



Contaminated Land Phase One Desk Study for proposed change of use from public house to convenience store and residential apartments at Shakespeare Hotel, Wytham Street, Padiham, B12 7DX.

Prepared for

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Summary

This report consists of a phase one contaminated land desk study produced in support of planning application for the change of use from public house to convenience store and residential apartments at Shakespeare Hotel, Wytham Street, Padiham, B12 7DX.

Following the site walkover and review of the available information it has been concluded that there is no contamination existing on or off site which presents a significant risk of significant harm to the identified receptors, as such the site is considered safe and suitable for the intended use.

The report further recommends that a watching brief is maintained throughout the construction of the new dwellings and any signs of potential contamination found are fully investigated, with appropriate remedial action taken as necessary.



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Introduction

Martin Environmental Solutions has been commissioned, to carry out a phase one contaminated land desk study report in relation to a proposed change of use from public house to convenience store, barbers and four first floor apartments at Shakespeare Hotel, Wytham Street, Padiham, B12 7DX.

Aims and Objectives of the report

The aims and objectives of this report are as follows:

- Assess the likelihood of contamination affecting the site,
- Identify any likely receptors to be affected by the potential contamination,
- Identify the pathways by which the receptors will be exposed to any potential contamination,
- Identify any areas where further investigation will be required.

Scope of works

This report has been written in line with the 'BS 10175: 2011+A2: 2017 Investigation of potentially contaminated sites – Code of Practice' and Land Contamination Risk Management (LCRM).

The scope of this report covers the phase one desk study only. It will look at relevant information on: -

- the history of the site and surrounding area,
- the current use of the site and surrounding area,
- the geology and hydrogeology of the area,

A site walk-over survey has been undertaken in addition to consultations with the existing site owner, to identify any potential contamination issues.

Evaluation of the above information will be used to construct an initial conceptual model as appropriate, with the identification of any additional investigations that may be required.



The Site:

Site Address: Shakespeare Hotel, Wytham Street, Padiham, B12 7DX.

Grid reference: 379719; 433218

An aerial photograph of the site is included in Figure 1.

Current Site use:

The site currently consists of the former public house with beer garden to the rear (west) small asphalt parking area to the front (east). The building is a two-story cavity brick-built structure with tiled roof. To the immediate north of the site is a water course, with housing beyond. To the west a housing development is being built and housing also lies to the east on the far side of the road.

Research

Details of Research

This report has been based on information gathered from a number of reputable sources, covering details:

- on the historic and current use of the site,
- any known waste disposal activities in the area,
- any regulated industrial activities within the vicinity of the site including recorded industrial accidents,
- on the geology, hydrogeology, hydrology of the area,
- identification of any environmentally sensitive sites,
- any natural hazards.

Principle sources of this information have been:

- environmental data from Groundsure Limited
- the Local Planning Authority,
- historic maps (Groundsure Ltd),
- site walk-over survey and discussion with the current owners.



Site History

Information on the historic uses of the site has been obtained from historic mapping information (Appendix 2), and environmental data from Groundsure Limited.

| Mapping Year | Changes on Site | Changes off Site |
|--------------|---|--|
| 1848 | The site forms part of a larger field | The area is predominantly agricultural. Padiham is over 750m to the north. A print and dye works are located 750m east with a cotton factory beyond. The Lodge River runs to the immediate north of the site in an east-west direction. A coal pit is shown 450m southwest. |
| 1890 | No Change | On the far side of the river a cotton Mill (Jubilee Mill) has been built along with two others to the northwest (Holme Mill & Levant Mill). Terrace residential properties have been built surrounding these properties and to the northeast The Great Harwood Loop Railway line. A chapel, cemetery and school have been erected 450m west of the site. Jubilee Mill has been extended to the northwest. Lumb Wood Quarry is shown 400m to the southeast on the far side of the railway line. |
| 1909-12 | No Change | A further Mill (Albion Mill) has been built on the opposite river bank to the northeast. Terrace properties are shown south east on Wytham Street and Albion Street and further away on Beech Street. Additional housing is also shown in the wider area to the north. Weirs are shown in the river. |
| 1929-31 | No Change | Allotments are 100m to the south off Abingdon Street. |
| 1938 | The public house building is shown on site and labelled as the hotel. | No significant changes |
| 1956-69 | The public house building is labelled as the hotel. | More residential properties are shown to the south, built over the allotments. |



| | | |
|---------------|------------------|---|
| | | <p>Holme Mill is shown as disused while Levant Mill is labelled as 'works'.</p> <p>The quarry is disused, and later mapping suggests it is infilled (refuse tip).</p> |
| 1970-74 | | No significant changes, more housing in the wider area. |
| 1986-87 | No change | No significant changes |
| 1989-93 | No change | Jubilee Mill has been demolished and a housing estate erected. |
| 2001-03 | No Change | No significant changes |
| 2010 | No Change | Albion Mill is no longer present with housing erected over the site. |
| 2023 | No Change | No significant changes |
| Aerial photos | No changes shown | <p>Albion Mill was cleared in 2006, housing erected in 2018.</p> <p>The area to the rear of the site is shown as a car parking area and open amenity space.</p> |



Regulatory Information

Relevant information obtained from the Groundsure report (Appendix 1) is summarised below.

The only permitted activities that has been identified within 500m of the site as defined in the Environmental Permitting (England and Wales) Regulations 2016 or previous legislation is a dry cleaners located 451m north of the site. However, Hepworth Building Products Ltd are identified as undertaking an inorganic chemical process between 1995-1999 439m southeast of the site.

11 pollution incidents have been identified in the surrounding area, the nearest located 101m northwest of the site in July 2020 with a significant impact to water. In December 2001 a minor impact to water occurred 128m northwest with another in September 2002 182m northwest. June 2003 at 215m north, July 2002 at 252m north saw another two minor impacts to water. While in July 2004 a significant impact to water occurred 227m northwest. These were not into waters affecting/running past the site.

13 discharge consents are reported. Ten of these are into the River Clader, the nearest being 214m north of the site two into the Green Brook 221m north & 224m northwest and one into Shaw Brook, 390m south. All area related to sewer storm water from the water company except the Shaw Brook discharge which is an emergency discharge consent for Hapton SOS Burnley.

The above identified sites are unlikely to impact on the development site.

No active landfill site records have been found in the area. A historic site identified in 1963-67 located 355m east of the site (the old quarry). In addition an historic inert waste licence is identified for the allotment gardens at Dorset Avenue 190m south and at the Railway line 256m east (household waste). A further industrial landfill site is identified 356m southwest at Shaw Brook.

Seven waste sites are also identified, 94m east at Albion Mill a metal recycling site in 1993, 389m northwest at Millwood Vehicle Services Ltd, Green Lane, Mill vehicle depollution in 2014. With additional depollution activities at Multi Vehicle Parts at Green Lane Mill 391m northwest in 2017 and Millwood Automotive 405m northwest in 2014. Recycled Parts Ltd from 2010 449m northwest also at Greenbridge Mill.



26 waste exemptions have been identified. The nearest is located 53m southeast of the site at Perseverance Mill, Albion Street for the screening and blending of waste, use of waste in construction, burning waste as a fuel at 126 Russell Terrace 149m northeast (a domestic property) and the use of the waste in construction 186m northwest at Thompason Stret. The other site area all located over 250m from the site and involve the storage of waste, use of waste in construction, burning waste,

Given the distances and nature and age of the both sites it is unlikely that the above sites will pose any risk to the development.

Ten current potentially contaminative sites are identified, these include

an electrical sub-station located 71m north, on the far side of the river, and 173m southeast

Unspecified works located 112m northwest,

A fish, meat and Poultry products business located 113m northwest on Thompson Street, (appears to be a domestic property)

A rubber, silicones and plastic business at R&A components 194m northwest at Thompson Street Works

An electricity pylon 222m southwest

A Gas governor 231m east

of the site, this is unlikely to impact on the site.

Historical potentially contaminative land uses have been identified within 250m of the site from the purchased information; most of these have been identified from the historical mapping and include:

The cotton Mills in the area, located 7m north on the far side of the river, 11m east, 103m northwest 153m northwest,

A pit 92m west in 1891, this is shown as on the mapping and appears to be banking to the river, with similar markings further along the river to the south.

A further unspecified pit from 1909-1929 185m south – this is a field pond which is shown in later mapping as drying up.

An unspecified tank is also identified 29m north from the site at the mill and 136m northwest at the other mills. All above ground tanks.



Geology and Hydrogeology

Information from the British Geology Survey 1:50,000 mapping identifies the bedrock in the area as Pennine Lower Coal Measures of Mudstone, Siltstone and Sandstone overlaid with Glaciofluvial Deposits of Till, Devensian - Diaicton.

The information obtained on the hydrogeology of the area identifies the site as having a Secondary A aquifer in the bedrock capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers, with a Secondary Undifferentiated aquifer in the superficial layer.

Six groundwater abstraction licenses have been identified, the nearest is 60m east and is historical associated with the form mill. The next an active borehole at Simonstone Business Park 1916m west. The rest are historic, one at Simsontone Business park and the others at Whittaker Farm 1975m north.

Nine surface water abstraction licenses are identified, all historical and the nearest being 858m north of the site.

The site is not located within a Source Protection Zone.

The Groundwater vulnerability is described as intermediate in the superficial layer and low in the surface and bedrock layers.

Hydrology

The nearest watercourse is located to the immediate north of the site which flows west, then north joining with the River Calder 545m north.

The site is within a floodplain, and the risk of flooding is classified as high. Flood defences are located 19m northeast and 27m north of the site. The site is within a zone 2 & 3 flood zone.

Environmental Sensitivity

The site lies within 857m west of the Lowerhouse Lodges Local Nature Reserve and is 985m southwest of the Shuttleworth ancient woodland and 1980m west of another. The site is 373m northeast of the Merseyside and Greater Manchester greenbelt.

The property is in an area identified as having less than 1% of properties above the action level of 200 Becquerel's per cubic metre, based on specific property search. Radon protection measures are not required in line with BR211.



No additional natural hazards have been identified & the site has very low/negligible risk of shrink swell, running sand, and compressible ground.

There are no mining activities identified in the immediate area although the site is located within a coal mining area as identified by the Coal Authority.



Site Walkover

A site walkover was undertaken on the 13th December 2023 and confirmed much of what had already been identified from the information obtained on the site. The photographs in Appendix 3 provide some indication of the current layout and condition of the site.

The site is accessed from Wytham Street to the east of the site. Existing housing lie on the opposite side of the road and access to a new housing development which wraps around the rear of the site is to the immediate south. The Lodge River runs along the northern boundary with more residential housing beyond.

The east side of the development consists of an asphalt parking area with access at both the north and south into the rear garden. Beyond the rear garden and forming the western boundary of the site is open land currently being used by the construction company for the new development. A stone wall separates the area from the garden.

The beer garden is slightly lower than the patio seating area and the property, grassed with mature trees.

The property is brick cavity built with a tiled roof and a stone patio seating area to the rear.

No signs of contamination, discoloration or olfactory evidence, dead or dying vegetation were seen during the walkover.

The current owners are unaware of any issues on site which could have led to contamination and the site has been used as a public house and beer garden since it was built in the early 1950's.



Conclusions

Potential Contaminants

Following a review of the information gathered on the history of the site and the surrounding area and following the site walk-over survey there are no contaminants identified on or off site that are likely to present a significant possibility of significant harm to any identified receptor.

The historic landfill to the south at Dorset Avenue excepted inert material and has been housing since the 1950's, ground gas production is therefore unlikely in the event that putrescible waste was included.

Receptors and Pathways

Potential receptors which may be affected by any unknown contamination on site will include:

- Construction workers who are likely to be affected by any potential contamination as they will initially be working in the ground and are likely to be the ones who unearth any potential contaminants.
- Future users of the site, including residents, staff and visitors to the site. For the purpose of evaluating any effects from any contamination found during any intrusive investigation future users/visitors to the site should be regarded as the 0-6-year-old female child.
- Any building on site e.g., foundations which may be attacked by any contaminants in the ground or services.
- The underlying groundwater which may be contaminated by migrating pollutants present on the site. There is also the potential for further pollution of the groundwater or the watercourse from disturbing any potential contaminants on site.



The pathways by which these receptors may be exposed to any unforeseen potential contamination will include:

Construction workers

- Inhalation, of gases or vapours released during ground work or fine particles.
- Ingestion of the contaminants, principally from cross contamination with contaminated soil and inadequate hand washing before smoking and eating.
- Absorption through the skin following contact with contaminated soil.

Future users and visitors

- Inhalations of gas/vapours or fibres, particularly if these are allowed to enter the new structures through the ground and build up in an enclosed area.
- Ingestion of contaminants, through the ingestion of contaminated soil from the garden area via direct contact, e.g., playing in the garden.
- Absorption of contaminants from dermal contact with contaminated soil.

Buildings

Contaminants on site have the potential to affect the foundations to the new building or the services supplying it.

Watercourses

As discussed above, if they exist on site, there is a potential for any contaminants to migrate through the ground into the groundwater and aquifer or via run-off into the watercourse.

Neighbouring sites

If present on site contaminants have the potential to migrate to neighbouring sites through ground water or air blown transfer.



Conceptual Model

The table represents a basic conceptual model. It highlights the potential sources of pollutants identified from the gathered information, and potential pathways in which any contaminants could reach the identified receptors.

| Pathway | Description | Identified sources | Receptor at risk | Likelihood |
|---------|---|--------------------|-----------------------------------|------------|
| 1 | Run off and seepage into groundwater from any spillages | - | Watercourse/ Environment | V. Low |
| 2 | Migration of gases into the building. | - | Future users | V. Low, |
| 3 | Inhalation of gases/ vapours outside | - | Construction workers/future users | V. Low |
| 4 | Inhalation of fine particles | - | Construction workers/future users | V. Low |
| 5 | Direct ingestion of contaminated soil | - | Construction workers | V. Low |
| 6 | In-direct ingestion of contaminated soil | - | Future users | V. Low |
| 7 | Absorption via direct dermal contact with contaminated soil | - | Construction workers/future users | V. Low |



Recommendations

As a result of the investigation into the historical use of the site and surrounding area no sources of contamination have been identified on or off site which present a significant possibility of significant harm to the any of the identified receptors. The development is therefore considered suitable a safe for its intended use.

It is further recommended that a watching brief is maintained throughout the construction of the new building and any signs of potential contamination found are fully investigated, with appropriate remedial action taken as necessary and the local planning authority informed of the findings.

Figure 1 - Aerial Photograph





Appendix 1 – Groundsure Data



Appendix 2 – Historical Mapping

Appendix 3 – Site Walkover Photographs

The front eastern section of the site, looking from the north an then the south



northeast corner by the road





Southeast corner by the road.



The rear of the building



The northern boundary looking west and then east



The far western boundary into the construction site (construction material to be removed)



The northern boundary and garden area





The patio area and northern side of the property





Appendix 4 Report limitations and exclusions

Basis of Risk Assessment

The methods used follow a risk-based approach with the potential risk assessed using the 'Source – pathway – receptor pollution linkage concept.

Limitations and Exceptions of this Report

This report was undertaken for at the request of Building Design Services and as such should not be entrusted to any third party without written permission of **Martin Environmental Solutions**. No other third parties may rely upon or reproduce the contents of this report without the written permission of **Martin Environmental Solutions**. If any unauthorised third party comes into possession of this report, they rely on it at their own risk and the authors do not owe them any duty of care or skill.

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The findings and opinions provided in this document are made in good faith and are based on data provided by third parties (Groundsure, Environment Agency, The Coal Authority, and Regulatory Bodies) and the report should be read in conjunction with the limitations on the document control form. The accuracy of map extracts cannot be guaranteed and it should be recognised that different conditions on /adjacent to the site may have existed between and subsequent to the various map surveys.

This report is prepared and written in the context of the purposes stated above and should not be used in a different context. Furthermore, new information, improved practices and legislation may necessitate an alteration to this report in whole or in part after its submission.

The conclusions and recommendations of this report are based on the development described, for any other development the report may require revision.

All of the comments and opinions contained in this report, including any conclusions, are based on the information obtained by **Martin Environmental Solutions**. The conclusions



drawn by **Martin Environmental Solutions** could therefore differ if the information obtained is found to be misrepresentative, inaccurate, or misleading. **Martin Environmental Solutions** reserves the right to amend their conclusions and recommendations in the light of further information that may become available.

The report should be read in its entirety, including all associated drawings and appendices.

Martin Environmental Solutions cannot be held responsible for any misinterpretations arising from the use of extracts that are taken out of context.

This report does not comprise a geotechnical assessment of the strata underlying the site.

Any borehole data from the British Geological Survey sources is included on the following basis: 'The British Geological Survey accept no responsibility for omissions or misinterpretations of the data from their Data Bank as this may be old or obtained from non-BGS sources and may not represent current interpretation'.

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Any risks identified in a Phase I Desk Study Report are perceived risks. Actual risks can only be assessed following a physical investigation of the site.

The findings of this report are based on finite information obtained from research and consultations. Martin Environmental Solutions cannot guarantee the reliability of all such information and the searches should not be considered exhaustive. The findings of the report may need to be reviewed as any future exploratory investigations progress and in the event that additional archive information becomes available.

Notwithstanding the findings of this study (and any subsequent investigations), if any indication of contaminated soil (visual or olfactory) is encountered at any stage of the development further investigation may be required.



Arboricultural Survey and advice on arboricultural issues are considered to be outside the scope of this report except for their effect on the foundations to the proposed buildings.

Where identification of any species is made, especially invasive plants such as Japanese Knotweed, Himalayan Balsam or Giant Hogweed, this should only be considered as a preliminary assessment and subject to confirmation by a professional Arboriculturist. Martin Environmental Solutions takes no responsibility for failing to identify, or the incorrect identification of, any tree or plant species on site.

Our investigations exclude surveys to identify the presence or indeed absence of asbestos in buildings/infrastructure on site. If asbestos is suspected to be present, we recommend specialists in the identification and control / disposal of asbestos are appointed prior to commencement of any works on site or, if appropriate, purchase of the site. The presence of asbestos on site may have considerable effects on the cost / timescale in developing the site. There is good guidance in relation to Asbestos available on the Health and Safety Executive (HSE) web site.

Whilst a site walkover has been undertaken as part of this report, the survey does not constitute either an asbestos or structural survey and all areas of the site may not have been visited / inspected.