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DOWNLEY DRIVE

MANCHESTER

M4 7JU



CONTROLLED WATERS SUMMARY RISK ASSESSMENT

UNDERTAKEN FOR

GREAT PLACES HOUSING GROUP

Ref:19-B-12490/Downley Drive

Revision '0'

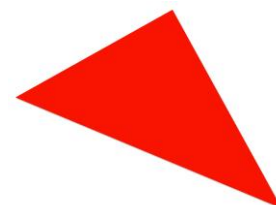
20th July 2021

Principal: **D.J. Middleton BEng(Hons) CEng MStructE**

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Report Title:	Downley Drive, Manchester, M4 7JU
Report Reference:	19-B-12490
Client:	Great Places Housing Group
Issue Date:	20th July 2021
Authorised By:	D.J. Middleton

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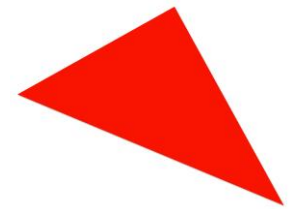
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1.0 INTRODUCTION

This report has been prepared at the request of Manchester City Council Planning to satisfy a Planning Condition imposed at the granting of Full Planning Permission. Phase 1 & Phase 2 site investigations have previously been produced and submitted as part of the planning process.

The site is located at the west end of Downley Drive in the Ancoats / New Islington area of Manchester, approximately 1km east of the city centre at NGR 385345, 398731 and at postcode M4 7JU.

2.0 PROPOSED DEVELOPMENT

Plans made available show the proposed development of the land to be residential units in a mix of houses & apartments with associated access road, drainage, utility & parking infrastructure.

3.0 PHASE 1 / 2 SITE INVESTIGATIONS

Separate Phase 1 & Phase 2 investigations have been undertaken by Messrs Carley Daines and Partners Limited. The Phase 2 investigation is dated 25th January 2021.

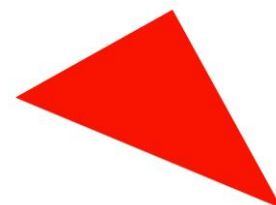
This indicates that the site has maximum dimensions of approximately 150m by 50m. The area is approximately 8,600m² (0.86 ha).

The site exists at an elevation of approximately 49m AOD.

The site is currently unoccupied and is split by a path from Downley Drive to the Rochdale Canal.

The site has been developed in the past with significant industrial and commercial usage and with housing in the southern area of the site.

The surrounding area is predominantly a mix of residential development with commercial and industrial land use to the west of the canal.



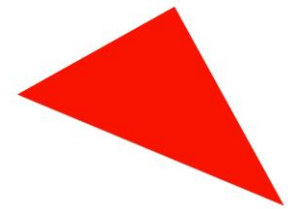
The Phase 2 Ground Investigation was based on 8 boreholes to a maximum depth of 6.0m and 4 trial pits to a depth of 1m, yielding 12 soil samples for laboratory testing. The report indicated that there are elevated concentrations of contaminants present on the site, specifically Lead, Benzo(a)Anthracene, Benzo(a)Pyrene, Benzo(b)fluoranthene and traces of Asbestos. These are considered a potential risk to human health. The report recommended placement of a suitable clean capping layer, 600mm in thickness to gardens & soft landscaped areas.

The table below references the contamination identified. The levels have been compared against Generic Assessment Criteria for Human Health Assessment – S4UL – based on “residential with home grown produce” and a soil organic matter of 1%. These are the most sensitive and conservative published values.

Contaminant	Number of Exceedances	S4UL (mg/kg)	Maximum Recorded Concentrations (mg/kg)	Sample
Lead	1	200	530	BH1, BH3, BH5, TPC, TPD
Benzo(a)Anthracene	1	7.2	10	TPC
Benzo(b)fluoranthene	6	2.6	6.5	BH1, BH3, BH5, TPB, TPC, TPD
Benzo(a)Pyrene	7	2.2	7.4	BH1, BH2, BH3, BH5, TPB, TPC, TPD
Asbestos	4	detection		BH2, BH3, BH4, TPC

4.0 RISK ASSESSMENT

Assessment of risk is carried out by consideration of a traditional conceptual site model (CSM) based upon source – pathway – receptor linkages. For a risk to be present, all three components of the identified pollutant linkage must be present.



Source

The source is readily identifiable as the on-site contamination, set out in the table above. However, the contamination levels cannot be regarded as being at very high or extreme levels. They have been assessed against very sensitive end user (ie future tenants) human health criteria and whilst moderately elevated, they are not orders of magnitude greater than the S4UL figures. Furthermore, if the site were proposed to be developed for a different end use (such as commercial) the site would not fall into a contamination classification.

Pathway

The pathway to controlled waters would be via gravitational migration through underlying strata. However, the site and surrounding area is indicated on Drift geological plans as being Devensian Till (Diamicton), more generally known as clay which is highly impermeable. This is further confirmed by the Phase 2 investigation where all boreholes identified underlying clay.

Receptor

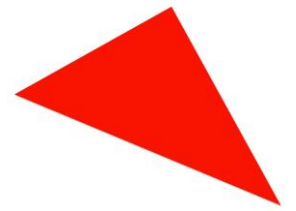
There are no nearby natural watercourses.

The adjacent canal is effectively a sealed man made system and should not be considered as a potential receptor to contamination migration.

Hydrogeological maps of Groundwater Vulnerability included in the Phase 1 PRA indicate both the underlying Bedrock & Superficial Aquifers as falling into the lowest of six vulnerability categories, designated as Low Vulnerability Secondary Aquifers.

Conclusion

In view of the relatively moderate level of on-site contamination, the presence of impermeable clay restricting a pathway and low vulnerability of receptive groundwater, the risk to controlled waters from the proposed development is considered NEGLIGIBLE.



SIGNED (electronically)

C. R. Carley JP MSc CEng MICE - Consultant

APPROVED (electronically)

D. J. Middleton BEng (Hons) CEng MStructE - Principal