OHES ENVIRONMENTAL

Woodgate & Clark

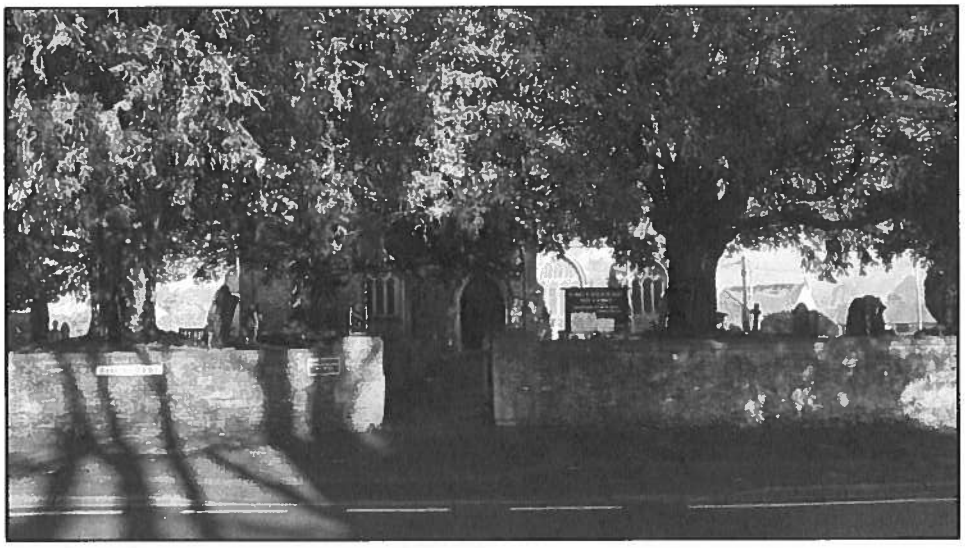
ENVIRONMENTAL CLAIM INVESTIGATION

INITIAL REPORT

OHES Ref:	FJ_395931
Adjuster:	Woodgate & Clark
Adjuster Ref:	12440
Insurer:	Ecclesiastical
Insurer Ref:	16651541
Insured:	The Vicar and Churchwardens FTTB and The PCC of West Harptree St Mary in the Diocese of Bath & Wells
Site:	St Mary's Church, West Harptree, Bristol, BS40 6HF
Report Author:	William Dorey Environmental Consultant
Report Approver:	Alison Haynes Regional Manager
Issue Date:	25th February 2025

This report has been prepared for Woodgate & Clarke, in accordance with their instruction dated 31st January 2025. The report is intended to provide information relevant to an insurance claim related to the above property and is not intended for any other purpose. OHES Environmental Ltd (OHES) cannot accept any responsibility for any use of, or reliance on the contents of this report by any third party.

1. INTRODUCTION



Photograph 1 – Entrance to St Marys Church on The St A 368 (31/01/2025)

1.1 Instruction

On 31st January 2025, OHES Environmental Ltd (OHES) were instructed by Woodgate & Clark to investigate potential impact to soils and controlled waters following a loss of kerosene from the oil storage tank (OST) at St Mary's Church in West Harptree (**Photograph 1**).

1.2 Incident Summary

It has been reported on 15th January 2025, an oil leak at the church was noticed and reported by a neighbour. A church volunteer visited site, the same day to check the OST at the site (**Photograph 2 and 3**), identified the leak and secured the loss. The church volunteer then notified the Environment Agency (EA) of the incident and made arrangements for Chew Valley Tanks to visit site and repair the leak.

The EA notified Wessex Water of the loss of kerosene, which prompted Wessex Water to undertake a site visit the same day and take groundwater samples from nearby boreholes. OHES have not been advised where the boreholes are located. Reportedly no evidence of hydrocarbon contamination was identified.

Chew Valley Tanks undertook the repair works on 16th January 2025 and identified the O ring within the filter bowl on the OST was loose (**Photograph 4**). It is suspected this may have been a result of water condensation freezing in periods of cold weather, resulting in loosening the O ring, and then thawing allowing oil to escape. Church volunteers have estimated that 350 L may have been lost to ground based on the current oil volume within the tank to the volume in August 2024, when it was last inspected. It is understood heating had not been used within the church during this period.

Since the loss was discovered the residents of Tilly Manor, a neighbouring property to the west, had reported hydrocarbon odours within their property to the local council. An officer from the council's Environmental Services team, undertook a site visit on 24th January to investigate the loss of oil and the potential impact on the neighbouring properties. During a visit to Tilly

Manor, the officer noted a slight white spirit / oily odour within the dining room. The residents believe that the odour may be originating from old drain covers located both within the dining room and the basement. However, it should be noted that the residents have stated the oil odours have got progressively improved since the initial report of vapours.

The officer also undertook a site walkover of the church grounds and noted a hydrocarbon odour originating from the drainage ditch, located along the eastern boundary of site. Furthermore, a hydrocarbon odour and sheen was observed on the water exiting the culvert, approximately 110m north of the church along Bristol Road. Sheens were also noticed on the water after the stream passed under Bristol Road (135m north of church) in an easterly direction to Tilly Meadows.

Bristol Water were also notified of the incident and took tap water samples from Tilly Manor and Vicarage on 24th January and reportedly found no evidence of hydrocarbon contamination.

1.3 Initial OHES Response

On 31st January 2025, OHES visited site to undertake a site walkover and initial investigation. Soil samples were obtained around the parameter of the OST to ascertain the presence and extent of kerosene contamination.

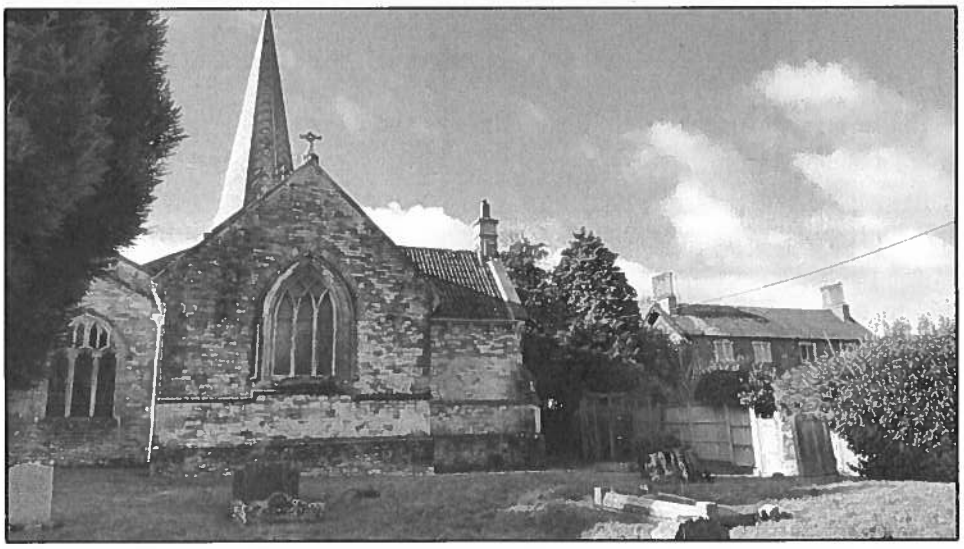
1.4 Regulatory Involvement

The EA were notified of the incident and with exception from notifying Wessex Waters, OHES is unaware of any other EA involvement to date. OHES have not been provided with their references.

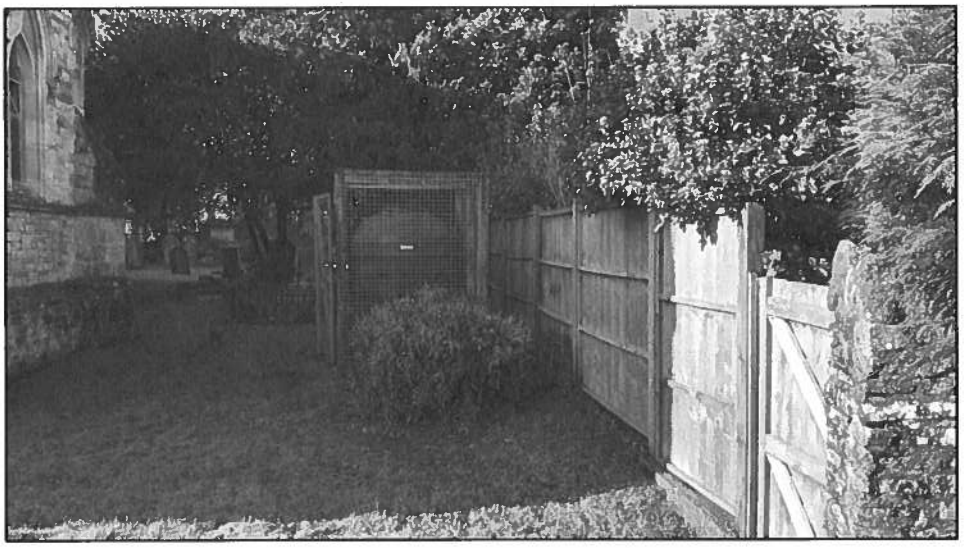
1.5 Compliance

This investigation and assessment has been carried out in general accordance with LCRM (Land Contamination: Risk Management) and BS 10175:2011+A2:2017 (Investigation of potentially contaminated sites – Code of practice).

1.6 Photographs



Photograph 2 – The churchyard and OST on the northern boundary (31/01/2025)



Photograph 3 – The OST (31/01/2025)

Photograph 4 – The Oil Feedline and Filter Bowl (31/01/2025)

2. SITE DETAILS

2.1 Property Description and Setting	
Property description:	The site, located within the centre of West Harptree consists of a church with surrounding churchyard. The churchyard is raised ground compared to the surrounding area and retaining walls mark the boundary on all sides of site. A wooden fence approximately 2 m high is located along the northern boundary of site. A drainage ditch, approximately 1 m deep is located on the eastern boundary (**Photograph 5**).
Surrounding land use:	Site lies within the centre of West Harptree a small village in Somerset. The surrounding land use consists mostly of residential properties, a local convenience store and a pub.
2.2 Environmental Sensitivity	
Nearest surface waters:	The nearest surface water features include an unnamed stream ~150 m north of site and an unnamed stream 250 m southwest of site.
Superficial geology:	According to the British Geological Survey (BGS), head deposits lie within 25 m north of site, consisting of poorly sorted and poorly stratified angular rock debris and/ or clayey hillwash and soil creep.
Bedrock geology:	According to the BGS, site is underlain by the Mercia Mustone Group and straddles a boundary between the marginal facies, consisting of conglomerate and/or breccia with clasts deriving from deeper limestone formations, and the main facies consisting of red and grey mudstones and subordinate siltstones.
Groundwater vulnerability:	According to the Environment Agency (EA), the underlying Mercia Mudstone is classified as a Secondary B Aquifer and is deemed to have a medium vulnerability due to soluble rock risk. BGS borehole records from approximately 1 km west of site indicates that groundwater strike may be between 12 – 22 m below ground level (bgl). Zone 1 of a Source Protection Zone (SPZ) and a Drinking Water Protection Zone for groundwater lies approximately 1km south of site.

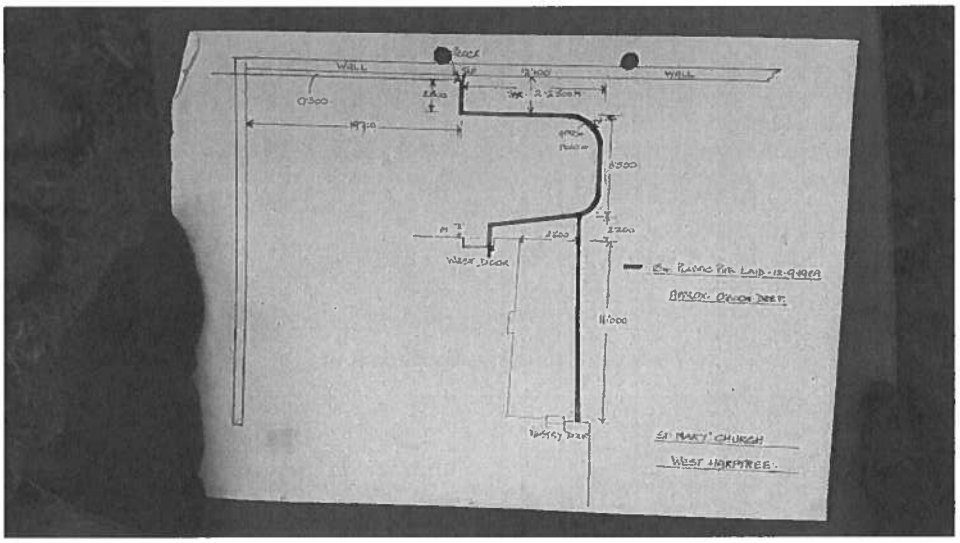
Sensitive land uses:	Site is located within the Mendip Hills Area of Outstanding Natural Beauty (AONB). Chew Valley Lake, a designated Special Protection Area (SPA) and Site of Special Scientific Interest (SSSI) is located within 1.5 km northeast of site. Harptree Combe SSSI is also located within 1 km south of site.
2.3 Location of Services	
Electricity:	Electricity supply and cable routes were not established during the initial survey.
Water supplies:	The church water supply plans show that the water enters the site via A38 and travels north along the western boundary of site before trending east along the northern boundary. The water supply then bends towards the building and splits, one pipe heading east towards the vestry door to feed the boiler, the other heading south to the west door (**Photograph 6**).
Surface / foul drainage:	Surface and foul drainage routes were not inspected during the site investigation.
Land drainage:	A drainage ditch is located along the eastern boundary to site and appears to drain in a northern direction.
Telecoms:	Telecoms was not inspected as part of the investigation
2.4 Heating Oil Tank and System	
Location, type, capacity and condition:	The OST tank, located within the churchyard on the northern boundary of site, is a plastic, double skinned 2,500L tank that sits on a raised concrete base and has a wire mess enclosure covering the front end of the tank.
Sight gauge and fittings:	At the time of the inspection the filter bowl had been fixed, and all fittings were deemed to be in good working condition.
Fuel transfer line:	The fuel transfer line, which is buried and not visible beyond the OST, is estimated to trend directly south towards the boiler.
Heating appliance:	The boiler is located within the vestry (**Photograph 7**).
Compliance with regulations:	The current site set up is considered compliant with current OFTEC regulations.

2.5 Evidence of Contamination

Previous reports of both vapours within Tilly Manor, the neighbouring residential property, and minor sheens observed on nearby surface waters indicate contamination to the surrounding area has occurred. However, no visual (**Photograph 8**) or olfactory evidence of contamination was identified on site during the site investigation by OHES on 31st January 2025.

2.6 Photographs

Photograph 5 – Drainage ditch located on the eastern boundary of site (31/01/2025)



Photograph 6 – Water supply plans (31/01/2025)

Photograph 7 – The boiler (31/01/2025)

Photograph 8 – Bush directly downslope of the loss (31/01/2025)

3.0 PRELIMINARY RISK ASSESSMENT

3.1 Preliminary Risk Assessment Table

Based on the dataset obtained during the desk study and site inspection, the following preliminary risk assessment has been carried out. This identifies the relevant sources, pathways and receptors (potential contaminant linkages) and assigns a qualitative risk classification to the identified potential contaminant linkages.

Preliminary Conceptual Site Model and Qualitative Risk Assessment					
Source	**Pathway**	**Receptor**	**CL**	**Risk**	**Comments**
Kerosene loss from filter bowl seal.	Direct soil/dust ingestion and dermal contact (outdoors)	Human Health	✓	Moderate / Low	Although the severity is deemed high, the likelihood is unlikely given the churchyard is considered closed, with limited interaction from site users. Therefore, the risk is moderate/low.
	Consumption of home grown produce and attached soil		X	No Risk	Given the nature of the site, no home-grown produce is present.
	Vapour inhalation (indoors)		✓	Very High	No odours have been noted or vapours detected within the church to date. However, hydrocarbon odours have been noted within the neighbouring property Tilly Manor.
	Vapour inhalation (outdoors)		✓	Low	Any vapours present in outdoor airways will quickly dissipate and therefore the risk is deemed low.
	Ingestion of impacted drinking water		✓	High	The water supply route to the boiler is within close proximity to the OST and therefore the risk is deemed high.
	Lateral migration of free phase / mobile contaminants through ground / services	Ecology (flora and fauna)	✓	High	The OST is within close proximity to bushes and therefore risk to flora is deemed high.
		Surface water	✓	High	The nearest surface water feature is approximately 150 m from site. However, a sheen has been reportedly observed

					exiting a culvert 110 m north of site.
		Building Structure	✓	High	The loss occurred within 5 metres of the building structure and therefore the risk is deemed high.
		Third Party	✓	Very High	Oil odours have been noted within Tilly Manor, the neighbouring residential dwelling located west of site.
	Vertical migration of free phase / mobile contaminants	Groundwater	✓	High	Given the volume lost is estimated to be 350L, vertical migration of kerosene has the potential to impact groundwater.
	Lateral migration of dissolved phase contaminants	Groundwater (Secondary B aquifer)	✓	High	According to the EA, the underlying aquifer is Secondary B and are deemed to have medium vulnerability. Therefore, the risk is considered high.
		Third Party abstraction	✓	Moderate	Wessex Water reportedly took groundwater samples and found no evidence of hydrocarbon contamination. However, the risk cannot be discounted at this stage and further assessment is required.
		Surface water	✓	High	The nearest surface water feature is approximately 150 m from site. However, a sheen has been reported exiting a culvert 110 m north of site.

CL = Potential Contaminant Linkage

Note: The above risk assessment is based on use of the site and surroundings as domestic properties. It does not take into account any future changes in land use which may arise.

The potential contaminant linkages are identified and assessed in general accordance with guidance in CIRIA Report C552 (Rudland et al 2001), but with the addition of a 'no linkage' category, as shown in the Risk Classification Matrix below. Full descriptions of each risk classification are included in **Appendix 5**.

		Consequence			
		Severe	**Medium**	**Mild**	**Minor**
Probability	**High Likelihood**	Very High	High	Moderate	Moderate / Low
	Likely	High	Moderate	Moderate / Low	Low
	Low Likelihood	Moderate	Moderate / Low	Low	Very Low
	Unlikely	Moderate / Low	Low	Very Low	Very Low
	No Linkage	No risk			

The identified potential contaminant linkages require further quantitative risk assessment to determine whether a potential unacceptable risk exists. An intrusive site investigation has been carried out to enable further assessment of identified potential contaminant linkages and confirm whether any unacceptable risks remain. The results and assessment are presented in Section 4 – Initial Investigation and Generic Quantitative Risk Assessment (GQRA).

3.2 Investigation Objectives

The objectives of the investigation were as follows:

1. Investigate the presence, and if possible, the extent of any contamination arising from the leak of fuel from the OST.
2. Assess risks associated with any identified contamination.
3. Confirm if any remediation work was required to address any unacceptable risks.

4. INITIAL INVESTIGATION AND GQRA

4.1 Overview of completed works

A summary of the completed works is presented in the table below for reference.

Date	Works Completed
31/01/2025	OHES completed an initial site walkover and initial investigation

Please note that full desk study information, field data and laboratory certificates are available on request.

4.2 Ground Conditions

Directly beneath the tank fittings within the enclosure door, the ground at surface level consisted of gravel underlain by a sheet of damp proof membrane (DPM) approximately 1 m^2. Soil conditions on site consisted of a very loose dark reddish brown, slightly silty clayey sand. Soils become noticeably wetter at approximately 1.0 m bgl indicating perched groundwater may be present.

4.3 Soil Sampling

PID Screening

A total of 29No. soil samples were obtained from 8No. (designated **S1 – S8** on **Diagram 1**) locations using a handheld auger. An appropriately calibrated Photo-ionisation detector (PID), detection limit 0.1 parts per million was used to field screen these samples for the presence of volatile organic compounds (VOCs).

Sampling Strategy

Based on the results of PID screening, 9No. soil samples were sent to an independent laboratory (Element Materials Technology Ltd) for UKAS accredited analysis of hydrocarbons. Selected soil samples from non-impacted horizons were also forwarded for Soil Organic Matter (SOM) analysis to enable assessment against Generic Assessment Criteria (GACs).

Justification for the chemical analysis carried out is as follows:

Sample ID	Depth (m)	PID (ppm)	Reasoning
S1	0.1	8.5	Ascertain whether the kerosene penetrated through the DPM and impacted the underlying soils.
S2	0.3	342.6	Investigate ground conditions directly downslope from the loss of kerosene.
	1.0	483.6	
S3	0.4	1.2	Investigate ground conditions to ascertain whether kerosene migrated laterally and / or vertically
S4	0.2	0.4	
S5	0.6	0.0	Investigate ground conditions upslope of the loss on the western side of the tank.
S6	0.8	0.0	Investigate ground conditions on the northern side of the tank to ascertain the presence and risk of contamination migrating north off site.

S7	0.2	0.0	Investigate the ground conditions between the point of loss and the bush.
S8	0.0	308.6	Investigate surface conditions directly beneath the tank.

Chemical Analysis Results

The following table presents a summary of the soil laboratory analysis results and a comparison of the concentrations of the contaminants of concern in soils against the OHES GAC for assessing risks to health from soil contamination. The derivation of the GAC is described in OHES Technical Guidance Note 6 which can be provided upon request.

Determinand	S1 0.1 m	S2 0.3 m	S2 1.0 m	S3 0.4 m	GAC 2.5% SOM
VOC (ppm)	*8.5*	*342.6*	*483.6*	*1.2*	-
EPH $>C_8$-C_{10}	19	**1,326**	**702**	24	65
EPH $>C_{10}$-C_{12}	<10	**1,838**	**967**	28	330
EPH $>C_{12}$-C_{16}	<10	1,282	678	22	2,300
EPH $>C_{16}$-C_{21}	84	51	18	42	1,900
EPH $>C_{21}$-C_{35}	152	18	<10	192	1,900
EPH $>C_{35}$-C_{40}	<10	<10	<10	19	-
EPH (C_8-C_{40})	255	4,515	2,365	327	-
Interpretation	Trace of possible kerosene & naturally occurring compounds	Kerosene	Kerosene	PAHs & trace of kerosene	

Determinand	S4 0.2 m	S5 0.6 m	S6 0.8 m	S7 0.2 m	S8 0.0 m	GAC 2.5% SOM
VOC (ppm)	*0.4*	*0.0*	*0.0*	*0.0*	*305.6*	
EPH $>C_8$-C_{10}	<5	<5	<5	<5	**2,605**	65
EPH $>C_{10}$-C_{12}	<10	<10	<10	<10	**6,246**	330
EPH $>C_{12}$-C_{16}	<10	<10	<10	<10	**5,005**	2,300
EPH $>C_{16}$-C_{21}	<10	<10	<10	<10	203	1,900
EPH $>C_{21}$-C_{35}	90	<10	<10	<10	245	1,900
EPH $>C_{35}$-C_{40}	17	<10	<10	<10	17	-
EPH (C_8-C_{40})	107	<30	<30	<30	14,321	-
Interpretation	PAHs	NIP	NIP	NIP	Kerosene	

Notes:

Concentrations presented in mg/kg.

GAC – LQM / CIEH (2015) based on residential without plant uptake land use scenario and 2.5% SOM.

Exceedances of the GAC highlighted in **bold**

NIP – No interpretation possible.

Analysis Discussion and GQRA

Analysis of samples **S2** (0.3m), **S2** (1.0m) and **S8** (0.0m) have identified elevated petroleum hydrocarbon concentrations within the carbon range of C_8 – C_{16}. The carbon distribution has

been associated as deriving from kerosene and exceed the GAC when compared to a residential without plant uptake land use scenario, based on a conservative approach.

Analysis of samples **S1** and **S3** have identified minor concentrations of petroleum hydrocarbon, interpreted as naturally occurring compounds and a trace of possible kerosene, and polycyclic aromatic hydrocarbons (PAHs) & trace of kerosene respectively.

Petroleum hydrocarbons identified within sample **S4** have been interpreted as deriving from PAHs, indicating the detectable levels of hydrocarbons are not associated with the loss of kerosene.

No petroleum hydrocarbons were identified above the laboratory's limit of detection (LOD) In samples **S5**, **S6** or **S7.**

Given the identified exceedance of the GAC for the assessment of risks posed to human health from contaminants in soils, a risk to human health is considered to exist. However, as the graveyard is closed and the main area of impact fenced off from general access, the likelihood of exposure and the likelihood impact occurring is considered to be very low.

There are no GACs against which to assess the risk to controlled waters as a result of soil conditions, however, elevated concentrations of hydrocarbons present in the shallow soils on-site are recognised to pose a potential risk to the underlying aquifer. Given the lower sensitivity of the aquifer and suspected significant depth to groundwater level, the likelihood of impact occurring is considered to be low albeit the potential severity still high.

4.5 Summary of Findings and Extent of Contaminant Impact

Following the review of field screening and laboratory analytical data, gross kerosene contamination has been identified within surface level soils directly beneath the OST. Gross kerosene contaminated soils have also been identified, within a localised area outside of the OST enclosure door, down to the depth of 1.0m bgl.

It is likely that when kerosene was lost to ground it was intercepted by the DPM and due to the gradient, diverted the product to the two separate areas.

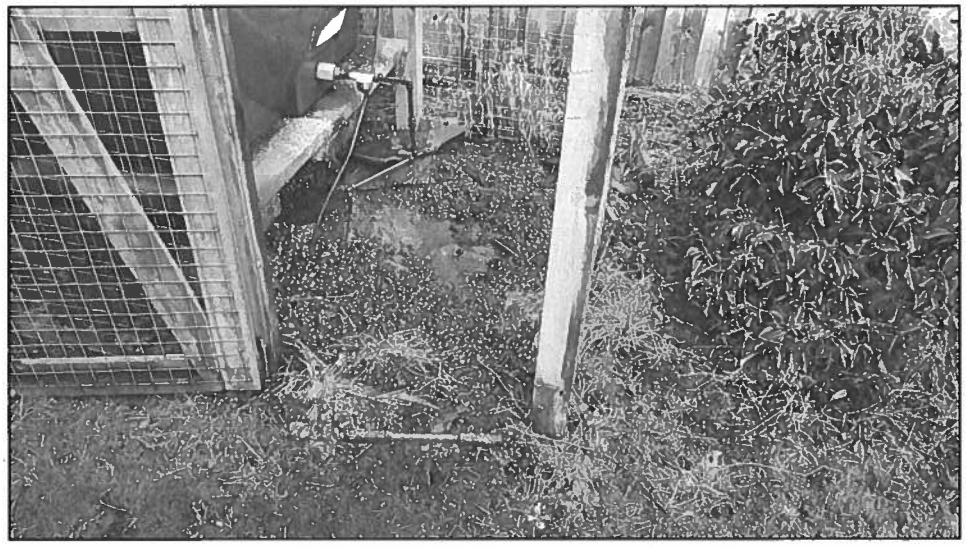
4.6 Survey Limitations

The survey was limited to 1.0 m bgl around the parameter of the tank, due to the length of a hand auger and surface level directly beneath the tank.

Sub-surface ground conditions are by their nature hidden from view and on this basis may differ to the understanding obtained through completion of the above investigation. Should unexpected conditions be encountered that have an effect on the proposed remediation works then an update and revised approach will be provided for approval.

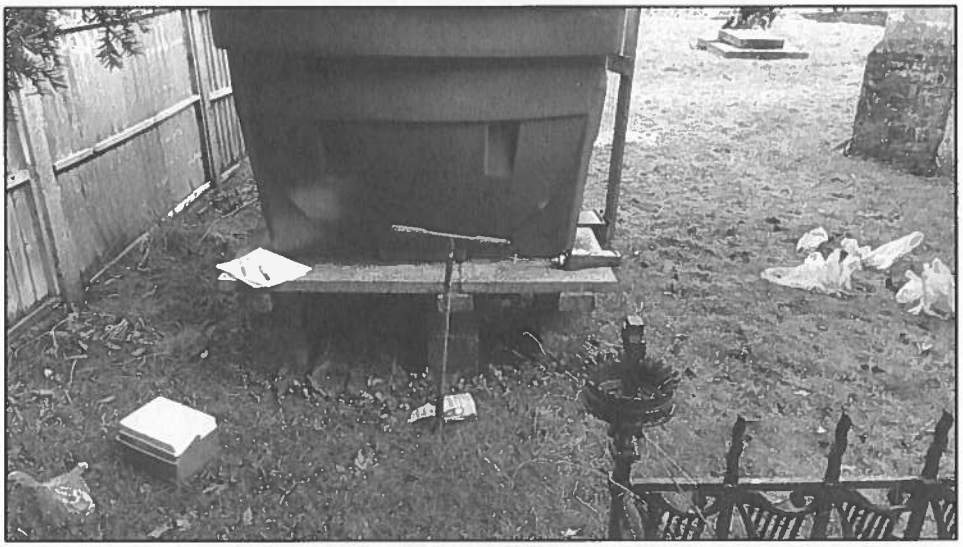
4.7 Photographs

Photograph 8 – Soil sample S1 (31/01/2025)



Photograph 9 – Soil sample S2 (31/01/2025)

Photograph 10 – Soil sample S3 (31/01/2025)



Photograph 11 – Soil sample S5 (31/01/2025)

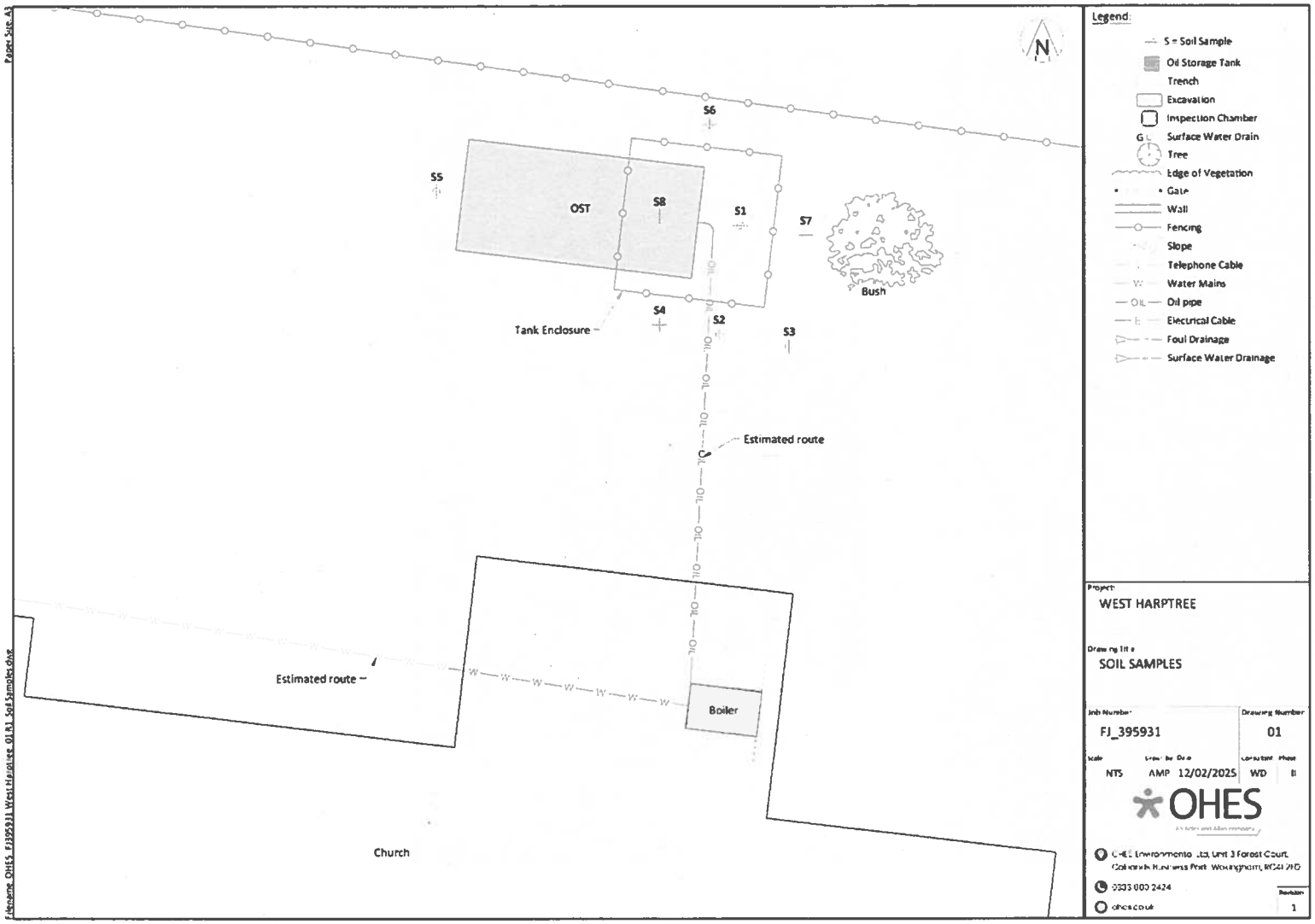


Diagram 1 – Site Layout with Sampling Locations

5.0 UPDATED RISK ASSESSMENT

5.1 Updated Risk Assessment

The Preliminary Risk Assessment has been updated based on the dataset obtained during the investigation, as follows.

Updated Conceptual Site Model and Qualitative Risk Assessment

Source	Pathway	Receptor	CL	Risk	Comments
Kerosene loss from filter bowl seal.	Direct soil/dust ingestion and dermal contact (outdoors)	Human Health	✓	Moderate / Low	Although the severity is deemed high, the likelihood is unlikely given the churchyard is considered closed. Therefore, the risk is moderate / low.
	Consumption of home grown produce and attached soil		X	No Risk	Given the nature of the site, no home-grown produce is present.
	Vapour inhalation (indoors)		✓	Moderate / Low	No pathway for kerosene to impact internal air quality within the church has been identified. Previous oil odours have been reported at Tilly Manor. However, the odours have reportedly subsided and have not been investigated further by OHES.
	Vapour inhalation (outdoors)		✓	Low	Any vapours present in outdoor airways will quickly dissipate and therefore the risk is deemed low.
	Ingestion of impacted drinking water		✓	Moderate / Low	Soil sample analysis indicate that the kerosene has not migrated within shallow soils towards the water main, located within 10 m of the loss. The water main is also due to be replaced and therefore the risk has been lowered.
	Lateral migration of free phase / mobile contaminants	Ecology (flora and fauna)	✓	Moderate	No dieback was observed on site. However, soil analysis indicates a

	through ground / services				risk to surface level flora (grass).
		Surface water	✓	Moderate	The nearest surface water feature is approximately 150 m from site. However, a sheen has previously been reported exiting a culvert 110 m north of site. No further impact to the stream has been reported to OHES since the initial visit.
		Building Structure	✓	Low	Soil sample analysis did not find evidence of kerosene migrating towards the building structure, located within 5m of the loss. Therefore, the risk has been lowered.
		Third Party	✓	Moderate / Low	There has been no further report of vapours from neighbouring properties and as such there is not recognised to be a significant risk to third party.
	Vertical migration of free phase / mobile contaminants	Groundwater	✓	High	Groundwater is classified as a Secondary B Aquifer. Soil analysis at sample location S2, indicates kerosene concentrations reduce with depth. However, evidence of kerosene impact has still been recorded at a depth of 1.0m bgl. Therefore, a risk remains but given the degree of impact recorded and the reported depth of groundwater the risk is considered to High.
	Lateral migration of dissolved phase contaminants	Groundwater (Secondary B)	✓	Moderate	According to the EA, the underlying aquifer is classified as secondary B and are deemed to have

					medium vulnerability. Whilst there is considered to be a risk of lateral migration of contamination through groundwater, given the significant depth at which groundwater is anticipated to exist and the limited evidence of vertical migration of contamination on-site, the risk has been reduced to Moderate.
		Third Party abstraction	✓	Moderate	Wessex Water reportedly took groundwater samples and found no evidence of hydrocarbon contamination. However, the risk cannot be discounted at this stage.
		Surface water	✓	Moderate	The nearest surface water feature is approximately 150 m from site. However, a sheen has previously been reported exiting a culvert 110 m north of site. Therefore, the risk remains high until potential pathways have been investigated.

CL = Potential Contaminant Linkage

Note: The above risk assessment is based on use of the site and surroundings as domestic properties. It does not take into account any future changes in land use which may arise.

5.2 Risk Assessment Summary

The work to date has identified the following relevant contaminant linkages, which are considered to require further assessment and/or remediation:

1. The risk to groundwater via vertical migration of contaminants
2. The risk to groundwater via lateral migration of dissolved phase hydrocarbons.
3. The risk to surface waters via the migration of contaminants through ground or into open drains and gullies.
4. The risk to flora via kerosene contaminated soils.

It should be noted that the risks to groundwater are recognised as Moderate to High due to the current unknown conditions of deeper soils at depth of >1.0m bgl. Following further investigation into deeper soils, this risk may be significantly reduced.

6.0 REMEDIATION OPTIONS APPRAISAL & RECOMMENDATIONS

6.1 Policy Cover And Recovery Prospects

Works to date have been undertaken under the insureds buildings policy. OHES has not identified any potential recovery prospects.

6.2 Remediation Options Appraisal

Remediation options have been assessed using the following criteria:

- Technical Suitability
- Disruption
- Time
- Cost
- Sustainability

Based on the identified risks and specific site conditions, the following remedial options have been considered:

- Excavation
- Monitored Natural Attenuation
- Chemical treatment
- Bioremediation
- Excavation and chemical treatment
- Soil vapour extraction (SVE)

The results of the environmental risk assessment carried out have identified risks that require further investigation / assessment. An options appraisal has been completed, and it is recommended that a further investigation is undertaken consisting of windowless sampling. This is outlined below in Section 6.3.

6.3 Remediation Recommendations

Laboratory analysis results for soil samples obtained to date indicate elevated concentrations of hydrocarbons exist within the soils immediately surrounding the OST that have potential to migrate vertically and impact the underlying groundwater. In order to investigate this risk, assessment of the deeper soil conditions is recommended. Based on the above assessment carried out the following scope of works is proposed:

<u>Enabling works</u>

1. The OST, tank base and tank enclosure is to be moved to another area of the churchyard to allow further soils investigation of the underlying ground conditions.
2. The tank will not be reconnected to the boiler at this stage of the works, as the church have confirmed that heating is not required at present.

Further investigation

3. OHES will mobilise to site for 1 day with drilling contractors to undertake windowless sampling of the impacted area.
4. Track matting will be placed in the churchyard to limit any superficial damage to the churchyard.
5. Several boreholes will be drilled and installed to 3 – 5 m bgl to investigate the presence of contamination at depths greater than 1 m bgl. This will help evaluate the risk to the groundwater and the installed pipework could be utilised at a later date for remediation if necessary.

Surface Water Investigation

6. During the site visit, OHES will also investigate risk to surface waters by undertaking a visual inspection and obtaining samples from any nearby drainage gullies and surface water features.

7.0 PROJECT FINANCIALS

7.1 Authorisations

A summary of the authorisations to date for works carried out by OHES is provided in the table below.

Description of Works	Value	Date Approved
Initial Investigation	£2,477.11	31/01/2025
Total	**£2,477.11**	

Further information on the authorisations provided is available on request.

7.2 Project Costs Summary

Project costs to date and proposed costs to project completion are summarised below:

Item	Costs (excluding VAT)	
	Completed	Proposed
Initial Investigation (II)	£2,477.11	
Sub-Total to date	**£2,477.11**	
Further Investigation (FI)		£8,576.26
Sub-Total Proposed		**£8,576.26**
Project Total		**£11,053.37**
***Contingency**		**£1,000.00**

Project costs for works completed to date are provided in **Appendix 1**. Full project costs for proposed works are provided in **Appendix 2**, with itemised remediation costs in **Appendix 3**.

*Contingency has been set in the case that border archaeology are required to report on their findings of the watching brief.

Estimated Environmental Reserve: £30,000 plus VAT

The recommendations, scope of works and quotation above are based on known information as obtained by the completed initial survey and any third party information provided. If the proposed works or any planned further investigation reveal more significant and widespread contamination, or if unexpected ground conditions, or external factors (e.g. regulatory involvement) cause increase scope of work, or OHES involvement then the situation will be appraised and any cost implications will be quantified and communicated for discussion and approval. Similarly, should the proposed scope of work be reduced then any savings made will be passed to the client.

Provided costs are valid for 30 days, subject to weather conditions, after which it may be necessary to resurvey. All works will be carried out in accordance with OHES terms and conditions which can be viewed at www.ohes.co.uk.

APPENDIX 1 - PROJECT COSTS FOR WORKS COMPLETED TO DATE

Site Address:	St Mary's Church,West Harptree, Bristol, BS40 6HF
Client Reference:	12440
OHES Project Number:	FJ_395931
OHES Project Handler:	William Dorey

INITIAL INVESTIGATION (II)

Site Visit	Hours	Rate	Cost
Environmental Technician	0	£71.50	£0.00
Environmental Consultant	5	£83.75	£418.75
Senior Consultant	3	£97.00	£291.00
		Sub Total	**£709.75**
Communication	**Hours**	**Rate**	**Cost**
Environmental Technician	0	£71.50	£0.00
Environmental Consultant	1	£83.75	£83.75
Incident Advisor	0.4	£97.00	£38.80
		Sub Total	**£122.55**
Technical	**Hours**	**Rate**	**Cost**
Environmental Technician	0	£71.50	£0.00
Environmental Consultant	1	£83.75	£83.75
Principal Consultant	0	£100.25	£0.00
		Sub Total	**£83.75**
Initial Reporting	**Hours**	**Rate**	**Cost**
Environmental Technician	0.6	£71.50	£42.90
Environmental Consultant	9	£83.75	£753.75
Principal Consultant	1	£100.25	£100.25
		Sub Total	**£896.90**
Mileage & Expenses	**Miles**	**Rate**	**Cost**
Mileage (car)	176	£0.66	£116.16
		Sub Total	**£116.16**
Consumables, Plant & Equipment Hire	**Number**	**Rate**	**Cost**
PPE	1	£8.00	£8.00
CAT	1	£59.00	£59.00
PID	1	£70.00	£70.00
		Sub Total	**£137.00**
Lab Testing	**Number**	**Rate**	**Cost**
TPH Banded	9	£42.00	£378.00
SOM	2	£16.50	£33.00
		Sub Total	**£411.00**
		PHASE COST	**£2,477.11**

APPENDIX 2 – ITEMISED PROPOSED COSTS

Site Address:	St Mary's Church,West Harptree, Bristol, BS40 6HF
Client Reference:	12440
OHES Project Number:	FJ_395931
OHES Project Handler:	William Dorey

REMEDIATION & VALIDATION (RV)

Site Visit	**Hours**	**Rate**	**Cost**
Environmental Technician	0	£71.50	£0.00
Environmental Consultant	8	£83.75	£670.00
Senior Consultant	0	£97.00	£0.00
		Sub Total	**£670.00**

Communication	**Hours**	**Rate**	**Cost**
Environmental Technician	0	£71.50	£0.00
Environmental Consultant	1	£83.75	£83.75
Principal Consultant	0	£100.25	£0.00
		Sub Total	**£83.75**

Technical	**Hours**	**Rate**	**Cost**
Environmental Technician	0	£71.50	£0.00
Environmental Consultant	2	£83.75	£167.50
Principal Consultant	0	£100.25	£0.00
		Sub Total	**£167.50**

Interim Reporting	**Hours**	**Rate**	**Cost**
Environmental Technician	1	£71.50	£71.50
Environmental Consultant	7	£83.75	£586.25
Principal Consultant	1	£100.25	£100.25
		Sub Total	**£758.00**

Mileage & Expenses	**Miles**	**Rate**	**Cost**
Mileage (car)	88	£0.00	£0.00
		Sub Total	**£0.00**

Consumables, Plant & Equipment Hire	**Number**	**Rate**	**Cost**
PPE	1	£8.00	£8.00
CAT	1	£59.00	£59.00
PID	1	£70.00	£70.00
		Sub Total	**£137.00**

Lab Testing	**Number**	**Rate**	**Cost**
TPH Banded	12	£42.00	£504.00
		Sub Total	**£504.00**

Remediation Team			**Cost**
Tank pump over and move (incl. structure)			£1,422.67
Drilling Contractor			£2,319.09
Archaeological Watching Brief			£514.25
Reinstatement Reserve (should no further works take place)			£2,000.00
		Sub Total	**£6,256.01**
		PHASE COST	**£8,576.26**

MCD Ground Solutions

Project Name:	Harptree, Bristol
MCD Project Number:	O10681
Client Organisation:	OHES Environmental
Client Contact:	William Dorey
Date of Quote:	18 February 2025
Date of Works:	TBC

Utility Surveying
Land Surveying
Drilling
In-Situ Testing
Technical Labour
Monitoring
Sampling

MCD Project Understanding: 1 no. day Window Sampling to include installs (assume max 5).
St Marys Church, West Harptree, Bristol, BS40 6HA

Tasks	Qty	Rate	Amount
Costs	**Quantity**	**Rate**	**Amount**
A.1 - Mobilisation Charge (up to 50 mile round trip)	1.00	50.00	50.00
A.2 - Mobilisation Charged Per Mile/Each Way above 50 miles	136.00	0.60	81.60
A6 - Accommodation and Subsistence	2.00	110.00	220.00
F6 - 50mm Install (inc 10mm gravel/bentonite in WS hole)	25.00	18.00	450.00
F11 - Gas Bung	5.00	10.00	50.00
F10 - End Cap	5.00	1.00	5.00
F7 - Flush Cover (Incl Headworks)	5.00	35.00	175.00
F14 - Liners	20.00	4.50	90.00
Track Matting	1.00	200.00	200.00
B1 - Windowless Sampling	1.00	595.00	595.00
		Total	**1,916.60**

Valid To: 18 March 2025

www.mcd-gs.co.uk info@mcd-gs.co.uk

CHAS Accredited Contractor CHAS.co.uk

border archaeology

archaeology & built heritage
working throughout the UK

Summary

Site Location: St Mary's Church, West Harptree, Somerset BS40 6HA

Programme Details: Archaeological Observation (AO)

Background

A programme of archaeological works, in the form of archaeological observation/ watching brief, is required during site investigations, comprising windowless sampling in a closed graveyard, due to the potential for human remains.

If human remains are uncovered, a report will be required.

Fee Proposal

Please note that all values given below are subject to VAT.

1. Written Scheme of Investigation (WSI) – *including liaison with LPA Officer*	-
2. Historic Environment Record (HER) data – if *required*	-
3. Archaeological Observation – *day rate per senior archaeologist inclusive of all relevant costs*	£425.00
4. Fieldwork Report	*Depends on discovery*
5. Post-Excavation Analysis & Reporting*	-

Please note

This fee proposal is based on our current understanding of the site. Should any parameters, such as advice or requirements from the LPA or exceptional discovery of finds or deposits, change during the course of the project, this may affect the scope of works and therefore necessitate a revision of the fee. Should this situation arise, we would notify you immediately and advise accordingly.

APPENDIX 4 – OHES LIMITATIONS

This report has been prepared for Woodgate & Clarke in accordance with their instruction. The report is intended to provide information relevant to an insurance claim related to the property detailed herein and is not intended for any other purpose. OHES Environmental cannot accept any responsibility for any use of or reliance on the contents of this report by any third party.

Sub-surface ground conditions are by their nature hidden from view and on this basis may differ to the understanding obtained through completion of the above investigation. Should unexpected conditions be encountered that have an effect on the proposed remediation works then an update and revised approach will be provided for approval.

All works will be carried out in accordance with OHES terms and conditions which can be viewed at www.ohes.co.uk.

If the proposed works or any planned further investigation reveal more significant and widespread contamination, or if unexpected ground conditions or external factors (e.g. regulatory involvement) cause increased scope of work or OHES involvement, then the situation will be appraised and any cost implications will be quantified and communicated for discussion and approval. Similarly, should the proposed scope of work be reduced then any savings made will be passed to the client.

APPENDIX 5 – RISK CLASSIFICATION DEFINITIONS

CIRIA C552 presents the following descriptions of risk classifications and likely action required.

Risk Classification	Description
Very High	There is a high probability that severe harm could arise to a designated receptor from an identified hazard, OR, there is evidence that severe harm to a designated receptor is currently happening. This risk, if realised, is likely to result in substantial liability. Urgent investigation (if not undertaken already) and remediation are likely to be required.
High	Harm is likely to arise to a designated receptor from an identified hazard. Realisation of the risk is likely to present a substantial liability. Urgent investigation (if not undertaken already) is required and remedial works may be necessary in the short term and are likely over the long term.
Moderate	It is possible that harm could arise to a designated receptor from an identified hazard. However, if is either relatively unlikely that any such harm would be severe, or if any harm were to occur it is more likely that the harm would be relatively mild. Investigation (if not already undertaken) is normally required to clarify the risk and to determine the potential liability. Some remedial works may be required in the longer term.
Moderate / Low	Not defined within CIRIA C552.
Low	It is possible that harm could arise to a designated receptor from an identified hazard, but it is likely that this harm, if realised, would at worst normally be mild.
Very Low	There is a low possibility that harm could arise to a receptor. In the event of such harm being realised it is not likely to be severe.