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Our Ref: 065374-CUR-00-XX-GE-CO-0001-P01

01 April 2020

FAO Laura Miller
Contaminated Land Department
Environmental Health
Manchester City Council

Response to Consultation on Planning Application Ref. 118267/FO/2017- Echo Street Development, Manchester

Introduction

We have recently been in receipt of MCC's memorandum for consultation on planning application Ref. 118267/FO/2017 dated 17 March Ref. 660328, relating to review of environmental reports provided to date.

Curtins carried out the aforementioned geo-environmental investigations at for the Echo Street, Manchester city centre development. We write to provide a response to your comments including clarification behind the scoping and strategy of our ground investigation, proposed updates to our reports and to agree an approach moving forward to meet planning requirements.

Section 2- The Adequacy of the Site Investigation

With regards your comments in Section 2- 'The adequacy of the site investigation' we note MCC comments were as follows:

The exploratory locations to date do not provide adequate site coverage and further site investigation is deemed necessary – no investigation has been undertaken within the footprint of the former Chandos Hall building {Comment 1}.

Provision of the calibration certificates for the ground gas monitoring equipment to cover the period of monitoring {Comment 2}.

With regards to Comment 1 above our rationale and strategy for the post demolition site investigation is provided below.

The site as a whole has been very well characterised through various stages of pre demolition and post demolition investigation with 45 sampling locations in total across the 0.3 Ha site with a total of 63 soil samples analysed. This results in a very high sampling density of between 5m to <25m across the whole site meeting requirements set out in BS 10175:2011 + A2 2017.

June and July 2019 investigations were undertaken after demolition of buildings on the eastern side of the site (nursery/garages/estates building), at this time the Chandos Hall building still remained on site. The eastern extent of the site was considered the main target for additional stages of investigation as building cover had previously occupied much of this area limiting previous investigation. Furthermore, this area was considered a higher risk due to the historical uses in this area (including printing works, battery repairs, car garage, depot, fuel storage tanks).

Further investigation was undertaken at the west of the site around Chandos Hall in June and July to increase sampling density and further develop the ground model for this area. Similar ground conditions were anticipated beneath the Chandos Hall Building as immediately adjacent areas given

the history of this part of the site; Chandos Hall and surrounding external hardstanding present since late 1950s/early 1960s and various small commercial properties prior to this off Lauder street, including a cloth store. Furthermore, the Chandos Hall building formed less than 20% of total site area.

Exceedances for non-volatile PAH species and lead as well as asbestos fibres/containing materials were identified across the site within the various ground investigations, whilst a single exceedance for Naphthalene was identified on the north east of the site, recommendations have been made for the provision of suitable thickness of clean cover in any soft landscaped areas to break any source pathway receptor linkages between contaminated soils and end users. If any low levels of non-volatile contamination existed beneath the Chandos Hall building it was considered that the recommended measures would be sufficient in protecting human health. The potential for volatile contamination on this part of the site is considered low whereas potential for volatile contamination was considered to be higher on the east of the site adjacent to historic fuel tanks. On this basis further investigation beneath Chandos Hall was not deemed necessary.

We therefore believe adequate site coverage has been achieved and for this reason we do not see further sampling beneath the Chandos Hall building as necessary or beneficial as this is unlikely to change the recommendations of our report. Instead we propose to update our Phase 2 Ground Investigation report accordingly and include the above justification and rationale for our investigation locations and strategy. We will also ensure a watching brief is undertaken during remediation with regards to dealing with any unexpected contamination.

With regards to Comment 2 our ground gas monitor calibration certificates is attached and we will ensure it is included within our updated report.

Section 3 The Adequacy of the Final Risk Assessment

With regards your comments in Section 3- 'The adequacy of the final risk assessment site investigation' we note your comments were as follows:

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 {Comment 3}.

With regards to Comment 3 I can confirm the additional sampling recommended within Curtins Additional GI report (Dated September 2019), has since been undertaken confirming a low risk from Naphthalene contamination in the north east of the site. We propose to update our Ground Investigation Report and final risk assessment accordingly.

Section 4 - The Acceptability of the Proposed Remediation Strategy

Following the above we then propose to update our Remediation Strategy to include appraisal of the final risk assessment, address the remaining potential contaminant linkages and address your associated comments in MCC memo Section 4- The Acceptability of the proposed Remediation Strategy.

Closure

We trust you will see the above measures to be acceptable in principal but would be grateful if you could confirm by response.

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Please don't hesitate to contact the undersigned should you have any queries.

Yours faithfully,

Niall Farnworth (E: niall.farnworth@curtins.com T: 079712267263)
Senior Geo-Environmental Engineer

For and on behalf of
Curtins Consulting Ltd

TEST DATE AND CONDITIONS	
Date	15.5.17
Atmospheric Pressure	1003 mB
Ambient Temp	24.6 °C
Environics Serial No.	5089

GAS DATA LTD
Pegasus House
Seven Stars Estate
Wheler Rd
Coventry
CV3 4LB
Tel 02476303311 Fax 02476307711

GFM430 -1 OUTWARD INSPECTION & QUALITY CHECK SHEET

INSTRUMENT DETAILS			
SO Number	Instrument Type	Instrument Serial Number + SW Version	Job Number(s)
316917	GFM430	10327 G430-000024/0013	1032702517

Calibration Technician ..... **Date** 15.5.17

Inspection Technician ..... **Date** 16.5.17

INSTRUMENT CHECKS			Pass (P), Fail (F) or not applicable (NA)	INSTRUMENT PACKING LIST		Tick if included
Function Tests	Dust Caps Fitted		P	Instrument		✓
	Keyboard Test (All Keys)		P	Leather Case		✓
	Backlight		P	Instrument Strap		✓
	Clock Set / Running		P	AC Battery Charger (UK)		✓
	Comms Test		P	AC Battery Charger (EURO)		X
	Pump Flow Test (In & Out)		P	AC Battery Charger (US)		X
	Overall Leak Test (30mB)		P	AC Battery Charger (AUS)		X
	Battery Charge Test		P	Gas Sample Pipe		✓
	Service Date set to?		15.5.18	Carry Case		✓
Channel Test	Data Logging Enabled?		P	Spares Pot		X
	Verify CH4/LEL		P	Allen Key		X
	Verify CO2		P	Flow Sample Pipe		✓
	Verify O2		P	Temperature Probe		X
	Verify LEL		P	Vane Anemometer		X
	Verify 1st Option Gas	H2S	P	USB Cable		✓
	Verify 2nd Option Gas	CO	P	USB Memory stick		✓
	Verify 3rd Option Gas		N/A	SiteMan Software	Ver 4.15	X
	Verify 4th Option Gas		N/A	Internal Filter Pack	Qty	X
	Verify Atmospheric pressure		P	External Filter Pack	Qty	X
	Verify static pressure		P	Field Guide		X
	Verify differential pressure		P	Operation Manual (hard copy)		X
	Verify flow		P	Extra Items:		
	Verify temperature probe input		P			
	Verify vane anemometer input		P			
DataBase Checks	Jobcard(s) completed and signed		P			
	Jobcard(s) booked off database		P			
	Calibration certificate completed		P			
	Complete & print QI record		N/A	Comments:		
Label Checks	No. of Calibration label fitted		GDC 08092			
	Warranty label fitted		N/A			
	H2S Range from Sales Order		5000 PPM			
	H2S Range from Cal Cert		5000 PPM			
	Over-range value correct?		P			

TEST DATE AND CONDITIONS	
Date	15/05/2017
Atmospheric Pressure	1003 mB
Ambient Temp	24.6 °C
Environics Serial No.	5089
Gas Cylinder Certification No.	53484/5016

GAS DATA LTD
Pegasus House
Seven Stars Estate
Wheler Rd
Coventry
CV3 4LB
Tel 02476303311 Fax 02476307711

GFM430-1 / 2 FINAL INSPECTION & CALIBRATION CHECK CERTIFICATE

INSTRUMENT DETAILS	
Serial No	Customer
10327	Curtins Consultants

INSTRUMENT CHECKS			
Keyboard	✓	Pump Flow	400 cc/min
Display Contrast	✓	Pump Flow @ -200mB	400 cc/min
Clock Set / Running	✓	S/W Version	G430.0024/0013
Labels Fitted	✓	Recalibration Date	15/05/2018

GAS CHECKS							
Calibration Gas		Instrument Gas Channels Read					
Gas Type	Applied Conc.	CH4 (%)	tol. (% vol.)	CO2 (%)	tol. (% vol.)	O2 (%)	tol. (% vol.)
N2	100%	0.0	0.0	0.0	0.0	0.0	+/-0.1
CH4	5%	4.8	+/-0.3	0.0	0.0	0.0	+/-0.1
	60%	59.8	+/-3.0	0.0	0.0	0.0	+/-0.1
CO2	5%	0.0	0.0	4.8	+/-0.3	0.0	+/-0.1
	40%	0.0	0.0	40.1	+/-3.0	0.0	+/-0.1
O2	20.9%	0.0	0.0	0.0	+0.1	20.9	+/-0.5

OPTIONAL GAS CHECKS								
Calibration Gas		Instrument Gas Channels Read						
Gas Type	Applied Conc.	Label	H2S	CO				tol. (% vol.)
		Range	5000ppm	2000ppm				
N2	100%		0	0				0
H2S	1500ppm		1500	0				+/- 5.0
CO	1000ppm		76	1002				+/- 5.0
								+/- 5.0
								+/- 5.0
								+/- 5.0
								+/- 5.0

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PRESSURE CHECKS							
Calibration Pressure		Instrument Pressure Channels Read					
Pressure @	Applied Pressure	Atmospheric [Ap] (mB)	tol. (mB)	Static [Sp] (mB)	tol. (mB)		
All ports	current atmospheric	1003	+/-2.0	0.0	0.0		
Ap port (internal)	+800mB(a)	798	+/-5.0	0.0	0.0		
	+1200mB(a)	1199	+/-5.0	0.0	0.0		
Gas IN Port	+50mB(g)			0.0	+/-2.0		
	-100mB(g)			0.0	+/-2.0		

FLOW CHECKS					
Calibration Flow		Instrument Flow Channels Read			
Applied Flow	Applied Pressure (Pa)	Flow [Flow] (l/hour)	tol. (l/hour)	Differential Pressure [Dp] (Pa)	tol. (Pa)
-30.0 l/hour	-267	-29.2	+/-3.0	-265	+/-50
-3.0 l/hour	-13	-3.1	+/-1.0	-14	+/-6
0.0 l/hour	0.0	0.0	0.0	0.0	+/-0.5
+3.0 l/hour	13	2.8	+/-0.5	14	+/-3
+30.0 l/hour	273	27.5	+/-3.0	252	+/-50
+60.0 l/hour	807	55.8	+/-6.0	739	+/-130
+90.0 l/hour	1574	89.4	+/-9.0	1567	+/-250

TEMPERATURE CHECK		
Calibration Temperature	Instrument Temperature Channel Read	
Applied Equivalent Temperature	Temperature [Temp] (°C)	tol. (°C)
-10.0 °C	-10.0	+/- 2.0
0.0 °C	0.0	+/- 1.0
30.0 °C	30.0	+/- 1.0
60.0 °C	60.0	+/- 1.0
100.0 °C	100.0	+/- 1.0