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New Plymouth District Council
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23 April 2026

Attention: Campbell Robinson – Senior Planner (Consultant)

Dear Campbell

LUC24/48583 - 1220 Devon Road NESCS Review

1 Background

Beca Limited (Beca) were engaged by New Plymouth District Council (NPDC) to undertake a technical review of a Preliminary Site Investigation (PSI) of 1220 Devon Road, Bell Block, New Plymouth (the site, legally described as Lot 1 DP 19854) prepared by BTW Company Limited (BTW) for the New Plymouth Pistol Club (NPPC), dated 16 August 2024.

The NPPC applied for resource consent for continued operation of the New Plymouth Pistol Club including expansion of existing facilities and all associated site mitigation and earthworks. The PSI was provided in response to a request for further information (RFI).

Beca's review was limited to the Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011 (NESCS)

The proposed activity includes soil disturbance which is covered by Regulation 5(4) of the NESCS. The site is considered a "piece of land" as the PSI identified it has had the following activities from the Hazardous Activities and Industries List (HAIL) undertaken on it.

Table 1: Identified HAIL Activities

HAIL Category Identified by BTW	Potential Contaminants
HAIL C2 – Gun clubs or rifle ranges, including clay target clubs that use lead munitions outdoors (relating to the operational gun club)	• Heavy metals (specifically antimony, copper, lead, nickel and zinc.) • Polycyclic aromatic hydrocarbons (PAHs)
HAIL C3 – Training areas for detonation of explosive ammunition (relating a historical machine gun range)	• BTW identified heavy metals as the primary contaminants • The MfE HAIL with hazardous substances also lists explosives (2,4 and 2,6-dinitro toluene (DNT), 2,4,6-trinitrophenol (picric acid), trinitrotoluene (TNT), cyclo-trimethylene trinitramine (RDX), ammonium, and barium nitrate)

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BTW[1] indicated that '*Soil disturbance volumes are anticipated to exceed permitted standards (with volumes to be confirmed once the earthworks plan has been prepared).'*

Limited soil sampling was undertaken as part of the PSI, but a Detailed Site Investigation (DSI) has not been prepared for the site. BTW indicated:

'The PSI identifies contaminant levels above applicable Soil Contaminant Standards (SCS) for a commercial / industrial land use with associated soil disturbance subject to NESCS regulations'

'The PSI recommends the preparation of a contaminated site management plan (CSMP) and ongoing site management plan (OSMP) to manage contaminated soils. The applicant adopts the PSI recommendations. Accordingly, no detailed site investigation (DSI) is to be prepared with resource consent sought as a discretionary activity in accordance with Regulation 11 of the NESCS.'

Beca agreed that the discretionary activity approach is an acceptable consenting pathway subject to the necessary conditions being applied.

2 Preliminary Site Investigation

Beca provided feedback regarding the PSI via letter dated 2 December 2024. This was shared with BTW who provided an updated PSI dated 17 December 2024 supported by an RFI response.

Beca provided feedback regarding the updated PSI via email dated 19 December 2024 which confirmed the review comments were addressed but noted the following items:

- The additional contaminants (i.e. those other than heavy metals) associated with the historical machine gun range and the potential for elevated PAHs are considered within the recommended contaminated site management plan (CSMP) and ongoing site management plan (OSMP). The updated PSI stated that: '*Should any soil disposal be required for the acoustic mitigation works, it is recommended that further soil sampling be undertaken to facilitate disposal to an appropriate facility*.' Beca supported this statement, noting these additional contaminants should be considered if disposal testing is undertaken.
- Updates to the conceptual site model to include potential pathways to ecological receptors such as nearby surface water features and terrestrial ecology were considered appropiate, noting the need for erosion and sediment controls to be implanted during construction works.

3 Additional Information

On 10 December 2025, Beca was provided[2] the sample location plan, laboratory report and results table for soil sampling from the Range 1 bund. BTW collected 12 soil samples across seven locations from the bund.

The samples were analysed for heavy metals (antimony, arsenic, cadmium, chromium, copper, lead, nickel and zinc). Five samples were also analysed for PAHs. Synthetic Precipitation Leaching Procedure (SPLP) for metals was carried out for all samples to assess if contaminants (metals in this case) have the potential to leach into groundwater or the adjacent tributary.

[1] email correspondence dated 20/11/2024, from Aaron Edwards a BTW Planning Manager to NPDC

[2] email correspondence dated 5/12/2025, from Aaron Edwards a BTW Planning Manager to NPDC

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The BTW email detailed:

- Soils from all samples, excluding SS06_0-0.1, were observed to be mixed fill with suspected lead flakes seen in many of the samples.
- Lead was found to be consistently elevated, with results ranging between 113-5,900mg/kg. Two samples exceeded the NESCS soil contaminant standard (SCS) to protect human health for commercial/industrial land use. The remaining samples (including a sample taken away from the bund and directly adjacent to the stream) were elevated well above expected background concentrations.
- The majority of results for arsenic, copper and zinc, while below the SCS to protect human health, exceeded expected background concentrations.
- Only one trace detection of PAHs was recorded, well below the SCS to protect human health.
- SPLP results were compared against the ANZECC Trigger Values for Freshwater (95% protection of species). It should be noted that the ANZECC trigger values are in reference to surface samples from freshwater bodies, as opposed to leachate, therefore the trigger values have been used as a reference point to assess the potential risk to the stream (ecological receptor). SPLP results for copper, lead and zinc exceeded the ANZECC trigger values, with the highest result being for lead.
- Surface water samples and sediment samples were collected at several different locations (Upstream, downstream and at the discharge point) by Taranaki Regional Council in July 2024. All surface water results were below the ANZECC trigger vales for freshwater, and all sediment results were well below the ANZECC sediment quality guidelines. BTW concluded while the sampling by TRC did not identify an immediate risk to the stream environment, lead is considered ecotoxic, particularly in terms of chronic exposure even at very low concentrations, and a leaching potential from the identified heavy metals remains long term with the bund in-situ.

NPDC requested Beca comment on:

- Methodology and process followed for the further sampling and if this meets best practice;
- Whether the proposed conditions would adequately mitigate the potential effects on human health;
- Any other matters which you think are relevant to the assessment of effects.

The following response was provided via email 7 January 2026.

Methodology:

- No information was provided on the sampling methodology however the distribution and density of sampling was considered reasonable providing the deeper samples (0.5m) were near the base of the bund.
- The screening criteria applied appeared reasonable for assessing risk to human health and environmental receptors with the following exceptions:
  - the NEPM health investigation level used for nickel was incorrect (should be 6,000mg/kg) noting this does not impact the outcome.
  - A reference was needed for the NNIPHE Environmental Risk Limit applied for antimony. It was unclear which exposure pathway the NNIPHE criteria is relevant to. For context, the 2023 Geochemical Atlas of Aotearoa New Zealand could be consulted for background concentrations of Antimony.
  - ANZECC was superseded by Australian & New Zealand Guidelines for Fresh & Marine Water Quality (ANZG) in 2018 although many of the default guideline values remain the same. For antimony, there is a low reliability value for freshwater of 0.009mg/L which just over half of the SPLP results exceeded.
- Contaminants relating to explosives were not considered in the testing suite, which was noted in the review of the PSI.
- Information regarding the composition of the mound was limited to ‘mixed fill’ and suspected lead flakes and no photos were provided. If building or demolition material is present, asbestos should be considered as a contaminant of concern.

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Proposed conditions:

- It was considered BTW need to provide some form of risk assessment from the proposed relocated stockpile. The metals will leach, having potential to reach groundwater and ultimately the stream. Depth to groundwater, distance to the stream and potentially dilution and attenuation factors are all likely relevant.
- Subject to satisfying the item above, the proposed conditions were considered adequate to mitigate potential effects on human health providing the CSMP, OSMP and ESCP are of suitable quality (compliant with CLMG No. 1).

Other matters:

- Ideally the results along with sampling methodology and risk assessment would be formally reported as something that council can rely on in granting the consent.
- The management of risk from soil contamination to environmental and human health receptors relies on the details and implementation of the CSMP, OSMP and ESCP. It is important these are prepared to a suitable standard.

BTW prepared a Receptor Risk Assessment dated 2 March 2026 to assess potential impacts on ecological receptors. Beca received this on 16 April 2026 and have read for information only. It is expected the outcome of the assessment will inform the management plans to be required by the conditions of the consent which will be certified by Council.

4 Draft Conditions

The following draft conditions have been proposed with respect to contaminated land:

SMP

25. *A Site Management Plan (SMP) must be prepared by a suitably qualified and experienced practitioner in accordance with the current edition of the Ministry for Environment Contaminated Land Management Guidelines No.1 – Reporting on Contaminated Sites in New Zealand. The SMP must be submitted to Council for certification at least 10 working days prior to commencing soil disturbance.*

26. *The SMP must detail the procedures, controls and contingency measures that must be implemented for the duration of the works in order to protect human and environmental health by ensuring exposure pathways are minimised for the duration of the soil disturbance works and must include, but not be limited to:*

    a. *Erosion and sediment controls preventing migration of contaminants to surface water or groundwater*
    b. *Environmental controls for stockpiling of soil*
    c. *Procedures to minimise on-site contaminant dispersal*
    d. *Procedures for the safe handling, decontamination, and management of tires*
    e. *Unexpected contamination discovery protocols*
    f. *Transport and disposal procedures for any material transported off-site*
    g. *Methodology of any soil management on-site in creating any new bund*
    h. *Soil testing requirements as a result of unexpected discoveries or off-site soil disposal.*
    i. *Worker health and safety measures, including PPE, hygiene, and training for handling contaminated materials.*

27. *Soil disturbance works must be undertaken in accordance with the approved SMP. The procedures, controls and contingency measures set out in the SMP must be implemented for the duration of the soil disturbance works.*

28. *All material removed from the site in the course of the soil disturbance works must be disposed to a suitably licensed facility authorised for receipt of material of that kind.*

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29. *If unexpected conditions, such as staining, odourous material, are encountered during the soil disturbance works; work in that area must cease and the Council notified. Unexpected contamination and contingency measures must be overseen and assessed by a suitably qualified and experienced practitioner.*

OSMP

30. *An Ongoing Site Management Plan (OSMP) must be prepared by a suitably qualified and experienced practitioner in accordance with the current edition of the Ministry for Environment Contaminated Land Management Guidelines No.1 – Reporting on Contaminated Sites in New Zealand to control management of the fill area to the west of Range 7 and future activities following completion of construction. The OSMP shall be submitted to Council within 10 days of the completion of the soil disturbance works.*

Work Summary Report

31. *Within three months of the completion of the soil disturbance works, a work summary report must be provided to the Council which must include:*
    a. *The approximate location and dimensions of soil disturbance carried out including a relevant site plan and photographs.*
    b. *Records of any unexpected discoveries encountered during the works and the actions taken to address them.*
    c. *Results of soil sampling or material sampling.*
    d. *Disposal dockets for any soil or materials removed from site.*
    e. *Confirmation that the works were carried out in accordance with the approved SMP.*
    f. *Recommendations or requirements for ongoing monitoring or management.*

Monitoring

32. *A Surface Water and Sediment Monitoring Plan (SWSMP) must be submitted to Council for certification at least 10 working days prior to the commencement of soil disturbance. The purpose of the SWSMP is to ensure potential adverse effects on groundwater and the unnamed tributary of the Mangaoraka Stream arising from soil disturbance activity associated with acoustic mitigation works, are appropriately avoided, remedied, or mitigated.*

33. *The SWSMP must include, but not be limited to:*
    a. *Sampling locations (upstream, downstream, and adjacent to the bund area).*
    b. *Parameters including, at minimum: lead, copper, zinc, arsenic, antimony, pH, suspended sediment, and any other contaminants of concern identified in prior investigations.*
    c. *Outline protocols for stream sediment sampling and analysis.*
    d. *Frequency of monitoring:*
        i. *During earthworks: at least monthly*
        ii. *Post-earthworks: quarterly for a minimum of 12 months following completion of acoustic mitigation works.*

34. *SWSMP monitoring results must be provided to Council within 10 working days of receiving laboratory results. Trigger values shall be based on the Australian and New Zealand Guidelines for Fresh & Marine Water Quality (ANZG) 95% freshwater protection or more stringent site-specific criteria. Any exceedance of trigger values must be reported within 48 hours (to allow for laboratory confirmation of the validated sample result), to include:*
    a. *Likely cause(s)*
    b. *Immediate mitigation actions taken*
    c. *Proposed corrective actions.*

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The conditions are considered thorough in addressing the contaminated land matters but the following could be considered:

- As contaminant (lead) concentrations are present above SCS, the report required in condition 31 could be upgraded to a soil validation report that must be prepared by a suitably qualified and experienced practitioner in accordance with the current edition of the Ministry for Environment Contaminated Land Management Guidelines No.1 – Reporting on Contaminated Sites in New Zealand.
- With respect to reporting of the SWSMP monitoring results in condition 34, identification of increasing trends will be important. Reporting should include comparison to previous results as well as the ANZG 95% freshwater protection guideline values. Given the 48 hour notification required in the event of an exceedance, there may be value in giving the consent holder longer to prepare and provide SWSMP monitoring results such as monthly or potentially quarterly.

Closure

Please do not hesitate to contact the undersigned should you require clarification.

Yours sincerely

Sarah Shepherd

Technical Director - Environment

on behalf of

Beca Limited

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Disclaimer

This letter has been prepared by Beca Ltd (Beca) solely for New Plymouth District Council (Client). Beca has been requested by the Client to provide a technical review of a resource consent application with respect to the Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011 (Scope).

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