BURO HAPPOLD

Technical Addendum to Remediation Strategy – Tank Discovery

Project	Mayfield Pigeon Triangle
Project Number	0046688
Subject	Tank Discovery
Date	24 April 2026

Revision	Description	Author	Date	Approved
P01	For information	EM/JY	24/04/2026	AN A Nicholson

1 Introduction

1.1 Purpose and Background

This document has been prepared by Buro Happold as an addendum to the Geoenvironmental Interpretive Report and Remediation Strategy for Pigeon Triangle ('the Site') [1] to support discharge of the relevant planning conditions following discovery of underground fuel tanks at the Site during enabling works.

This addendum is intended to be read alongside, and in addition to, the remediation measures and verification requirements presented in the Geoenvironmental Interpretive Report and Remediation Strategy [1], which was prepared prior to the commencement of Site strip works and subsequent to the ground investigation completed in January 2026, during which, buried tanks were not encountered.

This document provides requirements for the safe decommissioning and removal of the tanks, with consideration of potential risks to human health and controlled waters, as well as the implications for waste classification and disposal. The approach presented is intended to support the safe and effective undertaking of works in accordance with relevant guidance, legislation and requirements for the decommissioning and removal of underground fuel storage tanks. The approach remains aligned with the overall remediation objectives for the Site.

1.2 Discovery of Buried Fuel Tanks

During intrusive works on 1st April 2026 involving the removal of the reinforced concrete slab covering Pigeon Triangle, 4 no. buried tanks were discovered by Eric Wright (the Principal Contractor) and their contractor within the eastern portion of the Site. Below is a written account provided by Des Donnelly from Eric Wright as received by email to Tim Chetwood of Landsec on 23rd April as to the actions undertaken on site:

"*The tanks were discovered on the 1/4/26 whilst EWCE and their contractor were removing a concrete apron covering Pidgeon triangle. The concrete was broken across the triangle and then removal commenced. It was during the removal process the team began to notice small metal pipes. As removal continued it became apparent the pipes originated from what we now know are 4 no underground fuel tanks. Upon discovery we notified the client PM Cameron Dudley and then James Young from Buro Happold requesting next steps. James advised to cease all works and contact the petroleum officer from GM fire brigade. I made contact with the petroleum officer on 2/4/26 who told me to place a 999 call to speed up a visit and get the atmosphere tested.*

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An officer attended site on 2/4/26, atmospheric testing was undertaken and the findings were negative i.e. the officer declared there was no imminent threat of explosion. EWCE proceeded to remove the remainder of the concrete apron previously broken then left the area.

On the 8/8 Tim Chetwood project director asked me to contact the petroleum officer to see if they could provide any further guidance re next steps. The petroleum officer Darren Heathcote attended site the same day. Darren raised concerns regarding potential explosive atmospheres requesting we introduce 24hr monitoring around the vicinity of the tanks. An exclusion zone was also established to divert members of the public. Darren also provided a first step process to render the tanks safe from ignition.

On the 10/4/26 IWJS a licenced hazardous waste carrier attended site. IWJS took samples from the 3no tanks for testing. Verbal confirmation was given that the three no test's evidenced diesel rather than petrol therefore the risk of explosion could be downgraded. The tanks were flushed down and emptied with the waste sent to a licensed disposal site.

EWCE were requested to undertake trial holes around the tanks to establish if the surrounding ground had been affected by leaking fuel. The first trial hole was excavated on 13/4/26, a further three undertaken on 21/4/26 under supervision of Buro Happold. No works have been undertaken since."

Note that as the fourth most western tank was empty; therefore, no sampling or flushing was undertaken.

In response to information for further details on the nature of the tanks, Eric Wright also provided the following by email to the project team:

- "*From East to West the first three tanks had a small amount of liquid, a combination of rain water ground water and fuel residue. The most westerly tank (The tank with the damaged roof) was empty.*
- *We estimate each tank is approximately 2000L.*
- *The officer stated this was only an interim measure and would not render the tanks safe for removal, a specialist tank removal contractor was now to be contacted. To date we have spoken to three contractors and are currently awaiting responses/quotes*."

Eric Wright provided the below plan (Figure 1) showing the tank locations and the trial pit excavated on 13/4/26 (TP07).

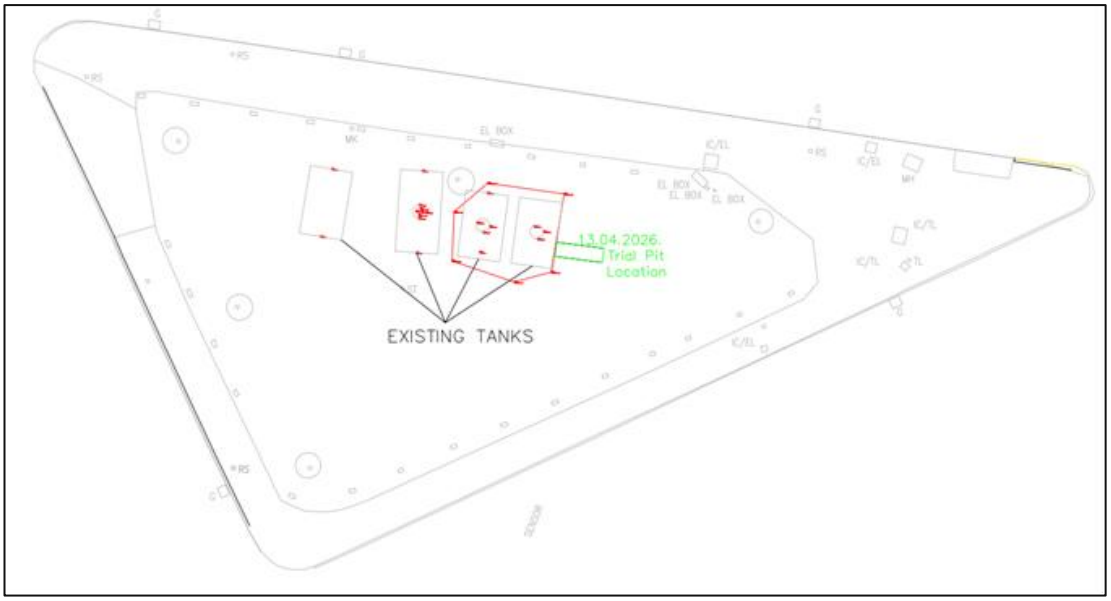


Figure 1: Tank locations (not surveyed) and trial pit location excavated on 13th April 2026 (as provided by Eric Wright, Principal Contractor)

2 Remediation Objectives

Remediation objectives additional to those provided in the approved remediation strategy [1], are provided below and relate to the buried tanks:

- To render fuel apparatus and infrastructure safe from risks of fire and explosion;
- To comply with statutory obligations (see Section 2.1);
- To comply with Petroleum Officer requirements (i.e. requirements given by an appropriately qualified and experienced specialist tank removal contractor that will be completing the work);
- To comply with the appropriately qualified and experienced specialist tank removal contractor requirements (to be determined once contractor is onboarded); and
- To remove the tanks to enable betterment and a safe development.

2.1 Statutory Obligations, Guidance and Requirements

The works to decommission and remove the tanks will be undertaken in accordance with the below legislation, guidance and requirements:

- The Dangerous Substances and Explosive Atmospheres Regulations 2002 (DSEAR);
- The Construction (Design and Management) Regulations 2015 (CDM 2015);
- Design, Construction, Modification, Maintenance and Decommissioning of Petrol Filing Stations 5th Edition November 2024 – Association for Petroleum and Explosives Administration (APEA) and Service Station Panel of the Energy Institute (EI). "Blue Book";
- The appropriately qualified and experienced specialist contractor requirements; and
- Petroleum Officer requirements.

It will be the Principal Contractors responsibility to ensure compliance with the above.

3 Supplementary Exploration

Supplementary exploration works were undertaken at the Site to investigate the condition and extent of the buried tanks. Buro Happold issued a proposed trial hole plan for the excavation of 3no. trial pits (TP08, TP09 and TP10) adjacent to the tanks to investigate the concrete slab at the base of the buried tanks and the potential for contamination beneath. Locations are shown in the trial pit plan in Appendix A.

Eric Wright excavated TP10 on 20th April 2026. TP08 and TP09 were excavated on 21st April 2026, with an engineer from Buro Happold present. A plan with the factual findings is also presented in Appendix A.

The pits were excavated up to the concrete slab, then through the slab and then below the slab up to a maximum depth of 5.2 m bgl. Observations were recorded regarding the material encountered including visual and olfactory signs of contamination.

In summary (see Appendix A for trial pit plan):

- **Eastern extent of eastern tanks** (TP07): *****No visual or olfactory evidence (NVO) of contamination below concrete slab base at 3.3m bgl (i.e. NVO below slab within natural sand to base of excavation terminating at 3.5m bgl);
- **Western extent of western tank** (TP08): No visual or olfactory evidence of contamination below concrete slab base at 3m bgl (i.e. NVO below slab within natural silty SAND to base of excavation terminating at 4.1m bgl);
- **Southern extent of western tank** (TP09): No visual or olfactory evidence of contamination below concrete slab base at 2.9m bgl (i.e. NVO below slab within natural silty SAND to base of excavation terminating at 3.7m bgl); and
- **Southern extent of eastern tanks** (TP10): Some grey/black staining and hydrocarbon odour below concrete slab base at 3.5m bgl within silty SAND to base of excavation terminating at 5.2m bgl. No free phase hydrocarbons; no sheen.

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A historical 50mm groundwater monitoring well pipe was uncovered during the enabling works to the south of the tank farm. The Buro Happold engineer dipped the well on 21st April 2026 and it was noted to be dry up to the base at 10m bgl. This historical groundwater monitoring well represents a potential preferential pathway; see Section 8.2 for mitigation measures.

Notes:

*Inferred from description by Eric Wright

Due to access restrictions and proximity to the adjacent Fairfield Street, no pit was extended to the north of the tanks or between the western tank and the three eastern tanks.

Gross contamination (not identified at the Site) is defined in this report as free phase or sheen within the soil matrix.

4 Remediation Strategy

The following text provides the written method statement for the tasks required to meet the remedial objectives set out in Section 2. In summary, the following approach will be undertaken:

- Provide shoring to the northern extent of the tanks adjacent to Fairfield Street;
- Western tank – Remove the tanks and retain the concrete base (as no visual or olfactory contamination noted associated with this tank);
- Eastern three tanks – Remove the tanks, break out and remove the concrete, and excavate up to a maximum of 0.5m below concrete slab level to remove gross contamination (if identified) i.e. up to a maximum of 4m bgl from the pavement to enable betterment; and
- Decommissioning of the 50mm groundwater monitoring well pipe to minimise potential groundwater and contaminant migration prior to tank removal.

4.1 Tank Decommissioning

Prior to removal works, the buried tanks and associated infrastructure are required to be formally decommissioned by an appropriately qualified and experienced specialist contractor in accordance with the legislation, guidance and requirements given in Section 2.1. The following outline approach and requirements will be adopted:

- CAT and Genny surveys will be undertaken by the Contractor to identify associated infrastructure (e.g. fuel lines). Any identified associated infrastructure will be decommissioned alongside the tanks;
- Tanks and lines will be fully emptied, cleaned and purged to remove residual fuel and vapours;
- Gas-free certification (where applicable) will be obtained confirming that the tanks have been cleaned and rendered safe; and
- Appropriate mitigation measures will be employed to prevent release to the environment of fuels during decommissioning as outlined in the specialist contractor RAMS.

The specialist contractor will hold all necessary waste, health and safety and petroleum-related competencies to ensure the works are carried out safely, hazards are mitigated and without causing pollution. The work will be undertaken in accordance with the specialist contractor RAMS and it is the Principal Contractors responsibility to ensure compliance.

5 Removal of Tanks

Removal of the buried tanks is to be undertaken by an appropriately qualified and experienced specialist contractor. Removal will not commence until the tanks have been confirmed as safe by the specialist decommissioning contractor with appropriate certification (where appropriate) and documentation.

The following outline approach and requirements for the tank and associated infrastructure removal will be adopted, the specialist contractor will provide detailed RAMS:

- Shoring to immediate north of tanks adjacent to Fairfield Street to stabilize ground prior to tank removal;

- Decommissioning of the 50mm groundwater monitoring well pipe to minimise potential groundwater and contaminant migration prior to tank removal;
- Tanks and associated infrastructure will be removed intact where practicable and cutting or breaking of tanks/lines will be avoided to maintain integrity and minimise the potential risk of fuel release to ground;
- The western tank is to be removed and the concrete base retained in-situ;
- The three eastern tanks are to be removed, the concrete base removed and, should visual gross contamination be identified (although not identified in the supplementary investigation), underlying soil to be removed up to a maximum of 0.5m below base of concrete slab (i.e. up to maximum of 4m bgl); and
- Appropriate mitigation measures to prevent release to the environment of fuels during removal will be in place as outlined in the specialist contractor RAMS.

Notes:

Excavations below 4m bgl are considered to be challenging due to the shoring required to the immediate north of the tanks, the proximity of adjacent infrastructure including gas mains and the limited space on site.

Groundwater is not anticipated to be encountered based on historical information as referred to in Geoenvironmental Interpretive Report and Remediation Strategy [1] and the dipping of the dry monitoring well at 10 m bgl on 21st April 2026. It is inferred that groundwater is at least 10 m bgl.

Appropriate air monitoring to be undertaken (if required by specialist contractor)

If encountered, grossly contaminated materials up to 0.5m below base of slab to be excavated and segregated to be taken off Site and disposed of appropriately (see Section 6.2).

6 Waste

6.1 Tanks and Associated Infrastructure

Tanks and associated infrastructure disposal to be undertaken by the appropriately qualified, experienced and licensed contractor under appropriate waste management legislation. Documentation of the disposal to be recorded by the Principal Contractor to include in the Verification Report.

6.2 Disposal of Soil Materials

Material exhibiting evidence of gross contamination (if found) will require segregation for further testing and appropriate disposal off-site. Stockpiled material will be sheeted and covered pending disposal to reduce run-off and potential mobilisation of contaminants.

It is the Principal Contractor's responsibility, in association with the operator and / or owner of the landfill to classify and record materials for disposal in line with current regulation and guidance. Waste classification and landfill Waste Acceptance Criteria (WAC) leachate testing will be undertaken prior to disposal to landfill to meet the requirements of the disposal facilities licence. All disposal tickets will be retained for inclusion within the final Verification Report.

7 Protection of Human Health

Potential risks to future site users have been appropriately assessed and addressed within the approved Remediation Strategy [1]. However, the tank discovery does represent additional potential risks to construction workers during construction activities involving decommissioning and removal of the buried tanks. Therefore, additional measures are considered necessary to mitigate potential risks to Site workers during these activities, as detailed in Section 7.1 below.

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7.1 Construction Workforce

The potential for risks to the construction workforce during the buried tank and infrastructure decommissioning, removal and associated works will be mitigated by the contractor adopting a combination of the measures detailed below, in addition to those measures already set out in the Remediation Strategy [1]. These measures will be reflected in the specialist contractor's RAMS, in accordance with the requirements in Section 2.1.

- Raising awareness of the potential for encountering contamination within the tanks and infrastructure amongst the construction workforce. This will include provision of a site induction and toolbox talks, with descriptions of the potential for and nature of potential contaminants and setting out the mitigation measures being implemented on Site;
- Watching brief for unexpected contamination;
- Stockpiled grossly contaminated soil arisings (if present) will be sheeted and covered to reduce run-off pending appropriate disposal;
- Providing an appropriate level of Personal Protective Equipment (PPE) and ensuring this is worn at all times. Supplementary PPE/RPE will be made available as appropriate; and
- UXO engineer on-call support to be provided during excavation.

8 Protection of Controlled Waters

8.1 Site Setting

Although the Sandstone below the Site is a Principal Aquifer, the risk to controlled waters relating to the discovery of the buried tanks is still considered low (as per the assessment in the Ground Investigation Report [1]).

This assessment of low risk to controlled waters is based on the information provided in the Desk Study report [2], the information collected during the site investigation [1] and supplementary exploration in Section 3 as follows:

- The Site is located within a historically heavily industrialised area;
- The Site is not within a Source Protection Zone;
- There are no active abstractions within the vicinity of the site (nearest record of potable abstraction is 1817m from the Site and the nearest active groundwater abstraction is 966m southwest of the Site related to a heat pump at Manchester Metropolitan University);
- The River Medlock is located 126m south of the Site. This is a Water Framework Directive Surface Water body that has an overall rating of Moderate, a chemical rating of Fail and an ecological rating of Moderate. No pollution incidents associated with hydrocarbons have been reported in the River Medlock;
- The Water Framework Directive groundwater body recorded on Site is the Manchester and East Cheshire Permo-Triassic Sandstone Aquifers which have overall, chemical and quantitative ratings of poor;
- Based on previous investigation prior to 2026 in the wider Mayfield area, groundwater is not anticipated above ~4m bgl (no groundwater was encountered during the 2009 investigation up to a termination depth of 3.8m bgl) and the groundwater monitoring well dipped on 21st April 2026 was dry at 10 m bgl. Therefore, it is not anticipated that groundwater will be encountered during the removal and that groundwater is at least 6.5m deeper than the base of the tanks;
- Visual grey/black material is localized below eastern extent of buried tanks from diesel (not petrol) and no gross contamination encountered;
- Prior to tank removal, the groundwater monitoring well will be decommissioned; and
- During tank and infrastructure removal it is proposed to remove gross contamination (if encountered) below the concrete slab on the eastern extent up to 4m bgl to provide betterment.

8.2 During Enabling and Construction

The potential for impact to the Principal Aquifer and the River Medlock by leaching from the soil and migration to groundwater with subsequent migration to the River Medlock will be mitigated by the following:

- Drainage plans to be well understood and communicated to site staff prior to commencement of enabling / earthworks;
- The 50mm groundwater monitoring well pipe will be fully grouted from base to formation level to minimise groundwater and contaminant migration prior to tank/infrastructure removal;
- Watching brief provided during tank and infrastructure removal for unexpected contamination;
- No excavations to be undertaken below the ground water table;
- Stockpiling and processing of excavated soils to be undertaken only in designated areas and be appropriately segregated;
- Grossly impacted stockpiles (if present) will be sheeted and covered to reduce run-off pending appropriate disposal; and
- Mitigation measures during tank removal will include prevention and mitigation of spills/releases as per the specialist contractor RAMS.

8.3 During Operation

8.3.1 Impermeable membrane

On completion of enabling works, tank removal and backfilling of suitable material to formation level, infiltration will be minimised within the vicinity of the former buried tanks as given below:

- Impermeable membrane (e.g., Visqueen Urban Drainage Membrane or equivalent approved) to be placed in area demarcated (see Appendix B) and at least 1m beyond extent of former tanks;
- Impermeable membrane placed between imported backfill/subsoil to reduce infiltration from surface in area of tanks to create an area of 'sealed drainage';
- A high visibility marker layer (i.e., geotextile as specified across landscaped areas e.g. Terram Hi-Vis Orange Geotextile) placed overlying the impermeable membrane;
- Suitable granular layer/perforated drainage above membranes designed to allow gravitational flow of infiltrated water to discharge to foul sewer in a manner sympathetic to the proposed landscaping and drainage strategy; and
- Drainage layer overlain by suitable subsoil and topsoil (i.e. a 'clean' cover system) in line with the approved remediation strategy [1] and horticultural requirements.

The above strategy will provide clear identification of the marker layer while minimising infiltration into underlying soils in the vicinity of the removed tanks.

9 Validation

Upon removal of the buried tanks and subsequent excavations, visual validation of the sides and base of the excavation/concrete slab will be undertaken to confirm the successful removal of grossly impacted material (where present) up to 0.5m below slab and up to a maximum of 4m bgl. Associated photographs and site logs will be recorded.

Prior to placement of the hi-visibility layer, the contractor will be required to provide photographs of the impermeable membrane laid across the former tank farm area.

Upon completion of the landscaping works, topsoil and subsoil validation will be undertaken in accordance with the approved remediation strategy [1]. Visual validation to confirm the installation of the hi-visibility marker layer will be undertaken. This will include the excavation of hand dug trial pits to confirm its presence with photographs and depths to the marker layer (from formation level) taken to evidence this.

Details including levels and the presence of both impermeable and permeable marker layers will be documented within validation report and submitted to planning authority.

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10 References

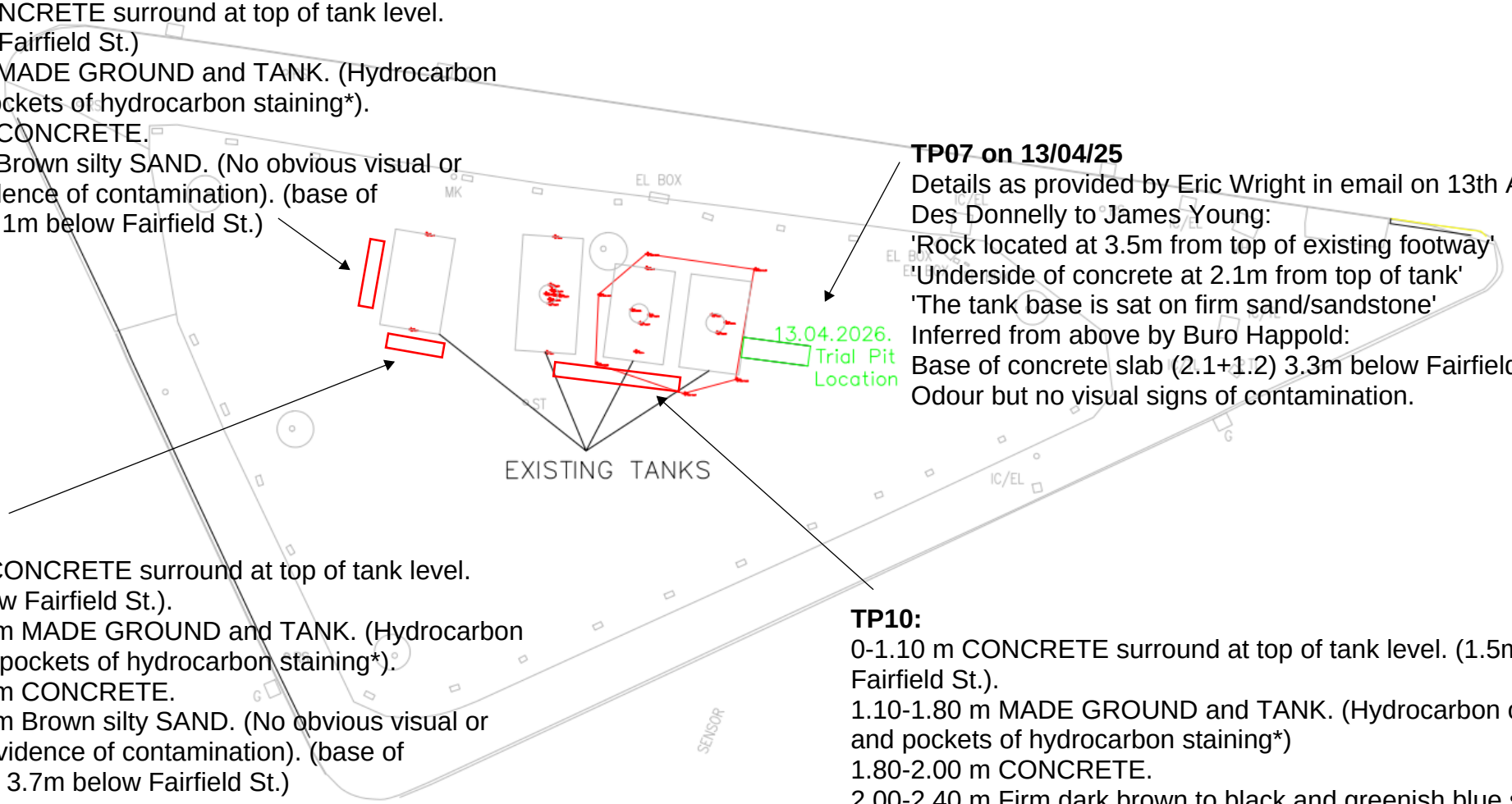
[1] Buro Happold, "Pigeon Triangle. Geoenvironemntal Interpretive Report and Remediation Strategy. 0046688-BHE-XX-XX-RP-YG-0002. Revision P01," February 2026.

[2] Buro Happold , "Mayfield Pigeon Triangle. Geoenvironmental Desk Study Report. 0046688-BHE-XX-XX-RP-YG-0001," 2025.

Appendix A Trial Pit Plan and Observations from Supplementary Exploration

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TP08:
0-0.30 m CONCRETE surround at top of tank level.
(1.5m below Fairfield St.)
0.30-1.30 m MADE GROUND and TANK. (Hydrocarbon odour and pockets of hydrocarbon staining*).
1.30-1.50 m CONCRETE.
1.50-2.60 m Brown silty SAND. (No obvious visual or olfactory evidence of contamination). (base of excavation 4.1m below Fairfield St.)



TP07 on 13/04/25
Details as provided by Eric Wright in email on 13th April from Des Donnelly to James Young:
'Rock located at 3.5m from top of existing footway'
'Underside of concrete at 2.1m from top of tank'
'The tank base is sat on firm sand/sandstone'
Inferred from above by Buro Happold:
Base of concrete slab (2.1+1.2) 3.3m below Fairfield Street.
Odour but no visual signs of contamination.

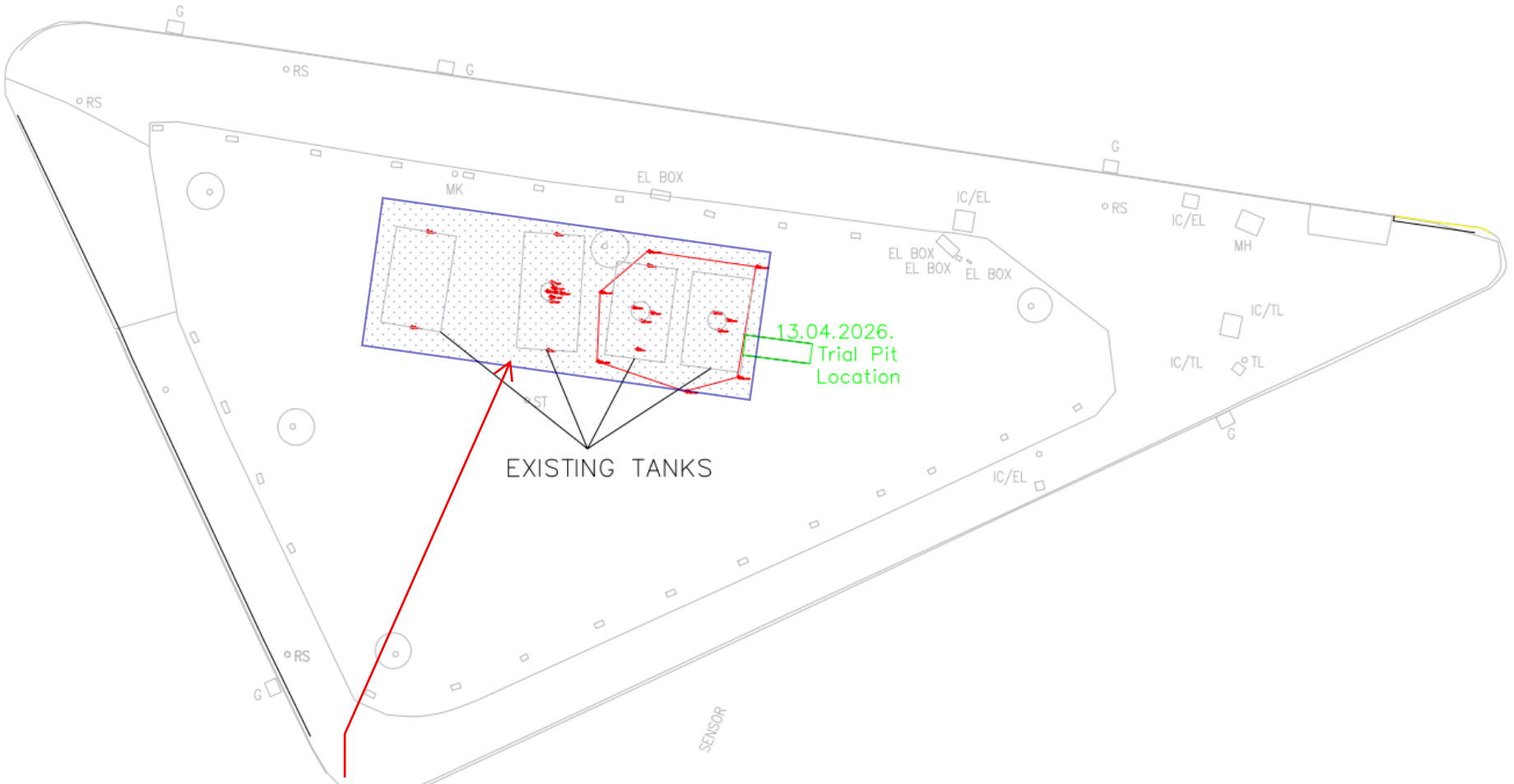
TP09:
0-0.30 m CONCRETE surround at top of tank level.
(1.5m below Fairfield St.).
0.30-0.95 m MADE GROUND and TANK. (Hydrocarbon odour and pockets of hydrocarbon staining*).
0.95-1.40 m CONCRETE.
1.40-2.20 m Brown silty SAND. (No obvious visual or olfactory evidence of contamination). (base of excavation 3.7m below Fairfield St.)

TP10:
0-1.10 m CONCRETE surround at top of tank level. (1.5m below Fairfield St.).
1.10-1.80 m MADE GROUND and TANK. (Hydrocarbon odour and pockets of hydrocarbon staining*)
1.80-2.00 m CONCRETE.
2.00-2.40 m Firm dark brown to black and greenish blue silty CLAY. (Hydrocarbon odour and grey/black staining. No free phase hydrocarbons, no sheen).
2.40-3.7 m Dark brown and grey to black silty SAND. (Hydrocarbon odour and grey/black staining. No free phase hydrocarbons, no sheen). (base of excavation 5.2m below Fairfield St.)

Notes:
Depths noted are from top of concrete surrounding top of each tank (not top of tank cylinder). Depths in brackets are from Fairfield Street levels.
Legacy groundwater monitoring well dipped was dry at 10m bgl
*Similar material noted, sampled and assessed as part of the main site investigation
Locations/tanks not surveyed

Sketch Title: Trial Pit Plan and Observations from Supplementary Exploration on 21st April 2026
Issue Date: April 2026
Buro Happold

Appendix B Proposed Impermeable Membrane



1. Tanks and associated infrastructure to be removed
2. Suitable imported backfill up to formation level
3. Impermeable membrane (e.g., Visqueen Urban Drainage Membrane or equivalent approved) to be placed in area demarcated by blue dots and at least 1m beyond extent of former tanks
4. Impermeable membrane placed between imported backfill/subsoil to reduce infiltration from surface in area of tanks to create an area of 'sealed drainage'
5. A high visibility marker layer (i.e., geotextile as specified across landscaped areas e.g. Terram Hi-Vis Orange Geotextile) placed overlying the impermeable membrane.
6. Suitable granular layer/perforated drainage above membranes designed to allow gravitational flow of infiltrated water to discharge to foul sewer

Note: Locations/tanks/area not surveyed

Sketch Title: Proposed Impermeable Membrane
Issue Date: April 2026
Buro Happold

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