MANCHESTER CITY COUNCIL

**Environmental Health**
**Internal Memorandum**

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| **To** | **Head of Planning FAO: Robert Griffin** |
| **From** | **Strategic Lead Compliance & Enforcement** |
| **Date** | **18 July 2025** |
| **Telephone** | [redacted] |

**Consultation on Planning Application**

Application No: 142652/FO/2025
Location: Chorlton Square Shopping Centre, Barlow Moor Road, Manchester, M21 9AQ

Proposal: Erection of 6 no. residential buildings of 10, 8, 6 and 4 storeys in height to provide up to 262 residential dwellings (Use Class C3) with ground floor commercial uses (Use Class E (a-e)); infrastructure works including electric substation and associated utilities works, basement and ground level car parking, service yard, vehicular and pedestrian accesses; together with public realm works and hard/soft landscaping following the demolition of the existing buildings and structures on site.

My officer, [redacted] writes in response to your memo of 20 June 2025 regarding the above planning application. The Contaminated Land Section has received a copy of the following reports:

> Phase 1 Desk Study, Chorlton Precinct, Civic Earth, Reference: E1013-CE-XX-XX-R-G-1000, Dated: 22 November 2023.
> Site Investigation Report and Remediation Strategy, Chorlton Precinct, Civic Earth, Reference: 51013-CE-01-XX-R-G-1001, Dated: 5 July 2024.

The Contaminated Land Section has reviewed the above information in order to assess the following points:

1. The adequacy of the desk study information available for this site.
2. The adequacy of the site investigation.
3. The adequacy of the final risk assessment.
4. The acceptability of the proposed remediation strategy.
5. Whether the information submitted is sufficient to discharge the relevant contamination and/or gas condition from the planning approval.

The site is located at 381562E, 394096N and it is approximately 1.27ha in area. It can be divided into three areas, car parks, Graeme House and the Chorlton Precinct. Adjacent land use includes housing, a health centre and commercial/retail units. Previous land uses on and adjacent to the site have included agricultural land, a marl pit, residential properties, glass houses and associate nursery, a shopping centre and offices. The site does not lie within 250 metres of any known landfill sites or surface water courses and lies above the Wilmslow Sandstone principal aquifer.

Two records related to former dry cleaners within the site (most recent Johnsons Dry Cleaners, permit surrendered in 2013, currently Costa).

**1. The adequacy of the desk study information available for this site**

The report includes a description of the site including its past historical uses. An appraisal of the site environmental setting is presented including its geology, hydrogeology and hydrological regime, mining activities, waste management issues, and identification of additional environmental sources, pathways and receptors. This information has been used to compile a clear site conceptual model, which identifies potential sources, pathways and receptors and likely pollution linkages.

The desk study information was found to be **adequate**.

**2. The adequacy of the site investigation**

A review of site investigation and risk assessments carried out at the site can be summarised as follows:

- Four cable boreholes to a maximum depth of 30m bgl and eleven windowless sample boreholes to a maximum depth of 5.45m bgl.
- Three groundwater and ground gas monitoring rounds (21 May, 31 May and 7 June 2024) from 11 of the boreholes, BH01, BH03 and BH04 were dual monitoring well. Six wells had their response zones in the made ground, rest in the Glaciofluvial sheet deposits.
- Groundwater samples obtained on 21 May 2024.
- Soil and groundwater samples for a broad range of contaminants.
- Made ground proven across the site containing gravel of coarse brick to a maximum depth of 2.90m bgl, over glaciofluvial sheet deposits and glacial till (in two locations only)
- Visual/olfactory evidence of contamination in the form of hydrocarbon odours in BH02 within the made ground. Suspected asbestos sheet material in WS05 and WS05A. The made ground was also noted to contain coal, ash, ceramic, slag, brick, concrete, sheeting and slate.
- Groundwater strikes recorded across the site.

The site investigation information that has been provided for this development is **inadequate**. In addition to the information provided, further information should be submitted which addresses the following issues:

Gas monitoring is still ongoing
Provision of the calibration certificate(s) for the gas monitoring equipment to cover the entire period of monitoring.
Post demolition watching brief with further SI if needed.

Delineation of hydrocarbon/asbestos contamination for removal.

## 3. The adequacy of the final risk assessment

**Ground Assessment:** The soil chemical results have been compared to C4SLs/S4ULs for a Residential without plant uptake end use. The following contaminants have been found to elevated; benxo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene and dibenzo(a,h)anthracene. Asbestos identified as loose fibres of amosite from BH01 (<0.001% by weight) and amosite sheeting/board debris from WS05A (1.182% by weight).

Material will be removed to construct the basement. Clean cover recommended for landscaped areas.

No elevations in the natural soils tested.

No risks from vapours have been identified.

Barrier pipes are likely to be required.

**Controlled Waters Assessment:** The following elevations have been identified

**Perched Groundwater:**

- Elevated total TPH concentration of 25µg/l and 201µg/l in BH01 and BH04 respectively against an EQS threshold and DWV threshold of 10µg/l;
- Elevated concentrations of anthracene (1.3µg/l), benzo(a)pyrene (1.2µg/l), benzo(b)fluoranthene (1.3µg/l), benzo(k)fluoranthene (0.39µg/l), and benzo(ghi)perylene (0.53µg/l), in BH04 against the respective EQS (0.1µg/l, 0.017µg/l, 0.0017µg/l and 0.0082µg/l respectively);
- Elevated fluoranthene concentration of 0.21µg/l and 3.7µg/l in BH01 and BH04 respectively against a EQS of 0.12µg/l; and
- Elevated ammoniacal nitrogen as N concentration of 1100µg/l in BH04, against a 'moderate' quality river EQS threshold of 750µg/l;
- Elevated total phenol concentration of 2.6µg/l in BH04 against a DWV threshold of 0.5µg/l.
- Elevated arsenic (12.8µg/l) and selenium (290µg/l) in BH01 against the DWV thresholds of 10µg/l;
- Elevated benzo(a)pyrene (1.2µg/l) and total sulphate (494mg SO4/l) in BH04 against the DWV thresholds of 0.01µg/l and 250mg SO4/l, respectively; and,
- Elevated total PAH (2.22µg/l) in BH04 against the DWV threshold of 0.1µg/l.

**Secondary A Aquifer:**

- Increased pH of 10 recorded in BH03 against an EQS upper threshold of 9.0 and DWV upper threshold of 9.5;
- Elevated selenium (12µg/l and 120µg/l) in BH01 and BH04 against a DWV threshold of 10µg/l;
- Elevated total TPH in BH03 (65µg/l) and BH04 (205µg/l) against an EQS and DWV threshold of 10µg/l;
- Elevated total Phenols in BH01 (2.1µg/l) and BH04 (1.1µg/l) against a DWV threshold of 0.5µg/l;
- Elevated concentrations of anthracene (0.34µg/l and 0.79µg/l), benzo(a)pyrene (0.37µg/l and 0.90µg/l), benzo(b)fluoranthene (0.45µg/l and 0.97µg/l), benzo(k)fluoranthene (0.16µg/l and 0.35µg/l), benzo(ghi)perylene (0.17µg/l and

0.47µg/l), and fluoranthene (1.1µg/l and 2.3µg/l) in BH03 and BH04 against the respective EQS criteria;
- Elevated concentrations of benzo(a)pyrene (0.37µg/l and 0.90µg/l) and total PAH (0.94µg/l and 2.16µg/l) in BH03 and BH04 against the respective DWVs of 0.01µg/l and 0.1µg/l; and
- Elevated ammoniacal nitrogen as N concentration of 770µg/l in BH04, against a 'moderate' quality river EQS threshold of 750µg/l.

Risks to controlled waters are considered to be low on the basis of the following:
- The proposed redevelopment of the site will result in the removal of large volumes of Made Ground as part of the basement excavations, therefore removing the source material from large areas of the site.
- The proposed redevelopment of the site will result in the majority of the site covered by buildings and/or hardstanding which will limit infiltration and therefore reduce the potential for mobilisation of contaminants within the underlying soils.
- The discontinuous nature of the perched water and the presence of cohesive Glacial Till and Glaciofluvial Sheet Deposits across the site will reduce the potential for lateral and vertical contaminant migration.
- The nearest surface water body (Chorlton Brook) is located approximately 750m of the site. Two historical watercourses were mapped in 1849 approximately 250m north of the site and 150m south of the site; however, these watercourses are believed to be either culverted or infilled and are no longer indicated on present day mapping.
- The Wilmslow Sandstone Formation Principal aquifer is located at least 30mbgl and the overlying cohesive deposits of the Glacial Till and Glaciofluvial Sheet Deposits will afford protection to the aquifer and reduce the potential for vertical contaminant migration.
- No groundwater abstraction points have been identified within 1km of the site and it is considered unlikely that the Secondary A aquifer will be used as a drinking water supply; the DWVs are therefore considered to be a conservative assessment for the site.

**Ground Gas Assessment:** Gas monitoring has been undertaken on 3 no. occasions over 2 months to date with three more rounds proposed including one during low and falling pressure.

To date maximum carbon dioxide 15.7%v/v in BH01, methane and flow below the level of detection. Maximum PID 0.6ppm. Some boreholes classed as CS2

An addendum report will need to be submitted.

The final risk assessment provided for this development is **inadequate**. The report recommends that further investigation and testing be performed on the site. Consequently the data obtained from this investigation may require changes to be made to the current risk assessment. This Section will require submission of the additional site investigation report and, if necessary, an updated final risk assessment for approval.

**4. The acceptability of the proposed remediation strategy**

The following measures are proposed so that the contamination identified on site no longer presents a risk:

**Enabling Works**

- Additional ground gas monitoring and detailed assessment to confirm ground gas regime at the site;
- Watching brief and discovery strategy;
- Decommissioning of existing borehole monitoring wells;
- Removal of hydrocarbon and asbestos contamination hotspots;
- Appropriate material management of arisings associated with enabling works for re-use and/or disposal (including the basement excavations) including off-site disposal to appropriately licenced waste facilities; and
- Mitigation of risks to controlled waters during enabling works including appropriate management of stockpiles, controlling surface water run-off and appropriate discharge / disposal of perched groundwater.

**Construction Phase**

- Watching brief and discovery strategy;
- Provision of soil capping layer in areas of soft landscaping – 600mm with minimum 150mm topsoil or 450mm with a minimum of 150mm topsoil over geotextile membrane;
- Installation of ground gas and radon protective measures – to be agreed depending on the conclusions of the further gas monitoring;
- Appropriate material management of arisings associated with construction works (i.e. foundation works) for reuse and/or disposal including off-site disposal to appropriately licenced waste facilities;
- Mitigation of risks to controlled waters during construction works including appropriate management of stockpiles, controlling surface water run-off and appropriate discharge / disposal of perched groundwater; and
- Selection and installation of appropriate materials for buried water supply pipes.

MMP may be required for material movements

The site investigation and final risk assessment for this development have identified levels of contamination that will require remediation prior to the site being suitable for its intended use. This Section requires submission of a remediation strategy for approval once the additional site investigation has been complete and before the commencement of any remedial works on site.

**5. Whether the information submitted is sufficient to discharge the relevant site investigation and/or gas condition of the planning approval**

Before this Section can recommend discharge of conditions from this application, the following information needs to be submitted to the Council for approval:

(i) Gas monitoring is still ongoing
(ii) Provision of the calibration certificate(s) for the gas monitoring equipment to cover the entire period of monitoring.
(iii) Post demolition watching brief with further SI if needed.
(iv) Delineation of hydrocarbon/asbestos contamination for removal.
(v) Updated ground gas risk assessment on completion of the monitoring.
(vi) Updated remediation strategy on completion of the gas monitoring.
(vii) After completion of site works, a verification report is required to validate that the work undertaken conforms to the remediation proposals received and agreed by this Section.

Please do not hesitate to contact [redacted] if you require any clarification of the above.

Samantha Stabler
Head of Compliance, Enforcement and Community Safety