

Selwyn District Council
2 Norman Kirk Drive
Rolleston 7643

Attention: Craig Friedel, Strategy and Policy Planner

Dear Craig

PC47 Stratford - Technical peer review of preliminary site investigation report

1 Introduction

The Selwyn District Council (SDC) has commissioned Tonkin & Taylor Ltd (T+T) to undertake a technical peer review of a preliminary site investigation (PSI) report¹ prepared by Lowe Environmental Impact (LEI) in support of a private plan change application (referred to by the SDC as PC47 Stratford).

The applicant is seeking to change the zoning of a single land parcel located at 631 Shands Road, Rolleston (the site). The site covers approximately 16 hectares of land and is currently zoned under the Selwyn District Plan as 'Rural Inner Plains'. The applicant is seeking to change to 'Living 3'. We understand that the applicant will subsequently seek to subdivide the property for future residential development.

This letter presents the findings of our technical peer review, which has been written and approved for issue by suitably qualified and experienced practitioners (SQEPs) in accordance with our offer of service dated 11th March 2016.

2 Methodology

The technical peer review comprised:

1. A review of the report against the requirements of the Ministry for Environment (MfE) *Contaminated Land Management Guidelines No.1 – Reporting on Contaminated Sites in New Zealand (Revised 2011)* – hereafter referred to as CLMG No. 1; and,
2. An assessment of the adequacy of the PSI with respect to the identification of activities on or adjacent to the site which have the potential to have caused ground contamination that could have significant implications for the future use of the site for residential purposes.

¹ 631 Shands Road, Prebbleton. Preliminary Site Investigation Report. Lowe Environmental Impact. October 2015.

3 Peer review findings

3.1 Structure and content

We consider that the report generally meets the requirements for a PSI as set out in the CLMG No. 1 noting that:

- The objectives of the PSI are clearly set out;
- The appropriate data sources have been consulted, and appropriate information obtained and reviewed;
- Copies of referenced material are appended to the report; and
- The conclusions are clearly presented and are consistent with the objectives.

We would note, however, that as the report has been prepared in part to support a resource consent application under the NES Soil² the qualification of the author, reviewer or approver of the report as a SQEP should be stated.

3.2 PSI findings and conclusions

The PSI has identified that the site comprised agricultural land until the 1980s, when it was acquired by the current owner. A residential dwelling and outbuilding were subsequently constructed in the centre of the site, and it has been used largely as a rural residential property since this time. The large area of pasture that surrounds the residential area includes a horse track which based on our review of the historical aerial photographs included in the report appears to have been constructed post 2004.

A site walkover completed by LEI as part of the PSI identified the storage of various liquid chemicals, generally in small to medium volume containers within storage buildings adjacent to the residential property. Building materials, building waste (including brick) and drums of construction-related liquid chemicals (including "Ramset Bondbreaker LS" were noted at various locations in and around the storage sheds and in a field immediately east of the residential property. Some of the drums of chemicals were noted to have leaked onto unsealed ground. Evidence of burning was also noted in the field immediately east of the residential property.

LEI concludes that HAIL activities have occurred at the property including chemical storage (A1, A17), metal polishing (D3) and waste disposal (G5). LEI also considers that HAIL activity I (any other land that has been subject to the intentional or accidental release of a hazardous substance in sufficient quantity that it could be a risk to human health or environment) is applicable to the site. LEI further concludes that the identified HAIL activities may have resulted in soil contamination and that *"there could be a risk to human health from the proposed land use (and associated soil disturbance) without additional investigations to establish contaminant levels in the locations where the HAIL activities have been identified prior to the proposed land use changes occurring"*

LEI recommends that intrusive investigations should be undertaken prior to development works occurring and that contaminants for analysis in a detailed site investigation should include petroleum hydrocarbons (TPH), polycyclic aromatic hydrocarbons (PAHs) and heavy metals.

T+T broadly agrees with the assessment, conclusions and recommendations as presented by LEI, but would note the following:

- The identified HAIL activities have occurred within a relatively small area interior and exterior to outbuildings adjacent to the residential property located in the centre of the site. LEI has

² Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011.

not identified HAIL activities outside of this area – i.e. within the pasture and horse track that forms the majority of the site. We would suggest that the report should more clearly define the extent of the ‘piece of land’ as defined in the NES Soil, and therefore the area of the site to which its recommendations for DSI apply;

- A horse track appears to have been present in a paddock north of the residential property since approximately the mid-2000s. Whilst unlikely given the recent construction of the track, it is possible that oil or other chemical dust suppressants have been used on this track and we would suggest that this is confirmed (or otherwise) by LEI and stated in the report;
- Based on the HAIL activities identified, soil sampling for TPH, PAHs and metals has been recommended. Given that building rubble of unspecified origin was noted by LEI to be present at the site, the potential for asbestos to be present in this material should be considered in the PSI, and recommendations for asbestos analysis included in the recommended analytical suite, if appropriate;
- The report comments on soil remediation and validation completed on an adjacent property, in relation to an above ground storage tank. The investigation and site validation reports referred to by LEI have not been attached to the PSI report and so the conclusions of those investigations cannot be verified. Given the inclusion of these investigations in the PSI, we would suggest that LEI comment on the potential for contamination associated with the off-site above ground tank to have impacted the subject site;
- We suggest that the report provide greater clarity on the potential extent of soil contamination associated with the identified HAIL activities, particularly as the volumes of chemicals stored appears to be relatively small, and that soil impacts are likely to have been highly localised; and
- In its assessment of exposure routes (Table 6.1), the assessment states that the inhalation of volatiles (indoor and outdoor) exposure pathway does not apply to post-development site users. Given the nature of the chemicals reported to be stored at the site (a number of which are likely to contain highly volatile components) we would suggest that if soil contamination by these chemicals has occurred it is possible that it would include volatile contaminants. Depending on the extent and magnitude of impact, and unless remediation or management of impacted soils occurs, the inhalation pathway is, in fact a plausible exposure pathway for future site users, including residents.

We would suggest that the SDC requests further information from the applicant for the points raised above. Once these points have been addressed and the report revised as appropriate, we consider that the report will be sufficient to support the notification of the plan change application.

4 Applicability

This report has been prepared for the exclusive use of the Selwyn District Council, with respect to the particular brief given to us and it may not be relied upon in other contexts or for any other purpose, or by any person other than our client, without our prior written agreement.

Tonkin & Taylor Ltd

Environmental and Engineering Consultants

Report prepared by:


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Paul Walker

Senior Contaminated Land Specialist

Authorised for Tonkin & Taylor Ltd by:


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Peter Cochrane

Group Manager

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