

Your Housing Group
602 Aston Avenue
Birchwood Park,
Birchwood
Warrington
WA3 6ZN

Our ref: SO/2020/120757/06-L01
Your ref: Ten Acres Lane / 129197/FO/2021
Date: 26 May 2023

FAO:

- **Former Jackson Brickworks / Ten Acres Lane Project Team**
- **Mike Riding, Jonathan Currie, Sam Folarin, Richard Jones**

Dear Sirs,

**ENVPAC/1/GMC/00310 - YOUR HOUSING GROUP / ENVIRONMENT AGENCY
TEN ACRES LANE / FORMER JACKSONS BRICKWORKS SITE**

DOCUMENTATION REVIEW & ASSOCIATED MEETING

**[1] - MEETING (18/04/2023) - WARDELL ARMSTRONG ADDITIONAL GROUND
INVESTIGATION REPORTING / SITE REMEDIAL REQUIREMENTS**

[2] - DOCUMENTATION REVIEW

- **TEN ACRES LANE - COMBINED PHASE 1 & PHASE 2 GROUND
INVESTIGATION. REPORT REF: LD10385-RPT-001. DATED OCTOBER 2022.**
- **TECHNICAL NOTE - HYDROGEOLOGICAL CONCEPT SITE MODEL
CLARIFICATIONS. REF LD10587. DATED 1st MARCH 2023.**
- **TECHNICAL NOTE - DEEPER GROUND CONDITIONS AND LABORATORY
TESTING CLARIFICATIONS. REF: LD10587. DATED 14TH APRIL 2023.**

**ASSOCIATED WITH PLANNING PERMISSION 129197/FO/2021: ENABLING
WORKS DEVELOPMENT APPLICATION FOR REMEDIATION OF LAND AT THE
FORMER JACKSONS BRICKWORKS SITE.**

LAND OFF TEN ACRES LANE, M40 2SP

Our thanks again to the external project team for meeting with the Environment Agency (EA) on the 18th April and for requesting associated preliminary review by our Groundwater and Contaminated Land Team of the following documentation pertaining to the Former Jacksons Brickworks / Ten Acres Land development site:

- **Combined Phase 1 & Phase 2 Ground Investigation. Report Ref: LD10385-RPT-001. Prepared by Wardell Armstrong. Dated October 2022.**
- **Technical Note - Hydrogeological Concept Site Model Clarifications. Report Ref: LD10587. Prepared by Wardell Armstrong. Dated 1st March 2023.**

Environment Agency
Richard Fairclough House Knutsford Road, Warrington, WA4 1HT.
Customer services line: 03708 506 506

www.gov.uk/environment-agency

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- Technical Note - Deeper Ground Conditions and Laboratory Testing Clarifications. Report Ref: LD10587. Prepared by Wardell Armstrong. Dated 14th April 2023.

Further to this EA correspondence letter, we advise that we have approximately ~ 18.5 hours currently remaining as part of extended chargeable planning agreement ENVPAC/1/GMC/00310. If subsequent to this correspondence additional preliminary documentation review by the EA be desired, then we advise that an extension of time to our current agreement is likely to prove necessary to facilitate this effectually. We welcome the opportunity to discuss this matter further in due course with the relevant members of the external development project team.

As context to below, it is our present understanding that is the intention of the external development project team, via the reporting provided / subject of this preliminary review, to seek to satisfy the relevant land contamination conditional requirements placed upon enabling works full planning permission 12919/FO/2021 for the development site. We note the conditions from this planning permission of relevance to the reporting submissions subject of this review are condition 5 (additional site investigation) and condition 6 (risk assessment) and our awareness of 'live' discharge of conditions application CDN/22/0922 (although note in scope this seeks only to address condition 5). Should this understanding of intention prove incorrect, then we ask that we are notified at the earliest possible convenience as to the true intention.

In connection with the above, we advise that are aware that planning permission/ approval has now been granted (17th May 2023) by the local planning authority / Manchester City Council (MCC) for the hybrid planning permission 133700/FO/2022. We acknowledge (except for phasing introduce for the hybrid planning permission 133700/FO/2022), that the development area(s) subject of 12919/FO/2021 and 133700/FO/2022 are identical. In virtue of this, further to this letter, we would welcome confirmation that the earliest possible convenience from the external development project team as to whether there remains an intention to progress both planning permissions to finalisation or where future actions intend to now to favor a singular permission for progression. i.e. 133700/FO/2022.

Further to context and outline of the EA's understanding detailed above, please find below written review commentary provided by our handling contaminated land specialist, Lee Beveridge, pertaining to the ground investigation documentation submitted (listed above) with, where relevant, reference to discussions held on the 18th April 2023.

EA GWCL Documentation Review Commentary – Wardell Armstrong Ground Investigation & Rationale Reporting

We have reviewed the Wardell Armstrong (W-A) reporting submissions provided to understand further site constraints (ground conditions) and any associated potential risk(s) posed to controlled waters to/from the proposed development site. We advise that for addressing the relevant conditional requirements placed upon 12919/FO/2021 and 133700/FO/2022, separate consultation is also sought from MCC's Environmental Health department for matters pertaining to the protection of human health if not already done so.

As preamble to the below, we advise that as outlined during prior discussions held, we do not dispute the historic use(s) of the proposed development site. We acknowledge that the original industrial land-use of the site was either a singular or series of

excavated clay quarries which presumably due to the exhaustion of useability (e.g. substantial water ingress impeding actions), was subsequently infilled with waste material.

We consider the depth and extent of the original clay excavations has been broadly confirmed by the series of ground investigations that have been undertaken to date. We further consider that these investigations have identified/shown that depth of quarry/excavation historically undertaken is not uniform across the full extent of the development site with variations existing.

In connection with the above observation, we note that the extent of historic infilling activity is variable i.e. the extent of infilling undertaken/possible has been determined by the depth of historic excavations; with several area of the site whereby the depth of infill is substantial as well areas whereby the depth of infill is shallow.

Further to the above, we are aware from the investigation logs provided that the content of the waste fill material on-site is heterogenous. The borehole logs suggest a range of waste materials as being present within the development site area including ash and clinker, demolition/construction waste and domestic waste types. The logs also suggest/show that deposition of such waste materials is not uniform/linear with lateral and vertical variations of content observed between the various logs.

In terms of the characterisation of underlying site conditions, we acknowledge and do not seek to dispute that, from an overall spatial perspective, the site has been carefully investigated by the development project team. However, with regards to depth of characterisation, we note that much of the contemporary investigations undertaken has been within the top three - five metres of the site (with a majority of investigations being within the top three-metres of the site); with these investigations having informed the understood present consideration of the development project team as the maximum depth to which remedial activity is required on-site. However, to reflect upon this and offer our own perspective we note, from the W-A presentation provided on the 18th April 2023, this offered an estimation that the volume of material below 3 metres depth equates to 400,000 cu m of material (almost half of the 840,000cu m of waste/made ground that is present). Furthermore, in terms of testing and analysis, it has been identified by W-A that of the 321 soils tests undertaken, 247 have been taken from within the top 3m of the site (equating to ~77% of total soil tests undertaken).

We consider EA observations outlined above, support our (the EA's) current consideration that presently on-site waste matter situated below a depth of 3 metres has, despite the extent of ground investigations undertaken to date, not been fully delineated by the scope investigations undertaken. We therefore consider uncertainty in overall site conditions (at depth) and associated potential risk posed to controlled water persists at this present time.

In further support the above EA conclusion regarding site characterisation, we note from the W-A presentation provided on the 18th April and the supporting W-A technical note summarising site conditions the confirmed the presence of plastic sheeting, plastic bags, fabric, coils of wire, metal, glass bottles, rolls of carpet, polystyrene, rubber, hardboard, leather, electronic boards, tyres, paint tins, cement bags, rope, occasional containers / drums, disposable cups and toys within the differing cohesive and granular matrices of waste across the site and at differing depths.

We also further note that W-A has identified the waste mass as being indirect contact with groundwater and that this was likely impacted by the leaching capacity of waste

mass. We acknowledge and agree that these anthropogenic constituents in themselves do not necessarily constitute a significant risk to controlled waters provided there are situated/found in 'low risk' locations / 'low risk' conditions but, as we have identified from previous discussions, the proposed development site and waste mass associated is located in a moderately sensitive location being situated above a Principal aquifer and within a Secondary Aquifer.

On the topic of 'low risk conditions / 'low risk' location in conjunction with the observations noted above, we have reviewed the W-A hydrogeological conceptual site model technical note and do not agree with the conclusions reached within. It has been identified within the technical note that W-A does not believe a groundwater body to present within the immediate vicinity of the development site further citing no reason to believe that the granular lenses in the cohesive till deposits are connected any such waterbody. However, referring to wider technical guidance available to the EA, we advise we consider the granular deposits detected evidence of paleo outwash channels characteristic of a high energy environment. In real terms, this means surface water bodies travelling from one location to another (often in a sinuous pattern) with likely interconnectivity across or along the paleo-glacial valley feature within which the development site is situated.

We do not accept the W-A position/conclusion put forwards that no discernible aquifer exists within the superficial deposits and that, by inference, the public records are incorrect and there is no/minimal risk to controlled waters. As also noted above, during the W-A presentation it confirmed that the waste mass was in direct contact with the groundwaters. We consider this observation is likely to be representative of an ongoing risk of contaminant transfer from the solid to liquid matrix. It is our opinion that this statement is supported by the presence of contamination in the liquid (leachate or shallow groundwater depending on the technical submission which has been reviewed) that some of those contaminants have the possibility of mobility.

In virtue of the above observations, unless sufficient remedial action is undertaken, we advise that we will be unable to definitively rule out a future consideration of the site under the Contaminated Land regulations (Part 2A). In conjunction with this, we note for attention on the development project team the requirements of paragraph 183 of the National Planning Policy Framework (NPPF) against which the EA seeks to offer regulatory recommendation /position to the planning authority – *'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.'*

On the topic of land contamination / Part IIA classification, wider to previous discussions, we are unaware as to the whether the removal of the formal historic landfill classification of the development site is necessitated in virtue of the residential intention of the proposed development site. However, if a key consideration / requirement for the progression of this development, noting the intention to create new dwellings, then we would advocate for early discussion with the planning authority / Manchester City Council to discern requirements for the effectual removal of this classification.

Associated with the above, it has been noted to the wider development project team from earlier discussions with the EA's National Permitting Service regarding the prospective use of a 'Disposal for Recovery' permit that lack of clear information/data demonstrating which materials are suitable to remain in situ, which materials must be removed (from an environmental risk perspective) and, in turn, the criteria that must be achieved to show recovery (to a non-waste standard) is not acceptable.

Previously, we asked for additional testing to be carried out to understand the presence of, and significance from, PFAS (per- and polyfluoroalkyl substances) which have been identified and noted the development project team as being associated with certain types of domestic and construction/demolition waste. Further to this, we note from the results of the testing and the additional assessment offered within the hydrogeological Concept Site Model developed by W-A that widespread presence of PFAS is unlikely (including within the saturated zones of the site). However, as caveat to this observation/conclusion, from careful examination of the testing data and the testing locations, we have identified that the majority of the PFAS testing undertaken is from sampling of solids and that much of the liquid sampling undertaken comes from within the made ground; with only a small number from the natural, truer, groundwaters surrounding the site. In virtue of this caveat, presently, we consider the ability to draw confident conclusion(s) on the significance of PFAS contamination to the needs (remediation) of the development site challenging.

Further to the above, we have identified that the solid sampling undertaken shows the presence of PFAS contamination and the landfill leachate confirms transfer from the solid to liquid. In light of this we consider it is possible (although uncertain from data available) leachate containing PFAS may have transferred to the natural surrounding groundwater. If true, this would represent an active source, pathway, receptor contaminant linkage necessary to address via remedial activities to prevent further adverse impact from occurring.

In virtue of the above EA conclusions, to offer overarching conclusion, at present, we are unable to advise definitively the external project team or planning authority / Manchester City Council, that the site does not pose an unacceptable risk to controlled waters from the current and/or the future condition of the site will meet a condition whereby it is not possible to consider the development site 'contaminated land' under Part 2A of the Environmental Protection Act 1990. From the current data/information available, we consider there to be evidence towards a scenario whereby more a more significant remediation (extending beyond a depth of 3 metres) is warranted

Cognisant to intention of this preliminary review and in turn intended purpose of the W-A reporting submissions, we wish to offer the following further perspective/advisories outlined below. However, note and acknowledge that the course of action pursued going forward will be for the external development project team to determine.

Considerate to the costs associated with additional, detailed, or targeted, ground investigation and potential for such further assessment to not offer ability to draw definitive conclusions on risks posed (given the heterogeneity of the site/site materials). We advise the basic premise that this site is a former landfill, that it has taken a range of waste types (some of which are domestic in origin) and that, due to the age of the landfill is still producing adverse concentrations of leachate is not disputable. Further because the waste mass is in contact with groundwater and the superficial deposits have paleo-glacial channels likely to be in connectivity to the surrounding bedrock / Principal, aquifer, neither is the potential for site to adversely impact upon on a sensitive controlled water receptor. In light of this, we have considered the potential forward approach which could be taken by the external development project team to bring this land back into beneficial use, address the materials which are present and the possible risks to controlled waters that are associated with the site.

At our most recent meeting, we noted the possibility of a more dynamic approach to remediation of the development site, and we feel that such a potential solution could be associated with this. As part of this approach, consideration may need to be given the

formal appointment of a remedial contractor.

On balance, in recognition of the fact that leaving the materials in situ would not lead to any possible environmental improvement, we advise that, if desired, via our preliminary chargeable planning agreement service, we keen to continue working with external development project potentially find a solution to help you move the project forwards and implement a suitable and safe solution. Due to the legislative requirements of the Construction (Design and Management) Regulations 2015 and our role as a regulator, we are unable to design/create such a remedial approach on your behalf. However, we can act as an advisor to the development of such a strategy.

To the end of the above, we suggest the external project team may wish to consider a hybrid approach that involves the removal of the known or suspected high risk materials to address the ongoing and future risks and in conjunction with this the development of realistic and applicable criteria which allows for the safe retention of materials and a process whereby waste materials can be excavated (to an agreed and information-based depth) and then transformed, treated or handled to enable them to meet an end of waste criteria, or fully recovered status to support their re-use on site as part of the wider site based remediation strategy and implementation plan.

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We trust that the development project team will find the contents of this letter beneficial to any further efforts made to the address conditional requirements placed upon planning permissions 12919/FO/2021 and 133700/FO/2022 for the Former Jackson Brickworks / Ten Acres Lane development site. However, should you have any initial queries or questions regarding the contents of this letter, or alternatively wish to request further preliminary engagement with the EA under ENVPAC/1/GMC/00310, then please don't hesitate to get in contact.

Yours sincerely,

Mr Andy Davies
Green Growth Team Project Manager

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