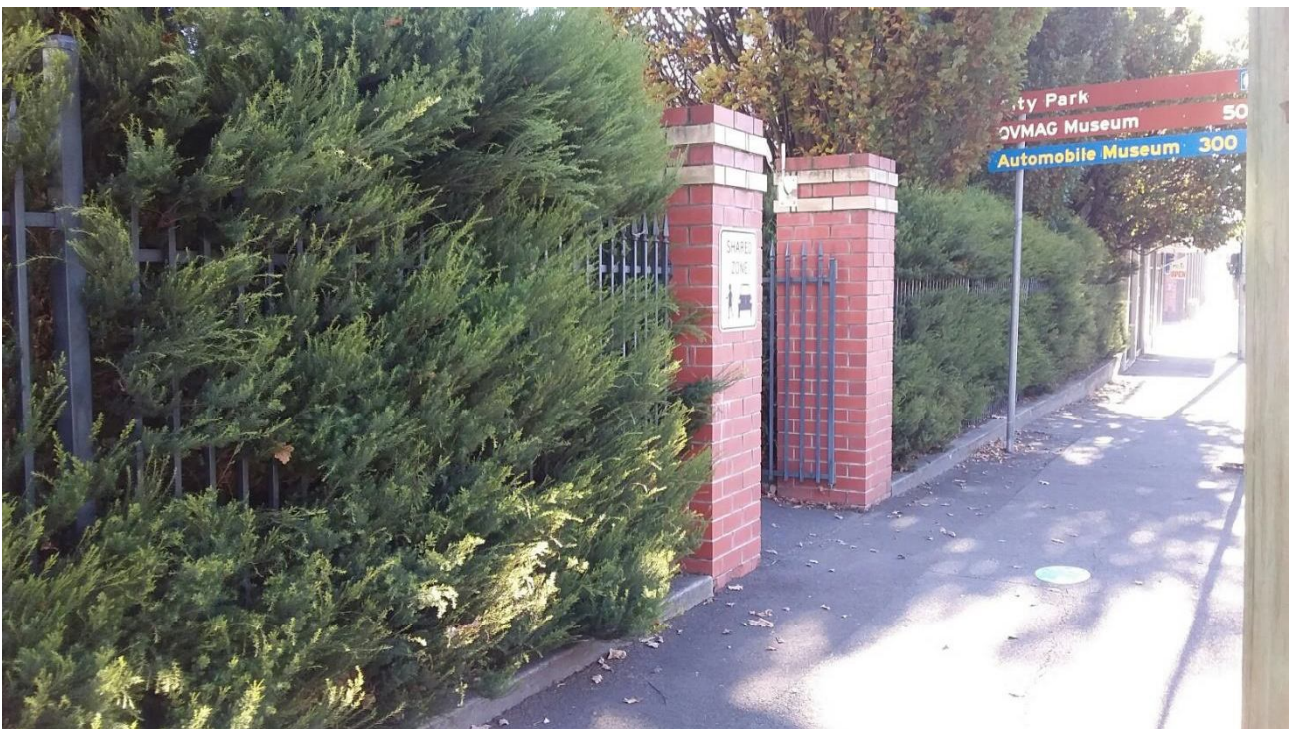


Figure 3 - Existing fence/gate on Tamar St, opposite Albert Hall.



Figure 4 - View to SW from Cimitiere St



Figure 5 - View to South West over carparks. (approx site of former UPS.)



Figure 6 Site of proposed Hotel structure.



Figure 7 View to the east, over site of proposed Hotel Structure.

No evidence was found to support a conclusion that The Site has been impacted by contaminants discharged to site soils or groundwater as a result of the present or former business activities, workshop or the previous uses of the sites. Regardless, the new proposed Hotel is to be built at the eastern end of this block, but with recent updates the power plant will be built close to where the UPSS was removed. The CSM confirms that no offsite nor onsite contaminants can impact the development due to Groundwater flow direction. Ground penetrating radar confirmed that the UPSS was decommissioned and removed from site. Due to the proximity of the development to potentially contaminated soil specific protection measures are required to be implemented to protect subsurface workers during construction during excavation. Protection measures are in relation to excavation near the old UPSS site are associated only with dermal contact with soil:

- a. Protective clothing is required to prevent dermal contact – boots, gloves and disposable suits.
- a. Visual and odour assessment by the site supervisor should be conducted and if any odour or discolouration is detected a PID meter should be used to confirm that vapour levels are below the OH&S alarm limits (The PID will alarm if this occurs).
- b. All soil removed from site must be disposed of under the EPA waste tracking system.

Realistically, based on the CSM, contamination is highly unlikely. Offsite impacts are limited to local soil hotspots and groundwater contamination. With the types and volumes of contaminants impacts on the Site are very unlikely. Groundwater flow is to the north/west, onsite contamination is again very unlikely. The site visit and interviews confirmed the WST data that shows there are no UPS tanks on or near the site.

There is no risk to human health or the environment as a result of the on site business activities, or the previous uses, with the protection measures implemented as a precaution for subsurface excavation.

In reference to Standard 2.5.1 the NEPM Based Risk Assessment found that there is no risk to future accommodation guests or staff and as such the land is suitable for the intended use. When conducting the CSM each pathway was considered. The contaminated groundwater pathway was discounted because the groundwater flows away from the development and as such there is no pathway for vapour to impact the hotel. However the soil pathway does pose risk for vapour and dermal contact. Dermal contact was considered as a potential risk and management is proposed. There is not a complete pathway for vapour to impact the hotel due to a number of factors and so this pathway is not complete and so is discounted.

These factors are:

1. The tank was removed in 1985 and so it is considered very likely that any contaminated soil was removed at the time of decommissioning.
2. As the decommissioning occurred 30 years ago any remaining soil contamination would have remediated to 1/8th of the original impact. Based on Tasmanian soil moisture examples, and the bitumen cover.
3. There is no possibility of upgradient migration of hydrocarbons towards the proposed hotel.

4. There is a standard 9-meter attenuation distance (NEPM) that removes the up-gradient hotel from vapour risk.

These factors allowed the potential risk to staff and accommodation guests to be discounted. It was noted that the ground floor of the proposed hotel has a car park / delivery area that gives a large exclusion area to the accommodation and the open area gives additional venting opportunity for potential vapours. The hotel design retains the asphalt, effectively removing the risk of concrete slabs giving a conduit for vapour. From a contamination risk perspective accommodation guests are lower risk than the staff due to expected exposure times. Obviously residential development would be a more sensitive use and further assessment (soil tests) would be required.

Conclusions

As per section E2.6.2 of the LCC Planning Scheme:

- (c) a plan to manage contamination and associated risk to human health and the environment that includes:
 - (i) an environmental site assessment;
 - (ii) specific protection measures required to be implemented before excavation commences; and
 - (iii) a statement that the excavation does not adversely impact on human health or the environment.

In reference to Standard 2.5.1 the NEPM Based Risk Assessment found that there is no risk to future accommodation guests or staff (refer CSM) and as such the land is suitable for the intended use.

Recommendations

The site is suitable for the Development Application proposed, office and accommodation. Excavation near the old UPSS site associated with potential dermal contact with soil require the following protection measures:

- a. Protective clothing is required to prevent dermal contact – boots, gloves and disposable suits.
- c. Visual and odour assessment by the site supervisor should be conducted and if any odour or discolouration is detected a PID meter should be used to confirm that vapour levels are below the OH&S alarm limits (The PID will alarm if this occurs).
- d. All soil removed from site must be disposed of under the EPA waste tracking system.

With these measures in place the excavation does not adversely impact on human health or the environment.



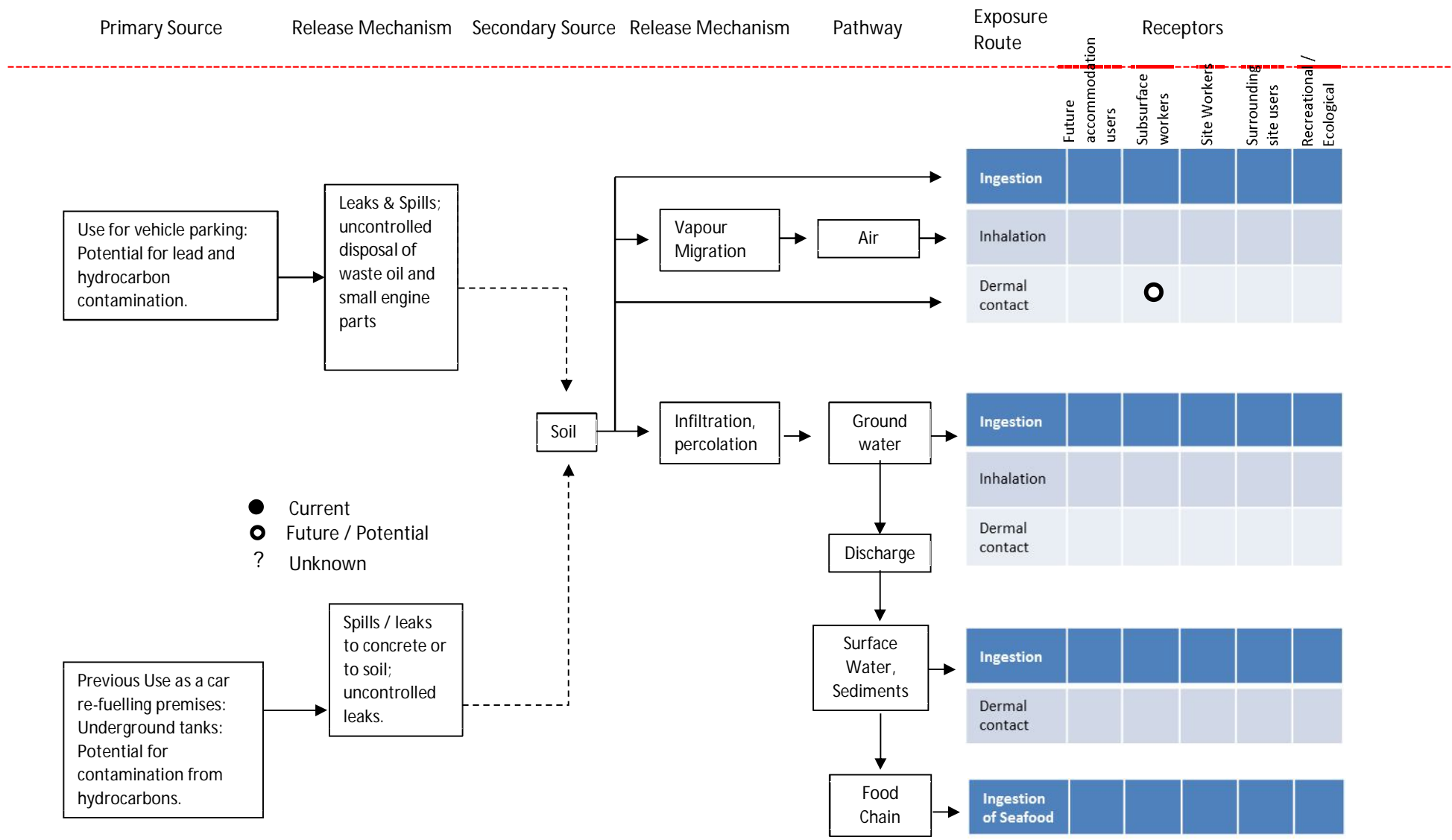


Figure 9 – Final CSM – Dashed arrows indicate that no contamination of the site is suspected to have occurred from the potentially contaminating activities conducted on site and no feasible pathway linking contaminants to receptors is considered to exist.

