

Laura Miller
Environmental Health
Manchester City Council
Town Hall Extension
Albert Square
Manchester
M60 2LA

Dear Laura

Date 05.07.2023

**RE: PLOT 10A DEVELOPMENT, FIRST STREET, MANCHESTER,
MATERIAL MANAGMENT PLAN**

In support of discharge of Part 4a of planning permission 136043/FO/2023 –
Approved 12 May 2023, please refer to the Ramboll Remedial Strategy report,
reference 1620007819-RAM-XX-XX-RP-CL-00010, April 2023

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Yours sincerely

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Confidential

Intended for
First Street Developments Ltd

Project no.
1620007819

Date
April 2023

PLOT 10A FIRST STREET MANCHESTER

REMEDIAL STRATEGY

Revision History

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I01	21.04.2023	I01	7819-RAM-XX-XX-RP-CL-00010	First Issue

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CONTENTS

1. INTRODUCTION..... 4

2. THE SITE 6

3. DEVELOPMENT PROPOSALS AND REMEDIAL DESIGN STATEMENT 8

4. REMEDIAL STRATEGY SPECIFIC REQUIREMENTS 10

5. VERIFICATION PLAN 15

APPENDICES

APPENDIX A – PLANNING CONDITIONS

APPENDIX B – PROPOSED DEVELOPMENT PLANS

APPENDIX C - SOIL REUSE CRITERIA

APPENDIX D – MCC PLANNING AND CONTAMINATED LAND TECHNICAL GUIDANCE 2021

1. INTRODUCTION

1.1. Brief

Ramboll UK Ltd was appointed by First Street Developments Ltd to provide a range of consultancy services, which included contaminated land consultancy, for the proposed development of Plot 10a, First Street, Manchester. Plot 10a is a part of a larger parcel of land formerly referred to as 'Plots 6 and 7', which was then renamed as 'Plots 9 and 10'. Plot 6 had become Plot 9 (which was split into development Plots 9a and 9b); and Plot 7 has become Plot 10 (which split into development Plots 10a and 10b). Plan showing the proposed site boundary and context of the plots is provided in Figure 1 and 2 below.

At the time of writing this report, the Planning Application for the site development at Plot 10a had been submitted to Manchester City Council (136043/FO/2023) dated 23rd January 2023. However, a decision is still outstanding, but the Contaminated Land Officer has attached conditions relating to contaminated land. A Remediation Strategy will be required to discharge Condition CLAND01 part a). Planning Condition CLAND01 b) requires a Completion / Verification Report to have been undertaken prior to occupation of the site. The conditions are included within Appendix A.

1.2. Previous Reports

There have been several reports already prepared for the site. Previous ground investigation and contaminated land risk assessment work has mostly been prepared for the combined Plots 9 and 10.

This report should be read in conjunction with the following Ramboll reports:

- Ramboll, 2022, Plot 10a Development First Street Manchester, Ground Contamination Risk Assessment Letter Report;
- Ramboll, 2020, Plot 9 and Plot 10 First Street Manchester, Contaminated Land Interpretive Report, (Ref:1620002943-GCLIR-03);
- Ramboll, 2019, Plot 9 and Plot 10, First Street Manchester, Waste Classification Letter Report;
- Ramboll, 2018, *Plots 6 & 7 First Street, Manchester – Geotechnical and Contaminated Land Interpretative Report*, Report Ref: 1620002943-GCLIR-02, rev. 2, March 2018;
- Ramboll, March 2017, Contaminated Land Desk Study – Plot 6/7 First Street, Report Ref: 1620002943_CLDS_01;
- Ramboll, February 2017, Ground Investigation Review, Plot 6/7 First Street, Manchester, Report Ref: 1620002943;
- Cundall, 2016, Geoenvironmental Assessment Plot 6/7 First Street, Manchester, (Ref:1011906.RPT.GL.005).

Details from these reports are referenced as appropriate.

1.3. Proposed Development

The proposed development of Plot 10a comprises construction of a ground floor plus 12-storey office building for use Class E. Partial basement in the north-western area of the development is proposed. No car parking spaces are included within the design, however, approximately 204 cycle parking spaces are proposed. There will be limited landscaping included within the development. The internal space of the office building is 20,155 sqm (square metres). The proposed depth of basement (i.e. underside of basement slab) level

is approximately 27.40m AOD. The proposed development design is included within Appendix A.

1.4. Objectives

The objective of this report is to provide a remedial strategy to address any potentially significant pollutant linkages identified and any other potential ground contamination-based risks associated with the proposed development at Plot 10a only.

1.5. Scope

The scope of works for this phase of works includes:

- Provide a remedial strategy detailing actions required to mitigate risks from the pollutant linkages identified and to ensure no new pollutant linkages are created as a result of the development; and
- Provide a verification plan for use during construction to aid confirmation that the remedial strategy has been adhered to during the development.

1.6. Constraints and Limitations

This report is intended for First Street (Developments) Limited for the purpose of assisting them in evaluating the site in the context of the potential development. This report should not be used in whole or in part by any third parties without the express permission of Ramboll in writing.

Ramboll has endeavoured to assess all information provided to them. The report includes summaries of information from external sources and cannot offer any guarantees or warranties for the completeness or accuracy of information relied upon. The proposed design options and recommendations summarised in this report relate to the feasibility of developing on the site are based on information gained at the time of writing the report. Any substantial changes to the use of the site may require a reassessment of the implications of the risks identified and a review of the design options.

The conclusions resulting from this study are not necessarily indicative of future conditions or operating practices at or adjacent to the site.

It should be noted that although every effort has been made to ensure the accuracy of the data obtained from the investigation, the possibility exists for variations in ground and groundwater conditions between and around the borehole locations. In addition, groundwater levels will vary seasonally and with changes in weather conditions.

2. THE SITE

2.1. Site Location

The site is situated on a site north of Hulme Street, Manchester, and is bounded by Plot 10b to the immediate east; Plot 9 to the immediate west, River Street to the north. The site is located at National Grid co-ordinates SJ 83769727 and is shown on Figure 1 and Figure 2 below.

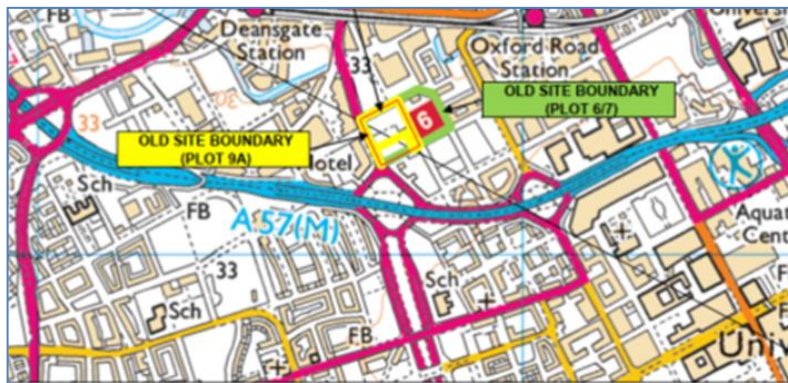


Figure 1 - Site location plan

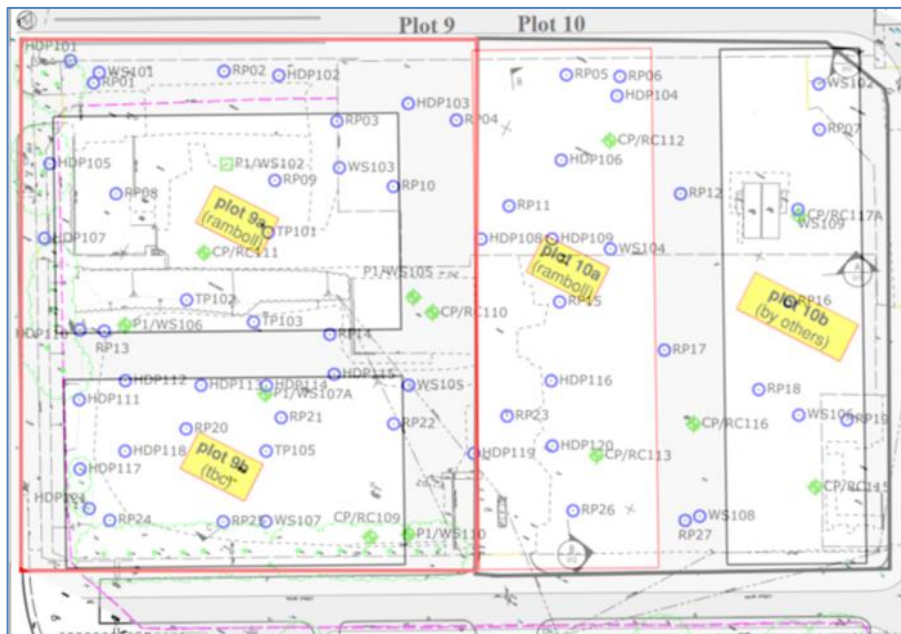


Figure 2 - Plot 10a in the context of the wider plots 9&10 investigation areas

2.2. Site Description

The site is rectangular in shape and is approximately 0.3 Ha in size. The site is situated to the south of River Street and is accessed through the northern site boundary via River Street.

At the time of the 2016 and 2017 site investigation, Plot 6 (Currently Plot 9 west of the site) was used for storage of building material for the Plot 5 development to the north. Plot 7 (currently plot 10) was occupied by site cabins and car parking. At the time of writing (March 2023) Plot 9 is under construction and Plot 10a and Plot 10b are being used for construction offices and car parking relating to the development of Plot 9.

There is one access gate along the northern boundary between Plot 9 and Plot 10a which is monitored by CCTV. A bin store access is also noted along the northern site boundary of Plot 10a. There are intermittent areas of hardstanding (concrete/asphalt) across the site.

2.3. Ground Model

The Ramboll Waste Classification letter report (March 2020) identified the following ground conditions onsite:

- Made Ground Granular
- Made Ground Black Ashy Material
- Made Ground Cohesive/Mixed
- Possible Made Ground- Cohesive/Granular reworked natural material (Glaciofluvial Deposits)
- Alluvium
- Glaciofluvial Deposits
- Sandstone (weak/weathered)

Further details are provided in the previous reports.

2.4. Conceptual Site Model

Information presented in previous reports has been used to develop a conceptual model for the site.

The potentially significant pollutant linkages identified for plot 10a which need to be carried on through the remedial strategy are listed in Table 2.1 below.

Table 2.1: Potentially Significant Pollutant Linkages Identified for Plot 10a

Pollutant Linkage	Additional Actions Required
Asbestos in Made Ground across the site.	Risk management measures required to address potential risks to human health (construction workers and off-site receptors) during construction.
Hydrocarbons and Semi Volatile Organic Carbon (SVOCs) in soils above water supply pipe threshold for PE pipe.	Barrier pipe recommended.
Potential additional impacts e.g. beneath site cabins and where site investigation access was restricted, or unexpected / unidentified contamination which may be encountered during works.	Risk management measures required in remedial strategy.

3. DEVELOPMENT PROPOSALS AND REMEDIAL DESIGN STATEMENT

3.1. Proposed Development

The proposed development of Plot 10a comprises construction of a Ground Floor plus a further 12-storey office building for use Class E. A partial basement is proposed in the north-western area of the building. No car parking spaces are included within the design, however, approximately 204 cycle parking spaces are proposed. There will be limited landscaping included within the development. The internal space of the office building is 20,155 sqm (square metres). The proposed depth of basement (i.e. underside of basement slab) level is approximately 27.40 m AOD. The proposed development plans are included within Appendix B.

3.2. Ground Contamination Risks From Proposed Development

There are a number of design elements that will affect the current ground conditions and thus may have a potentially significant effect on ground contamination risks at the site. These are summarised in Table 3.1.

Table 3.1: Design Details

Design Feature	Development Details	Implication for Ground Contamination Risks
Earthworks Cut and fill	Full details not known at the time of writing. However, a basement is to be excavated which covers the north-western area of Plot 10a. The basement level is approximately 27.4m AOD. Therefore, it is calculated that the basement will be 5.7m deep from the existing ground level.	Strategy for material management required to address reuse of materials under the CL:AIRE Code of Practice and ensure appropriate waste management procedures adopted for materials surplus to requirements.
Drainage	Drainage design has yet to be finalised. However, it is likely that all surface water drainage will discharge to public sewerage network. There are understood to be no soakaways intended as part of the development scheme.	No additional associated risks to the water environment. Soil arisings from any new excavation to be managed under a material management strategy.
Potable water supply pipes	The finalised new potable water supply pipe route is not known at the time of writing.	Due to the presence of organic compounds in Made Ground soils, it is recommended that barrier pipe be used for potable water supply pipes. Additional soil sampling and analysis may be required along the route of any proposed potable water supply with subsequent assessment in accordance with current guidance. Consultation with the Water Authority as to the type of water pipe to be used and verification plan required. Soil arisings from any new excavation to be managed under a material management strategy.
Foundations	Current foundation solution to comprise CFA or rotary bored piles to the bedrock, expected an average depth of 9.5m bgl.	Given the geology identified and the type of piling selected, the piles are considered unlikely to pose an additional risk to controlled waters. Hard standing across the site will also aid mitigation of any such potential risks. Pile arisings to be managed under a material management strategy. A piling risk assessment will be required from the contractor to demonstrate no additional risks to the water environment.
Landscaping	No significant areas of planned soft landscaping. Potential for minor areas of tree pits and scrub planting.	Any imported topsoil will need to conform to BS3882:2015 for Topsoil and also the suitability for use criteria for Human Health for the proposed end use.

3.3. Remedial Design Statement

Remedial mitigation measures have been identified based on the potentially significant pollutant linkages identified in the previous reports and additional specific implications of the proposed development (summarised in Table 3.1).

The following are to be incorporated into the development design and construction to allow for the safe development of the site.

- Requirement for barrier pipe for any potable water supply pipes;
- Protection of future site users from contact with asbestos fibres in areas of soft landscaping;
- Mitigation of risks to construction workers and general public from asbestos during construction works;
- Re-use of site won material under the CL:AIRE Waste Code of Practice Protocol;
- Procedures for dealing with previously unidentified contamination; and
- Validation Works: Verification during works and a final validation report will be required on completion of ground works to confirm that all actions required in this report have been completed appropriately for safe development.

Specific elements of the remedial strategy are presented in the following chapters to include the above considerations.

A Verification Plan is also presented which will inform the principal contractor as to the data requirements for preparation of a Verification Report on completion of ground works.

4. REMEDIAL STRATEGY SPECIFIC REQUIREMENTS

4.1. Cut and Fill Earthworks

All material management should be carried out under the CL:AIRE Waste Code of Practice (WCoP) to ensure appropriate material management procedures are adopted for materials reused on site. A separate CL:AIRE CoP Material Management Plan (MMP) will be required with the associated 'declaration' made by a Qualified Person as defined by CL:AIRE WCoP.

This development will result in a significant surplus of material but will also include some reuse of materials following excavation.

Excavated soils should be stockpiled according to material types to avoid mixing of different waste streams. Stockpiled soils are to be sampled for chemical testing and assessment for suitability for re-use and / or waste classification (further details in the sections below).

Should excavations reveal soils which are identified as potentially contaminated through visual indicators such as black staining or olfactory indicators such as strong hydrocarbon odours, the materials should be stockpiled separately from other excavated materials free of visual or olfactory contamination. Similarly, visual evidence of asbestos containing materials should be considered separately (see section on management of asbestos below).

The Contractor should take all practicable measures to ensure water does not enter excavations. In the event of water entering excavations the Contractor should take suitable measures to ensure it does not become contaminated. Any water entering excavations must be disposed of in a suitable manner. All records of volume, and where it was disposed of will need to be kept as they will need to be reported within a site Environmental Verification Report.

4.1.1. Management of Asbestos Containing Soils

Some asbestos containing materials were identified within the Made Ground soils. There is also a potential for further discrete impacts of asbestos which may be encountered during the excavations to be completed at this site.

Under the Control of Asbestos Regulations 2012, the production of a 'Plan of Work' or an Asbestos Management Plan (AMP) is required for all works dealing with asbestos.

An AMP can be a standalone document or could be included within the material management plan and should detail the specific asbestos control measures used to facilitate safe systems of work to ensure the safety of construction workers, local residents and the surrounding environment.

An AMP should be produced in conjunction with the Principal Contractor who is required to produce specific construction related risk assessments and protocol statements in relation to work with asbestos impacted soils.

Details of the AMP would further link to the MMP relating to the reuse or offsite disposal of site won soils.

The AMP should contain *inter alia*:

- Details of types, quantifies and state of degradation of asbestos contained onsite;
- Assessment of intended site activities and if they consist of licenced or non-licensed asbestos works;
- Details of all stakeholders, role and responsibilities and a communication protocol;
- Details of the working methodologies and asbestos working controls; and
- Details of asbestos waste management.

During the construction phase, onsite verification of the implementation of the control measures is required the details of which should be reported within a site Environmental Verification Report.

4.1.2. Reuse of site won materials

It is intended that soil is re-used on site using the procedures outlined in the CL:AIRE Waste Code of Practice.

There is to be a net surplus of material, thus there is likely to be only minimal reuse of material.

Site won Made Ground is considered chemically suitable for use beneath hardstanding, engineered site surfacing or below 450mm where there is no direct contact pathway via which future site users may be affected by asbestos impacts.

Made Ground soils intended for re-use beneath areas of hardstanding will require no additional testing where visual or olfactory evidence of contamination is absent.

Any materials with significant visual / olfactory evidence of contamination should be managed in accordance with the procedures for unexpected contamination detailed below.

4.1.3. Waste Management

The proposed development layout includes a net surplus of material due to the excavation of the partial basement in the north-western area of the site, to approximately 5.7m below the existing ground level. A summary of likely waste classifications based on the previous reports, is provided in Table 4.1 below.

Table 4.1: Waste classification summary

Strata	Waste classification	Notes
Made Ground Granular (hardstanding materials)	Non-hazardous.	Allowance for localised asbestos impacts which would be classified as hazardous
Made Ground Black Ashy Material	Non-hazardous.	Allowance for localised asbestos impacts which would be classified as hazardous.
Made Ground Cohesive Mixed	Non-hazardous.	Potential for localised pockets of asbestos containing materials (ACMs) in deeper made ground in foundation backfill. Hand picking of asbestos should allow the quantities of materials classified as hazardous to be minimised. Likely to be suitable for disposal as inert, confirmation would be required from landfill operator.
Possible Made Ground / reworked glacial clays	Non-hazardous.	Likely to be suitable for disposal as inert, confirmation would be required from landfill operator.
Glaciofluvial	Non-hazardous.	
Alluvium	Non-hazardous.	Organic content makes it unlikely this will pass inert WAC.
Sandstone	Non-hazardous.	Inert

The classification of waste reported above must be confirmed by the receiving landfill prior to disposal, under Duty of Care. Any material to be disposed of as hazardous or inert must have WAC analysis provided to confirm appropriate class of landfill.

The following documentation must be completed and held on site for the removal of waste:

- Waste Transfer Notes (Controlled Waste) including EWC classification,
- Consignment Notes (Hazardous Waste).

The Transfer Note must include a description and the quantity of the waste and details of the waste collection contractor who must be licensed. Copies of the waste carrier registration shall be held on site. Sufficient information shall be provided to ensure that the waste disposal operator is aware of the potential hazards of the substance.

The Contractor must ensure that the waste is taken to an appropriately licensed facility.

4.2. Clean Capping and Imported Materials

In soft landscaped areas, a minimum 450mm thickness of clean imported material is required to provide a planting medium and reduce potential for exposure to asbestos impacted subsoil. This cover layer should be separated from the underlying Made Ground using a marker layer.

For materials intended to be imported onto site and used as part of the development, consideration should be given to the following:

- Any material imported to the site shall be analysed geotechnically and chemically to ensure it is suitable for use. Chemical suitability for use shall be considered for soils intended for use at shallow depth. This should be undertaken prior to bringing any such material onto the site. All records must be kept and included within the Environmental Verification Report.
- All materials imported for use in soft landscaped open space shall be free from man-made ameliorants and also conform to the specific requirements of the Landscape Architect.
- In all areas topsoil is imported, certificates shall be provided to demonstrate the material is suitable for use with reference to the British Standard for Topsoil (BS3882:2015).
- It will be necessary to ensure imported materials do not exceed the relevant assessment criteria provided in Appendix C.
- If the imported material is to be from a brownfield source, the material shall be tested at a minimum frequency of 1 per 150m³ or at least three samples for each source whichever is the greatest as per the Manchester City Council Guidance included within Appendix D.
- Onsite testing is required to validate the suitability for use and to verify the thickness of clean cap emplaced in soft landscaped areas. The frequency of testing will be 1 sample per 150m³ or at least three samples for each source whichever is the greatest as per the Manchester City Council Guidance included within Appendix D.
- Virgin quarried material will need to be tested at a frequency of two samples per source when intended for use at shallow depth.
- Care must be taken to confirm the source of all aggregates being imported onto the site. Inert material or soils may be classed as waste, depending on their source. The producer of aggregate must show the material has been fully recovered and is no longer a waste. To do this the producer must follow the quality protocol for the production of aggregate from inert waste, as outlined by WRAP. All documentation will need to be included within the verification report.
- All chemical testing shall be undertaken at an appropriately accredited laboratory (UKAS and MCERTs).
- The use of chemical testing results provided solely by the supplier to determine suitability would not be considered acceptable.
- If chemical test results exceed the assessment criteria then the frequency of testing shall be increased as required to determine the reasons for the exceedances and confirm that the materials are suitable for use or an alternative source used.

- Documentation on the source, quantity and testing results shall be retained onsite for inspection and subsequent inclusion in the verification report.

The Contractor shall retain records on the location, depth of excavations and how/where any imported material is placed. The Contractor shall supply compliance reports for validation reporting.

4.3. Areas of Unexpected Contamination

Any material encountered during enabling works that shows visual and / or olfactory evidence of potentially significant contamination should be assessed by the project Environmental Consultant (Ramboll) to determine potential for re-use.

Segregated stockpiles of suspected contaminated arisings should be tested at a frequency of 1 sample per 100m³ with a minimum of three samples per stockpile. Each sample should comprise of four sub samples collected at random from the stockpile and bulked. Samples should be kept in accordance with the requirements for MCERTS accreditation and testing should be undertaken by a UKAS accredited facility.

Soil samples should be analysed for the suspected contaminants of concern in consultation with the project Environmental Consultant. Additional samples should be taken from the walls and base of any additional excavation deemed necessary to remove significant contamination in order to demonstrate that the material remaining in-situ is chemically suitable for use. A sufficient number of samples should be taken under the guidance of the project Environmental Consultant to ensure a representative spread of data is available for the material types present remaining within the excavation.

In order to reuse the soil on site it will need to be demonstrated that the soil adheres to the chemical reuse criteria presented in Appendix C. Should material fail the chemical specification, then the project Environmental Consultant (Ramboll) should be consulted immediately to assess the material further and recommend appropriate risk management measures.

It will be necessary to retain all records relating to testing, quantity, depth and location of the material identified. Where such material is re-used, it will be necessary to retain records on where this material was placed and depth it was placed.

If this material is removed off-site, then in addition to records on the source area outlined above, it will also be necessary to retain records relating to waste transfer notes, quantities and the receiving site (see waste management section).

The Contractor shall be required to provide a method statement describing how any areas of unexpected contamination encountered will be addressed during the earthworks. This is likely to include:

- The Contractor stopping work in that area and immediately informing the project Environmental Consultant to discuss the proposed action;
- Sample the unexpected contamination to assess the nature of the material;
- No works to commence in the area of unexpected contamination until the contamination has been identified and proposed method of excavating, placing elsewhere onsite during the works, or possible export offsite is understood;
- It may be necessary to place the impacted material in a bunded area of the site, and possibly sheeted (to limit any water ingress), whilst the information on the material is gathered; and
- Inform the Local Authority and agree proposals for dealing with the impacted material as appropriate.

4.4. Piling Risk Assessment

Once the final piling solution is confirmed, a piling risk assessment will be required to ensure there is no significant risk to the underlying aquifer resource or human health receptors. This will need to be agreed with the regulator prior to piling works commencing.

4.5. Buried Plastic Water Pipes

Protection measures are considered necessary for buried plastic drinking water pipes due to the elevated concentrations of hydrocarbons in shallow Made Ground.

The measures typically comprise the introduction of a suitable backfill material into service trenches and/or upgrading water pipes to a proprietary material such as "Protectaline".

Given the history of this site and surroundings, barrier pipe is recommended at this site. Correspondence should be undertaken with the local water authority to determine the extent of additional sampling required, if any.

5. VERIFICATION PLAN

The remedial works required to ensure a safe development must be documented and a verification report prepared following the completion of all ground works to demonstrate compliance with this remedial strategy.

Table 5.1 below provides a detailed Verification Plan to be followed during works.

The Contractor will be responsible for keeping and providing the appropriate records. A part time watching brief by the project Environmental Consultant comprising site visits during key aspects of the remedial works should be completed. An Independent Verification Report would then be prepared following completion of the ground works to provide details of works as witnessed and verification of required documentation provided by the Contractor.

Table 5.1 Verification Plan

Item	Potential Risk	Risk Mitigation	Method of Validation
V1	Asbestos fibres in made ground – risk to construction workers and neighbouring residents during construction	Minimise risk of any asbestos fibres being released during construction and ensure H&S precautions are in place.	Contractor to provide copy of AMP. Details of induction presentation which shows asbestos risks, the PPE used and face fit certificates for respirators if required. Plans of where asbestos was found. Chemical testing certificates for any asbestos found. Details of any site specific measures taken e.g. dampening down methods such as spraying and wheel washing of vehicles on exit from site. Details of any hand picking of asbestos or other measures to segregate asbestos impacted waste streams.
V2	Asbestos in soils – risks to future site users	Remove direct contact pathway through provision of a clean soil cover to soft landscaped areas.	Confirmation that site won soils are all below specified depths in landscaped areas or below hardstanding, including photograph evidence of cover layers.
V3	Tainting of potable water supply	Barrier pipe.	Email confirmation from United Utilities that they are satisfied with pipe assessment and specification. Photographic evidence of the installation and material used. Site visits from the Environmental Consultant during the installation. Chemical analysis for the trench backfill. Plan of where the potable water pipes are located including depths.
V4	Introduction of contamination from soils imported to the site	Checks made to ensure soils brought to site are suitable for use based on the acceptance criteria in Appendix C. Imported soils must be accompanied by chemical testing data. Imported soils should not contravene waste legislation.	Where materials imported to the site could be considered a 'waste', details to demonstrate that the material is not a 'waste' or that waste legislation has been complied with. Details of source of imported material and, where necessary, chemical testing certificates to demonstrate suitability for use against criteria in Appendix C. Volumes of imported material. Plans of where it was temporarily stored, and where it was finally placed, including thickness. For imported topsoil, certificates required to demonstrate it complied with BS3882:2015 and does not exceed the re-use criteria in Appendix C.
V5	Reuse of soils	Strategy for reuse of soils on site.	Details of where the material was excavated from onsite, including volumes. Where material was placed, thickness of material placed, temporarily and permanently. Details of capping of the material in soft landscaping areas. Adherence to the MCC capping guidance for minimum 450mm clean topsoil in

Item	Potential Risk	Risk Mitigation	Method of Validation
			landscaped areas. Details of site working methods, including how stockpiles have been managed.
V6	Contamination being identified which was not anticipated	Dealing with unexpected contamination appropriately and under liaison with the project Environmental Consultant. Dealt with in accordance with the Remediation Strategy.	Records relating to any unexpected contamination identified and actions taken to address this, together with regulator liaison where necessary. Records including where it was identified, where it was stored prior to disposal, where it was disposed to, chemical analysis of the materials and waste assessment and all records of transportation and licences of waste carriers.
V7	Piling activities introducing preferential pathways for contaminant migration	Piling Risk assessment to be provided by contractor and agreed with regulator.	Details of piling risk assessment and regulatory agreement to be provided. Any change in methodologies during site works to be reviewed and documented appropriately to demonstrate risk minimisation.

APPENDIX A PLANNING CONDITIONS



To	Head of Planning	FAO: Angela Leckie
From	Head of Compliance, Enforcement and Community Safety	
Contact Officer:	Laura Miller	Our Ref: 764501
Date:	17 February 2023	Telephone: 31742

Consultation on Planning Application

Application No: 136043/FO/2023

Description: Erection of 13-storey office building (Use Class E) with associated public realm, external roof terraces (level 12 and 13) and other associated works including external amenity spaces (Plot 10A).

Location: Land Bounded By River Street To The North, Plot 10B To The East, Hulme Street To The South And The Development Plot 9A To The West, Manchester,

I write in response to your memorandum of the 31 January 2023 regarding the above application and to inform you that I have considered the application and recommend that the following conditions are attached to any approval.

CONSTRUCTION MANAGEMENT PLAN¹

Prior to the commencement of development, a construction management plan outlining working practices shall be submitted to and approved in writing by the City Council as Local Planning authority, which for the avoidance of doubt shall include as a minimum:

- Measures to control noise and vibration;
- Dust suppression measures;
- Compound locations where relevant;
- Details of an emergency contact telephone number;
- A community consultation plan; and
- Sheeting of construction vehicles.

The development shall only be carried out in accordance with the approved management plan.

Reason - To safeguard the amenities of nearby residents pursuant to policies SP1, EN19 and DM1 of the Manchester Core Strategy.

¹The submitted CMP seems to be acceptable, there are some unknowns in it, so a final version should be submitted for approval prior to works commencing.

**The applicant should refer to our noise from building sites [webpage](#) for further information/guidance and also [IAQM/EPUK Construction Guidance on controlling emissions](#).*

*** (For city centre major developments) In addition to the IAQM guidance, MCC recommends that Non-Road Mobile Machinery (NRMM) used on the site of any major development within Manchester city centre for the purpose of construction or demolition works should meet Stage IV of EU directive 97/68/EC, and Stage IIIA as a minimum.*

DEMOLITION/CONSTRUCTION HOURS

Construction/demolition works shall be confined to the following hours unless otherwise agreed in writing by the City Council as local planning authority:

- Monday - Friday: 7.30am - 6pm
- Saturday: 8.30am - 2pm
- Sunday / Bank holidays: No work

Reason - To safeguard the amenities of nearby residents pursuant to policies SP1, EN19 and DM1 of the Manchester Core Strategy.

HOURS1

The premises shall not be open outside the following hours unless otherwise agreed in writing by the City Council as local planning authority:-

To be agreed

Reason - To safeguard the amenities of the occupiers of nearby residential accommodation.

HOURS2

Deliveries, servicing and collections, including waste collections shall not take place outside the following hours: 07:30 to 20:00, Monday to Saturday, Sunday/Bank Holiday deliveries etc shall be confined to 10:00 to 18:00

Reason - To safeguard the amenities of the occupiers of nearby residential accommodation.

LIGHT1

a) Before the use hereby approved commences external lighting shall be designed and installed in accordance with a scheme approved in writing by the City Council as local planning authority so as to control glare and overspill onto nearby residential properties.

b) Prior to occupation of the development a verification report shall be required to validate that the work undertaken throughout the development conforms to the recommendations and requirements in the approved light consultant's report. The report shall also undertake post completion testing to confirm that acceptable criteria have been met. Any instances of

non-conformity with the recommendations in the report shall be detailed along with any measures required to ensure compliance with the criteria.

Reason - To safeguard the amenities of the occupiers of nearby properties.

NSE1 – fitness studio²

a) The premises shall be acoustically insulated and treated to limit the break out of noise in accordance with a noise study of the premises and a scheme of acoustic treatment that has been submitted to and approved in writing by the City Council as local planning authority. The scheme shall be implemented in full before the use commences or as otherwise agreed in writing by the City Council as local planning authority.

Where entertainment noise is proposed the L_{Aeq} (entertainment noise) shall be controlled to 5dB below the L_{A90} (without entertainment noise) in each octave band at the facade of the nearest noise sensitive location.

b) Prior to occupation of the development a verification report shall be required to validate that the work undertaken throughout the development conforms to the recommendations and requirements in the approved acoustic consultant's report. The report shall also undertake post completion testing to confirm that acceptable criteria have been met. Any instances of non-conformity with the recommendations in the report shall be detailed along with any measures required to ensure compliance with the agreed noise criteria.

Reason - To safeguard the amenities of the occupiers of the building and occupiers of nearby properties.

²The submitted acoustic report (Cundall, 12 January 2023) does not include an assessment of noise break out and internal transfer from the proposed ground floor fitness studio. This assessment is required for part a) of this condition.

NSE2

Shall only allow use of external areas within the application site in accordance with a schedule of days and hours of operation submitted to and approved in writing by the City Council as local planning authority, and shall not allow for the use of amplified sound or any music in these external areas at any time.

Reason - To safeguard the amenities of the occupiers of nearby properties.

³The submitted acoustic report (Cundall, 12 January 2023) does not include noise from the use of the external terraces on levels 12 and 13 nor the winter garden. An assessment is required based on maximum capacity of these areas.

NSE6⁴

a) Externally mounted ancillary plant, equipment and servicing shall be selected and/or acoustically treated in accordance with a scheme designed so as to achieve a rating level of 5dB (L_{Aeq}) below the typical background (L_{A90}) level at the nearest noise sensitive location. Prior to commencement of the use hereby approved the scheme shall be submitted to and approved in writing by the City Council as local planning authority in

order to secure a reduction in the level of noise emanating from the site. The scheme shall be implemented in full before the use commences or as otherwise agreed in writing by the City Council as local planning authority.

b) Prior to the operation of the scheme a verification report shall be submitted to and approved in writing by the City Council as local planning authority to validate that the work undertaken throughout the development conforms to the recommendations and requirements in the approved acoustic report. The report shall also undertake post completion testing to confirm that the noise criteria have been met. Any instances of non-conformity with the recommendations in the report shall be detailed along with any measures required to ensure compliance with the agreed noise criteria.

Reason - To minimise the impact of the development and to prevent a general increase in pre-existing background noise levels around the site.

⁴The submitted acoustic report (Cundall, 12 January 2023) proposes limits for external plant. At the time of writing the specifications for the plant were not known. An addendum report is required to satisfy part a) of the condition once the plant has been confirmed.

REF⁵

The details of the approved scheme shall be implemented as part of the development and shall remain in situ whilst the use or development is in operation.

Reason - In the interests of amenity and public health.

⁵The Waste Management Strategy submitted with the application is acceptable.

Emergency Generators

The testing of the emergency diesel generators hereby approved shall be restricted to the following hours and to total no more than 50 hours a year, unless agreed in writing by the City Council as local planning authority.

- Monday to Friday 09:00 to 18:00
- No testing to be undertaken at the weekend or on a Bank Holiday

Reason – In the interests of residential amenity pursuant to policies <insert>

AIR QUALITY 1⁶

a) Prior to commencement of the development, an air quality impact assessment together with any mitigation measures to safeguard local air quality shall be submitted to and approved in writing by the City Council as local planning authority.

b) Prior to occupation of the development any agreed mitigation measures shall be implemented and verified as such in writing by the City Council as local planning authority and shall remain in situ whilst the use or development is in operation.

Reason: To secure a reduction in air pollution from traffic or other sources in order to protect existing and future residents from air pollution, pursuant to policies EN16, SP1 and DM1 of the Core Strategy.

⁶The Environmental Protection Team has read the submitted Air Quality Assessment (Cundall, 12 January 2023). The scheme is to be all electric with heating being provided via ASHPs and car free. It has been recommended to consider the installation of particulate filters on the clean air intakes where practicable. Notwithstanding the outcome of the assessment best practice principles from the IAQM will still need to be applied (i.e. charging points for disabled spaces)

CLAND01⁷

a) Before the development hereby approved commences, a report (the Preliminary Risk Assessment) to identify and evaluate all potential sources and impacts of any ground contamination, groundwater contamination and/or ground gas relevant to the site shall be submitted to and approved in writing by the City Council as local planning authority. The Preliminary Risk Assessment shall conform to City Council's current guidance document (Planning Guidance in Relation to Ground Contamination).

In the event of the Preliminary Risk Assessment identifying risks which in the written opinion of the Local Planning Authority require further investigation, the development shall not commence until a scheme for the investigation of the site and the identification of remediation measures (the Site Investigation Proposal) has been submitted to and approved in writing by the City Council as local planning authority.

The measures for investigating the site identified in the Site Investigation Proposal shall be carried out before development commences and a report prepared outlining what measures, if any, are required to remediate the land (the Site Investigation Report and/or Remediation Strategy) which shall be submitted to and approved in writing by the City Council as local planning authority.

b) When the development commences, the development shall be carried out in accordance with the previously agreed Remediation Strategy and prior to occupation a Completion/Verification Report shall be submitted to and approved in writing by the City Council as local planning authority.

In the event that ground contamination, groundwater contamination and/or ground gas, not previously identified, are found to be present on the site at any time before the development in each phase is occupied, then development shall cease and/or the development shall not be occupied until, a report outlining what measures, if any, are required to remediate the land (the Revised Remediation Strategy) is submitted to and approved in writing by the City Council as local planning authority and the development shall be carried out in accordance with the Revised Remediation Strategy, which shall take precedence over any Remediation Strategy or earlier Revised Remediation Strategy.

Reason - To ensure that the presence of or the potential for any contaminated land and/or groundwater is detected and appropriate remedial action is taken in the interests of public safety, pursuant to [INSERT] of the Unitary Development Plan for the City of Manchester.

⁶The Environmental Protection Team has read the submitted Contaminated Land cover letter (Ramboll, September 2022). We have previously seen the referenced supporting

reports for other plots within the First Street estate. Within the cover letter the gas risks have been reassessed and I agree with classing the site as CS1, especially given the excavations to form a basement. The letter recommends that a remediation strategy is produced, along with a piling risk assessment and MMP. These documents will need to be submitted before part a) of the condition can be discharged.

Information for Developers guidance documents can be downloaded using the following link:

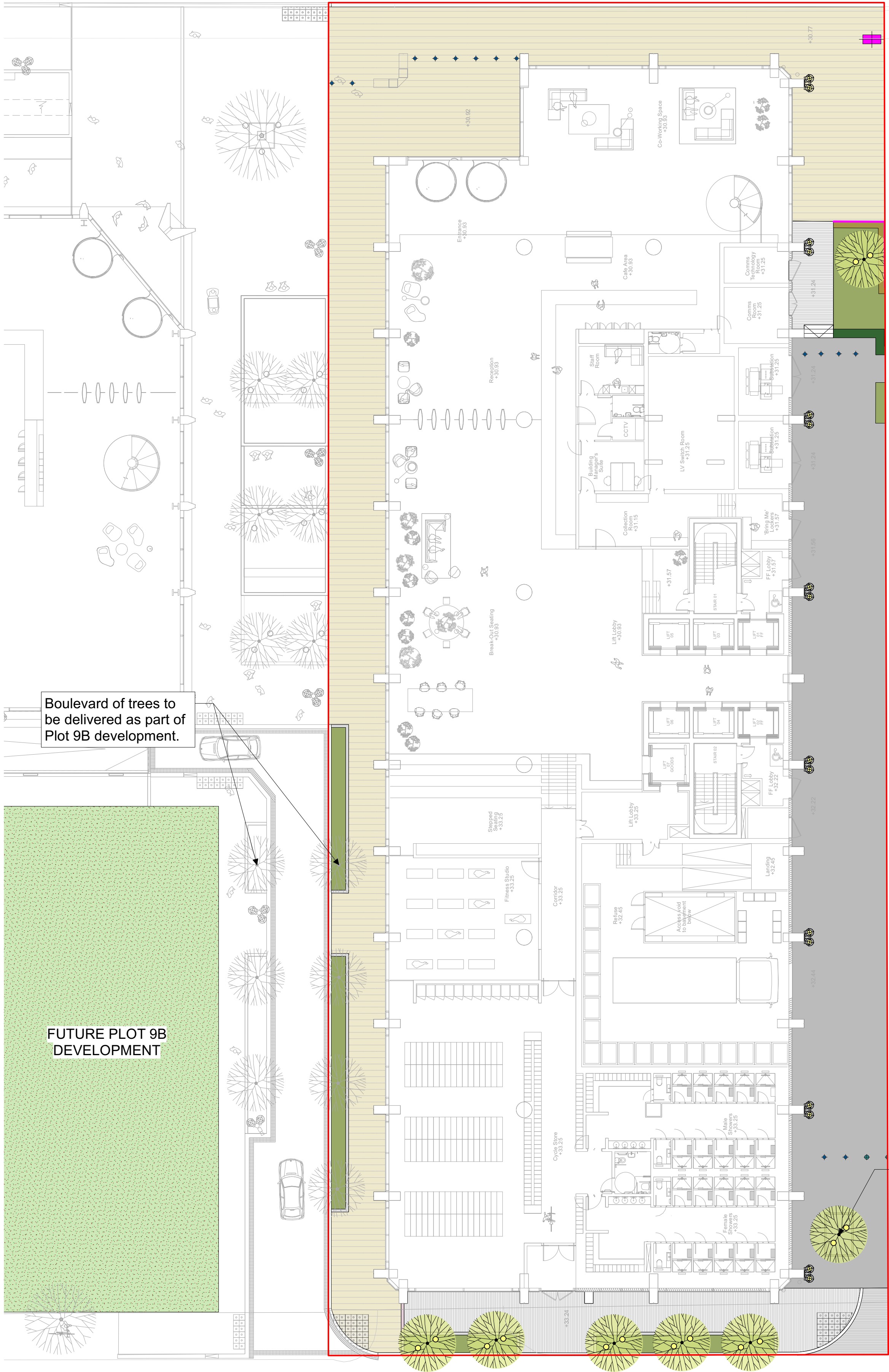
http://www.manchester.gov.uk/info/500207/planning_and_regeneration/1962/additional_planning_guidance/3

Should you wish to discuss this matter further please contact Laura Miller.

Fiona Sharkey
Head of Compliance, Enforcement and Community Safety

APPENDIX B PROPOSED DEVELOPMENT PLANS

RIVER STREET



Boulevard of trees to be delivered as part of Plot 9B development.

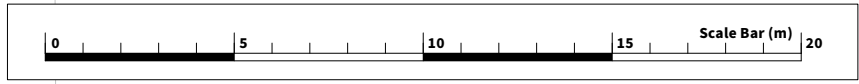
FUTURE PLOT 9B DEVELOPMENT

MEANWHILE LAWN
Species rich wildflower lawn to be installed on plot 10B

Tree in planter to be delivered as part of plot 10B development. Access required for servicing to plot 10A.

WILMOTT STREET

HULME STREET



KEY	HARDWORKS	SOFTWORKS	LIGHTING
Application Boundary	YORKSTONE FLAG PAVING - Sandstone paving to match specification of existing First Street surfacing	SEMI-MATURE TREE - Proposed	BUILDING MOUNTED LIGHTING
	LINEAR CONCRETE BLOCK - Option to use permeable system	SHRUB/PERENNIAL PLANTING	SEAT STRIP LIGHTING
	PERMEABLE CEDEK SURFACING - Option bound gravel finish	HEDGE - Instant, trough grown, 1.2m high, 1m troughs	PLANTING UPLIGHTER - In soft
	INSITU CONCRETE SURFACING	TEMPORARY MEANWHILE USE LAWN - Species rich wildflower lawn to be installed to future Plot 10B - To be removed before the construction of Plot 10B	PROPOSED FIXED BOLLARD Bo1
	UPSTAND KERB - Granite upstand kerb; W: 300mm, H: 60mm		PROPOSED FIXED BOLLARD Bo2 - Automatic telescopic bollards
	FLUSH KERB - PLANTER EDGING - Granite flush kerb; W: 200mm		TREE PLANTER 3m x 2m - To Hulme Street site entrance
	FLUSH KERB - Granite flush kerb; W: 200mm		TIMBER BENCH
	GRANITE STEPPS		WAY FINDING TOTEM
	GRANITE BLISTER HAZARD PAVING		
	TEMPORARY TIMBER RAILING To be removed before the construction of Plot 10B		

Revision	Date	Description	Drawn	Apprvd.
S1-P04	12-01-23	Minor amendments	YH	RM
S1-P03	04-01-23	Layout update	YH	RM
S1-P02	15-09-22	Layout update	VE	RM
S1-P01	02-09-22	First Issue	VE	RM

Client	Ask	
Project	First Street Plot 10a	
Drg Title	General Arrangement	
Created on	Created by	Approved by
02-09-22	YH	RM
Scale	Size	Workstage
1:200	A1	For comment
Drg No.	PL1471.2-PLA-ZZ-00-DR-L-001	
Suitability	Revision	
S1	P04	

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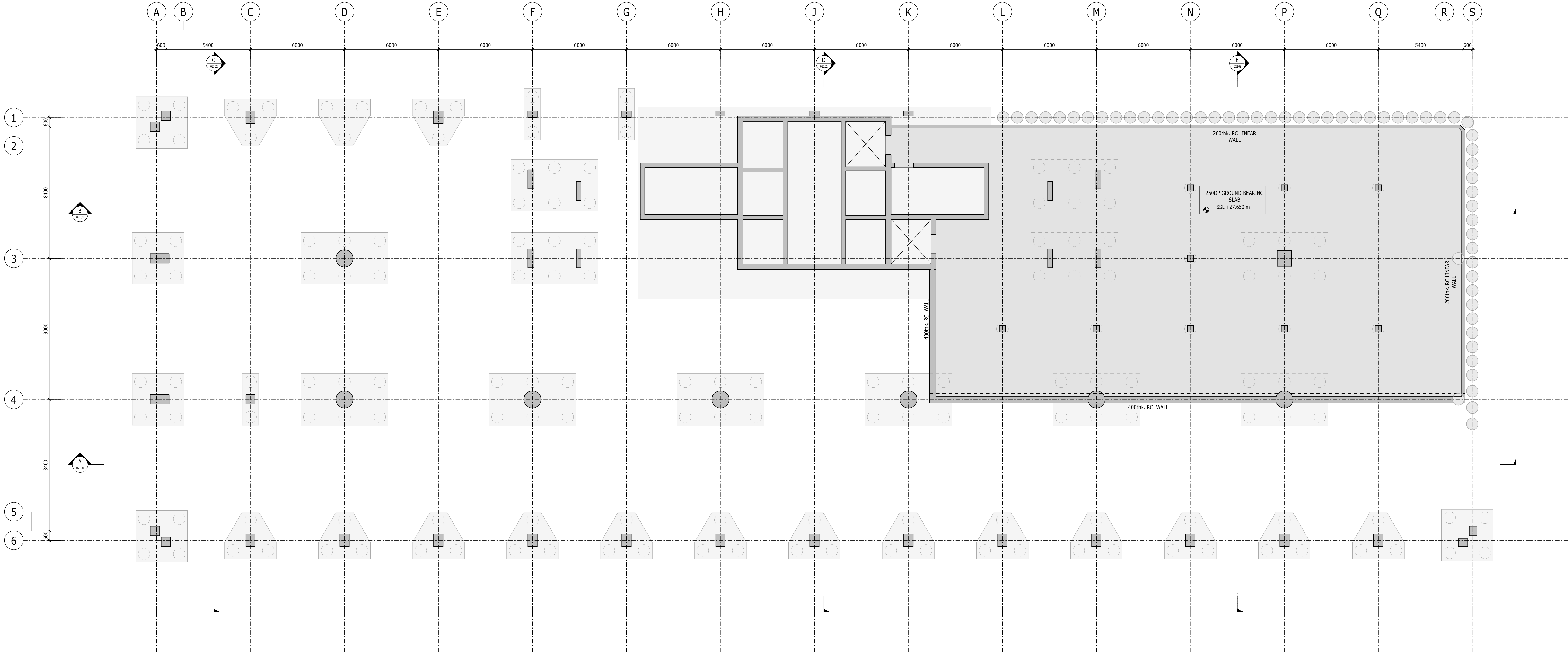
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- FOR GENERAL NOTES, REFER TO RAMBOLL DRAWING No. 1620007819-RAM-XX-XX-DR-S-00010.
- CONTRACTOR TO ALLOW FOR DE-WATERING DURING CONSTRUCTION AS PERCHED GROUNDWATER IS LIKELY TO BE FOUND DURING BASEMENT WORKS.
- WATERPROOFING FOR BELOW GROUND (BASEMENT) AREAS BE IN ACCORDANCE WITH REQUIREMENTS FOR A GRADE II BASEMENT. ALLOW FOR 1 LINE OF DEFENCE CONSISTING OF A WATERPROOFING BARRIER. DETAILS TO BE DEVELOPED BY SPECIALIST DURING DETAIL DESIGN STAGE (RIBA STAGE 4).
- WATERPROOFING FOR GROUND FLOOR AREAS LOCATED BELOW EXTERNAL GROUND LEVELS TO BE IN ACCORDANCE WITH REQUIREMENTS FOR A GRADE III BASEMENT. ALLOW FOR 2 LINES OF DEFENCE CONSISTING OF A WATERPROOFING BARRIER AND WATER RESISTING CONCRETE ADDITIVE. DETAILS TO BE DEVELOPED BY SPECIALIST DURING DETAIL DESIGN STAGE (RIBA STAGE 4).
- ALLOW FOR RESIN-FIXED REINFORCEMENT FOR THE CONNECTION BETWEEN THE BASEMENT SLAB AND THE CONTIGUOUS PILED WALL.
- IT HAS BEEN ASSUMED THAT THE BASEMENT SLAB WILL HAVE A BASIC UNIFORMED FINISH, AND WILL BE RESIN-BONDED AND PAINTED IN ACCORDANCE WITH THE ARCHITECT'S REQUIREMENTS.
- BASEMENT UPSTAND REQUIREMENTS TBC.
- ALLOW FOR FORMING OF OPENINGS REQUIRED FOR MANHOLES IN THE BASEMENT.
- ALLOW FOR LOCALIZED PLINTHS IN WATER TANK LOCATIONS.
- IT HAS BEEN ASSUMED THAT THE ERECTION SEQUENCE FOR THE SUPERSTRUCTURE CONSISTS OF ERECTING FROM BASEMENT LEVEL UP TO LEVEL 2. THE CONTINUOUS PILED WALL WILL NEED TO BE DESIGNED AS UNPROPPED WHILST RESISTING THE SELF-WEIGHT LOADS FROM THE FRAME. THE GROUND FLOOR SLAB WILL BE INSTALLED AFTER THIS, AND THE SLAB MUST BE COMPLETED AND GAINED STRENGTH BEFORE CONCRETING FROM L2 UPWARDS.

P01	STAGE 2 ISSUE	23/09	DM	NSM
Rev	Description	Date	By	App

S2-FOR INFORMATION

FIRST ST PLOT 10a

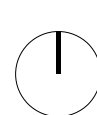


GENERAL ARRANGEMENT BASEMENT LEVEL

Project No:	Scale (B A3):	Date:	Drawn:
1620007819	1 : 100	AUG22	DM
Drawing No:	Rev:		
1620007819-RAM-ZZ-B1-DR-S-00990	P01		



Notes:
— Planning Application Boundary



Project Name: Plot 10a First Street		Title: Proposed Site Plan		Scale: 1:250 @ A1	
Drawn: IB	Checked: JC	Status: Information	Project: 105	Drawing No: MP_02_2200	Rev: H
Details: 13.01.23 Issued for Planning					

Jon Matthews Architects

Union, 2-10 Albert Square, Manchester, M2 6LW

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0161 974 3690



A horizontal scale bar with a black background and white markings. The bar is divided into four equal segments by vertical white lines. The segments are labeled '0', '5', '10', and '15' at the top. The final segment ends at a vertical line labeled '20'. The text 'Scale Bar (m)' is written in black at the top right of the bar.

- 
SEMI-MATURE TREE - Proposed
- 
SHRUB/PERENNIAL PLANTING
- 
HEDGE - Instant, trough grown, 1.2m high, 1m troughs
- 
TEMPORARY MEANWHILE USE LAWN
 - Species rich wildflower lawn to be installed to future Plot 108
 - To be removed before the construction of Plot 108

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6. This drawing must be read with the relevant specification clauses and detail drawings.
7. Order of construction and setting out to be agreed on site.

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S1-P02	11-01-23	Minor amendments	YH	RM
S1-P01	02-09-22	First issue	VE	RM
Revision	Date	Description	Drawn	Apprvd.

APPENDIX C SOIL REUSE CRITERIA

	Generic Assessment Criteria (GAC) for soils - to be protective of human health		REH UK - Soil GAC - v2 July 2022
		Commercial / Industrial	Theoretical Saturation Limit
Pathway	Units		
Metals			
Aluminium	mg/kg	370000	NR
Antimony	mg/kg	7400	NR
Arsenic (C4SL)	mg/kg	640	NR
Barium	mg/kg	22000	NR
Beryllium	mg/kg	12	NR
Boron	mg/kg	240000	NR
Cadmium (C4SL)	mg/kg	410	NR
Chromium (III)	mg/kg	8600	NR
Chromium VI (C4SL)	mg/kg	49	NR
Copper	mg/kg	68000	NR
Lead (C4SL)	mg/kg	2300	NR
Mercury - Elemental	mg/kg	8.9	26
Mercury - Inorganic	mg/kg	1100	NR
Mercury - Methylmercury	mg/kg	290	300
Molybdenum	mg/kg	18000	NR
Nickel	mg/kg	980	NR
Selenium	mg/kg	12000	NR
Tributyl tin oxide	mg/kg	130	241
Vanadium	mg/kg	9000	NR
Zinc	mg/kg	730000	NR
Miscellaneous			
Cyanide (free)	mg/kg	2100*	
Phenol	mg/kg	380 ^[2]	20000
BTEX, MTBE			
Benzene (C4SL)	mg/kg	15	1100
Ethylbenzene	mg/kg	3200	510
Toluene	mg/kg	33000	840
Xylene-m	mg/kg	3400	610
Xylene-o	mg/kg	3700	470
Xylene-p	mg/kg	3300	560
Methyl tert-butyl ether	mg/kg	3800	17000
Total Petroleum Hydrocarbons (TPH)			
TPH Aliphatic C5-6	mg/kg	2400	370
TPH Aliphatic C6-8	mg/kg	5300	160
TPH Aliphatic C8-10	mg/kg	1300	79
TPH Aliphatic C10-12	mg/kg	6100	48
TPH Aliphatic C12-16	mg/kg	43000	24
TPH Aliphatic C16-35	mg/kg	1000000	8.5
TPH Aliphatic C35-44	mg/kg	1000000	8.5
TPH Aromatic C8-10	mg/kg	2200	610
TPH Aromatic C10-12	mg/kg	11000	360
TPH Aromatic C12-16	mg/kg	35000	170
TPH Aromatic C16-21	mg/kg	29000	54
TPH Aromatic C21-35	mg/kg	29000	4.8
TPH Aromatic C35-44	mg/kg	29000	4.8
TPH Ali&Aro C44-70	mg/kg	28000	0.29
Polyaromatic Hydrocarbons (PAHs)			
Acenaphthene	mg/kg	75000	57
Acenaphthylene	mg/kg	76000	86
Anthracene	mg/kg	520000	1.2
Benzo(a)anthracene ^[3]	mg/kg	170	1.7
Benzo(a)pyrene ^[3] (C4SL)	mg/kg	76	0.91
Benzo(b)fluoranthene ^[3]	mg/kg	45	1.2
Benzo(ghi)perylene ^[3]	mg/kg	3900	0.015
Benzo(k)fluoranthene ^[3]	mg/kg	1200	0.69
Chrysene ^[3]	mg/kg	350	0.44
Dibenz(ah)anthracene ^[3]	mg/kg	3.5	0.0039
Fluoranthene	mg/kg	23000	19
Fluorene	mg/kg	60000	31
Indeno(123-cd)pyrene ^[3]	mg/kg	510	0.06
Naphthalene	mg/kg	110	75
Phenanthrene	mg/kg	22000	36
Pyrene	mg/kg	54000	2.2

Assumptions
C4SL exposure scenario adopted for all compounds. C4SL low risk health criteria values adopted where available (indicated by '(C4SL)' after compound name), GAC derived using minimal risk health criteria
Soil: Sand
Soil organic matter (SOM) 1%
Modelling package used: CLEA 2015 v1.071 (Environment Agency, 2015)
Toxicity data sourced in accordance with Environment Agency defined heirarchy of data sources, based on minimal risk with the exception of the published C4SL compounds which are based on a low risk level.

Notes

*Acute toxicity values sourced from SoBRA, 2020. Development of Acute Generic Assessment Criteria for Assessing Risks to Human Health from Contaminants in Soil; v2
Where acute toxicity values are lower than the chronic values derived using CLEA, these are presented as the GAC.
^[2] Phenols capped based on EA approach to limit phenol to 1% by weight in soil solution (Phenol SGV report)
^[3] Benzo(a)pyrene used as surrogate marker for PAHs in grey. Likely to be applicable to the majority of sites. Only use GAC in grey if bap marker approach not applicable.
Saturation limit - If GAC > theoretical saturation limit, there is a potential for free product on site. This must be assessed seperately through site observations etc.
NR - not required.
GAC rounded to 2 significant figures in accordance with EA guidance.

APPENDIX D MANCHESTER CITY COUNCIL PLANNING AND CONTAMINATED LAND TECHNICAL GUIDANCE 2021



MANCHESTER
CITY COUNCIL

Planning & Contaminated Land

Technical Guidance

February 2021

Environmental Protection
Environmental Health
Neighbourhoods Directorate
Manchester City Council

Service Aim.....	4
Overview	5
1.0 What is Contaminated Land	6
1.1 Definition under Part 2A of the Environmental Protection Act 1990	6
1.1.1 Impacts to Human Health	6
1.1.2 Impacts to Buildings	7
1.1.3 Impacts to the Natural Environment	7
1.2 Planning definition	7
1.3 Types of contamination	8
2.0 Roles and responsibilities	9
2.1 Role of the Owner/Developer	9
2.2 Role of the Local Planning Authority	9
2.3 Role of the Environmental Protection Team	10
2.4 Role of other organisations	10
3.0 The planning procedure.....	11
3.1 Pre-commencement conditions	11
3.2 Local Planning Policy	12
3.2.1 Policy EN17 – Water Quality	12
3.2.2 Policy EN18 – Contaminated Land and Ground Stability	12
3.3 National Planning Policy	13
4.0 Criteria used for assessing the submitted information	14
4.1 Preliminary Risk Assessment	14
4.2 Phase 2 investigation	15
4.3 Remediation strategy	15
4.4 Verification report	16
5.0 Reporting Considerations	17
5.1 Obtaining representative samples	17
5.2 Sample analysis	17
5.3 Generic and detailed quantitative risk assessment (GQRA and DQRA)	17
5.4 Assessment criteria for ground gas	18
6.0 Cover Systems	20
6.1 Depth of cover systems and capping layers	20
6.2 Depth of growing medium and planting	20
6.3 Sampling Ratios	21
6.4 On-site or Off-site Soil Validation	21
6.5 Documentary Evidence	21
6.6 Obtaining Representative Samples	22
7.0 Other Information	23
7.1 Human Remains and / or Burial Sites	23
7.2 Japanese Knotweed	23
7.3 Asbestos	23
7.3.1 Asbestos and Contaminated Land	23
7.3.2 Asbestos, Neighbours and Current Developments	24
7.3.3 Asbestos at Work	24
7.4 Coal Mining	24
8.0 References	25
8.1 Additional Reference Material	25

Appendix A	Checklist outlining the information required in support of a planning application	27
Appendix B	Frequently Asked Questions	29
Appendix C	Coal Authority Statement	30

Tables

Table 1	Growth medium rooting depths for various vegetation types	21
Table 2	Sampling frequencies for imported or site-won fill materials	21

Service Aim

This guidance aims to provide help and advice in relation to land contamination in a planning context to encourage good practice and mitigation of impacts. It outlines what is expected in relation to current guidance and policy with the aspiration that new developments achieve the highest possible standards without compromising the health and well-being of people that live and work within the City of Manchester.

Applicants, developers, landowners and contaminated land consultants are advised to read this document prior to submitting a planning application.

This document is written to serve as an informative and a helpful source of advice. Readers must note that legislation, guidance and practical methods may be subject to change. The Council has taken all reasonable precautions to ensure the information is correct. However, the Council, its officers, servants, or agents, will not accept any liability for loss or damage caused by any person relying on this information, or for any errors or omissions in the information provided.

Overview

Many areas of the City have previously been occupied by a variety of industrial activities. Historically, the predominant industries included textile and dye works, heavy engineering works, chemical works, gas works and brickworks. In general, early industrialists had little or no knowledge of the environmental effects of their manufacturing processes or operating practices. Consequently, over a period of time a particular site may have been home to a variety of industries, each of which may have left substances in the ground that may be hazardous to human health and the environment. Additionally, more recent activities may also have had a detrimental impact on the environment.

As the Government encourages more redevelopment on brownfield land, developers now have to take into account the possibility of land contamination. The purpose of this guide is to make applicants, developers and their advisors aware of the information that Manchester City Council (MCC) requires in assessing an application for planning consent on land that may be affected by the presence of contamination.

In order to assess submitted information, the Environmental Protection Team would expect a developer to demonstrate that due consideration has been given to the guidance contained within this document.

For more detail on the underpinning principles on which this document is based, the reader is directed to the [Land Contamination Risk Management](#) (LCRM) information from the Environment Agency (EA) and the [National Planning Policy Framework](#) (NPPF)

This Guidance Note is written to serve as an informative and helpful source of advice. Readers must note that legislation, guidance and practical methods may be subject to change. This Council has taken all reasonable precautions to ensure the information is correct. However, the Council, its officers, servants, or agents, will not accept any liability for loss or damage caused by any person relying on this information, or for any errors or omissions in the information provided.

1.0 What is Contaminated Land

Local Authorities are responsible for addressing land contamination issues within two separate regimes: The Contaminated Land Regime (commonly known as Part 2A) and the Planning Regime (Development Control).

1.1 *Definition under Part 2A of the Environmental Protection Act 1990*

The definition of contaminated land (from [Section 78A\(2\) of the Environmental Protection Act 1990](#) (EPA 1990) is; any land which appears to the local authority in whose area it is situated to be in such a condition, by reason of substances in, on or under the land, that:

- a) significant harm is being caused or there is the significant possibility of such harm being caused; or
- b) significant pollution of controlled waters is being caused or there is a significant possibility of such pollution being caused

Part 2A of the EPA 1990, as inserted by Section 57 of the Environment Act 1995, was brought into force on 01 April 2000. It requires all local authorities to identify contaminated land in its area and secure its remediation to a condition suitable for its current use.

To fall within the Part 2A definition, the land when assessed in the context of its current use must be capable of causing significant harm to human health or other specified receptors and/or significant pollution of controlled waters. Development of land will have to take into account Part 2A because a change in the use of the land may bring the development inside the statutory definition of contaminated land by creating a pollutant linkage.

A key element of the Part 2A regime is the Source-Pathway-Receptor pollutant linkage concept. Each element is defined as follows:

- The source is the contamination in, on or under the land;
- The pathway is the route by which the contamination reaches the receptor, and;
- The receptor is defined as living organisms, ecological systems or property which may be harmed.

Without the clear identification of all three elements of the pollutant linkage, land cannot be identified as contaminated land under the regime.

1.1.1 Impacts to Human Health

1. Uptake of contaminants by food plants grown in contaminated soil: Heavy metals (e.g. cadmium, lead) and persistent organic pollutants including certain pesticides and veterinary products may result in an accumulation in food plants to concentrations where they exceed legal limits and/or may pose a hazard to human health. Uptake will depend on concentration in soil, its chemical form, soil pH, plant species and prominence in diet.
2. Ingestion and inhalation: Substances may be ingested directly by young children playing on contaminated soil, by eating plants which have absorbed metals or are contaminated with soil or dust. Ingestion may also occur via

contaminated water supplies. Metals, some organic materials and radioactive substances may be inhaled from dusts and soils.

3. Skin contact: Soils containing tars, oils and corrosive substances may cause irritation to the skin through direct contact. Some substances (e.g. phenols) maybe absorbed into the body through the skin or through cuts and abrasions.
4. Irradiation: As well as being inhaled and absorbed through the skin, radioactive materials emitting gamma rays can cause a radiation response at a distance from the material itself.
5. Fire and explosion: Materials such as coal, coke particles, oil, tar, pitch, rubber, plastic and domestic waste are all combustible. If heated by contact with buried power cables or careless disposal of hot ashes they may ignite and burn underground. Both underground fires and biodegradation of organic materials may produce toxic or flammable gases. Methane and other gases may explode if allowed to accumulate in confined spaces.

1.1.2 Impacts to Buildings

1. Fire and explosion: Underground fires may cause ground subsidence and cause structural damage to buildings. Accumulations of flammable gases in confined spaces leads to a risk of explosion. Underground fires may damage building services.
2. Chemical attack on building materials and services: Sulphates may attack concrete structures. Acids, oils and tarry substances may accelerate corrosion of metals or attack plastics, rubber and other polymeric materials used in pipe work and service conduits or as jointing seals and protective coatings to concrete and metals.
3. Physical: Blast-furnace and steel making slag (and some natural materials) may expand if ground conditions are changed by development. Degradation of fills may cause settlement and voids in buried tanks and drums may collapse as corrosion occurs or under loading from construction traffic.

1.1.3 Impacts to the Natural Environment

1. Phytotoxicity (prevention/inhibition of plant growth): Some metals are essential for plant growth at low levels and are phytotoxic at higher concentrations. Methane and other gases may give rise to phytotoxic effects by depleting the oxygen content in the root zone.
2. Contamination of water resources: Soil has a limited capacity to absorb, degrade or attenuate the effects of pollutants. When this is exceeded, polluting substances may enter into surface and groundwater.
3. Ecotoxicological effects: Contaminants in soil may affect microbial, animal and plant populations. Ecosystems or individual species on the site, in surface waters or areas affected by migration from the site may be affected.

1.2 Planning definition

The planning system uses a slightly different definition for contaminated land, which is not based solely on the legal definition set out in Part 2A. A wider range of contamination and receptors is relevant to planning but the degree of harm or pollution and the approach to remediation are essentially the same.

However, to avoid confusion with the term Contaminated Land the planning regime uses the wider term land affected by contamination. This is intended to cover all cases where the actual or suspected presence of substances in, on or under the land may cause risks to people, human activities or the environment, regardless of whether or not the land meets the statutory definition in Part 2A.

The NPPF states that; as a minimum, the land should not be capable of being determined as contaminated land under Part 2A of the EPA 1990

The principal difference is that under the planning system, risks have to be assessed based upon the new or intended use of the land, rather than the existing use.

However, the principles underlying both regimes are fundamentally the same, namely, the identification and remediation of land that may pose a risk to human health and/or the environment.

Typical causes of land contamination include previous industrial or commercial usage, mining, and the landfilling of wastes. Land can also become contaminated due to its proximity to contaminated areas.

Part 2A was designed and intended to encourage voluntary remediation and should only be used where no appropriate alternative solution exists. The Contaminated Land Strategy published by the Council provides details of the planning system to ensure land is made suitable for use when it is redeveloped and/or encouraging polluters and owners of land to deal with problems without the need for Part 2A to be used directly.

1.3 *Types of contamination*

Contaminating substances may include,

- Metals e.g. cadmium, arsenic, lead, iron, nickel, chromium
- Inorganic compounds e.g. cyanide, ammonium, chlorides
- Organic substances e.g. oils, petrol, solvents, phenols, PAHs, PCBs
- Gases e.g. methane, carbon dioxide, hydrogen sulphide, volatiles
- High or low pH

Contamination may not occur solely as a result of human activities and land can be contaminated as a result of its natural state. For example, in Greater Manchester, marsh gas can cause a contamination problem, particularly in areas previously occupied by moss land.

2.0 Roles and responsibilities

2.1 *Role of the Owner/Developer*

Where development is proposed, the developer is responsible for ensuring that development is safe and suitable for use for the purpose for which it is intended.

The developer is therefore responsible for determining whether land is suitable for a particular development or can be made so by remedial action. In order to demonstrate this, the developer should determine:

1. Whether the land in question is already affected by contamination through source – pathway – receptor pollutant linkages;
2. Whether the proposed development will create new linkages, e.g. new pathways by which existing contaminants might reach existing or proposed receptors; and
3. What action is needed to break those linkages and avoid new ones, deal with any unacceptable risks and enable safe development and future occupancy of the site and neighbouring land.

A potential developer will need to satisfy the local authority that unacceptable risk from contamination will be successfully addressed through remediation without undue environmental impact during and following the development.

In doing so, a developer should be aware that actions or omissions on their part could lead to liability being incurred under Part 2A, e.g. where development fails to address an existing unacceptable risk or creates such a risk by introducing a new receptor or pathway.

Where an agreed remediation scheme includes future monitoring and maintenance schemes, arrangements will need to be made to ensure that any subsequent owner is fully aware of these requirements and assumes ongoing responsibilities that remain with the new landowner.

2.2 *Role of the Local Planning Authority*

The Local Planning Authority (LPA) has a duty to take account of all material planning considerations including land contamination during the preparation of Local Plans and when considering an application for planning permission. Usually where there is reason to believe land may be contaminated, or the proposed development is of particular sensitivity e.g. housing, a full assessment may be required in advance of planning approval being issued, and a planning condition requiring assessment of possible contamination may be recommended by the LPA and applied to the decision notice.

When considering development on land affected by contamination, the principal objective of the LPA is to ensure that any unacceptable risks to human health, property and/or the wider environment are identified so that appropriate action can be considered and then taken to address those risks. In achieving this objective, the LPA should assist in providing the necessary confidence to owners and occupiers of the land after development, regarding the condition and the ranking of the land in relation to relevant environmental protection regimes, such as Part 2A.

2.3 Role of the Environmental Protection Team

The Environmental Protection (EP) Team are responsible for addressing land contamination issues using Part 2A and the planning system, and are consulted by the Planning Department on applications within Manchester's district.

EP consider a number of environmental issues, including land contamination, before making a recommendation to the Planning department. Typically this recommendation is that the application either be approved, be approved subject to appropriate conditions, or be refused.

The recommendations made by EP are not binding on the Planning department, who will consider all relevant issues concerning a planning application but land contamination is a material planning consideration that must be taken into account in the decision making process.

2.4 Role of other organisations

The Environment Agency (EA) are a statutory consultee for any planning applications where development is proposed on land potentially affected by contamination. Where the EA are consulted and land contamination is an issue they will seek to implement the objective of the water framework directive to prevent and limit the entry of pollutants into groundwater.

Within the LPA, Building Control will also need to be satisfied that any risks to the development from potential contamination have been adequately addressed. The [Building Regulations 2000](#) require developers to demonstrate that hazards from potential contamination have been properly assessed and appropriate measures put in place to address any risk.

3.0 The planning procedure

The actual or possible presence of contamination is a material planning consideration. Planning advises that as a precautionary approach, the possibility of contamination should be assumed when considering planning applications in relation to all land subject to or adjacent to previous industrial use and also where uses are being considered that are particularly sensitive to contamination, e.g. housing, schools, hospitals and children's play areas.

Where development is proposed on land that is or may be affected by contamination, an assessment of risk should be carried out by the applicant for consideration by the LPA before the application is determined. Any existing or new unacceptable risks should be identified and proposals made to deal with them effectively as part of the development process.

When a planning application is made, the planning officer will consult with the Contaminated Land Section and the application (with supporting information) will be assessed to determine whether there is the potential for contamination to influence the site, whether suitable measures have been proposed to address any risks and whether the proposed development is acceptable.

Other statutory bodies and relevant local authority departments may also be consulted as necessary, including English Nature, Natural England and the departments for building control, conservation and archaeology, and engineering.

If there is the potential for contamination to affect the site, or the end-use is particularly sensitive, recommendations will be made that pre-commencement conditions be imposed upon the development. These are intended to ensure that the site is made suitable for its proposed end use and ensure the safety of site workers, future site users and the protection of the environment.

It is essential that the developer and their agents provide as much information to the LPA at every stage of the planning process. Withholding information, however trivial, may cause a delay to the application. The onus is on the applicant to keep the LPA well informed about the development at all times so that decisions can be made swiftly and the application process completed as quickly as possible.

For large developments on sites where serious contamination is known, or is likely to be present, it is strongly recommended that a pre-application consultation with the LPA be undertaken. It may save both time and money if a thorough pre-application consultation takes place prior to submission of a full planning application. This may result in a site investigation being required to be submitted with the application.

3.1 *Pre-commencement conditions*

On the 1st October 2018 [The Town and Country Planning \(Pre-commencement conditions\) Regulations 2018](#) came into force. These regulations mean the local planning authority needs to give notice to applicants when pre-commencement conditions have been recommended. The applicant has 10 working days to accept the pre-commencement conditions (or to challenge them).

With regards to land contamination there is a pre-commencement requirement for sites where there is a risk of contamination being present. This requires the council to be in receipt of; and to agree the findings of a preliminary risk assessment, a site investigation and a remediation strategy prior to works commencing on site.

For some low risk sites we may accept a preliminary risk assessment only but there will still be a post completion element in the form of a validation/site completion report before the condition can be fully discharged.

3.2 Local Planning Policy

Land and water contamination are covered in the Manchester City Council [Core Strategy 2012-2027](#) under EN17 and EN18

3.2.1 Policy EN17 – Water Quality

Development should avoid any adverse impact on water quality, including during the construction phase, and wherever possible should seek to enhance water quality, both chemical and ecological.

Development should minimise surface water run-off from development and associated roads, and maximise the use of appropriate sustainable drainage systems, to minimise groundwater contamination, and to avoid pollutants reaching watercourses.

Development close to a watercourse should also ensure that waste or litter cannot enter the watercourse from the site.

Development should, where feasible and appropriate, seek to open up any culverted or hidden watercourse beneath the site to improve the ecological status of that watercourse.

This will help towards the achievement of the water framework directive by 2027. This policy also gives advice related to Sustainable Urban Drainage Systems (SUDS)

3.2.2 Policy EN18 – Contaminated Land and Ground Stability

The Council will give priority for the remediation of contaminated land to strategic locations as identified within the core strategy. Any proposal for development of contaminated land must be accompanied by a health risk assessment

All new development within former mining areas shall undertake an assessment of any associated risk to the proposed development and, if necessary, incorporate appropriate mitigation measures to address them

The Council's target is for 90% of new development to be on previously developed land. This is in line with historical trends across Manchester and will ensure a sustainable approach is taken with regard to the use of land as a limited resource.

3.3 National Planning Policy

The [National Planning Policy Framework](#) (last updated February 2019) covers Land Contamination in paragraphs 178 and 179.

178. Planning policies and decisions should ensure that:

- a. A site is suitable for its proposed use taking account of ground conditions and any risks arising from land instability and contamination. This includes risks arising from natural hazards or former activities such as mining, and any proposals for mitigation including land remediation (as well as potential impacts on the natural environment arising from that remediation);
- b. After remediation, as a minimum, land should not be capable of being determined as contaminated land under Part IIA of the Environmental Protection Act 1990; and
- c. Adequate site investigation information, prepared by a competent person, is available to inform these assessments.

179. Where a site is affected by contamination or land stability issues, responsibility for securing a safe development rests with the developer and/or landowner.

4.0 Criteria used for assessing the submitted information

Information submitted in support of planning applications must be of an acceptable minimum standard in order to satisfy the LPA. The guidance contained within this section aims to inform developers of the procedural requirements of a risk-based approach to land contamination, as defined in current UK legislation and guidance.

A detailed technical framework for investigating and dealing with land affected by contamination is contained within [Land Contamination Risk Management](#) (LCRM, published in October 2020). The process involves identifying, making decisions on, and taking appropriate action to deal with, land contamination in a way that is consistent with government policies and legislation within the UK.

The approach outlined in this guidance note is consistent with LCRM and is based on a staged or tiered approach to risk assessment, which includes the following three key elements:

1. Risk Assessment
2. Options Appraisal
3. Remediation and Verification

Risk assessment generally involves developing a conceptual model (Section 4.1), which identifies whether there could be any potentially unacceptable risks at the site. The conceptual model may then be used to determine if any further assessment is required. If this preliminary assessment clearly demonstrates that contamination at the site poses no unacceptable risks (i.e. no source-pathway-receptor relationships) then further assessments may not be required.

The procedure for investigating a potentially contaminated site would be expected to meet the criteria outlined in [British Standard \(BS\) 10175 \(2011\) Investigation of Potentially Contaminated Sites – Code of Practice](#). Typical components of a report submitted in support of a planning application would generally include the following four components:

1. Preliminary Risk Assessment (PRA) (often referred to as a Phase 1 Investigation or Desk Study)
2. Phase 2 Investigation (intrusive investigation)
3. Remediation Strategy
4. Verification Report

Points 1-3 are a pre-commencement requirement.

A more detailed checklist of LPA requirements in relation to each of these components can be found in Appendix A.

4.1 Preliminary Risk Assessment

A Preliminary Risk Assessment (PRA) (sometimes referred to as a Phase 1 investigation or Desk Study) should provide a preliminary qualitative assessment of risk by interpreting information on a site's history, considering the likelihood of contamination being present and making an initial hazard assessment. The PRA

typically consists of a desk study, site reconnaissance, development of a conceptual model and a basic hazard assessment.

The desk study comprises a search of available information and historical maps, which can be used to identify the likelihood of contamination being present. The two main indicators for the likely presence of contamination at a site are past industrial uses and/or close proximity to a landfill. A detailed appraisal of documentary research can be found in [CLR 3](#) Documentary Research on Industrial Sites.

A simple site reconnaissance survey of the site is conducted to identify if there are any obvious signs of contamination at the surface. Further information regarding site inspection can be found in [CLR 2](#) Guidance on Preliminary Site Inspection of Contaminated Land.

A conceptual model is a representation (text and/or graphics) of the relationships between contamination sources, pathways and receptors developed on the basis of hazard identification. Developing a conceptual model should be viewed as an iterative process that should be refined during subsequent phases of assessment.

Using the information gathered, the conceptual model of the site is constructed and a basic hazard assessment is carried out.

4.2 Phase 2 investigation

A Phase 2 investigation (site investigation) aims to reduce the uncertainties identified in the initial conceptual model by quantifying potential contamination at the site. The data obtained will be used to inform a decision as to whether the site is potentially harmful. A Phase 2 report generally consists of an intrusive site investigation and a subsequent risk assessment. The investigation process should seek to clearly identify and characterise plausible source-pathway-receptor linkages at the site and provide information for the refinement of the initial conceptual model.

4.3 Remediation strategy

This is a document detailing what action is to be carried out so that contamination no longer presents a risk to site users, property or ecological systems. It may include measures such as the removal of contamination, encapsulation of the contaminants, treatment of the contaminants or measures to break the pollution linkages. Please note that Government policy encourages sustainable methods of remediation.

A remediation strategy should be submitted where a site investigation identifies levels of contamination that will require remediation prior to the site being suitable for its intended use. This statement should include full details of how the contamination problem at the site will be addressed and demonstrate that the standard of remediation work complies with current best practice and guidance. This must be approved by the LPA before any remedial actions at the site commence.

4.4 Verification report

Where contamination has been found and/or remediated, the developer will be required to submit a verification report. In certain circumstances it may be necessary for the developer to conduct post-completion monitoring. This should be undertaken to the approval of the LPA and results of the monitoring should be submitted for review. For limited remediation works or protective works a verification statement alone may be acceptable, but prior confirmation of this should be obtained from the LPA.

The verification report should provide confirmation that all measures outlined in the approved remediation statement have been successfully completed, including where appropriate, validation testing.

Recommendations to discharge land contamination conditions will only be made once the Contaminated Land Section has received and approved a satisfactory verification report.

5.0 Reporting Considerations

The complexity of land contamination technical guidance, coupled with individual site variability, makes it difficult to produce comprehensive guidance applicable to every situation.

However, when assessing the adequacy of a site investigation, a number of common problems frequently arise. These generally relate to areas where technical guidance may be complex or incomplete. In an attempt to minimise the occurrence of these problems, the CLS apply consistent criteria for certain technical aspects of a site investigation. This section is intended to highlight recurring problem areas and key points that are of particular importance.

5.1 *Obtaining representative samples*

All sampling strategies should be designed to provide data that is representative of the site conditions as a whole. Sampling should be undertaken in accordance with recognised sample collection methodology and guidance, with reference made to recommendations within [BS 10175](#). Reference to the historical site information obtained from the desk study is essential in order to target possible sources of contamination and to ensure that an appropriate suite of analysis is performed. Justification for the chosen sampling regime and analysis suite should be clearly set out in the site investigation report.

5.2 *Sample analysis*

A suitably accredited laboratory should be used to undertake analysis of samples. The site investigation should include a detailed plan showing the location of sampling points and accreditation details of the laboratory used, together with summary tables of results. A full set of results should be included in the report submitted and an electronic form from the laboratory that undertook the analysis should also be submitted.

5.3 *Generic and detailed quantitative risk assessment (GQRA and DQRA)*

Defra formally withdrew the 1987 ICRCL trigger and action values in December 2002, following the implementation of the Contaminated Land Exposure Assessment Model (CLEA) and associated publication of the Soil Guideline Values (SGVs).

In 2008, the CLEA UK model and the SGVs were withdrawn by Defra and a revised CLEA model was launched. MCC would expect all future site investigations to make no reference to the withdrawn standards.

Generic and detailed QRA should now be carried out using assessment criteria derived using the new CLEA model (1.06). Where site-specific target levels are used they should be calculated based on suitable and reasonable assumptions as well as current best practice and associated briefing notes and guidance. Reference should also be made to statistical analysis of the resulting data from the intrusive investigation.

More recently the following criteria have been released Category 4 Screening Levels (C4SLs) (replaced SGVs) and Suitable 4 Use Values (S4ULs) (replaced LQM/CIEH GACs). Where these values exist they should be used instead of the SGVs and LQM/CIEH GACs.

The [CLR7](#) report 'Assessment of Risks to Human Health from Land Contamination: An Overview of the Development of Soil Guideline Values and Related Research' was withdrawn in 2008. Consultants when assessing site investigation data should adopt a suitable statistical approach. The CIEH and CL:AIRE set out in the document '[Guidance on Comparing Soil Contamination Data with a Critical Concentration](#)' an approach that is a useful starting point for statistically assessing data.

It is usually inappropriate to apply quantitative criteria developed outside the UK, to UK sites, as assumptions underlying the models used to derive these criteria often reflect different behaviour patterns, local soil types or other technical factors.

Where other land contamination quantitative criteria are used e.g. Dutch or USEPA, the reasoning behind not using current UK guidance should be given and their use must be fully justified and referenced within the report. This would be expected to include a discussion of the conceptual model and assumptions used to derive the generic criteria together with an assessment of the underpinning toxicological data.

5.4 Assessment criteria for ground gas

If the development is situated within 250m of a landfill site or is suspected of having the potential to generate ground gas, it will be necessary to assess the potential risk and, if required, to incorporate appropriate gas protection measures into the development design.

When undertaking gas monitoring and designing gas protection measures reference should be made the following British Standards:

- [BS8576](#) - Guidance on investigations for ground gas. Permanent gases and Volatile Organic Compounds (VOCs)
- [BS8485](#) - Code of practice for the design of protective measures for methane and carbon dioxide ground gases for new buildings

Guidance is also available for assessment of the risks associated with the presence of methane and carbon dioxide within ground gas (full references are given at the end of this document), this includes:

- CL:AIRE TB18 - Continuous Ground-Gas Monitoring and the Lines of Evidence Approach to Risk Assessment
- Assessing Risks Posed by Hazardous Gas Ground Gases to Buildings (CIRIA C665)
- BRE Report 414 publication Protective Measures for Housing on Gas Contaminated Land
- NHBC - Guidance on Evaluation of Development Proposals on Sites where Methane and Carbon Dioxide are present
- CIEH Local Authority Guide to Ground Gas

Due to the age of some of the guidance documents their use will need to be fully justified.

It should also be noted that when submitting ground gas monitoring data a current calibration certificate for all machines used for the gas monitoring should also be submitted. The risk assessment will also need to demonstrate that sufficient data have been obtained to determine the gas regime for the site.

6.0 Cover Systems

The main function of an engineered cover system should be to provide a safe and permanent barrier between any 'significant' levels of buried contamination and residents/site users.

It is not uncommon for developers to include a simple cover system into garden and soft landscaped areas. This is done in order to provide a reduction in the hazard to human health in situations where 'marginally' elevated levels of contaminants have been encountered, as well as to provide a suitable medium for plant growth.

There is currently no definitive guidance available that is able to adequately address the design of either of these cover systems. Therefore the CLS considers that where cover systems are used there should be no distinction between 'marginal' and 'significant' levels of contamination.

6.1 *Depth of cover systems and capping layers*

Where used as a capping layer of cover system, fill materials should be installed at prescribed depths according to their soil type and the role they play within the cover system. As cover systems are almost always site-specific, the various depth of fill can vary greatly depending on how complex or engineered the cover system is to be, but there are a few minimum standards to be observed, which are described below.

Typical cover system design requires a capillary break layer at its base, which is then overlain by various depths/types of fill material. These individual layers working in unison form the cover system or capping layer.

The minimum acceptable total depth for fill materials (including the break layer) within private garden areas should be 600 mm. This figure is recommended and has been adopted for the following reasons:

- i. Root systems for shrubs are typically up to 600 mm;
- ii. Excavations are unlikely to be deeper than 600 mm in typical gardening activities;
- iii. Bioturbation (soil-mixing by biological organisms) is typically limited to the top 600 mm of the soil profile;
- iv. Excavations by children or pets are unlikely to exceed 600 mm.

The minimum acceptable total depth for fill materials (including the break layer) within areas of soft-landscaping, common areas or public open spaces is 450 mm. This relaxation of cover depth is designed to reflect the reduced risk afforded by diminished exposure of human health receptors to potentially contaminated soils within these public areas via direct contact (dermal, ingestion, inhalation).

6.2 *Depth of growing medium and planting*

In certain circumstances, where it can be demonstrated that future activities will not result in soil mixing, it may be acceptable to use a shallower depth of cover material. A robust case would need to first be presented for prior approval from the LPA. An additional consideration when planting landscaped areas is that [BS 3882](#) recommends the rooting depths in Table 2.

Table 1 Growth medium rooting depths for various vegetation types

Vegetation Type	Rooting Depth (mm)
Grass	450
Plants	450
Shrubs	600
Trees	900

6.3 Sampling Ratios

When a cover system is used, a desk study should be provided with details of the source of the cover material. It should be demonstrated that the soil is free from contamination by supplying results of analytical tests. Justification for the analytical suite used should be included. Sampling densities should be justified and based on the findings of a desk study. It would be expected that as an absolute minimum sampling would consist of at least three samples for each source used. One sample for every 200m³ from proven 'greenfield' sources and one sample every 50m³ from 'unknown', 'mixed' or 'brownfield' sources (for residential gardens). Table 3 summarises the recommended sampling frequencies depending on the soil source and end use.

Table 2 Sampling frequencies for imported or site-won fill materials

End-Use	Greenfield Soils	Remediated Soils	Brownfield Soils	Unknown Soil Source
Residential Gardens	1:200m ³	1:100m ³	1:50m ³	1:50m ³
Soft landscaping	1:200m ³	1:150m ³	1:150m ³	1:150m ³
Other	1:200m ³	1:200m ³	1:200m ³	1:200m ³

6.4 On-site or Off-site Soil Validation

Fill material imported onto site should be stored in a designated area, which is clearly identified on an appropriate scale plan. Stockpile management protocols consistent with best practice apply.

The Environmental Protection Team does not routinely accept off-site validation of fill material (whether this is top-soil, sub-soil or other substrate), as this often results in chemical testing of different material to that actually imported to site. It is therefore difficult to prove the exact chemical nature of the material eventually imported, as off-site validation tends to involve composite samples taken from a 'typical batch' of the material intended for import. As such, validation testing of imported fill materials should be carried out in-situ, after materials have been imported to site.

An exception will be made if samples can be taken at source from a stockpile which has already been allocated to the site in question and this can be proven in the validation report.

6.5 Documentary Evidence

Chemical analysis: All raw laboratory data should be submitted with the analytical test certificate.

Statistical analysis of datasets: Calculations in line with CIEH/CL:AIRE guidance should be provided.

Photographic evidence: Photographs of installed remedial measures (of any type) are required. Photographic evidence should be representative and where necessary, include a scale/ruler. This is of particular importance when photographing cover depths to verify the agreed depth of cover has been installed.

Plans: Showing pertinent information relating to remediation, such as stockpile locations, areas subject to remedial measures or areas of further investigation.

Import/export data: Pertinent data relating to fill materials/wastes, including volumetric data (i.e. how much was imported to site), source data (i.e. where the material came from) and waste transfer data (where applicable).

6.6 *Obtaining Representative Samples*

All sampling strategies should be designed to provide data that is representative of the site conditions as a whole. Sampling should be undertaken in accordance with recognised sample collection methodology and guidance, with reference made to recommendations within the British Standard [BS10175](#) guidance document. It is essential to derive a CSM using the information obtained from the PRA to target possible sources of contamination and also to ensure that an appropriate suite of analysis is performed. Justification for the chosen sampling regime and analysis suite should be clearly set out in the site investigation report.

A suitably accredited laboratory should be used to undertake analysis of samples. The site investigation should include a detailed plan showing the location of sampling points and accreditation details of the laboratory used, together with summary tables of results. A full set of results, including exploratory hole logs, should be submitted.

7.0 Other Information

7.1 Human Remains and / or Burial Sites

If you have been made aware through means such as historical records that the site is on or adjacent to an existing or former burial ground that may contain human remains, you must contact Environmental Health at the earliest opportunity.

If at any time during site investigation works, ground-works or excavating on a site within the boundary of MCC you discover human remains, suspected human remains or bones of an unknown type you must stop all works, secure the area and contact the Police and Environmental Health for advice. Environmental Health can be contacted through the City Council's contact centre on 0161 234 5004.

7.2 Japanese Knotweed

Japanese knotweed is a very invasive species of plant which is not native to the British Isles. Since it was introduced into the UK as an ornamental garden plant in the mid-nineteenth century it has spread across the UK, particularly along watercourses, transport routes and waste areas. Japanese knotweed is not just a problem for our native wildlife; the vigorous growth can also damage buildings and hard surfaces. Once established underneath or around the built environment, it can be particularly hard to control.

Neither the Environment Agency or the Local Authority are responsible for controlling Japanese knotweed, other than that growing on their own land. Managing knotweed is the responsibility of the owner/occupier of a site.

[Japanese Knotweed Guidance](#) **[Invasive Species Guidance](#)**

Contact Details for the Environment Agency

Telephone: 08708 506 506 (Mon-Fri, 8am - 6pm)

E-mail: enquiries@environment-agency.gov.uk

Postal Address: National Customer Contact Centre, PO Box 544 Rotherham S60 1BY

7.3 Asbestos

With regard to the MCC CLS there are three issues related to asbestos that we may be contacted in relation to and they are;

- Dealing with asbestos as part of a land contamination condition or in relation to the planning process;
- Concerned members of the public thinking about asbestos in their homes, in/on neighbouring properties or on current developments close by, and;
- Members of the public working and being exposed to asbestos in their workplace.

7.3.1 Asbestos and Contaminated Land

If the presence of asbestos within made ground is suspected then contact use via the City Council's contact centre on 0161 234 5004.

7.3.2 Asbestos, Neighbours and Current Developments

If the issue is with members of the public having concerns with their house, neighbours or building sites dealing with asbestos sheeting or similar, then please visit our [website](#).

If asbestos is suspect within a building due for demolition then the initial contact should be with the [Health and Safety Executive](#).

7.3.3 Asbestos at Work

If the issue is work related then please visit the [Health and Safety Executive](#) website.

7.4 Coal Mining

Historical coal mining has been undertaken in part of MCC.

If the Coal Authority (CA) does not comment on specific risks (which they will only do when there have been recorded emissions) on occasion this is wrongly being interpreted as implying that there are no gas risks. Due to the volume of consultation responses they deal with they do not have the in-house capacity to provide detailed technical guidance in every case. The CA have provided a statement where former mining has been identified on a site which has been included in Appendix C.

8.0 References

Department of Environment, Food & Rural Affairs/Environment Agency, 2004, CLR Report No 11, Model Procedures for the Management of Land Contamination.

Department of the Environment, 2004, PPS23, Planning & Pollution Control.

British Standards Institute, 2011, BS10175, Investigation of Potentially Contaminated Sites – Code of Practice.

Department of the Environment, 1994, CLR Report No 3, Documentary Research on Industrial Sites.

Department of the Environment, 1994, CLR Report No 2, Guidance on Preliminary Site Inspection of Contaminated Land.

Chartered Institute of Environmental Health (CIEH) / Contaminated Land: Applications in Real Environments (CL:AIRE), 2008, Guidance on Comparing Soil Contamination Data with a Critical Concentration.

British Standard 8576:2013 - Guidance on investigations for ground gas. Permanent gases and Volatile Organic Compounds (VOCs).

British Standard 8485: 2015+A1:2019 - Code of practice for the design of protective measures for methane and carbon dioxide ground gases for new buildings.

CL:AIRE 2019, TB18 - Continuous Ground-Gas Monitoring and the Lines of Evidence Approach to Risk Assessment.

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8.1 *Additional Reference Material*

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Appendix A Checklist outlining the information required in support of a planning application

Preliminary Risk Assessment/Desk Study (pre-commencement)

- A site description.
- A detailed site plan showing the site location, extent and boundary.
- A review of historical information including copies of historical maps where available.
- Background information on past and present uses of the site and its surrounding area.
- Background information on the nature of any hazards and potential sources identified.
- An appraisal of the site's environmental setting including:
 - Geology, hydrology and hydrogeology.
 - Information on coal workings and other extractive industries.
 - Waste management issues and landfill sites.
 - Water abstractions and discharges, pollution incidents, IPPC Part A and B, and radon.
- Drainage and services.
- A review of previous desk studies or site investigations.
- Risk screening by means of an initial conceptual model, which should generally include the following.
 - Source characterisation.
 - Migration pathway descriptions.
 - Environmental receptor identification and discussion.
 - Identification of potential pollution linkages.
- Description of the limitations and uncertainties inherent in the conceptual model.
- Recommendations and conclusions.

Phase 2 Site Investigation (pre-commencement)

- Site Investigation Methodology:
 - A clear investigation scheme, based on findings of desk study.
 - Methods of investigation with justification of the methodology and investigation techniques used.
 - Justification of exploration locations and a plan showing their position.
 - Sampling and analytical strategy.
 - Coverage of investigations (statistical significance - targeted and non-targeted)
- Environmental monitoring including water sampling and gas monitoring/sampling.
 - Results and findings of the site investigation:
 - Ground, groundwater and gas conditions encountered.
 - Presentation of laboratory analysis, sampling and monitoring results.
- Discussion of any ground contamination (soil/gas/water) encountered.
- Refine conceptual model.
- Qualitative and quantitative risk assessments (clearly identifying pollutant linkages).

- Recommendations for remediation.
- Recommendations for further investigation (if required).

Remediation Strategy (pre-commencement)

- Clear remediation strategy.
- Detailed outline of works to be carried out.
 - Description of ground conditions.
 - Type, form and scale of contamination to be remediated.
- Consents, agreements and licenses (waste management issues).
- Implementation and validation of remediation.
 - Use of on-site observations and visual evidence.
 - Chemical analysis/monitoring data.
 - Proposed clean up standard.
 - Construction Quality Assurance.

Verification Report (post completion)

- Details of works carried out and contamination encountered during investigation.
- Details and justification of any changes from the original remediation strategy.
- Demonstration of compliance and description of validation methods.
 - Laboratory and in-situ results.
 - Monitoring results for groundwater and gases.
 - Summary data plots and tables relating to clean up criteria.
 - Plans showing treatment areas and details of any differences from the original remediation strategy.
 - Photographic and other media records.
 - Waste management details and records.
- Ongoing environmental monitoring or works to be carried out.
- Confirmation that remediation objectives have been met.

Appendix B Frequently Asked Questions

Q: How much of the work can I do without employing a consultant?

A: Simply determining whether land contamination is likely to be an issue is relatively straight-forward. Researching the history and uses of a site at the local studies unit of a library, and making enquiries of the Council and other agencies, can be carried out by competent developers. You can also contact the Environmental Protection Team and request an Environmental Search to use as part of the Desk Study, for further information and costs see our [website](#)

Q: Can the Council advise on employing a consultant or contractor?

A: The Council cannot recommend any consultant or contractor. Lists can be found in telephone and trade directories. There are websites that may help to identify consultants and contractors with suitable experience. Advice may be given as to the type of expertise a consultant or contractor might be expected to demonstrate.

Q: Who should I address correspondence to within the Council?

A: Once a land contamination condition has been placed on an application all correspondence relating to the subsequent assessment process should be directed to the Planning Department who will refer the information to the Environmental Protection Team. The team will keep the appropriate planning officer informed of the progress of the application.

Q: When should I contact the Environment Agency?

A: Although local authorities are the primary regulators of Part 2A, the Environment Agency assume the role when contamination is found to impact on controlled waters. Therefore, if a development is likely to impact on either surface waters or groundwater the advice of the Agency should be sought.

Appendix C Coal Authority Statement

The CA does not have any interest in matters of ground contamination, but does seek to ensure that where development is proposed on sites with coal mining features at or near the surface, the risks of potential ground instability and the possible presence of mine gas are appropriately considered and reflected in the layout and design of the development as may be necessary, and in any proposed mitigation or remediation measures.

The CA identifies specific risk features based on abandoned mine plans and other data, and in combination they constitute the CA defined Development High Risk Area (DHRA). The CA normally contacts all 181 local planning authorities within the defined coalfield every April to advise of the availability of the current DHRA data, and to request that it is downloaded by each LPA. Guidance on the consideration of coal mining related risks and our consultation process is also produced and periodically reviewed by the CA and is made available to all such LPAs.

For most forms of development within the DHRA, LPAs should require developers to submit a Coal Mining Risk Assessment (CMRA) with the Planning Application. For more guidance please go to the Coal Authority [website](#).

If a CMRA is required, the LPA should then also consult the Planning team at the CA in accordance with the formal consultation process. The Planning team will review the submitted CMRA and compare it with the mining information held by the CA. In accordance with the CA defined role as a statutory consultee, a substantive response will then be sent back to the LPA. The response will confirm whether or not the submitted CMRA is considered adequate, and whether or not the CA wishes to raise any objection to the proposed development. If an objection is not raised then it is usually the case that the CA will recommend certain pre-commencement planning conditions in respect of site investigation and remediation as may be necessary.

Some specific risk features (such as mine entries and their zones of influence) are considered to have direct implications for site layout, whereas others (such as probable and recorded coal mine workings at shallow depth) do not have a direct impact on site layout provided appropriate investigation is undertaken, and appropriate remediation is implemented. It is important to note therefore that within the DHRA, LPAs should ensure that CMRA are treated as a fundamental validation requirement. They should not be required by planning condition, as the matters in consideration may be critical to the very principle of the development.

A CMRA should be produced by a technically competent person and should review a breadth of source data to consider the potential risks of ground instability and mine gas. In addition to identifying such risks, the risk assessment should show how all coal mining related risks that cannot be discounted, have been appropriately reflected in the development that is proposed and in any further site investigations and related remedial or mitigation measures that may be recommended.

The CA expects that where possible stability risks should be dealt with directly. Engineering solutions related to the design of the development will not normally be considered acceptable as a substitute for ground treatment, unless such treatment is

demonstrated to be impractical, and the proposed engineering solution has been designed on the basis of specific site investigations.

It should be noted that wherever coal resources or coal mine features exist at or near the surface, there is the potential for mine gases to exist. These risks should always be considered by the LPA.

Potential gas pathways to the surface can change over time and may be induced by construction activities on site.

There are different types of mine gas - all potentially toxic, and some potentially explosive.

Whilst it is expected that the risks of mine gas are taken into account in CMRA, in its responses to LPAs the CA will normally only highlight specific gas risks and make related recommendations where we have records of previous gas emissions in the locality.

If we do not raise a specific comment, it should be recognised by LPAs and developers that mine gas may nonetheless be present. Therefore, no comment should not be interpreted as meaning no risk.

Whether or not specific risks are highlighted by the CA, LPAs should seek their own technical advice on the gas risks that may exist, and appropriate measures to be implemented, from technically competent personnel.

Please note that whilst our statutory role only involves discussion with LPAs through the formal consultation process, developers and their technical advisors may seek guidance from the CA through our chargeable [Pre-application Advice Service](#).