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Remediation Action Plan: 92, 108, 148 Middle Road and 139 Te Aute Road

Prepared for
CDL Land New Zealand Ltd

Carl O'Brien
21 September 2026

Document Quality Assurance

Prepared by:	Carl O'Brien Senior Environmental / Horticultural Consultant	21 September 2026
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Qualifications and Experience

I am a Senior Environmental / Horticultural Consultant at AgFirst Consultants HB Ltd. AgFirst Consultants HB Ltd is a specialist multi-disciplinary consultancy supporting the primary sector with world class knowledge and experience across farmers, growers, and agribusiness enterprises. I have been employed at AgFirst Consultants HB Ltd since July 2023.

I hold the qualifications of Post Graduate Diploma in Environmental Management (Distinction)(2012) and a Bachelor of Science (Biology) (2008), both from the University of Auckland. I am also a member of the New Zealand Institute of Primary Industry Management. I have 17 years of professional experience in Environmental Management, including roles such as General Manager / Director of Geosciences Ltd and Environmental Consultant with Mitchell Partnerships Ltd. I meet the definition of a Suitable Qualified and Experienced Practitioner as defined within Section 2.1.1 the Users' Guide National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health (MfE 2012).

My area of expertise is within Environmental Management and the application and interpretation of the Resource Management Act 1991 (RMA), national environmental standards (NES), national policy statements (NPS), district plans and regional plans to the extent that these relate to soil and water resources. Within my role for AgFirst Consultants HB Ltd I have:

- Undertaken preliminary and detailed site investigations for a range of private developments throughout the region;
- Provided strategic advice on risk and management of tile drain discharges as part of the What's Coming out of Tile Drains SFFF Project;
- Assessed productive capacity of properties throughout Hawke's Bay for private sector clients to determine their suitability for subdivision, change in use, or development as required under the National Policy Statement for Highly Productive Land, Napier City District Plan, and Hastings District Plan;
- Undertaken Land Use Change Assessments for private sector clients regarding changing contamination risk levels associated with productive land, irrigation, and intensification;
- Provided strategic advice and risk assessment on water allocation, water requirements, consent renewals, and demand modelling for a range of public and private sector clients with respect to water availability and use across the region; and
- Assisted a range of parties with Cyclone Gabrielle recovery works including soil remediation, productive capacity, land use assessments, and strategic business advice.

I confirm that, in my capacity as Author of this report, I have read and abide by the Environment Court of New Zealand's Code of Conduct for Expert Witnesses Practice Note 2023.

Disclaimer:

The content of this report is based upon current available information and has been prepared for CDL Land New Zealand Ltd for the purpose of their Substantive Application under the Fast Track Approvals Act 2024. All due care was exercised by AgFirst in the preparation of this report. Any action in reliance on the accuracy of the information contained in this report is the sole commercial decision of the user of the information and is taken at their own risk. Accordingly, AgFirst disclaims any liability whatsoever in respect of any losses or damages arising out of the use of this information or in respect of any actions taken in reliance upon the validity of the information contained within this report. While the Report is subject to a standard disclaimer stating that the report is not for use by persons other than the Applicant, I can confirm that the Report can be relied upon by the Panel and participants for the purposes of considering the Application under the FTAA.

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1.0 Contractor Key Actions

Intrusive investigation has identified four key zones within the Middle Road Project where mandatory remediation is required to address actual and potential risks to human health. In achieving this, the Contractor must:

- Ensure a copy of this RAP is held on site during earthworks, and that all practices and procedures are understood;
- Establish a clean area for personnel undertaken remediation to eat and drink, including appropriate washdown facilities;
- Provide all appropriate PPE, and health and safety controls as detailed in Section 8.1;
- Familiarise themselves with the 4 impacted zones and associated remedial approaches as detailed in Section 6 and Section 8;
- Ensure validation testing is organised with the CLA;
- Organise offsite disposal for any impacted soil that will be removed;
- Dust control (section 8.3.5), Erosion and Sediment control (Section 8.3.6) and are to be in place and effective for the duration of works. Groundwater provisions (Section 8.3.7) are to be utilised as required;
- Ensure any imported fill has appropriate provenance of its quality;
- Familiarise themselves with the accidental discovery protocols in Section 9;
- Carl O'Brien from AgFirst will be the Contaminated Land Advisor for the development and can be reached on 027 420 5193 or carl.obrien@agfirst.co.nz for any questions;
- Once remediation is complete, ensure validation is completed, followed by site stabilisation before closing out any remedial areas; and
- Ensure meticulous record keeping as detailed in Section 10.1 is undertaken to ensure the Site Validation report is comprehensive.

Responsible parties, contact details and responsibilities are set out below.

Role	Contact Name & Company	Contact Details	Responsibility
Primary Construction Contractor			Project Delivery, PCBU
Engineer to the Contract			Management of project requirements & technical details
Project Manager			Management of Project
Site Manager			Implementation of RAP
Contaminated Land Advisor	Carl O'Brien AgFirst Consultants HB Ltd	M: 027 420 5193 E: Carl.obrien@agfirst.co.nz	On-Call assistance, validation, disposal advice and Validation Reporting.

2.0 Introduction

This Remediation Action Plan is submitted in support of CDL's Substantive Application for the Middle Road Project under the Fast-track Approvals Act 2024 (**FTAA**) to be lodged with the Environmental Protection Authority. The project comprises a comprehensively planned residential development of 317 lots, supported by integrated transport, three waters infrastructure and open space, including stormwater management designed in accordance with best practice treatment and attenuation principles.

The purpose of this report is to document the appropriate practices and procedures required for remediating land containing elevated concentrations of contaminants to the level required for the proposed end residential landuse standard. This plan has been prepared in accordance with the requirements of the Ministry for the Environment (MfE) National Environment Standard for Assessing and Managing Contaminants in Soil to Protect Human Health (NES-CS) and the Hawkes Bay Regional Council (HBRC) Regional Resource Management Plan (RRMP).

3.0 Description of the Application Site

The application site is located at 92, 108, 148 Middle Road and 139 Te Aute Road in Havelock North (**site**). The site is held in five separate titles and consists of a combined area of approximately 30.6ha. The site is relatively flat and currently used for rural residential and grazing purposes with four existing dwellings. **Figure 1** shows the site extent within the context of Havelock North.

Figure 1: Location and Extent of Site (Red Outline).



The site is on the southwest side of Havelock North, approximately 900m south of the town centre, which contains a range of retail and commercial uses. The wider land uses to the north, east and west of the site are predominantly suburban residential in character, with a retirement village to the northwest and larger rural landholdings to the southwest.

The Planning Report and other technical assessments prepared to support the referral application under the FTAA provide a comprehensive description of the site and its context. With respect to matters relating to contamination and land containing elevated levels of contaminants, the following comments are made about the site and surrounds:

- The parcels of land are determined to be a 'piece of land' with respect to the NES-CS;
- Site assessments have been undertaken as part of CDL Land New Zealand's acquisition and development plans that identify the scope and scale of actual and potential contamination to an appropriate detail to inform this remediation action plan;
- Primary issues within the piece of land are the result of historic persistent pesticide uses and discharges from hazardous building materials;
- The primary contaminants of concern are arsenic and lead that present a risk to human health and the environment if not remediated;
- While other heavy metals are elevated above the expected naturally occurring background ranges, alongside the detectable presence of persistent pesticides, concentrations recorded are generally lower risk when viewed against arsenic and lead, or within the applicable landuse thresholds;
- Remediation and management are required to ensure any risks to human health and the environment are addressed as part of the landuse change to a residential standard.

3.1 Description of Proposal

The Middle Road project will provide for the residential subdivision of the site to enable the development of 317 lots. The intended subdivision layout will provide for a range of lot sizes to enable conventional residential development along with medium density development opportunities. A masterplan has been prepared to inform the substantive application and is provided as **Figure 2**. The development is supported by a suite of technical assessments addressing key environmental matters, including infrastructure, stormwater, geotechnical, groundwater, landscape, transport, ecology, contamination, productive land, noise, archaeology and urban design.

The Middle Road Project will be developed in two phases:

- **Phase 1 – Land Development:** CDL will undertake the subdivision, bulk earthworks, infrastructure, roads, stormwater works, reserves, landscaping and creation of the residential lots.

- **Phase 2 – Dwelling Construction:** CDL’s build partners and future landowners will construct dwellings and associated site works in accordance with the consent notices applying the relevant Havelock North General Residential Zone or Medium Density Residential Zone provisions.

A full description of the Middle Road Project is provided in the Planning Report submitted in support of the Substantive Application.

With respect to matters relating to actual and potential contamination the project is summarised as follows:

- Residential redevelopment results in change of landuse, subdivision, and development which trigger the requirements of the NES-CS as a restricted discretionary activity and a discretionary activity under the Hawke’s Bay Regional Council Regional Resources Management Plan Rule 52;
- CDL Land New Zealand Ltd has undertaken previous investigations of the parcels of land, resulting in a good understanding of soil quality alongside remediation and management requirements;
- Identified impacts are typical of historical orchard, horticultural, and pastoral (sheep) farming land uses;
- Risks identified within the previous investigation relate to potential risks to human health in isolated areas due to the change in landuse from production land to residential land and the associated exceedances of the Soil Contaminant Standard for Residential Landuse (10% homegrown produce); and
- Identified areas of contamination can be managed through standard practices coupled with appropriate controls, reporting, and testing to ensure that land is safe for its intended end landuses.

Figure 2: Master Plan.



4.0 Soil Quality Status – Former Investigations

CDL Land New Zealand Ltd has previously commissioned five assessments of ground contamination risks across the site as part of previous development programmes and / or pre purchase due diligence. The extent of each of these reports is set out on Figure 3 below.

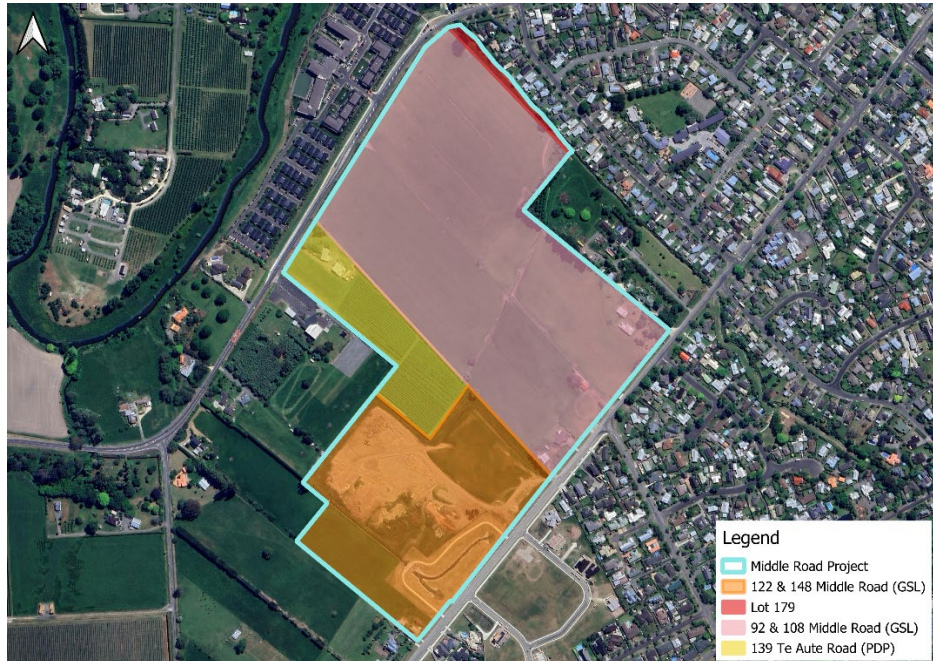


Figure 3: Parcels of Land Subject to Investigations Commissioned by CDL Land New Zealand.

Each of these reports are summarised in Appendix A alongside tabulated results and full copies can be provided upon request. All investigations have been completed in accordance with the MfE CLMG No.1 & No.5 and the sum of the reports are considered to provide sufficient coverage of the site with respect to detailed site investigations.

With respect to this FTAA Application, AgFirst notes that while these assessments have identified the site meets the definition of Land Covered as defined by the NES-CS, identified contamination areas are consistent with typical historic orchard, horticultural, and farming use and can be readily remediated within a development programme. Previous assessments have identified the following primary contamination risks:

- Lead based paint degradation through time creating a curtilage of impacts around buildings constructed pre-1950's;
- Arsenic, cadmium and zinc impacted soil arising within a previous animal race area and long history of sheep farming operations; and
- Minor degradation of asbestos containing materials utilised within residential buildings across the site.

Risks are confined to discrete areas of the site and concentrated in the surficial soil layers of soil. Testing has identified four discrete areas of impact encompassing 12,556

m² (3.7%) of the development footprint with an estimated 5,865 m³ of impacted soil that requires remediation and / or management.

5.0 Remedial Methodology

This RAP has been prepared to prioritise sustainability, cost effectiveness, and risk management via a combination of remediation methodologies. Remediation of impacted soils to the Residential Soil Contaminant Standard will be achieved via:

- ① Excavation and in-situ mixing of impacted soils to dilute concentrations of elevated contaminants. Mixing will include vertical mixing and long-low stockpile methods, coupled with validation to ensure soil is compliant with more sensitive landuse standards;
- ① Offsite disposal of soil that does not comply with the applicable Residential Soil Contaminant Standard to an appropriately consented disposal facility;
- ① Utilisation of soil that exceeds the applicable standard for Residential Landuse (10% Produce), but complies with the Recreational Landuse and Environmental Threshold within reserves and road berms within the proposed development; and
- ① Where required, offsite disposal of excess soil to locations / facilities/ developments that can utilise soil of the recorded quality (such as sports fields, reserves, consented fills etc).

6.0 Extent of Impacted Areas

Risks are confined to discrete areas of the site and concentrated in the surficial soil layers of soil. Testing has identified four discrete areas of impact encompassing 12,556 m² (3.7%) of the development footprint with an estimated 5,865 m³ of impacted soil that requires remediation and / or management as set out in Table 1 and Figure 4:

Table 1: Remedial Extents.

Remediation Location	Remedial Areas	
Villa (Zone 1)	Area:	2,460 m ²
	Cut Depth Required:	300mm
	Est. Volume:	738 m ³
Woolshed Building (Zone 2)	Area:	131 m ²
	Cut Depth Required:	300mm
	Est. Volume:	39.3 m ³
Woolshed Race (Zone 3)	Area:	425 m ²
	Cut Depth Required:	750mm
	Est. Volume:	318.75 m ³
139 Te Aute Road (Zone 4)	Area:	9,540 m ²
	Cut Depth Required:	400mm
	Est. Volume:	3,816 m ³

Figure 4: Remedial Extents.



7.0 Regulatory Framework

As the site meets the definition of Land Covered, and the Proposed Middle Road Project involves subdivision, soil disturbance, and a change in landuse (primary production to residential), the NES-CS regulations are applicable to the site.

Previous investigations have identified discrete areas of the site where soil contaminant concentrations exceed the Soil Contaminant Standards (SCS) for Residential Landuse (10% home-grown produce). Remediation is therefore required to enable the proposed residential development. Based on the extent of identified contamination and proposed remediation methodologies (including excavation, soil mixing, and encapsulation), the works are unlikely to comply with Regulation 8(3) of the NES-CS as a permitted activity. Consistent with the conclusions reached in the site investigations referenced in this report, it is anticipated that a Restricted Discretionary Consent will be required under Regulation 10 of the NES-CS to authorise remediation, subdivision, and soil disturbance.

With respect to the Hawke's Bay Regional Resources Management Plan, resource consent is required for a Discretionary Activity under Rule 52 on account of the proposed remedial methodology to dilute impacted soils, and redistribute soil across the development area aligned to its assessed quality.

8.0 Remedial Earthworks Controls

The primary contractor will be responsible for implementing staged controls for the duration of the earthwork procedures with the following sections outlining the expectations and obligations:

- ① Pre-commencement, responsibilities, PPE, and Briefings – Section 8.1;
- ① Site Establishment – Section 8.2;
- ① Remedial Earthworks Procedures – Section 8.3;
- ① Erosion & Sediment – Section 8.3.5
- ① Dust – Section – 8.3.4
- ① Groundwater – Section 8.3.6
- ① Site Validation – Section 8.5; and
- ① Post Remedial General Earthworks – Section 8.6

8.1 Pre-Commencement

Prior to remedial works commencing on site, the consent holder will:

- ① Appoint an earthworks contractor and site manager who will be responsible for the implementation of this RAP. A copy of this RAP must be kept on site at all times; and
- ① Notify Hastings District Council at least five (5) working days in advance of remedial works commencing on site.

Carl O'Brien of AgFirst Consultants HB Ltd will provide on-call direction in relation to any contamination / disposal issues for the project and are to be notified in advance of works commencing. Carl is an environmental professional, suitably qualified and experienced in the investigation, reporting, remediation, and validation of contaminated land.

8.1.1 Responsible Parties

A primary contractor will be appointed to undertake the remedial works and provide the Contractor with a copy of this RAP to ensure they understand the scope and scale of works required. The contractor will in turn appoint a site manager who will be the primary person responsible for ensuring the requirements of this RAP are implemented on site and all controls stipulated in the following sections are in place and effective.

A copy of this RAP must also be provided to Hastings District Council and Hawkes Bay Regional Council in advance of works commencing on site for approval.

Following the appointment of a site manager, it will be their responsibility to ensure the contact details for the responsible parties with respect to this RAP are provided in Table 2 below.

Table 2: Responsible Parties

Role	Contact Name & Company	Contact Details	Responsibility
Primary Construction Contractor			Project Delivery, PCBU

Engineer to the Contract			Management of project requirements & technical details
Project Manager			Management of Project
Site Manager			Implementation of RAP
Contaminated Land Advisor	Carl O'Brien AgFirst Consultants HB Ltd	M: [REDACTED] E: [REDACTED]	On-Call assistance, validation soil sampling, disposal advice and Validation Reporting.

8.1.2 Briefing Sessions

The site manager is to commission a briefing session for relevant staff and subcontractors prior to the commencement of works. The briefing session will include as a minimum:

- ① Known areas of impacted soil;
- ① Appropriate PPE and safety measures;
- ① Familiarisation with the requirements of the RAP;
- ① Procedures to be followed should contaminated material be encountered (Refer Section 8).

8.1.3 Health and Safety

While this RAP provides steps that are required because of the concentrations of arsenic and lead identified during former investigations, the earthworks contractor is ultimately responsible for the H&S procedures related to the earthworks. Assessed arsenic concentrations in surface soils within limited portions of the Project Area exceed the soil contaminant standard for site workers, as outlined in the soil contaminant health standards (SCS(HEALTH)) of the NES. As such, these pockets of soil may present potential a risk to the health of site workers if soil in these areas is directly handled in the absence of appropriate controls.

In determining risks, AgFirst notes:

- ① Identified areas that exceed the NES CS for commercial workers are limited to one area of the site only and represents <1% of the site area as a whole. Therefore, exposure to dust and soil during earthworks will be representative of the wider average, rather than the identified hotspot. Controls are noted that provide a conservative baseline and ensure that both site workers and end residential occupiers are protected to the appropriate level;

- Remedial earthworks will be undertaken via mechanical means, with erosion, sediment and dust controls in place alongside appropriate personal protective equipment (PPE) and staff amenities to further reduce exposure risk; and
- The primary contractor will have a suite of Health and Safety Controls for site workers that will assist in mitigating risks through prudent good practice.

With respect to PPE, the minimum PPE which will be available on-site will be in accordance with the contractor's specific health and safety plan. AgFirst recommends that the following additional PPE be available on site in the event in the event of inclement conditions or unexpected discoveries:

- Protective leather or rubber gloves
- Safety glasses
- P2 rated dust masks

The site manager will use their discretion regarding the use of the additional PPE and might call on the CLA for advice on this matter.

The primary exposure risks associated with the disturbance of arsenic and lead impacted soil are inhalation and direct contact with skin or eyes. These primary risks are managed through the implementation of appropriate staff hygiene, PPE, and dust suppression as documented in Section 8.1 of this RAP alongside appropriate staff briefing, PPE and statistical assessment methodologies.

8.1.4 Confirmation of RAP

Following confirmation of design details and appointment of a primary contractor, it may be necessary to refine and update this RAP. Any updates will be submitted to Hastings District Council at least five (5) working days prior to any changes being implemented on site.

8.2 Site Establishment

Prior to remedial earthworks commencing, the site manager will ensure that appropriate site amenities are available on site and will include as a minimum:

- Washdown facilities for all personnel on site and provide clean area for rest and food breaks;
- Appropriate decontamination facilities to ensure personnel can wash hands and face prior to eating, drinking or smoking;
- An area for undertaking remedial mixing and stockpiling. This needs to be a flat area, isolated from the earthworks, 20m from any sensitive areas, and be contained with erosion and sediment controls; and
- Equipment and processes for ensuring an appropriate and continual supply of water for dust suppression is available for earthworks footprints and stockpiles.

Once the on-site amenities are established, the site manager will ensure that dust, erosion and sediment controls are in place and effective, and that all personnel undertaking the works have been briefed on their obligations and have appropriate PPE for the works being completed.

8.3 Remedial Earthworks

Impacted soil across the Project is silty loam topsoil, impacted from historical use of persistent pesticides and lead based paint. Intrusive investigations have confirmed that the primary impacts are contained within the organic topsoil horizon and attenuates rapidly with depth within three of the four impacted areas. Deeper impacts are present within the woolshed race area, to a depth of 750mm due to the nature of these discharges and deep soils present on site.

Due to the area, volume, and degree of impacts, impacted topsoil will be managed individually within each of the four impacted areas, appropriate to its contamination status. Controls and protocols for each Zone are set out in turn below:

8.3.1 Zone 1: Villa Halo

Approximately 2,460m² surrounding the villa (Figure 4), containing an estimated 738 m³ of material exceeds the NES-CS for residential landuse, but is compliant with NES-CS for recreational landuse.

To remediate this area, the contractor will Cut to stockpile the full extent of demarcated extent of impacted soil to 300mm below ground level. Stockpiled soil will then be subject to validation testing at a rate of not less 1 sample per 500m³. Following confirmation of quality, soil from this area will either be placed into a reserve area, diluted further via long low stockpile methodology, or removed from site.

8.3.2 Zone 2: Woolshed Building

The halo of the woolshed has been impacted to a depth of 300mm across 131 m², comprising an estimated 39.3 m³ of lead, arsenic and cadmium impacted soil.

To remediate this area, the contractor will Cut to stockpile the full extent of demarcated extent of impacted soil to 300mm below ground level. Stockpiled soil will then be subject to validation testing at a rate of not less 1 sample per 500m³. Following confirmation of quality, soil from this area will either be placed into a reserve area, diluted further via long low stockpile methodology, or removed from site.

8.3.3 Zone 3: Woolshed Race

Soil within the race of the woolshed has been impacted to a depth of 750mm across 425 m², comprising an estimated 318.75 m³ of impacted soil.

Remediation of this area will be via cut to waste disposal to an appropriate waste receiving facility. Remediation controls for this area are:

- All residual infrastructure will be dismantled and disposed of as required for building materials of this nature;
- Any foundations removed from the ground must either be disposed of as waste to an appropriate facility, or clean from any residual soil;
- An area on the existing hardstand footprint (or an extended hardstand footprint will be established) will be protected with 'mudstop' matting or geotextile cloth to form the loading area;
- Excavated soil will be directly cut from the impacted footprint and loaded into trucks for disposal;
- All trucks must be covered before leaving site;
- All trucks must proceed straight to an appropriate disposal facility;
- All trucks and excavation equipment must be decontaminated via low pressure washing at completion of works using the geotextile loadout;
- Once all works and decontamination complete, the geotextile is to be disposed of to landfill.

Following completion of works, a visual inspection of the excavation area is to be completed to confirm its extent and depth matches the measured contaminant extents.

8.3.4 Zone 4 – 139 Te Aute Road

An area of 9,540 m² across 139 Te Aute Road has been impacted by arsenic to an approximate 400mm depth. Soil material exceeds the NES-CS for residential landuse, but is compliant with NES-CS for recreational landuse.

To remediate this area, the contractor will Cut to stockpile the full extent of demarcated extent of impacted soil to 300mm below ground level. Stockpiled soil will then be subject to validation testing at a rate of not less 1 sample per 500m³. Following confirmation of quality, soil from this area will either be placed into a reserve area, diluted further via long low stockpile methodology, or removed from site.

8.3.5 Dust Suppression

Dust controls are required to minimise pollutants becoming airborne and reduce stormwater sediment loads. If the proposed earthworks are undertaken in dry conditions, dust will be controlled by light frequent water spraying. Water spraying will be frequent enough to suppress the generation of dust, but not as heavy as to generate sediment laden water run-off.

8.3.6 Erosion & Sediment Control

To prevent generation of contaminated sediment laden run-off, stormwater protection measures shall be incorporated around the perimeter of the proposed works in

accordance with Hawkes Bay Regional Council Document “Hawke’s Bay Waterway Guidelines Erosion and Sediment Control”.

8.3.7 Groundwater

Provided that remedial earthworks within woolshed race, being the deepest area of excavation to 700mm below ground level, are undertaken during summer low conditions, no groundwater is expected to be encountered.

Any groundwater encountered will be treated in accordance with erosion and sediment control guidelines and discharged into the drainage network onsite. Flocculation for sediment may be required where groundwater flows from within an active work area and all efforts will be made to ensure that clean water diversions remain in place and effective for the duration of works.

8.3.8 Soil Disposal – Impacted Soil

If it becomes necessary through the project to dispose of impacted soil off site, material is to be mechanically loaded into truck and/or trailer units. All trucks leaving the site hauling impacted soil will be covered prior to leaving the property boundary and will proceed directly to the appointed disposal location.

Landfill manifest or weigh bridge dockets of all material disposed of at a managed fill or landfill facility will be kept and provided to the CLA & Project Management Team.

8.3.9 Post Remediation Decontamination

Upon completion of remedial excavation works, the site manager shall ensure that plant and equipment are cleaned and decontaminated appropriately before moving to work on any other portion of the site or leaving the site.

Decontamination will involve low pressure washing of machinery over mud stop matting within the controlled stockpile area. Alternative methods may be used in consultation with the CLA.

8.4 Site Validation

Following the completion of remedial excavations to remove topsoil, validation will be undertaken by the CLA in stages, subject to the following requirements:

- Visual inspection of remedial extents will be undertaken by the CLA to verify the minimum cut areas have been completed;
- Any stockpiled soil that will be reused within reserve areas will be tested at a rate of not less than 1 sample per 500m³ for a suite of heavy metals. Stockpiles will be subject using a composite soil sampling methodology, comprising the collection of four sub-samples collected in a cross section across the stockpile profile;

- Should significant cut to waste be required of underlying silt subgrade soils, validation testing will be undertaken at a rate appropriate for the area and volume of soil, alongside the receiving locations certification requirements; and
- In the event of an accidental discovery, the CLA will use their discretion on appropriate protocols and in consultation with Hastings District Council and Hawke's Bay Regional Council, validate any discovery areas at rates and sampling density appropriate to the discovery.

8.5 General Site Earthworks

Soil from outside the remedial footprints has been characterised as containing detectable concentrations of ΣDDT and elevated heavy metal concentrations which are below the relevant NES-CS for residential landuse but above the expected naturally occurring background concentration ranges.

Following the remedial works described in Section 8.4 above, the following procedures will be implemented for the duration of the site preparation earthworks activities to ensure that appropriate actions, contingencies, and response frameworks are in place should any unidentified contaminated soil is accidentally encountered, and to ensure the appropriate handling and disposal of impacted soil.

- The site manager will organise for offsite disposal surplus soil at an appropriately licenced receiving facility or consented site where excess soil must be removed from site;
- Dust controls must be in place and effective for the duration of soil disturbance activities in accordance with the MfE Good Practice Guide for Assessing and Managing Dust (2016). Dust suppression will be primarily through light and frequent water spraying, sufficient to dampen soil but not heavy enough to cause runoff;
- Erosion and sediment controls must be installed and be in place and effective until the site is returned to an erosion resistant state in accordance with the Hawkes Bay regional Council Hawke's Bay Waterway Guidelines Erosion and Sediment Control (2009);
- Standard earthworks procedures for mechanical excavation and loadout, including contractor PPE are considered sufficiently conservative to address Regulation 9 of the NES-CS considering the analytical results obtained; and
- Contingency measures in accordance with Section 8 are followed in the event of the accidental discovery of unexpected contamination.

8.5.1 Soil Disposal

Soil from outside of the remedial area is permitted to be reused onsite as part of development earthworks. However, in the event soil requires removal from site, this material is to be disposed of at an appropriately consented receiving facility on account of not meeting the MfE Definition of Cleanfill, with disposal dockets / waste manifests kept to ensure appropriate tracking of this material.

If further significant cut to waste earthworks are required, further soil sampling can be undertaken within the underlying subgrades in order to rationalise soil disposal options for any cut to waste material.

8.5.2 Imported Soil

Should any soil be imported to the site, for landscaping or backfilling if required, that material should be certified cleanfill material. Provenance certification may be required in order to satisfy any conditions of resource consent that may be imposed.

9.0 Unexpected Discovery Protocol

The primary contractor will actively manage excavations and soil disturbance activities on site to ensure that soil being disturbed is consistent with that described in the former intrusive site investigations. DSI's have been completed across all areas of the Project Area and the primary source of contamination confirmed as being from direct application of persistent pesticides to orchards. As a result, the site is considered low risk of accidental discovery of gross contamination. However, to ensure appropriate controls are in place and effective the primary contractor and personnel onsite will observe, monitor, and notify in accordance with Sections 9.1 & 9.2 below.

9.1 Identifying Contamination

The primary contractor will observe for any:

- Strong odours, notably effluent / waste, petrol, diesel and waste oil. Acetone and rotten egg odours can be indicators of other buried refuse;
- Colouration / staining of soil including black from hydrocarbon contamination. Green and orange staining are also common while residual chemicals can leave white powdery residues;
- Remnants of underground tanks or historic tank structures themselves. Works should look for PVC of steel pipework that would be representative of tanks and carefully look for other indicators (such as staining or odour);
- Refuse materials including drums, containers, plastics, paints or treated timber; and
- Fibrous materials that may be ACM including cladding, tiles, lagging and gaskets as common ACM. Care should be taken when lifting concrete slabs to ensure ACM has not been buried underneath concrete structures or used in historic formwork.

9.2 Protocol in the Event of Discovery

If any of the above are observed, or any other unusual or unexpected discovery occurs, the primary contractor will:

- Immediately cease all works within 15m of the discovery, make safe all personnel, and ensure all machinery is powered down;

- Notify the SQEP of the discovery; and
- Ensure all erosion, sediment, and dust controls are in place and effective, including any additional interim controls that may be recommended by the SQEP.

Following notification, and as soon as practicable, the SQEP will:

- Notify all applicable regulatory authorities as required;
- Characterise the discovery, including collection of representative samples for laboratory analysis;
- Review the existing site management plan / remediation action plan and either prepare a specific remediation action plan for the discovery or update the existing control documents as required;
- Notify the primary contractor of:
 - the outcome of characterisation and methods to minimise constructions delays while addressing the discovery ;
 - any updated controls required for mitigating actual or potential risks to human health or the environment and provide updated copies of Site Management Plan / Remediation Action Plan; and
 - any additional record keeping, reporting, or regulatory requirements triggered by the discovery.
- Undertake any additional validation sampling and reporting required post remediation of discovery.

9.3 Fibrous Material (Asbestos)

No evidence of asbestos contamination of the soil was identified during the DSI's, however, potential asbestos containing materials are present on the existing building onsite. Prior to any development works occurring, the existing building should be surveyed by a licenced asbestos assessor, and removed or managed in accordance with their recommendations. If asbestos containing materials (ACM) are encountered during earthworks at the site within the soil matrix, all works shall cease (including the excavation and disposal of affected materials) until the provisions of the Health and Safety at Work (Asbestos) Regulations 2016 are exercised. ACM identification will be primarily through visual inspection by a suitably competent person. Any fibrous material observed during the excavation will be visually inspected, photographed, and representative samples submitted to an accredited laboratory for analysis. Following the receipt of analytical results, the site manager, in conjunction with the CLA shall determine what, if any further remedial steps are required, including the provisions of asbestos removal control plans, semi-quantitative analysis, or site management under the BRANZ New Zealand Guidelines for the Assessment and Management of Asbestos in Soil (November 2017).

10.0 Reporting And Record Keeping

10.1 Primary Contractor Requirements

At the completion of soil disturbance activities, the Primary Contractor will provide the following information as a minimum to the Client and the SQEP:

- Volume and nature of any material removed from site and copies of all controlled fill/landfill disposal dockets;
- Details of any complaints received, incidences, or accidental discoveries of actual or potential contamination, including any photographic logs and records;
- Details of any material imported to site, and where necessary, certification of soil quality for imported soils; and
- Written confirmation that the controls set out in this RAP / SMP were in place and effective for the duration of remedial and / or general development works as required.

10.2 SQEP Validation / Completion Reporting

Upon completion of the remedial works, a site validation report (SVR) will be completed by the CLA as a Suitably Qualified and Experienced Practitioner. The SVR will be provided to Hawke's Bay Regional Council and Hastings City Council, including, but not limited to:

- Volume and nature of any material removed from site and all controlled fill/landfill disposal dockets;
- A log of any unknown or suspicious materials encountered during the earthworks;
- Details of any site inspections or soil sampling that occurred;
- Laboratory reports from any soil testing undertaken;
- Details of onsite encapsulation works undertaken;
- Any complaints or incidents; and
- Site photographs of all excavations and re-instatement works.

11.0 Disclaimer & Limitations

11.1 Statement

This Remediation Action Plan has been prepared in accordance with the Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011. It has been prepared and authorised by a suitably qualified and experienced practitioner (SQEP); and reported on with the current edition of the Ministry for the Environment's Contaminated Land Management Guidelines No.1 – Reporting on Contaminated Sites in New Zealand.

11.2 Certification

I, Carl O'Brien, Senior Environmental Consultant at AgFirst Consultants HB LTD certify that:

1. this Remediation Action Plan meets the requirements of the Resource Management (National Environmental Standard for assessing and managing contaminants in soil to protect human health) Regulations 2011 because it has been:
 - a. done by a suitably qualified and experienced practitioner, and
 - b. reported on in accordance with the current edition of Contaminated land management guidelines No 1 – Reporting on contaminated sites in New Zealand, and
 - c. the report is certified by a suitably qualified and experienced practitioner.

Evidence of the qualifications and experience of the suitably qualified and experienced practitioner(s) who have done this investigation and have certified this report can be provided upon request.



Carl O'Brien
21 September 2026

11.2.1 Limitations

This Remediation Action Plan is provided on the condition that AgFirst Consultants HB Ltd disclaims all liability to any person or entity other than the client, Hawke's Bay Regional Council, and Hastings District Council, in respect of anything done or omitted to be done and of the consequence of anything done or omitted to be done by any such person in reliance, whether in whole or in part, on the contents of this report. The conclusions and all information in this Report are given strictly in accordance with and subject to the following limitations and recommendations:

1. The assessment undertaken to form this conclusion is limited to the scope of work agreed between AgFirst and the client, or the client's agent as outlined in this Report. This report has been prepared for the sole benefit of the client with respect to their Substantive Application under the Fast Track Approvals Act 2024 for the proposed Middle Road Project. Neither the whole nor any part of this report may be used or relied upon for any other purpose, by any other party unless explicitly stated.
2. The investigations carried out for the purposes of the report have been undertaken, and the report has been prepared, in accordance with normal prudent practice and by reference to applicable environmental regulatory authority, and industry standards, guidelines and assessment criteria in existence at the date of this report.
3. This report should be read in full, and no excerpts are to be taken as representative of the findings. No responsibility is accepted for use of any part of this report in any other context.
4. This Report was prepared on the dates and times as referenced in the report, based on the conditions encountered on site, and information reviewed at the time of preparation. No responsibility is accepted for any changes in site conditions or in the information reviewed that have occurred after this time period.
5. Where this report indicates that information has been provided to AgFirst Consultants HB Ltd by third parties, AgFirst Consultants HB Ltd have not undertaken any independent verification of this information, unless expressly stated in the report. AgFirst Consultants HB Ltd assumes no liability for any inaccuracies in or omissions to that information.

6. Environmental studies identify actual sub - surface conditions only at those points where, and when samples are taken. Actual conditions between sampling locations may differ from those inferred and actual interfaces between materials may be far more gradual or abrupt than an assessment indicates. Actual conditions in areas not sampled may differ from that predicted.
7. Except as otherwise specifically stated in this report, AgFirst makes no warranty or representation as to the presence or otherwise of asbestos and/or asbestos containing materials ("ACM") on the site. If fill has been imported on to the site at any time, or if any buildings constructed prior to 1970 have been demolished on the site or materials from such buildings disposed of on the site, the site may contain asbestos or ACM.
8. No investigations have been undertaken into any off - site conditions, or whether any adjoining sites may have been impacted by contamination or other conditions originating from this site. The conclusion set out above is based solely on the information and findings contained in this report.
9. Except as specifically stated above, AgFirst makes no warranty, statement or representation of any kind concerning the suitability of the site for any purpose or the permissibility of any use, development or re - development of the site.
10. The investigation and remediation of contaminated sites is a field in which legislation and interpretation of legislation is changing rapidly. The opinions and interpretations set out in this report are AgFirst Consultants HB Ltd's own, and is not be taken to be that of any other party. Where approval from a statutory authority is required for a project, that approval should be directly sought by the client.
11. Use, development, or re - development of the site for any purpose may require planning and other approvals and, in some cases, environmental regulatory authority and accredited site auditor approvals. AgFirst offers no opinion as to whether the current use has any or all approvals required, is operating in accordance with any approvals, the likelihood of obtaining any approvals, or the conditions and obligations which such approvals may impose, which may include the requirement for additional environmental works.
12. AgFirst Consultants HB Ltd makes no determination or recommendation regarding a decision to provide or not to provide financing with respect to the site. The on - going use of the site and/or use of the site for any different purpose may require the owner/user to manage and/or remediate site conditions, such as contamination and other conditions, including but not limited to conditions referred to in this report.
13. Except as required by law, no third party may use or rely on, this report unless otherwise agreed by AgFirst Consultants HB Ltd. Where such agreement is provided, AgFirst Consultants HB Ltd will provide a letter of reliance to the agreed third party in the form required.
14. To the extent permitted by law, AgFirst Consultants HB Ltd expressly disclaims and excludes liability for any loss, damage, cost, or expenses suffered by any third party relating to or resulting from the use of, or reliance on, any information contained in this Report. AgFirst Consultants HB Ltd does not admit that any action, liability, or claim may exist or be available to any third party.
15. Except as specifically stated, AgFirst Consultants HB Ltd does not authorise the use of this report by any third party.

Appendix A: Summary of Former Investigations

122 & 148 Middle Road

Geosciences Ltd (GSL) undertook a pre purchase due diligence assessment of the Iona Structure Plan area in October 2020, which included the properties at 122 & 148 Middle Road. Desktop assessment identified that the properties had been utilised for mixed cropping activities amongst a long history of pastoral farming. A series of sheds were constructed on 122 Middle Road in 1988 associated with the dwelling, while a shed and dwelling was constructed in 1969 at 148 Middle Road. No other evidence of potential contamination was recorded within the site history.

Two composite soil samples were collected from the productive areas of these sites to assess soil quality. Both Comp 1 from across 148 Middle Road and Comp 2 from across Middle returned concentrations of heavy metals below the expected naturally occurring background ranges, and concentrations of OCPs below the laboratory limit of reporting. AgFirst notes that there is an error on Figure 3 of this report where the location of Comp-1 is recorded in the key to be above the expected naturally occurring background range.

92 & 108 Middle Road

The properties at 92 & 108 Middle Road have been subject to two distinct assessments, alongside the preparation of a draft remediation action plan.

November 2020

Initial assessment was undertaken in November 2020 as a pre-purchase due diligence which identified portions of the site have been utilised for horticultural & rural activities while buildings and structures present on site are of an age where lead-based paint and asbestos may be present. Stage 1 of intrusive investigation revealed:

- Trace detections of the Organochlorine Pesticide (OCP) DDT were detected in two of the four composite soil samples collected;
- 15 Discrete soil samples collected from within the house and woolshed areas revealed concentrations of lead, copper, cadmium, arsenic, and zinc at levels that present a risk to human health and / or the environment. Concentrations of lead ranged from below background to 2,580 mg/kg while arsenic ranged from below background to 44.5 mg/kg; and
- Traces of OCPs were recorded in three of the seven discrete soil samples assessed.

Subsequent to the above results being recorded and assessed, additional delineation soil sampling was completed and reported, focussed on delineation of lead impacts around the dwelling and lead and arsenic impacts around the woolshed and suspected spray race associated with that woolshed operation. A further five composite soil samples were collected while 37 additional discrete soil samples were collected comprising 30 additional unique locations and seven depth samples from the two worst results recorded. Analytical results revealed:

- Topsoil across the remainder of the horticultural areas is consistent with all five additional soil samples returning concentrations of heavy metals within the expected naturally occurring background ranges for the underlying geology alongside trace levels of DDT;
- Concentrations of arsenic and lead rapidly attenuate from surface with concentrations of arsenic attenuating to be within the expected naturally occurring background range within 750mm of surface and lead within 500mm of surface;
- Arsenic concentrations are concentrated within the race footprint and do not extend widely beyond; and
- Toxic characteristic leaching procedures (TCLP) undertaken on SS7 and SS14 revealed that TCLP results were within the Class A Landfill Acceptance thresholds and there did not require any pre-treatment should offsite disposal be required.

GSL identified that an estimated area of 2100 m² around the dwelling at 98 Middle Road was impacted by lead to approximately 300mm below ground level, comprising some 631 m³ of impacted topsoil. Similarly, an estimated area of 441 m² around the woolshed and race at 108 Middle Road was impacted by heavy metals (primarily arsenic and lead) to a depth of 750 mm below ground level, comprising 331 m³ of impacted soil.

Based on the findings of desktop and intrusive assessment, GSL recommended that the estimated 1072 m³ of impacted soil be removed offsite and disposed of at Omarunui Landfill due to its concentrations and difficulty in mixing to an acceptable threshold. In addition, localised removal of effluent fields associated with residences would be necessary in conjunction with appropriately detailed hazardous building material surveys on all buildings and structures requiring demolition. While the regulations of the NES-CS are applicable to the site, the exact activity status would depend on the staging of remedial works through time. A conservative determination of restricted discretionary status was made.

February 2022 – REP-H0181A/DSI/Feb22, GSL

A revised Detailed Site Investigation was prepared by GSL in February 2022 that built on the previous due diligence assessment completed, and included additional delineation samples collected in January 2022. A further 18 discrete sample locations were established in 2022 to assist in refining the extent of contaminated soil around the race and dwelling.

Concentrations of contaminants recorded within the additional delineation samples were consistent with those previously identified showing lead and arsenic above the NES-CS Soil Contaminant standard for Residential Landuse (10% Produce) alongside discrete elevations of zinc, cadmium and copper.

Delineation soil sampling confirmed three discrete areas of the site required remediation as follows:

- 92 Middle Road Villa Curtilage: an impacted area of 2,460 m² is impacted by lead to a depth of 300mm and comprising an estimated volume of 738 m³ of impacted soil;
- 108 Middle Road Woolshed Curtilage: an impacted area of 131 m² around the woolshed is impacted by lead to a depth of 300mm, comprising an estimated volume of 39.3 m³ of impacted soil; and
- 108 Middle Road Spray Race: an impacted area of 425m² was identified around the race and holding pens, to a depth of 750mm below ground level and comprising some 318.75 m³ of impacted soil.

GSL concluded that a restricted discretionary consent would be required to facilitate general earthworks under the NES-CS. A remediation action plan is cross referenced to facilitate this which is assessed in turn below.

February 2022 Remediation Action Plan – REP-H0181A/RAP-SMP/Feb22, GSL

A combined Remediation Action Plan and Site Management Plan (RAP-SMP) was prepared for the properties at 92 and 108 Middle Road (18.0971 ha) based on the findings of the pre-purchase due diligence and detailed site investigations completed in 2020 and 2022 respectively. The purpose of the RAP-SMP was to detail remedial procedures for areas of the site that have been identified as containing contaminants above the applicable residential landuse threshold and to document controls to manage risks during site development activities (accidental discovery, soil handling, non-clean fill soil tracking etc). GSL proposed a combination of remedial strategies for the site including:

- Excavation and in-situ mixing;
- Encapsulation and utilisation of soil that exceeds the residential landuse threshold, but not the commercial / industrial thresholds within non sensitive landuse areas (reserves, roadberms etc); and
- Utilisation of topsoil within offsite locations for rehabilitation of sports fields, reserves and other development areas that require topsoil and the assessed quality meets the applicable landuse threshold; and
- Offsite disposal to a licensed waste site as a last resort;

The RAP-SMP sets out appropriate health and safety controls including Personal Protective Equipment (PPE), soil handling, dust, erosion, and stormwater protection controls alongside contingency measures for any accidental discoveries that could occur.

Validation sampling and reporting controls are also included.

139 Te Aute Road

Pattle Delamore Partners Ltd (PDP) undertook a Ground Contamination Risk Assessment in August 2024 across 139 Te Aute Road (Ref HB010870001L001_Final). The assessment is in general accordance with CLMG No.1 and No.5 and included a desktop assessment, site walkover, and intrusive soil sampling.

Assessment identified that the site already had a residence established in 1950 with the remainder of the site under pasture cover from which it was developed into orchard between 1964 and 1980. At the time of their assessment, the site remainder under orchard cover.

As the bulk storage and use of persistent pesticides within orchards is included on the Mfe HAIL under item A.10, PDP collected 8 composite soil samples from within the orchard footprint and 9 discrete soil samples within the site. Analytical results identified:

- Three composite soil samples and four discrete soil samples returned concentrations of arsenic above the NES-CS for Residential Landuse (10% Produce);
- One soil sample returned a positive detection of asbestos debris; and
- All but two soil samples returned concentration of priority contaminants exceeding the expected naturally occurring background ranges for the underlying geology.

The primary contaminant of concern identified by PDP and requiring remediation is arsenic, with concentrations ranging from 27 to 50 mg/kg, exceeding the residential landuse threshold of 20 mg/kg. It is noted that no concentrations exceed the commercial / industrial or recreational landuse standards of 70 mg/kg and 80 mg/kg respectively. PDP estimated the impacted area to encompass 9,540 m² and represent between 3,816 and 4,770 m³ of topsoil.

While asbestos was detected adjacent to the buildings, the ACM debris recorded was below the laboratory limit of reporting and was therefore assessed as compliant with the Asbestos in Soil Guidelines (ALGA 2017) for residential use.

Lot 179 Te Aute Road

AgFirst undertook a pre-purchase due diligence assessment of Lot 179 in January 2026 in general accordance with Mfe CLMG No.1 and No.5 to assess the site history and determine whether any actual or potential contamination risks exists within the piece of land. The report identified that the land has been vacant for its discernible history, with no distinct features, buildings or structures identifiable.

To verify soil quality, one composite and one discrete soil sample were collected, from which both soil samples returned concentrations of priority contaminants within the expected naturally occurring background range. As a result this parcel is not considered contaminated, and the provisions of the NES-CS are not applicable to this parcel.

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