

Table 1 - Contaminated Sites Summary Table

Site Name	Primary Risk	Recommended Investigation	Recommended Action	Approx. Price for additional works/investigation (excl. GST)
Queen Elizabeth Park WRC Occupied	Detonation of unstable explosives by excavation Detonation by handling Detonation by foot traffic (least likely) Sharps from medical waste dump	<ul style="list-style-type: none"> - Further stream sampling to assess contamination near sandbank. - Check landfill cover thickness. - Further history review of Paekakariki area to identify medical dump location – excavations to review dump cover thickness. - Screen the area south of Camp Russell and particularly the eastern edge of the ephemeral wetland. - Contour 1942 and 1948 photo runs of the park to identify major areas of topographical change that could be munitions dumps. 	<ul style="list-style-type: none"> - Prepare a specific Stray Munitions Management Plan – with specific reporting forms and location plans for use in recording all future finds. - Re-fence the sand bank and the sandhill butt adjacent to the model aircraft airfield and allow to revert to scrub (assist with in seed manuka slash) - Consider sweeping high use areas that co-occur with areas of past munitions finds or suspected ranges or dumps. 	<ul style="list-style-type: none"> Stream sampling \$1500 Check landfill cover \$1,200 History review \$1,500 UXO Management Plan \$1,200 Closed Landfill Management Plan \$1,200 Screening for UXO \$6,000 Photo investigation \$5000
Greytown WRC Occupied	Indoor air inhalation of volatiles from UST and Gasworks contamination (BTEX) by workers	<ul style="list-style-type: none"> - Boreholes adjacent to the former tank pit - seek partial funding from Shell Oil. - Groundwater investigation to assess plume from adjacent Gasworks. - Further sampling for pesticides. 	<ul style="list-style-type: none"> - Consideration should be given to excavation of the former UST site. - Removal of stained soil from inside the depot building and outside the fuel storage shed. - Tidy depot yard and remove disused drums. 	<ul style="list-style-type: none"> Drilling and GW Investigation \$7,500 Pesticide Soil Sampling \$2,200
Belmont Regional Park Demolition Site Burning Site Dump Site WRC Occupied	UXO in demolition area Environmental	<ul style="list-style-type: none"> - Request NZDF to screen area around demolition area for kick-outs. - Review any sheep dips in the wider Regional Park area. 	<ul style="list-style-type: none"> - Prepare a specific Stray Munitions Management Plan - Re-fence demolition area and 20m buffer spray with herbicide and lay cut manuka brush (with ripe seed) over the area. - Identify borrow source and obtain consents to cover the bare ground at the main dump/burning area. Say 1,000m³ of local silt. - Erect warning sign. - Cover burial of rusting ammunition cases to avoid risk of cuts and infection to future fossickers. 	<ul style="list-style-type: none"> UXO Management Plan \$1,200 Screening of dumps \$1,500 Review of sheep dips \$1,500
Masterton Workshop WRC Occupied	Groundwater contamination Indoor air risk to workers	<ul style="list-style-type: none"> - Groundwater bores to assess off-site migration, seek partial funding from Shell Oil. - Indoor air survey. 	<ul style="list-style-type: none"> - Prepare a management plan for the protection of maintenance and excavation workers. - Bunding of waste oil tank. 	<ul style="list-style-type: none"> Drilling and GW Investigation \$7,200 Indoor Air Sampling \$1,500 Management Plan \$1,200

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Pre-cast Systems WRC Owned	Minimal risk to environment due to inert nature of material stored on site.	No further investigation is considered warranted.	<ul style="list-style-type: none"> The WRC should advise the site occupier that the dumping of any refuse on the subject site is not permitted and that the occupier removes refuse that has been dumped on this site. 	
Te Marua WRC Owned	<p>Medium level of risk associated with underground storage tank with no observation well.</p> <p>Medium level of risk associated with current level of reliance on delivery drivers at bulk delivery areas.</p>	<ul style="list-style-type: none"> Groundwater and soil test investigation at time of observation well monitoring. 	<ul style="list-style-type: none"> Installation of an observation well next to the underground storage tank for the purpose of easily ascertaining tank condition. Use of an indicator to assess presence of soluble chemicals in containment bund stormwater prior to pumping out. Indicator needs to be simple and quick possibly some kind of pH check? (pH Meter). Review of delivery area procedures in terms of the provision of wash down hose auditing measures on chemical delivery areas. 	Drilling and GW Investigation \$4,800
Hukinga Sawmill WRC Owned	Low contamination levels well within acceptable levels for the current landuse.	No further investigation considered necessary.	No action is recommended for this site.	
Former Firth WRC Owned	No significant risk to human health or the environment	No further investigation considered necessary.	No action is recommended for this site.	
Former Ava Landfill WRC Owned	<ul style="list-style-type: none"> Landfill gas exposure – migration via service trenches. Leachate migration to adjacent Hutt River. 	<ul style="list-style-type: none"> Sample stormwater outlets and the closest man hole riser upstream during low tide and during winter time. Determine if there is any direct leachate discharge flow from the landfill into stormwater lines running through the landfill. 	<ul style="list-style-type: none"> A management plan should be prepared to record the location of the site and the requirement for its future management. All service authorities should be advised of the potential for gas hazards in confined spaces at the site. 	<p>Management Plan \$1,200</p> <p>Stormwater Sampling \$600</p>
NZDA Pakuratahi Rifle Range WRC Owned	Negligible risk to suite – users Significant potential for mobilisation of lead during storm events – with consequent effects on local ecosystems	<ul style="list-style-type: none"> Review stormwater provisions at the site. Ensure that the stormwater has sufficient sediment control prior to release to the stream. Review with the NZDA a maintenance program to ensure that lead contamination of the Butts is regularly removed. 	<ul style="list-style-type: none"> Develop a small wetland at the stormwater outlet for the site. 	<p>Review stormwater \$800</p> <p>Review maintenance program \$800</p>

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<p>Numerous Pump Stations, Wanuiomata & Waterloo Water treatment Plants</p> <p>WRC Owned</p>	<p>USTs – specific risk could vary but generally lower risk diesel fuel</p>	<ul style="list-style-type: none"> – Review age of tanks and ownership. If owned by the oil companies then provide a policy statement to the oil companies on the WRCs expectations of management of these tanks. – Undertake a site sensitivity survey for each UST (per OSH code for USTs). – Drill monitoring wells adjacent to any older sites or sites in sensitive locations. 		