

Hutt City Council
30 Laings Road
Lower Hutt 5010

17 September 2018

Attention: Gina Sweetman, consultant planner

RE: RC180108 Proposed retirement village, 32A Hathaway Avenue, Boulcott

Dear Gina,

Introduction

Hutt City Council (Council) instructed HAIL Environmental Ltd. (HAIL Environmental) to review contaminated land aspects of *Proposed retirement village, 32A Hathaway Avenue, Boulcott, Lower Hutt* ('the application', 'the site'). This document is a resource consent application dated October 2017 by Urban Perspectives Limited on behalf of Summerset Group Holdings Limited (Summerset).

HAIL Environmental had previously reviewed contaminated land aspects of *Proposed earthworks, 32A Hathaway Avenue, Boulcott, Lower Hutt*, for Council. Our letter of review was dated 24 October 2017 (Ref: HAIL). Consent for the proposed works was subsequently granted as RC170268 ('the earthworks consent').

The 2.93 ha site has been part of a golf course since the 1950s (according to the application) and uncontrolled fill is present within its southern boundary. These uses arguably fall under Hazardous Activities and Industries List (HAIL) categories A10 – persistent pesticide bulk storage or use – and G5, waste disposal to land.

Summerset seeks to develop the site as a retirement village comprising approximately 250 residential units including villas, apartments and care rooms. This constitutes a change of use, and accordingly the proposed development requires resource consent from Council under the Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011 ('the NES-CS').

Consent is also required under rules of the Hutt City Plan, but those are not contaminated land matters and are not part of HAIL Environmental's scope of review. Consent requirements under Regional Plans and other National Environmental Standards are also outside the scope.

In HAIL Environmental's view, the proposed development **can be granted NES-CS consent as a restricted discretionary activity**, subject to conditions requiring further investigation, remediation and management. Our reasoning is set out below.



Purpose of this document

The purpose of this letter is to provide summary findings of a peer review. It is not intended for any other purpose. The letter is solely for use by Council and other persons agreed in writing by HAIL Environmental. The review is based on cited reports only, HAIL Environmental has not reviewed information from other sources. As a site will change over time, the letter is only accurate at the time of preparation.

Relevant information

The assessment of environmental effects (AEE) within the application is based on two contaminated land reports:

- *Boulcott Farm Heritage Golf Club, Lower Hutt: stage 1 preliminary site investigation report.* Project 234107, report to Summerset Management Group Limited. Aurecon New Zealand Limited. Wellington. 2013. ('The PSI')
- *Detailed site investigation – Boulcott Farm Heritage Golf Club, 33 Military Road, Lower Hutt.* Report to Summerset Retirement Villages. Beca Limited. ('The DSI')

The PSI concluded that:

- The site had been subject to historical pesticide use for golf course maintenance (although it could not say what formulations had been used, or when). The risk to future site users from pesticide residues was considered moderate, and the risk to other identified receptors was considered low to negligible.
- Uncontrolled fill material appeared to be present in the west of the site, and within the southern boundary flood protection bank. The risk to identified receptors was considered low to negligible.

The PSI also included three topsoil samples that were analysed for organochlorine pesticides (OCPs), organophosphate pesticides (OPPs), and acid herbicides. Of the compounds in the analytical laboratory's standard suites, only dichlorodiphenyltrichloroethane (DDT) residues were reported above limits of reporting.

The DSI was based on the PSI, though it specifically did not verify its findings or warrant its contents. It was also based on observations by Beca geotechnical engineers that identified uncontrolled fill material including glass, ceramics, metals, and concrete, with greyish-black discolouration. The DSI included twelve test pits or trenches across the site, and samples of topsoil (typically at depth of 0.2 m) and subsoil at each location. These exploratory holes confirmed the presence of waste material at two adjacent locations. The exact extent of the waste was not delineated.

On analysis, a sample from the uncontrolled fill was found to contain slightly to moderately elevated arsenic, copper, lead, mercury and zinc, as did soils at one other location. Concentrations were reported to be less than soil contaminant standards (SCS) for high-density residential use; one of the samples exceeded the Canadian environmental quality guideline for zinc. No DDT or other OCPs were detected.

The DSI concluded that uncontrolled fill will require removal, including any such fill that may be discovered during development. HAIL Environmental comments that if the analysis is representative, removal is not necessary from a contaminated land perspective. Conversely there is no reason to retain it if there are geotechnical or aesthetic reasons for removal.

Commentary

The PSI is signed by Greg Beck, who attained certified environmental practitioner: contaminated land specialist (CEnvP:CLS) status in 2013, while the DSI is signed by Phil Ware, CEnvP:CLS since 2015. Council can reasonably consider these people to be 'suitably qualified and experienced practitioners' (SQEPs) and can hence consider that these reports meet the definitions of PSI and DSI in the NES-CS.

HAIL Environmental has reviewed information presented in the PSI and considers its conclusions to be robust.

HAIL Environmental has also reviewed the DSI. While its analysis appears generally robust, we have issues with the sampling strategy.

Sampling for persistent pesticide residues

HAIL Environmental is not satisfied that the DSI has adequately investigated persistent pesticide use at the site. The principal locations where we would expect pesticide residues to be present are on the greens where turf maintenance is crucial; and around storage facilities. Based on our reading of the PSI and DSI, no pesticide storage facilities have been identified on site. However, at least three greens appear to have been present at the site since the 1970s (and possibly earlier); no sample from the PSI or DSI (except possibly DSI test pit TP10) appears to intercept any of these greens.

Moreover, the DSI indicates that samples were collected from depths of 0.2-2.5 m below ground level (bgl). This is poor practice as it is likely to underestimate concentrations of contaminants applied to surface and effectively retained in topsoil, such as persistent pesticides. It may therefore underestimate risks to future users, who are most likely to come into contact with surface soils.

We recommend a **condition of consent requiring additional sampling of topsoils and analysis for pesticide residues**. Samples should be collected from the top 0.15 m of the soil profile at historic green locations. The analytical suite should include arsenic and OCPs, and at least some analyses for OPPs and acid herbicides. The sampling, analysis and reporting should be directed and certified by a SQEP.

For reasons which we return to later, this additional sampling and analysis must be done, and **the report approved by HCC, before ground works begin**.

We note that the earthworks consent contains a condition to this effect (condition 6). The application requests the same condition be included in the resource consent for the proposed development, and we see no reason to disagree.

Applicable standards for health risk assessment

HAIL Environmental previously raised issues with the risk assessment element of the DSI (Ref: HAIL). Beca evaluated soil quality in fill-impacted areas against SCS for high-density residential use, a choice of applicable standard that is not justified in the report.

To the contrary, the Operator's Statement, appendix 2 of the application, states that "Summerset's retirement villages... provide a medium density living environment."

However, having considered the current application in detail, specifically the Operator's Statement and Landscape Concept Plans, HAIL Environmental considers that Beca's choice of applicable standard is acceptable. We note that:

- The largest green space will be the bowling green. Necessarily, a bowling green is formed of compacted, engineered soils, with an excellent cover of turf, which residents would not be digging up. Site soils will not be exposed in this area.
- While communal vegetable gardens will be provided, these will be raised gardens.
- Grounds will be maintained by Summerset, not residents.

Accordingly, even for 'villa' residents, the proposed development appears to fall within the 'high-density' residential SCS scenario. Outside the uncontrolled fill area, DSI samples did not exceed these SCS, though samples from at least one other location exceeded regional background.

We also question the DSI's use of Canadian soil quality guidelines to assess potential impacts of contamination on the environment, though that is not germane to NES-CS assessment.

Remediation

The applicant proposes to remove waste fill materials and contaminated soil from site. The driver for remediation, and the remedial standard, are not stated.

This process is to be controlled by a 'contaminated soils management plan' – (CSMP). The proposed CSMP is contained in Appendix 17 – Civil Works Construction Management Plan. We would view this CSMP as more properly a remedial action plan (RAP), since it principally involves removing fill material and validating surrounding soils.

HAIL Environmental has several issues with the proposed CSMP:

- It provides little more than principles, with details left to a contractor's environmental management plan (CEMP).
- It does not recognise the inadequacy of the DSI as set out above and in condition 6 of the earthworks consent; it does not explicitly provide for revision based on further investigation. To the contrary it states at 3.2.1 that "all remaining soils are suitable for reuse at the site."
- It does not specify any remedial criteria for contaminants in soil.
- It does not specify limits on dust or contaminants in dust (nor does the proposed Construction Management Plan).
- It does not require monitoring or validation.
- It requires a SQEP only if unexpected contamination is identified.

The proposed CSMP also states (section 3.3, page 8) that "if the site is to have garden spaces there should be a minimum of 0.5 m of soil... free of any fill material, and/or clean fill imported to make up this depth". We feel it is sufficiently clear that the proposed development does have garden spaces, that this control should be developed into a coherent plan, including soils within raised gardens.

Accordingly we recommend that conditions of consent require:

- The CSMP to be **revised based on the findings of the additional investigation** recommended above.
- Site soils to meet **SCS for high-density residential use** (and, in the event that non-priority contaminants are identified on site, remedial criteria recommended for this site by a SQEP and approved by Council).

- An adequate **site validation report** (SVR) in accordance with the Ministry for the Environment's contaminated land management guidelines (and any other guidelines that may be relevant, such as the BRANZ asbestos in soil guidelines if asbestos is encountered) to be prepared and submitted to Council no later than two months after contaminated land elements of ground works finish. If the development proceeds in stages, then the SVR should be revised and submitted following the completion of each stage.

Should the applicant wish to remediate for ecotoxic contaminants as well, that is commendable, but in our view Council cannot enforce that by consent unless contamination is so high as to prevent amenity planting. We suggest the applicant considers a zinc target of 280 mg/kg, based on *Development of soil guideline values for the protection of ecological receptors (eco-SGVs): technical document*, JE Cavanagh and K Munir, Landcare Research Limited, 2016.

Management controls

The proposed CSMP provides a range of site management controls during works, including controls on set-up and induction procedures, dust control, stormwater and sediment control, stockpiling, soil movement within the site, disposal to landfill, discovery, exiting site, imported materials, groundwater handling, and health and safety.

A general problem with these controls is that, while they appear reasonable, the CSMP does not make it clear what controls are actually to be implemented. As such the CSMP could be quite difficult to enforce. This appears to be because the works contractor is to produce a Contractor's Environmental Management Plan (CMP) before works, rather than being held to the CSMP.

A condition of consent should require the applicant to supply a CEMP (in general accordance with the CSMP attached to the application) to Council's satisfaction before works begin, and to implement that CEMP with any relevant amendments that Council may require. In particular, the CEMP should include"

- **Specific dust monitoring procedures, trigger levels, and controls** in the CSMP (or the parent Construction Management Plan) meeting relevant requirements of the Hutt City District Plan.
- **Specific contaminated soil handling and disposal requirements**, including the name(s) of suitably authorised landfill(s) to which soil will be sent, and proof of soil acceptance.
- Details of the soil to be used in the communal gardens, which should be clean fill (whether sourced on site or from imported soil).
- A nominated contaminated land **SQEP**, including emergency contact details.

We would suggest this be at least ten working days before works begin, so that Council can be confident of getting it reviewed. Many site management plans are living documents that change during the works they control; accordingly the **condition should also specify that any contamination-related changes to the CEMP be promptly submitted to Council for approval.**

Submitter concerns

HAIL Environmental has reviewed the submissions made on the application. As far as we could determine, no submitter has raised contaminated land as an issue of particular concern to them. Several submitters refer to "pollution" from the proposed development, but it is not clear to us whether they are referring to contaminants in soil and dust, or to air pollutants that they consider may be emitted from construction works.

In HAIL Environmental's view, subject to additional investigation and implementation of an adequate CSMP, effects of soil contamination on adjacent sites as a result of the proposed development should be negligible.

The potential for air pollution arising from construction works, if any, is outside the scope of this review.

Following earthworks

Council, or the applicant, should in due course forward the PSI, DSI and SVR to GWRC so that the site can be appropriately reclassified on the Selected Land Use Register.

Limitations

This letter has been prepared for Council by HAIL Environmental in accordance with the purpose and scope set out above, and the usual care and thoroughness of the consulting profession. Any use of any part of this letter by any other party, or in any other context, is the responsibility of the user. In particular, nothing in this letter is to be taken as approving or advocating any health, safety or environmental control proposed in the application or its associated documents.

A detailed review of the surrounding land use(s) in relation to potential hazardous activities and industrial land uses was not included in this limited assessment. Information from cited sources has not been independently verified unless specifically stated, and HAIL Environmental assumes no responsibility for any inaccuracy or omission therein.

This document does not purport to give legal or financial advice.

Closing

Should you have any questions related to this matter, please contact the undersigned on 021 036 7764 or dbull@hailenvironmental.co.nz.

Yours faithfully,



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