



GEO-ENVIRONMENTAL AUDIT

PHASE 1 PRELIMINARY RISK ASSESSMENT

SALT SEPARATION SERVICES
UNIT 6&6
FLETCHER STREET
ROCHDALE
OL11 1AE

Author: Daniel Slattery
Client: Sat Separation Services Ltd
Reference: rep-tjba-salt sep-fletcher st-Phs1Env-170925.docx

Revision	Date	Reason
0	October 2025	Original to support planning application for commercial development.

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1. PHASE 1 - PRELIMINARY RISK ASSESSMENT.

1.1. Introduction.

T. J. Booth Associates have been appointed by Salt Separation Services Ltd to undertake an environmental assessment of two proposed units within the Salt Separation Ltd/Fletcher Street site.

The Salt Separation complex is located to the north and west sides of Fletcher Street, Rochdale, and comprises numerous buildings, factory units & offices, as well as external areas such as yards & car parks.

The Application Site refers to units 6&7, to the north of Fletcher Street. The units form part of a larger collection of mill buildings and subsequent extensions which are to remain. Units 6 & 7 are to be demolished and rebuilt.

A planning application has been granted under permission notice ref: 23/01325/FUL, for the: 'Erection of fabrication workshop following demolition of existing workshop building'.

Condition No.4, referred to environmental assessment as follows:

- 4 No development shall take place until such time as a Phase I Report (Preliminary Risk Assessment) must have been completed to assess the actual and/or potential contamination risks at the site. The Phase 1 Report must be submitted to, and approved in writing by, the Local Planning Authority and shall include a desk top study, site walk over, conceptual model, basic hazard assessment and recommendation regarding the need or otherwise for further investigation and risk assessment.

Where the Phase 1 Report has identified potential unacceptable risks, a suitable investigation, risk assessment and remedial action shall be carried out in accordance with details and within a timescale to have first been submitted to and approved in writing by the Local Planning Authority.

In the event that contamination is suspected or found at any time when carrying out the approved development that was not previously identified, or contamination is caused, the Local Planning Authority shall be notified immediately and development affected and potentially affected by the contamination must stop. An investigation and/or risk assessment and/or remediation shall be carried out in accordance with an agreed process and within agreed timescales to have first been submitted to and approved in writing by the Local Planning Authority. If contamination is not suspected, found or caused during development, this must be confirmed in a completion letter which is subject to the approval in writing of the Local Planning Authority.

Further to the above, T J Booth Associates have been employed to undertake environmental site assessment, including a phase 1 preliminary risk assessment (PRA), and where necessary, phase 2 site investigations, and a phase 3 remediation statement.

As part of the assessment, current UK guidance for environmental investigation within the construction industry will be adhered to. Principal to the assessment is the potential for contamination pollutant linkages via the Land Contamination Risk Management (LCRM) source-pathway-receptor methodology. Assessment of potential pollution linkages is primarily undertaken in strict accordance with BS 5930:2015, BS 10175:2011+A2:2017, CIRIA C665, and BS 8485:2015+A1:2019 et al.

1.2. Site Plans.

The Location Plan in the Appendix shows the entire Salt Separation Services ownership boundary (BLUE), with the proposed building outlined (RED).

The only development associated with the planning approval certificate, and considered within the remit of this environmental assessment is the outline (RED).

The rest of the ownership site is to remain as present and will be operational during the development life cycle.

The proposal is for the demolition of the current building, and the construction of a replacement purpose-built fabrication building.

There will be no external landscaping areas as part of the development.

Refer to Location Plan & Existing/Proposed Plans in the Appendix.



1.3. Historic Maps.

DATE	ON-SITE	OFF-SITE/SURROUNDING AREA
c1850	The Application Site appears to have been part of public open space/soft landscaping.	Wellfield cotton Mill occupies the adjacent land to the north of the Salt Separation Services owned curtilage, on what is now the Wellfield Health Centre. Smithy noted 25m southeast. Rochdale Canal noted 40m northeast. General surroundings comprise residential terraces in the immediate area, and terraced housing and mills in the wider area.
c1890	Site is part of an unnamed cotton mill fronting onto Fletcher Street as in the present day. The wider ownership boundary of the mill comprises much of the current day site, with a chimney noted to the west the only potential contaminative feature of note.	Smity no longer shown. General surroundings comprise residential terraces in the immediate area, and terraced housing and mills in the wider area.
c1910	Site noted as Canal Street Mills (Cotton).	Wellfield Mill to the north noted as a soap works. No overall change.
c1930	No change.	Former terraced dwellings adjacent the Application Site building now demolished to form a yard as in the present day. Wellfield Mill to the north predominantly demolished, with remaining buildings noted as an engineering works. No overall change.
c1960	No change.	No overall change.
c1980	No change.	Many of the terraced dwellings in the local area demolished including those opposite the site across Fletcher Street, as well as some of the mills in the wider area especially to the northeast. No specific uses noted which would negatively impact the site.
c1990	No change.	No overall change.
c2000-10	No change.	Gorrel Street to the south closed up and much of the area to the south of Fletcher Street incorporated into the wider site ownership.

1.4. Present Day Maps.

Site Boundaries, Outlines of Structures and Buildings:	The Application Site building subject to the site assessment is surrounded by other connected and former mill buildings to the north and west sides, which are part of the Salt Separation Services site. The Application Site building has a small strip c3.5m wide between the building and Fletcher Street. There is a small car park to the east side.
Ground Contours, Natural Drainage Features:	Land elevation falls to the west down Fletcher Street towards the Rochdale Canal. The majority of the site is covered with roofing. All rainwater is collected by piped services, and discharged into the local drainage network.
Water Courses:	Rochdale Canal nominally 40m northwest.
Below Ground Obstructions:	None noted.

1.5. Geology.

Bedrock Geology:	Carboniferous Westphalian Coal Measures. The site is split with the west half nominally underlain by general Coal Measures, and the east half by Old Lawrence Rock sandstone. The local dip is estimated to be approximately 5-10deg southwest.
Superficial Geology:	Glaciofluvial sand & gravel deposits, which extend over much of the wider area.
Coal Seams/Faults.	The closest seam is the Arley Mine seam subcropping approx. to the southwest and dipping away from site. No shallow seams are likely to underlie the Site.

1.6. BGS Boreholes Records.

No BGS boreholes within relevant distances.

1.7. Landmark Envirocheck Report.

A Landmark Report was obtained for the adjacent Norwich Street Mill in 2019. The data is still considered relevant.

1.7.1. Agency & Hydrological.

Water Abstractions:	Closest records as follows: 150m N, relating to J & J Makin Convector Ltd, commercial boiler feed. 300m SW, relating to Sealocrete Pla Ltd, commercial boiler feed. 410m S, relating to Dunphy Combustion Ltd, commercial general cooling & boiler feed. 615m NE, relating to J & J Makin Convector Ltd, commercial boiler feed. 615m E, relating to Rochdale Sheet Metal Co Ltd, commercial boiler feed. 1075m N, relating to Greater Manchester Waste Disposal, commercial cooling.
Bedrock Aquifer Designation:	Secondary A Aquifer.
Superficial Aquifer Designation:	Secondary A Aquifer.
Source Protection Zones:	Not within a Source Protection Zone.
Flooding from Rivers & Sea:	Not within a flood zone.

1.7.2. Waste.

Landfill Sites:	None within 250m of site boundaries.
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1.7.3. Hazardous Substances.

Hazardous Substances:	No records noted within a 250m radius of the Site.
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1.8. UK Radon.

Radon Potential/Radon Affected Areas:	The recently updated maps indicate the property is within a Lower Probability Radon Area (where 1-3% of homes are estimated to be at or above the action level).
Radon Potential/Radon Protection Measures:	No radon protection measures are necessary in the construction of new dwellings or extensions.

1.9. Mining Remediation Authority.

Mine Shafts, Pits, Adits/Entries:	No coal entries within the local area.
Past/Present Recorded Underground Mining:	The Mining Remediation Authority data indicates that no recorded workings exist beneath the Site.
Probable/Potential Shallow Underground Workings & Outcrops:	The Mining Remediation Authority data indicates that no unrecorded shallow workings potentially exist beneath the Site.
Outcrops:	None near the site.
Development High Risk Area:	The Site is not within a Development High Risk Area.

1.10. Site Reconnaissance.

Details of Existing Structures:	The site has been visited on numerous occasions. The building comprises a red brick masonry structure with cladded roof & concrete floor slabs. It has an external concrete hardstanding strip of land between the building and the Fletcher Street, with two vehicular openings to the south elevation. The building had been recently used as an automobile repair & MOT garage, prior to being developed into a fabrication work shop. The garage had a small sump/pit nominally 150mm deep to the west side, and internal manholes assumed to be part of an interceptor system. There were also internal office rooms. Past investigations at the site suggest the following floor make-up inside the building, (refer to photo in Appendix): <table border="0"> <tr> <td>0-100mm</td><td>MADE GROUND: Conc floor slab;</td></tr> <tr> <td>100-300mm</td><td>MADE GROUND: Hardcore blinding;</td></tr> <tr> <td>300-900mm</td><td>MADE GROUND: Sand & gravel (Ash);</td></tr> <tr> <td>900-1200mm</td><td>Suspect MADE GROUND: CLAY</td></tr> <tr> <td>1200-1500mm</td><td>Glaciofluvial SAND.</td></tr> </table>	0-100mm	MADE GROUND: Conc floor slab;	100-300mm	MADE GROUND: Hardcore blinding;	300-900mm	MADE GROUND: Sand & gravel (Ash);	900-1200mm	Suspect MADE GROUND: CLAY	1200-1500mm	Glaciofluvial SAND.
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900-1200mm	Suspect MADE GROUND: CLAY										
1200-1500mm	Glaciofluvial SAND.										
Adjacent Properties:	Surrounded by mill buildings.										
Water Levels, Directions of Flow and Rates in Rivers:	Canal to the northwest.										
Old Mine or Quarry Workings:	None noted.										
Obvious/Immediate Hazards to Health/Safety:	None noted.										
Areas of Discoloured Soil, Polluted Water, Vegetation, and Significant Odours:	None noted.										
Relevant Ground Levels, Ground Water Levels, Positions of Wells and Springs:	The Fletcher Street access road falls to the west. There was a fall away from the building over the external strip to Fletcher Street nominally 400-500mm.										

1.11. Identification of Source-Pathway-Receptor.

1.11.1. Summary & Discussion.

The Application Site building appears to be the original building erected between the 1850s-1890s, prior to which it was part of public open space.

The original use was as a cotton mill, and was later generally specified as a 'works'.

It has recently been used as a fabrication workshop and car garage.

Site investigations for previous renovations & foundation design indicated the general make-up of the site, with nominally 1m of ashly & clayey MADE GROUND above glaciofluvial SAND & GRAVEL deposits.

There is unlikely to be significant underground contamination as the building has a significant floor slab in place, and the external area is limited. There is also no sign of historic tanks on historic mapping. However, there was/is suspected to be an internal interceptor/drainage system which has the potential for minor leakage over time.

Externally there are no landfill sites & radon is not an issue in the locally.

The local area has not been subject to coal mining or its legacy.

While there is potential for in ground contamination, pathways are generally considered to be mitigated, unless hydrocarbon/mobile contamination is found.

1.11.2. Potential Contaminants.

CURRENT SOURCE/S	ORIGINAL ASSOCIATED SOURCE	CONTAMINANT/S
MADE GROUND/underlying natural soils beneath the site.	Internal tanks, storage of fuels/oils, and leakage through interceptors.	Hydrocarbons.
Ash bearing MADE GROUND.	Former fill to level the site prior to construction of the mill building.	Metals, PAHs, sulphates, asbestos.

1.11.3. Potential Pathways.

The potential pathways to/from the Application Site include (not an exhaustive list but a summary of the main points):

PATHWAY	MEDIA
Soil and dust ingestion	Soil and indoor dust
Consumption of home-grown fruit and vegetables	Produce
Skin contact (indoors)	Indoor dust
Skin contact (outdoors)	Soil
Inhalation of dust (indoors)	Air
Inhalation of dust (outdoors)	Air
Vapours (indoors)	Air
Vapours (outdoors)	Air

1.11.4. Potential Receptors.

Receptors mainly comprise workers in the construction phase, and workforce for the proposed end use.

Controlled waters: canal & underlying aquifer.

1.12. Preliminary Conceptual Model.

POLLUTANT RISK IDENTIFIER	SOURCE	CONTAMINANT TYPE	PATHWAY	RECEPTOR	POLLUTION LINKAGE	CONSEQUENCE	PROBABILITY	RISK
PL1	General contaminants in upper site soil/made ground, and effects on humans/animals /ecology as a receptor.	Metals, PAHs, inorganics, organics, asbestos.	Direct ingestion, aerial ingestion, dermal contact, drinking water. Crops.	Primarily human - Site construction operatives & future site users.	There is a potential source with minor areas of made ground expected, which are a likely source of metals, PAH, sulphates, and asbestos. However, the full site is proposed to be covered by the proposed building footprint. Pathway missing, no pollutant linkage.	Medium.	Unlikely.	Low risk.
PL2	Potential historic use of hazardous PSRAS chemicals & effects on PE water pipes.	Hydrocarbons, BTEX & MTBE, VOCs/SVOCs, phenols, cresols and chlorinated phenols.	Contact with water pipes/services.	Water pipes/services & human/pet end users.	Potential for minor contamination from former industrial processes cannot be ruled out. It is not yet confirmed whether water supplies are to be routed internally or above ground. Pathway missing, no pollutant linkage.	Medium.	Likely.	Moderate risk.
PL3	Mobile contaminants in the water environment.	Hydrocarbons.	Groundwater.	Aquifer.	Potential for minor contamination from former industrial processes or the garage/MOT station cannot be ruled out, and will be assessed as part of the soil sampling investigation.	Medium.	Low likelihood.	Moderate to low risk.
PL4	Mobile contaminants in the water environment.	Hydrocarbons.	Groundwater.	Canal.	Any leakage is likely to be minor & locally contained. The canal is too distant a pathway to be considered a significant risk. Pathway missing, no pollutant linkage.	Medium.	Unlikely.	Low risk.
PL5	Geological ground gas from coal seams/workings.	CH ₄ , CO ₂ , other trace gases.	Diffusion through soil, substructures, aerial inhalation.	Human. Explosion, suffocation.	No shallow coal mines or seams. Source missing, no pollutant linkage. Source missing, no pollutant linkage.	Mild.	Unlikely.	Very low risk.
PL6	Geological ground gas, radon sources in Namurian deposits.	Rn.	Diffusion through soil, substructures, aerial inhalation.	Human - future Site residential occupants.	The updated radon maps suggest a risk of between 1-3% of properties affected in the local area which is considered low risk. No radon protection measures are required. Source missing, no pollutant linkage.	Mild.	Unlikely.	Very low risk.
PL7	Anthropogenic ground gas from historic/present landfill.	CH ₄ , CO ₂ , other trace gases.	Diffusion through soil, substructures, aerial inhalation.	Human - future Site residential occupants.	No landfill sites in the local/wider area. Source missing, no pollutant linkage.	Mild.	Unlikely.	Very low risk.

				Explosion, suffocation.				
PL8	Anthropogenic ground gas sources from alluvium.	CH ₄ , CO ₂ .	Diffusion through soil, substructures, aerial inhalation.	Human - future residential Site occupants. Explosion, suffocation.	No alluvial deposits noted beneath the Site. Source missing, no pollutant linkage.	Mild.	Unlikely.	Very low risk.

1.13. Conclusions & Suggested Site Investigations.

1.13.1. General.

There is a potential risk noted due to historic uses, primarily as a former garage/MOT station.

Site investigations will need to be undertaken for future geotechnical and foundation design, as well as for geoenvironmental purposes.

The timing and requirement for these will depend on type of investigation, ie borehole if undertaken pre demolition, or trial holes will be possible if undertaken when the building is demolished.

For geoenvironmental purposes, either type of investigation will be sufficient, and subsequent soil samples can be taken to assess risks.

The made ground/superficial deposits will need to be sampled for hydrocarbons to quantify the risk as indicated in the sections below.

All site investigations should be written up in a Phase 2 site investigation report, detailing further Phase 3 Remediation Strategy if required by the result findings.

1.13.2. Human Health Risk.

1.13.2.1. Shallow soil contamination.

Made ground has been noted beneath the floor slab in previous investigations, which comprises ashy made ground and is a likely source of metals & PAH.

However, the pathways to this material will be negated in the proposed development and therefore the pollution linkage is broken.

No remediation is required in this regard.

1.13.2.2. Buildings & services.

1.13.2.2.1. Water pipes.

There is a potential risk of mobile contamination from the desk study.

If water pipes are to be routed internally above ground, then the risk is considered mitigated. However, if there is to be underground services, there may be a risk from contaminated material.

If potable water supply services are to be routed beneath the slab, then to assess whether a barrier pipe is required, the following sampling should be undertaken to assess the risk and should comprise the following suites for PSRAS chemicals:

- Total VOCs.
- Total BTEX & MTBE.
- Total SVOCs (excluding PAH, phenols & chlorinated phenols).
- EC5-10 aliphatic & aromatic hydrocarbons.
- EC10-16 aliphatic & aromatic hydrocarbons.
- EC16-40 aliphatic & aromatic hydrocarbons.
- Phenols.
- Cresols & chlorinated phenols.

1.13.2.3. Ground Gas Risk.

1.13.2.3.1. Historic landfill sites.

No risk noted. No remediation is required in this regard.

1.13.2.3.2. On-site refuse tips/infilled ponds/infilled land.

No risk noted. No remediation is required in this regard.

1.13.2.3.3. Radon.

No risk noted. No remediation is required in this regard.

1.13.2.3.4. Alluvium.

No risk noted. No remediation is required in this regard.

1.13.3. Controlled Waters Risk.

1.13.3.1.1. Surface waters.

No credible risk noted. If contamination has occurred, it is suspected to be minor, and the distance to the canal is thought too tortuous for a pollution linkage.

1.13.3.1.2. Aquifers.

There is a potential risk from hydrocarbons due to former uses.

It is proposed to assess the ground either via borehole or trial hole investigations and subsequent soil sampling taken to assess if any contamination has occurred to the soil beneath the current floor slab.

Sampling will comprise the following suites:

- Hydrocarbon TPH (CWG).

Signed.....



D.S. Slattery BSc (Hons).

T J Booth Associates.

Authorised...

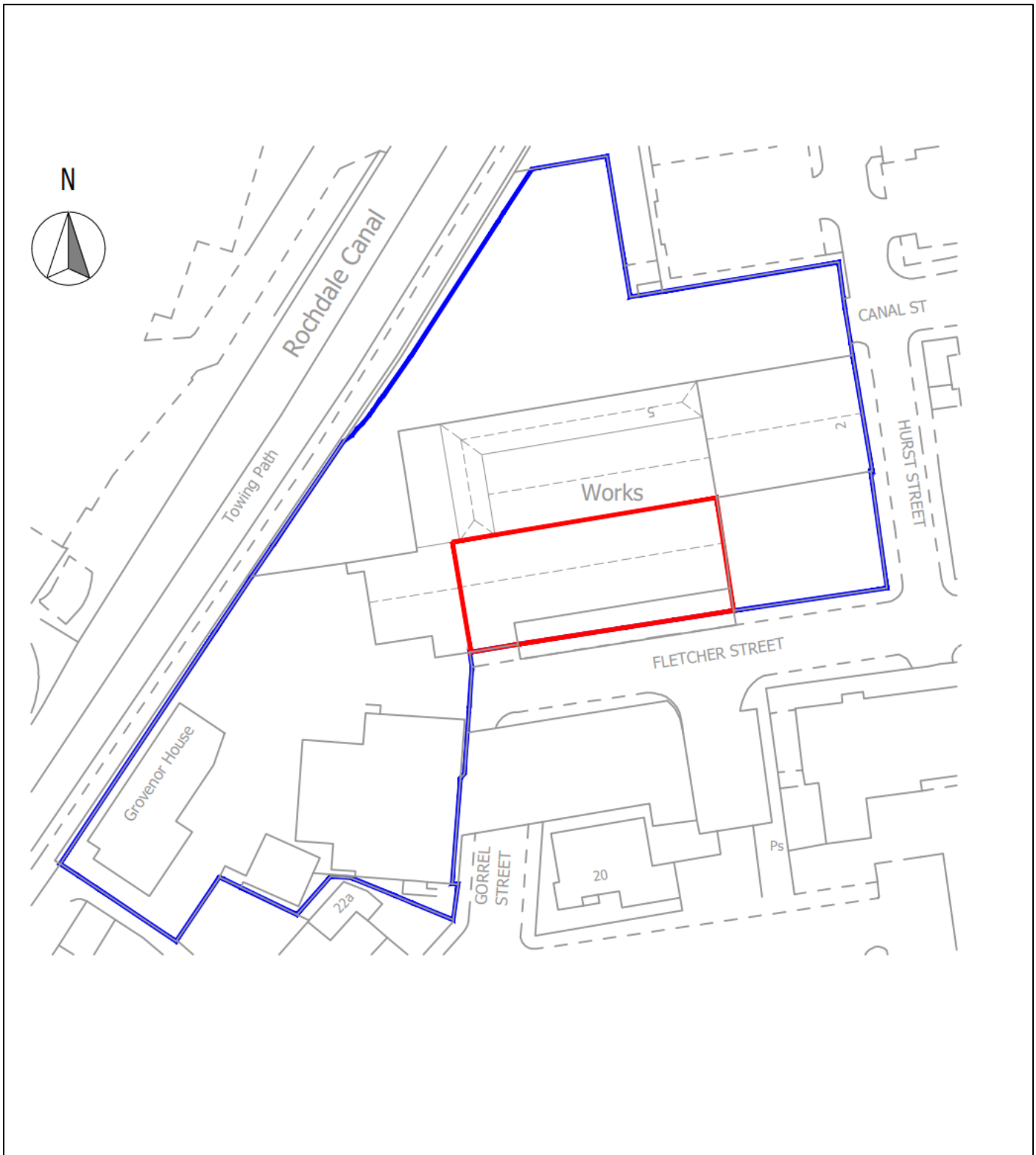


T J Booth BSc (Hons), C. Eng. C. Env. MICE.

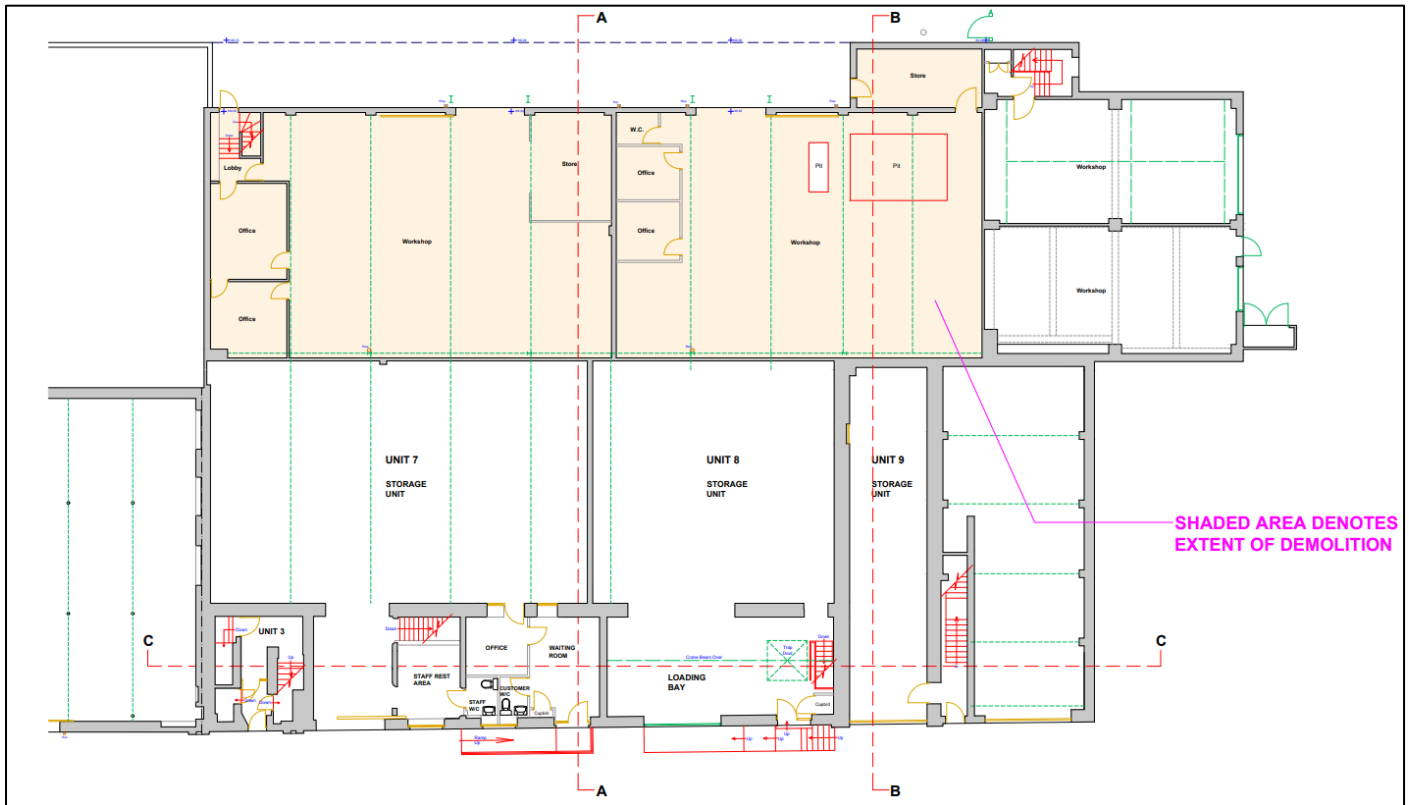
T J Booth Associates.

2. APPENDIX A: FIGURES.

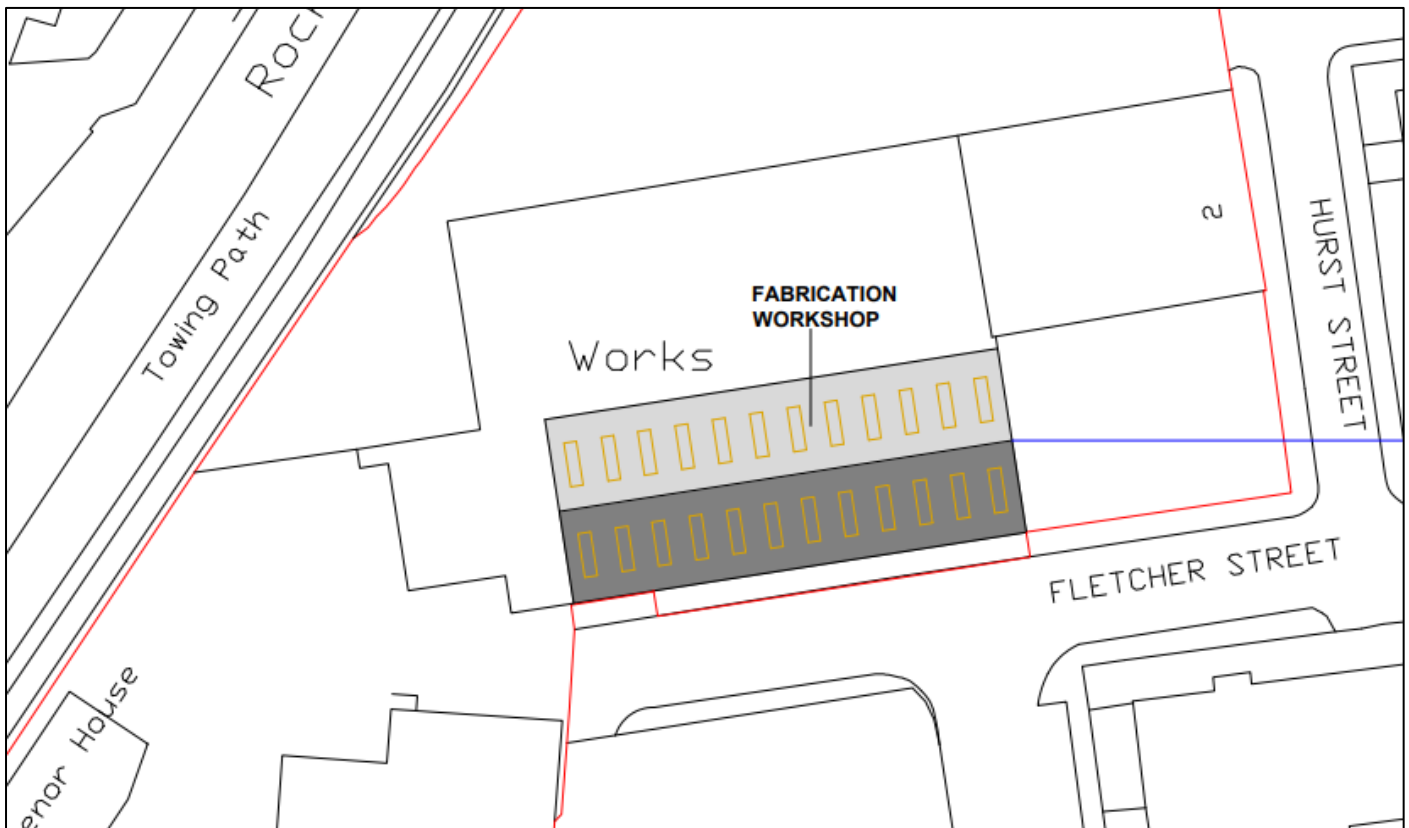
2.1. Location Plan.

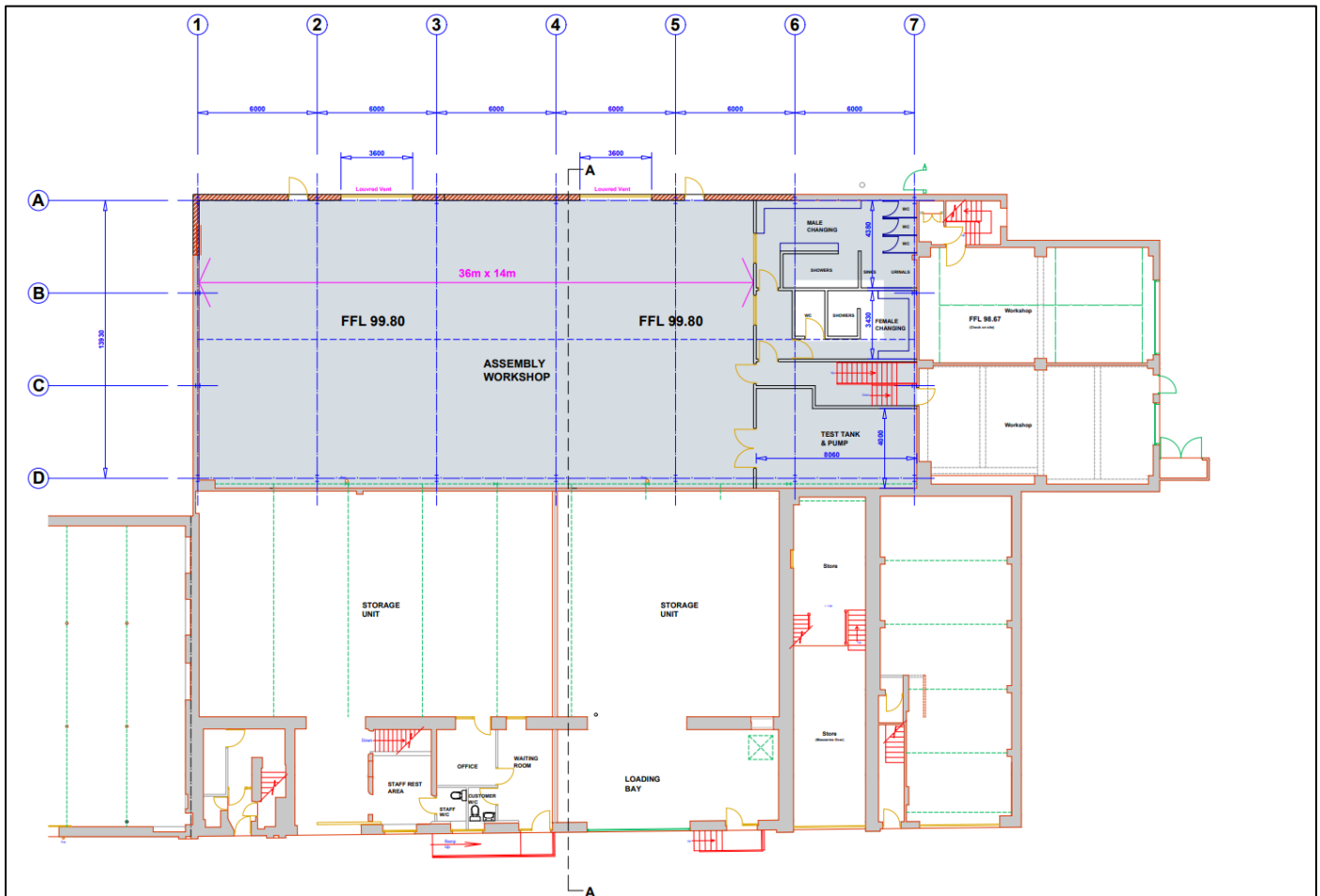


2.2. Existing Plans.



2.3. Proposed Plans.





2.4. Photographs.



3. APPENDIX C: LANDMARK ENVIROCHECK & ENVIRONMENTAL DATA.

