Hampson, Frances

From: Matt Lindsay <matt.lindsay@roscoe.co>
Sent: 09 July 2024 16:46
To: Hampson, Frances
Cc: Benjamin Flenley
Subject: [EXT] RE: 224054 - Gallery Gardens - Carriageway Survey
Attachments: Road Layout.pdf; PHASE_2_GEO-ENVIRONMENTAL_INVESTIGATION__RISK_ASSESSMENT_AND_REMEDIATION_STRATEG-1245260.pdf

Hi Fran,

Thanks for the e-mail below with attachment.

The LKC phase 2 geo-environmental investigation submitted as part of the planning package, contains a phase 2 SI, a risk assessment and remediation strategy. Document reference: LKC 17 1166 Dated Jan 2019 (attached).
This report contains a section on recommendations and remedial strategy (however we note that this remedial strategy, whilst submitted to planning, is yet to be approved by the regulator).

From the report, we summarise the salient points relating to contamination and remediation:

The contamination assessment in section 8.2 provides a conceptual model:
1 – contaminants posing a risk to future site users via dermal contact, ingestion and inhalation (of soil, dust, fibres and vegetables) – **recommendations: clean cover in soft landscaped areas**
2 – Volatile contaminants posing a risk to future site users via the inhalation of vapours – **no remediation required**
3 – gas posing a risk to buildings and future site users via migration of gas into building causing explosion and asphyxiation – low / moderate risk, **no remediation required**
4 – Mobile contamination posing a risk to controlled waters via migration through permeable strata – low risk, **no remediation required.**
5 – Sulphate posing a risk to building via direct contact – moderate / low – **adopt DS-2 AC-2 for buried concrete**
6 - Organic contaminants posing a risk to water pipes – moderate / low risk. Consultation with UU and completion of **potable water risk assessment** once the depth and route of new pipes are known
7 - Phytotoxic metals posing a risk to flora via root uptake – very low **no remediation required**

Section 9.1 of the report sets out recommendations for remediation and validation further to the intrusive investigation and testing work carried out by LKC.
These are summarised below:

1) Further investigation due to limited access relating to the southern third of the site – **the proposed early works access road lies outside of this area**
2) Earthworks Inspections / unexpected contamination briefing required for contractor should unusual ground conditions and / or visual or olfactory evidence of contamination (including asbestos containing material) be encountered at the site. LKC and local authority should be informed and further assessment of material required – **LKC or an alternative geo-environmental engineer should be consulted if unforeseen contamination is encountered**
3) Environmental Cover System – **Environmental cover** should be as follows: shared landscaping 300mm (100mm MOT Type 1 and 200mm comprising clean inert material and sufficient topsoil for a growing medium or Geotextile membrane and at least 300mm clean inert fill and sufficient topsoil for a growing medium.
4) Sulphate resistance Concrete – **DS-2 AC-2**

5) Potable Water Pipes – **Water Pipeline assessment to be undertaken once location and depth of potable water pipes are known. Likely a barrier pipe will be required**.
6) **Grubbing out in-ground structures** – where in ground structures may required grubbing out as part of the groundworks
7) Re-use of site won material – **any site won material re-used on site should be in recourse to appropriate exemptions. Materials Management Plan (MMP) with recourse to the CL:AIRE code of practice may be required if volumes exceed the exemption limits** and must be registered before material movement starts onsite. If an MMP is required, it is to be registered by a Qualified Person and there must be a 'certainty of use' for any material re-used onsite or exported to site.
8) Asbestos Management Plan – **Asbestos containing material is present on site** and it is recommended that additional precautions are taken during site clearance, earthworks and construction in the area of concern. The presence of asbestos in the made ground at the site presents a potential risk of generation of airborne fibres if this material is disturbed, such as excavations to construct new foundations. An **appropriate asbestos management strategy is to be developed** and adopted for all intrusive ground works which disturb the made ground in the area of concern – carried out in line with C733. Asbestos awareness training required for staff with provision of suitable personal and respiratory protective equipment and air monitoring.
9) Health and Safety considerations when working with contaminating material requiring good environmental management of the site during the remedial phases.

Roscoe Summary of the LKC report against the proposed early works:

It is proposed to undertake some minor excavation works on the site – circa 4.5m x 25.2m on plan as the formation for the new access road. Reviewing the standard adopted highway details, we expect a maximum depth of buildup to the proposed as 0.75m therefore an excavation of around the same given the relatively level site.

- The material excavated to form the reduced level dig for the road buildups (max 0.75m) would generate a volume of material circa 100m3 therefore less than the defined limits of a waste exemption certificate – reference to section 9.1 of LKC report therefore subject to the groundworks contractor obtaining this exemption certificate, these works should be able to be undertaken without undertaking a Materials Management Plan.
- As the finished surface would be impermeable, there is no pathway for any potential contamination that may existing in the final condition
- No buried concrete is proposed within the buildups however any that is installed should meet the requirements of DS-2 AC-2.
- Any water pipes within the road are to be assessed in line with UU guidelines with appropriate barrier pipe provided
- An asbestos management plan will be required by the contractor undertaking the works and in the temporary state
- We'd recommend providing 300mm of type 1 clean cover to the bottom of the excavation (required for the highway buildups anyway) however in line with the most onerous of the environmental cover requirements, these would be met
- If any unforeseen contamination is encountered, work must stop and advice sought from a qualified geoenvironmental engineer

I trust the above is acceptable, please let me know if you need anything further on this

Regards

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