Appendix F
Lifting and Access Strategy
Temporary Lighting Plan

KIER

Lifting Operations Schedule

Ref No.	Materials to be Lifted	Details of Lifting Equipment and Accessories Required	Date of Works	Works Package	Current Status	Comments
1	Delivery of barriers, fencing and hoardings	Hi-ab				
2	Delivery of cabins	Hi-ab				
3	Lifting materials with excavators	Excavator and chains				
4	Lifting skips	Skip wagon				
5	Lifting scaffold materials	Hi-ab and gin wheel				
6	Lifting steel	Crane				
7	Delivery general materials	Various methods				
8	Lifting precast	TBC				
9	Lifting rebar	TBC				
10	Lifting shutters	TBC				
11	Lifting metal deck	TBC				
12	Lifting cladding	TBC				
13	Lifting spandrel panels & glazing	TBC				
14	Lifting stairs	Crane				
15	Lifting masonry	TBC				
16	Lifting steel linings	TBC				
17	Lifting new substation	TBC				
18	Lifting new plant	Crane				
19	Lifting services	Crane				
20	Lifting plant onto roof	Crane				

Lifting Equipment is work equipment for lifting or lowering: including a crab, winch, pulley block or gin wheel, Tower, Mobile Cranes, Shear legs, Dragline, Piling Frame, Aerial Cable Way, Aerial Ropeway, Overhead Runway, Telescopic Handlers, Fork Lift Trucks, MEWPS - Scissor Lift, Cherry Pickers, POP UPS, Goods and Passenger Hoists, Passenger Lifts, Ropes used for access, Excavators, Lorry Loaders (Hiabs) Lifting Accessories: include lifting beams or frames, chain sling, rope sling or similar gear, a ring, link, hook, interlocks, plate clamp, shackle, swivel or eyebolt and any loose equipment used with lifting gear.

****Where Temporary Works are identified then cross reference to Temporary Works Schedule**

11 York Street, Manchester - Lifting and Access Strategy

Indicative Tower Crane Location

- Based on Wolffkrane, WOLFF 100B
- Planned erection date: August 2018
- Planned removal date: March 2019

External Perimeter Scaffolding

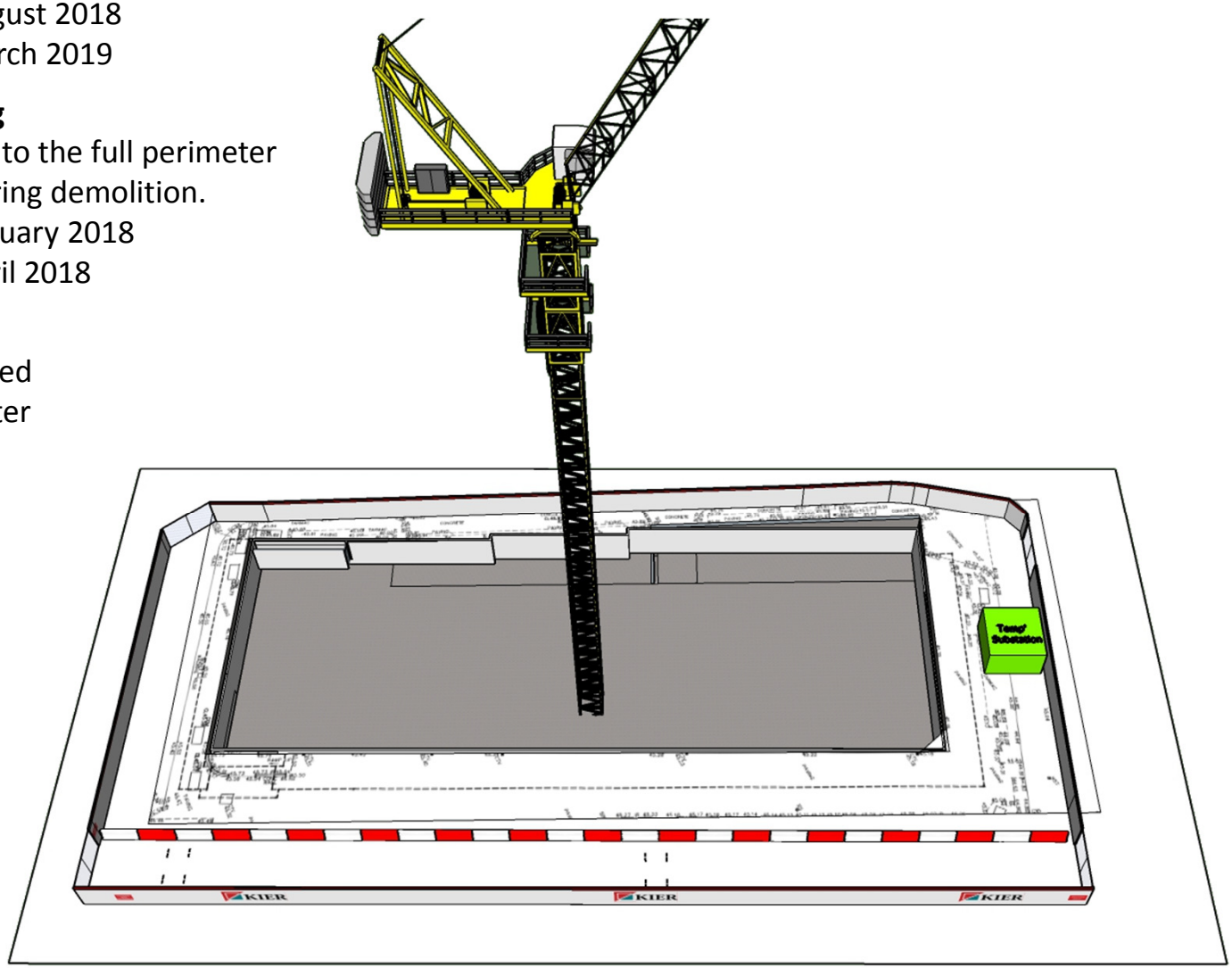
- Scaffolding will be erected to the full perimeter of the existing building during demolition.
- Planned erection date: January 2018
- Planned removal date: April 2018

Façade Installation

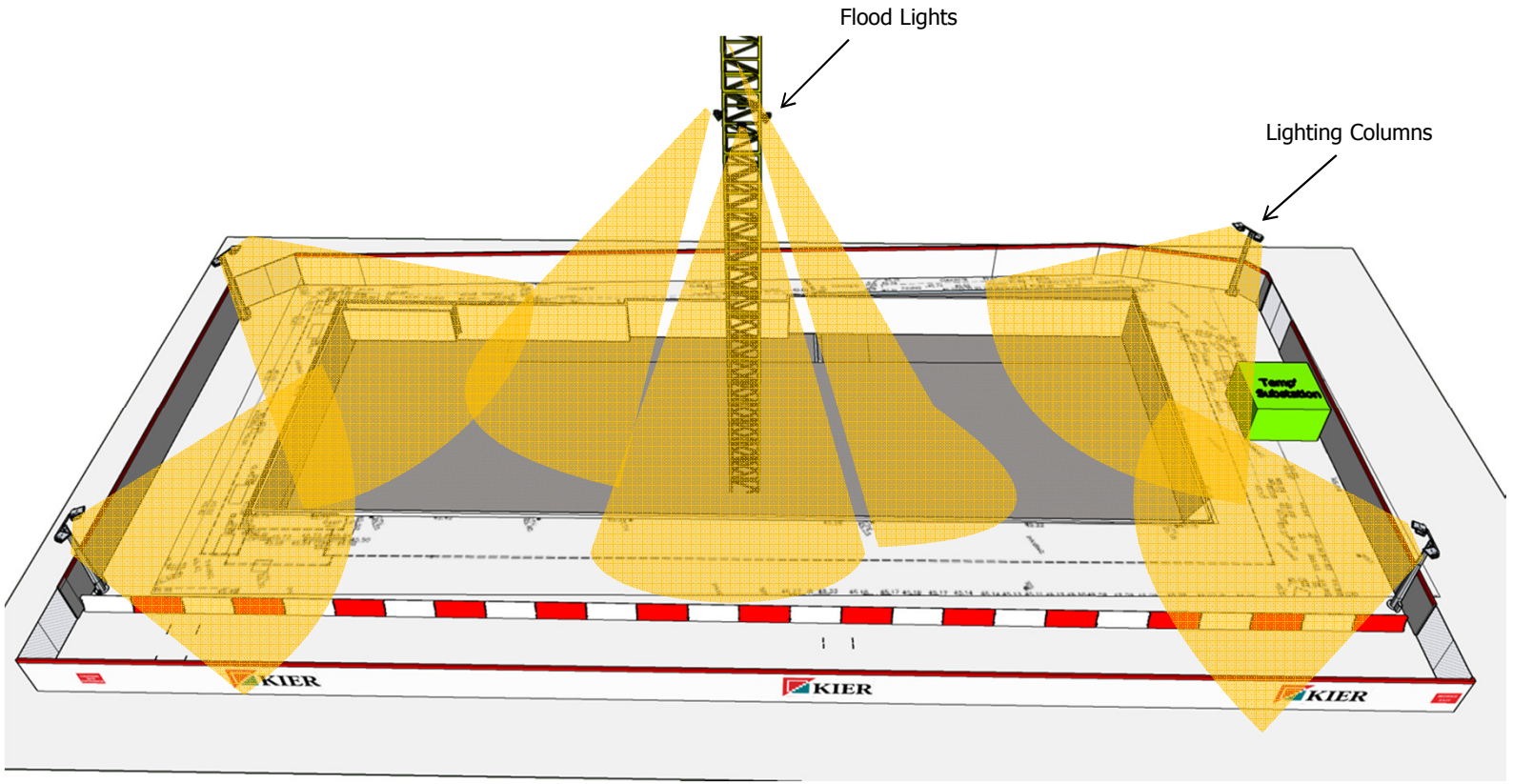
- Mast climbers will be utilised to the full building perimeter for façade installation.

Vertical distribution

- A material and passenger hoist will be installed on the Fountain Street elevation for vertical distribution of materials and workforce.



Proposed Lighting Strategy



Legend / Comments

Project:	11 York Street - Manchester	Drawing Title:	Lighting Strategy				
Drawn By:	Gavin Lyon	Drawing No.	1 of 2	Rev:	B	Date:	09.06.17

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Appendix G
Demolition Plan

Attached Existing Building Demolition Statement.

11 York Street
Manchester

Existing Building Demolition Statement

Tier Consult
7-9 New Wakefield Street
Manchester
M1 5NP

Tel 0161 876 2900
Fax 0161 876 2901

Ref TM/16/1145
June 2017
Rev A 19.07.17

DOCUMENT CONTROL			
REVISION	DESCRIPTION	AUTHOR	DATE
A	2.06 – 2.19, 3.05 – 3.07 Updated following further onsite inspections	RJH	19.07.17

1.0 Introduction

1.01 Tier Consult have been appointed by Kier Property to provide a method statement for the safe demolition of the existing building currently occupying the site of the proposed 11 York Street Development, Manchester.

1.02 This report and the methodology contained therein has been informed by discussion with the potential contractor for the new development. The demolition phasing is governed by the proposed construction methodology for the new structure which may be subject to minor alteration as the design for the proposed works is finalised. This report concerns structural matters only, for services information and terminations etc refer to specialist consultant's details.

1.03 This report is prepared for the sole benefit of Kier Property Ltd and must not be reproduced or relied upon by any third party without the written consent of Tier Consult. Tier Consult accept no duty or responsibility (including negligence) whatsoever to any third party with regard to the contents of this report.

2.0 Existing Building

2.01 The existing building occupies an island site in the centre of Manchester. The building is longitudinally aligned to the north west and is bounded to the North by Marble Street, East by Fountain Street, South by York Street and to the West by Milk Street.

2.02 The building is approximately 50m long and 20m wide and comprises a basement storey with a further six storeys above ground. The basement accommodates car parking, plant and a network electrical sub-station serving both this building and neighbouring properties. The sub-station is to be decommissioned and a temporary replacement installation provided adjacent to the site prior to the commencement of demolition. It is assumed that the structure was designed for retail use at ground floor and office use at first floor and above.

2.03 The Marble Street and Fountain Street elevations have a reinforced concrete cantilever canopy at first floor level extending approximately 2.75m from the building, the Milk Street elevation has a similar canopy for part of its extent within the inset section.

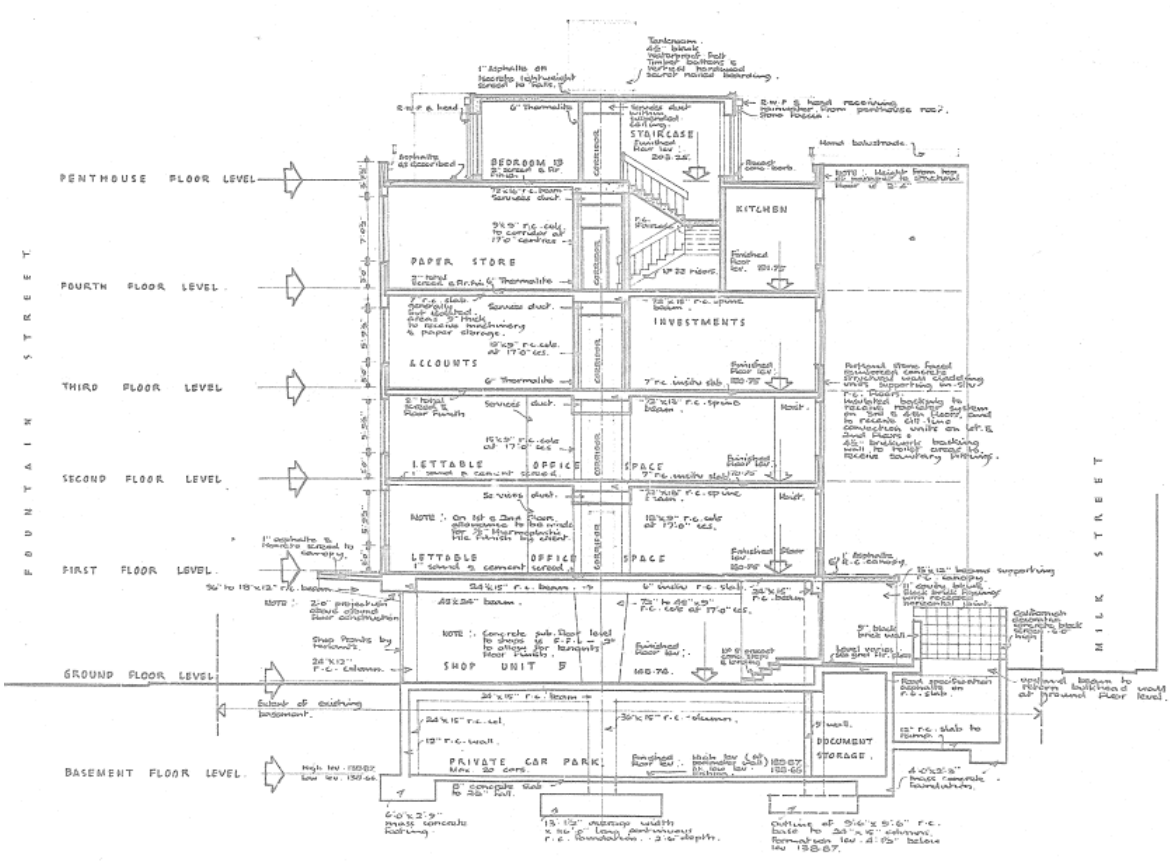


Fig 1 Existing Cross Section

2.04 A number of architectural record drawings are available for the original construction however no structural drawings have been made available. Manchester City Council Building Control have been contacted in order to

access their records however to date no documents have been forthcoming. The structural detail discussed in this report is obtained from both site survey and interrogation of the original Architectural details.

2.05 A Type 2 asbestos survey has been carried out on the building which has detected both licensable and non-licensable materials. These materials are to be removed from the building in strict accordance with The Control of Asbestos Regulations current edition, prior to the commencement of demolition.

2.06 The existing structure comprises a reinforced concrete frame. Reinforced concrete floor slabs span across the building from the external envelope to a central wide reinforced concrete spine beam. The external precast concrete cladding supports the floor structures and carries the load down to reinforced concrete 'transfer' beams at first floor level which in turn are supported by discrete columns at ground floor. The external precast concrete cladding is formed from an assembly of structural 'H' profile panels, staggered in elevation with infill spandrel panels (Fig 2). The 'H' panels are spliced at mid-storey height with the spandrel section directly supporting the floor slab (fig 3).

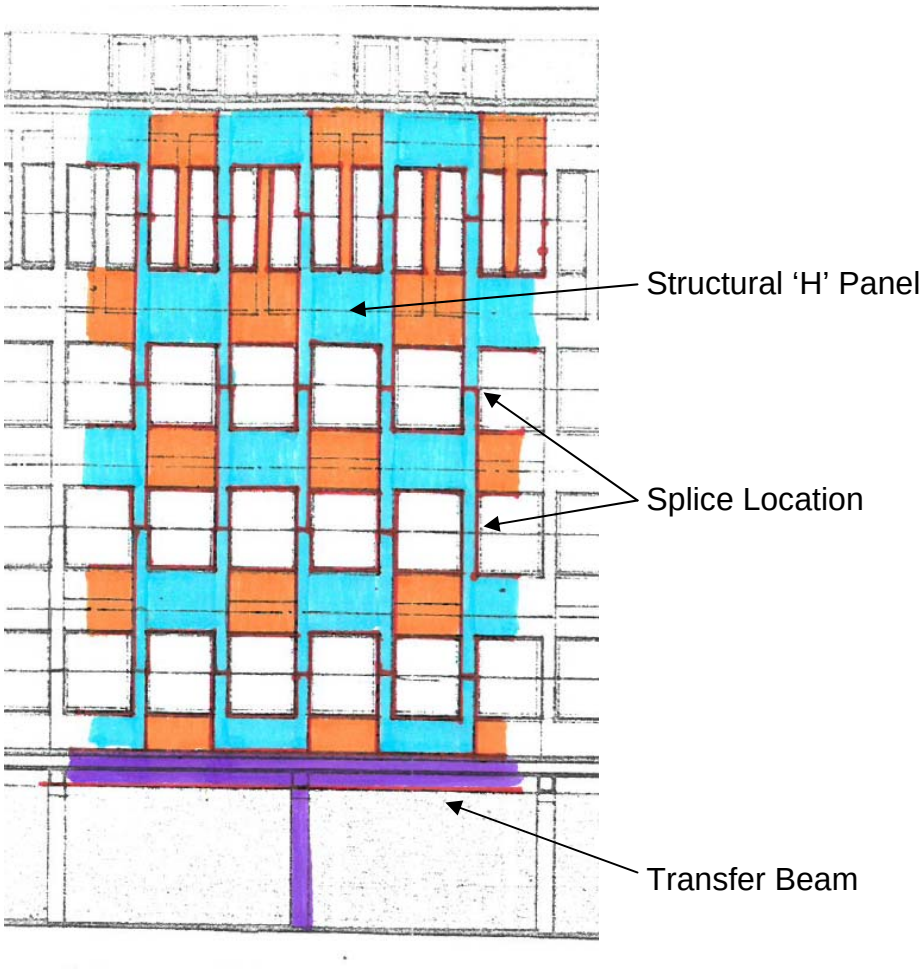


Fig 2 PCC External Panels

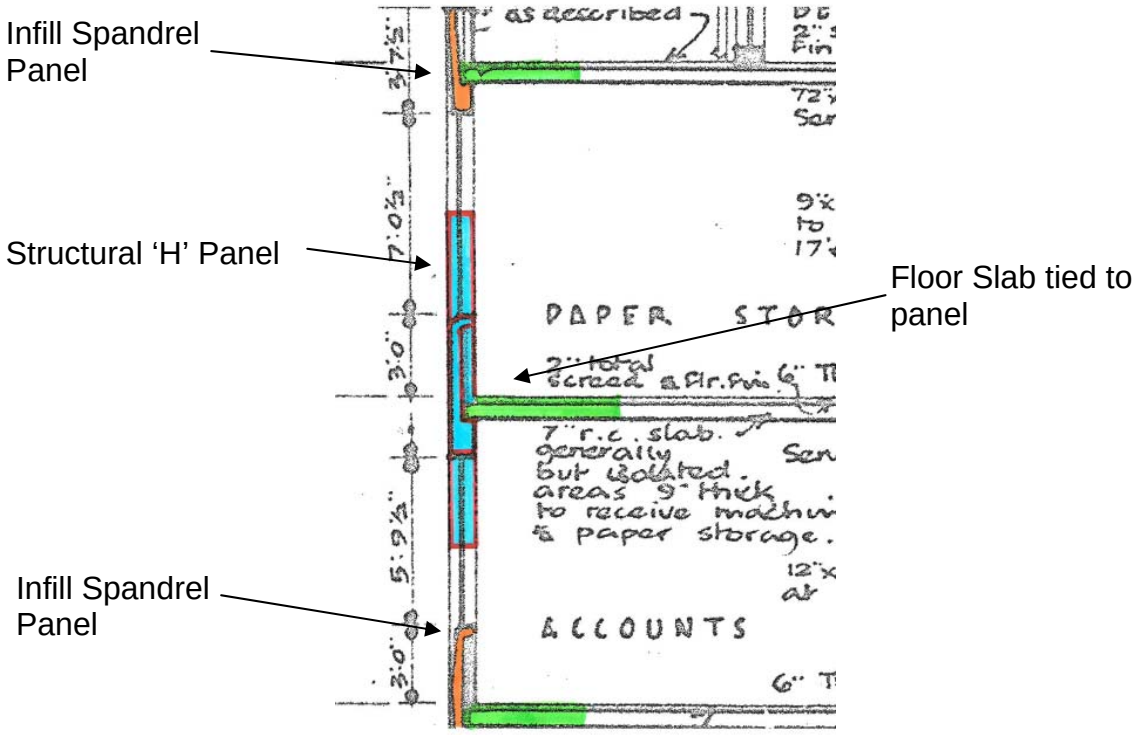


Fig 3 Section Through External Panels

2.07 Above first floor the central spine beam is supported by a pair of reinforced concrete columns either side of a central 'corridor', commensurate with office layouts at the time of construction. Between basement and first floor the column pairs are supported by a single larger column which splays out from its base to its head at ground floor. The ground floor slab spans longitudinally between beams spanning across the building.

2.08 The existing basement is formed with reinforced concrete perimeter retaining walls propped at ground floor level by the existing reinforced concrete slab and beams. The architectural drawings indicate that the base of the wall is integral with the slab, however on site investigation have shown that the as-built condition differs in so far as there is a flexible joint between the basement slab and the wall face indicating a ground bearing slab with a separate wall footing beneath. Core samples have been taken through the walls which indicated a reinforced concrete thickness of approximately 300mm, no waterproofing material was present on the retained face of the wall. The record drawings also indicate the presence of relic foundations and walls outside the footprint of the existing basement.

2.09 The perimeter of the building is surrounded by paved foothpaths at ground floor level. There are extensive live services beneath the footpaths which have been the subject of detailed investigation.

2.10 The structure appears to have been constructed of traditional reinforced concrete and therefore there does not appear to be any elements of pre or post stressed concrete or any other forms of construction containing embodied energy.

2.11 The building has 2 vertical circulation cores, a stair and lift core to the south and an escape stair core in the north west corner. The main stair and lift core is enclosed with reinforced concrete walls which provide lateral stability to the structure, the escape staircase has an adjacent longitudinal concrete wall again providing stability in that direction.

2.12 Existing storey heights are generally 4.0m floor to floor.

2.13 The structure is supported on reinforced concrete spread foundations bearing onto the underlying clay sub soil.

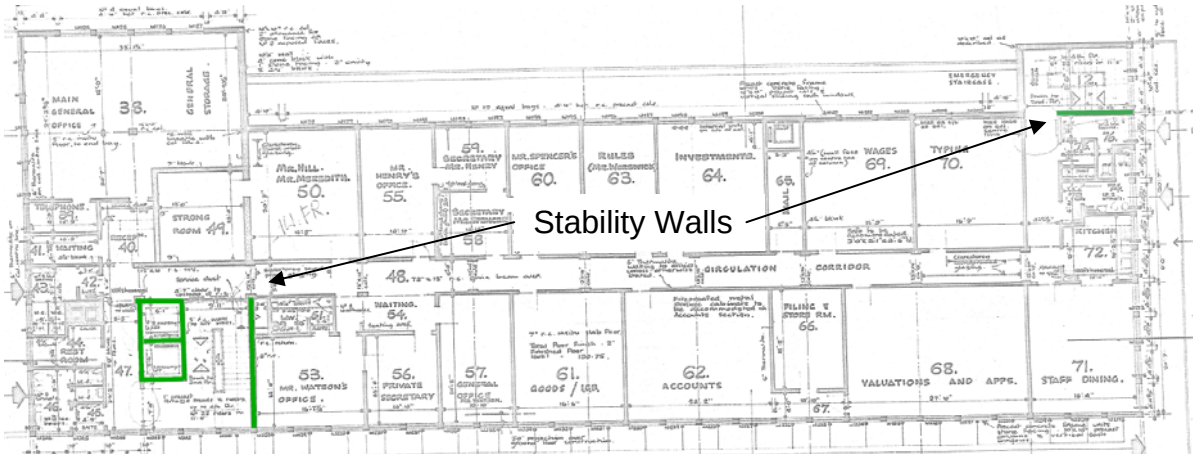


Fig 4 Typical Floor

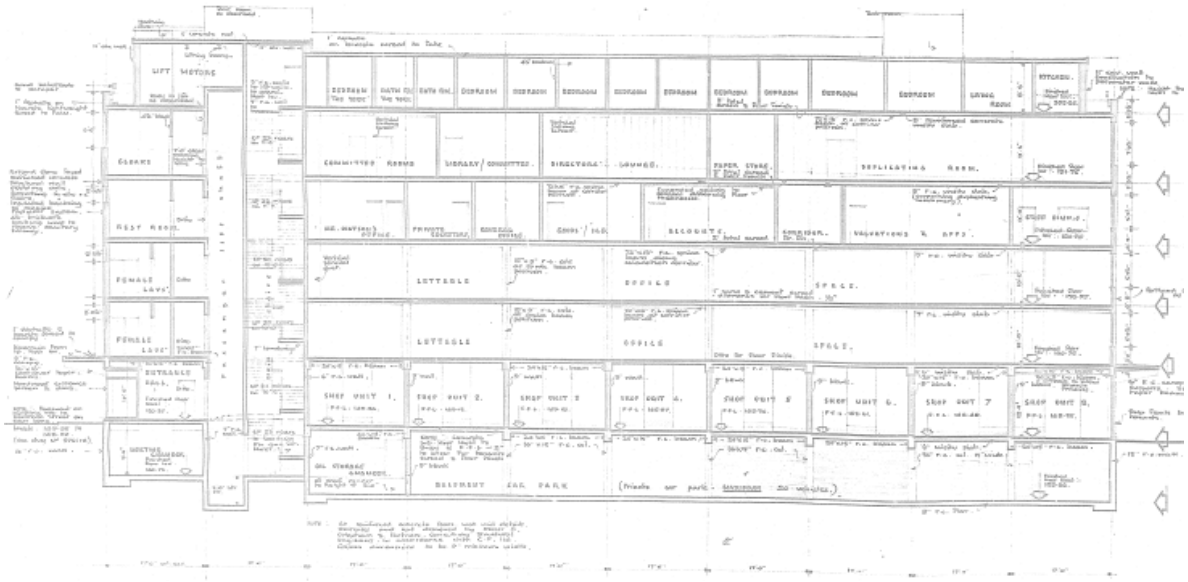


Fig 5 Long Section

3.0 Demolition Methodology

3.01 Prior to demolition a suitable secure solid hoarding is to be provided to the full perimeter of the building in a location to be agreed with the Local Authority. The hoarding is to contain vehicle gates to allow for waste lorries to be loaded within the confines of the hoarding. In addition to the hoarding, protective cantilever 'fan' scaffolds are to be erected where deemed necessary at a suitable level to prevent debris falling from the building from reaching ground level. At the end of the demolition process the hoarding is to remain to provide protection to the permanent construction works, adapted as necessary to suit the ongoing construction works. As noted previously there are considerable below ground services around the building and therefore all necessary protective measures are to be taken to avoid damage to them.

3.02 The location of the building prevents the use of explosive demolition techniques therefore the structure should be demolished in a traditional piecemeal top down manner in either a storey by storey sequence or a bay by bay sequence using hydraulic / pneumatic breaking or cutting equipment.

3.03 Plant loads and loads from the stockpiling of arisings is to be limited to 5kN/m^2 to prevent overloading of the existing slabs, This restriction is likely to require that all arisings be lifted to ground floor level for processing and disposal. The basement slab is ground bearing and therefore the loading available at this level is considerable and can be taken as in excess of 50kN/m^2

3.04 It is recommended that demolition is commenced at the gable ends progressing towards the centre of the building. The sequencing of the demolition should be such that, to avoid instability of the retained structure, there is only one storey above the level of the intact stability walls at any time.

3.05 The external envelope provides structural support to the floor slabs therefore the contractor must demonstrate a method of removal of these panel which maintains the stability of the floor structure and also stability of the wall panel following removal of the floor. It is anticipated that the external wall panel will be demolished down to slab level and the remainder down to slab soffit level demolished with the slab. This sequence will leave a short section of panel unrestrained above the mid-storey splice position however it is assumed that this joint will be robust enough to restrain the retained section prior to demolishing down to the next slab level.

3.06 The construction of the permanent works requires a level working platform at ground floor level therefore the ground floor slab is to be broken out and the basement backfilled with demolition arisings consolidated by machine tracking where possible. Tier Consult are to arrange further intrusive investigation into the construction of the basement walls and provide suitable

demonstration of the ongoing stability (or otherwise) of these with the ground floor prop removed.

3.07 Following the initial phase of the permanent works the filled basement is to be excavated and the basement slab broken out. Where necessary the existing foundations are also to be removed. Tier Consult are undertake check calculations based upon the further intrusive investigations to investigate the stability of the retained walls in this condition.

3.08 If necessary a system of temporary support to the basement retaining walls will need to be provided, this will need to be co-ordinated with the contractor for the permanent works in order that ongoing access is not compromised.

3.09 It is proposed that the permanent works re-use the existing drainage connection from beneath the basement at the north end of the building discharging into the public sewer with marble Street. Care is therefore to be taken to protect this drain from damage during demolition.

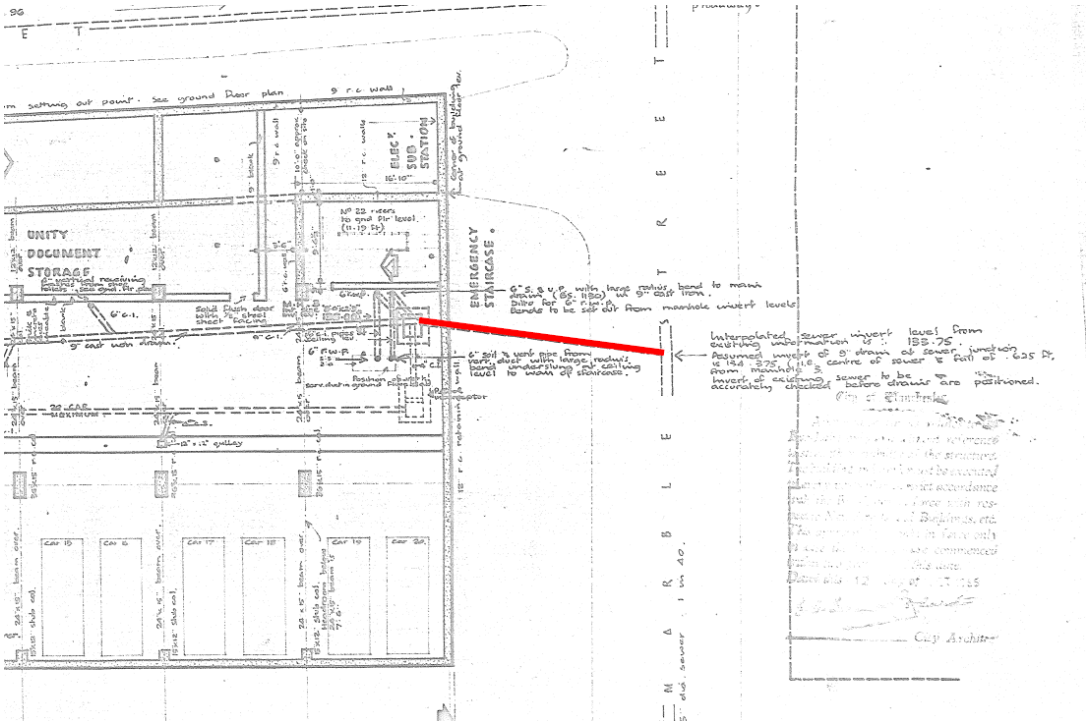


Fig 4 Existing Drainage Connection

Appendix H
Fire Safety & Other Emergencies Plan

Will be developed prior to commencing on site.

Project Title: York St

Start Date: 30th October 2017 Anticipated completion: September 2019

Plan Produced By: Dave Ledwidge

Date Produced: 15/06/17 Signature:

Maximum anticipated number of persons on site: 100

Current Fire Hazard Risk Rating: High

Revision Number	Description of Change	Updated by	Date of update
01	DRAFT	DL	15/06/17
02	General update	LW	14/07/2017

1.0 INTRODUCTION

Referral to the Fire Management Standard (SHEMS-STD-GR-020/021) and identified references is essential when developing or reviewing this site specific **Fire Safety and Other Emergency Plan**.

2.0 ORGANISATION

Insert the following details:

The Project/Site Manager (Responsible Person) Is: Lee Williams

The Site Fire Safety Coordinator for this project is: TBC

The Deputy Site Fire Safety Coordinator is: TBC

The Fire Marshals are: TBC

Out of hours contact arrangements are (specify): TBC

All other emergency contact details can be found in section 3 of the Construction Phase Plan.

3.0 EMERGENCY & INCIDENT PREPAREDNESS

3 1 Environmental

Kier has a call-out arrangement with a specialist contractor capable of providing advice and responding quickly to an oil / chemical spill, or other pollution event. For further information, please refer to Kier Minimum Standard SHEMS-MST-CIS-0055 Spill Response.

In the event assistance is required to deal with an environmental incident, a member of the project team shall contact the appointed specialist contractor using the telephone number below:

Company:	OHES Environmental Ltd
Address:	1 The Courtyard Denmark Street Wokingham Berkshire RG40 2AZ
Telephone:	**0333 333 1123 (24hrs)**

4.0 INCIDENT REPORTING

Should an incident occur, follow the Major Incident Response Plan Standard (SHEMS-STD-GR-013) and/or SHE Incident Management & Investigation Process flowchart within the Incident & Near Miss Management Standard (SHEMS-STD-GR-011).

5.0 GENERAL ARRANGEMENTS

5.1 Current Fire Hazard Rating

High

5.2 Design Risk Assessment (FIRE)

Design Stage Fire Risk Assessment SHEMS-FOR-GR-075

5.3 Construction Phase Fire Risk Assessment

Copy attached.

5.4 Records of Appointment

See Appendix N – SHEMS-FOR-GR-005/006

5.5 Site Layout Plan

Attached see schedule I.

5.6 Emergency Services Liaison

- Design phase liaison: Michael Battman - 0161 817 4070 m.battman@gardiner.com
- Construction phase liaison: TBC
- Nearest hospital with A&E facility: Manchester Royal Infirmary, Upper Brook St, Manchester, M13 9WP
- Arrangements for notification and briefing of emergency services: Information provided during project specific Site Induction and displayed in site office & canteen.

5.7 Fire Safety Emergency Precautions

See attached fire & emergency plan.

5.8 Fire Protection

The site cabins are fire rated cabins due to their proximity to the building to the west of the site. There will be temporary fire exit signs for the construction site & compound. There will also be a number of temporary WES+ alarm sounders with smoke and heat detectors and fire extinguishers placed throughout the site in line with the Fire Strategy plan.

5.9 Hot Work

All activities containing hot works must have a detailed Risk Assessment and Method Statement. Prior to the commencement of any hot works a Hot Works Permit must be completed by an authorised member of Kier staff. This will detail the works, the location, the competency of the persons undertaking the work, and of the subsequent mandatory fire watch period.

5.10 Temporary Covering Materials

Temporary floor protection is in place, in accordance with PS 1207 and 1215 fire retardant rated temporary covering materials.

5.11 Portable Fire Extinguishers

- Fire extinguishers to range from $C0^2$ to powder. These are to be located at designated fire points throughout the site in close proximity to a WES+ alarm in line with the Fire Strategy plan.
- Additional fire extinguishers will be adjacent to any hot works taking place.
- Fire extinguishers serviced through external contractor, every 12 months.
- Fire marshals will be trained in the use of fire extinguishers.

5.12 Security against Arson

Site & compound cordoned off by 2.4m solid hoardings from general public with digital lock access at all entrances. There will also be a gateman located by the pedestrian entrance as well as a turnstile in order to prevent unauthorised access to the site. Security will be present on the site as well as CCTV cameras.

5.13 Temporary Buildings/Accommodation

Temporary sure start unit used whilst site set up is established. Unit should be used for no longer than 2 weeks. 6 x units will then be installed to replace the sure start unit. 1 x site office, 1 x meeting room, 2 x canteens, 1 x toilet block, and 1 x drying room. The units are to be laid out and double stacked with a scaffold gantry access along the entrances. There will be stair access at either end of the gantry. In addition to this there will be a gateman's lodge by the pedestrian entrance.

All units to be fire rated units due to proximity to neighbouring building. WES+ alarm and fire extinguishers to be located in the site compound by all of the units, and a WES+ alarm and fire point to be located by gateman's lodge also.

5.14 Storage of Flammable Liquids and Gasses

On site storage is to be kept to a minimum. Flammable liquids and gases to be stored in the designated area in either a cage or a fire rated container. The COSHH assessments are required by Kier prior to their delivery on site.

5.15 Waste Management

Hazardous waste such as paint tins, mastic tubes etc. to be stored in a separate container to be disposed of correctly by the relevant sub-contractor. Cardboard and paper bins are to be placed well away from any potential source of ignition.

5.16 Plant and Vehicles

There will be no parking on site for any vehicles. Deliveries will be booked on site at specific times to minimise congestion and traffic on site.

All plant and vehicle spill kits will be stored in the site offices, as well as on the plant and vehicles themselves. The specialist spill contractor will be called in the event a spill becomes uncontrollable.

The refuelling area will be a designated area away from any manhole covers, road gulleys etc. The exact location is to be confirmed once Kier are on site and detailed in the pollution prevention plan.

5.17 Stored Materials

Non-flammable materials will be stored in designated area in containers. Flammable materials area to be stored in the designated area in fire rated containers.

5.18 Smoking

No smoking outside of the site boundary. Smoking and e-cigarette smoking shelters, are to be located within the site compound away from the storage of any materials. There is no smoking on site.

6.0 ADDITIONAL SITE SPECIFIC EMERGENCY ARRANGEMENTS

One way vehicle access to site. Access will be extremely difficult while crane is located on site. Specific details TBC once Kier are on site and the relevant emergency services to be contacted for advice.

7.0 MONITORING & REVIEW

To follow, as the job progresses.

8.0 SPECIFIC ARRANGEMENTS

In the event of a fire, operatives are to gather at the designated fire assembly point, which will be clearly identified during the sit specific induction. The emergency call (999) is to be made as soon as an issue is identified.

The fire marshals and fire safety co-ordinator will then carry out their duties which involve; head count for everyone gathered at the assembly point/s, briefing the emergency services, assisting the emergency services with any site plans, material storage plans etc. that they may require.

8.1 High Rise Construction Projects (beyond the 30 metre reach of a parked fire appliance)

Schedule I - Site Layout Plan Including Hazardous Storage

[Insert site layout plan illustrating fuel, chemical, spill kits and hazardous waste storage locations]

Schedule II - Site Drainage Plan

[Drains must be labelled blue (surface / storm), red (foul) & red 'C' for combined. Also identify drains or controlled waters that may be at risk from spills, contamination or mis-use & indicate what measures are being implemented to prevent pollution

Appendix I
Occupational Health Strategy

Site management must consider the wider hazards and risks associated with the project such as occupational health concerns – this form is designed to assist site management identify and control occupational health hazards in adequate time ahead of the relevant activities and aid regular review.

Issue	Considerations	Hazards Identified	Controls planned
Working Hours/Resources	Stress Nightwork* *Risk Assessment Required.	Misjudgement Pressures of work	Reduce hours of work Increase resources
Demolition	Asbestos, HAV, Noise, Dust	Asbestos, HAV, Noise, Dust, musculoskeletal	See sub-contractor Risk Assessment
Substructure	Pile cropping - HAV, Noise, Vibration, Dust	HAV, Noise, Dust	See sub-contractor Risk Assessment
Ground works	Heavy Components, noise, dust, skin problems	HAV, Noise, Dust, Skin Diseases, Musculoskeletal	See sub-contractor Risk Assessment
Masonry or Cladding	Heavy components, noise, dust, skin problems	HAV, Musculoskeletal, Noise, Skin Diseases, Dust	See sub-contractor Risk Assessment
Building Frame	Heavy components, skin problems, HAV	HAV, Musculoskeletal, Noise, Skin Diseases, Dust	See sub-contractor Risk Assessment
Temporary Works	Heavy components, HAV, dust, skin problems	Musculoskeletal, Noise, HAV, Skin Diseases	See sub-contractor Risk Assessment
Roofing	Heavy components, HAV, skin & respiratory problems	HAV, Musculoskeletal, Noise, Skin Diseases, Dust	See sub-contractor Risk Assessment
Insulation/Air Tightness	Dust, skin problems	Dust, Skin Diseases, Musculoskeletal	See sub-contractor Risk Assessment
Internal Wall Finishes	Dust, skin problems, respiratory problems	Skin Irritation, Dust, Musculoskeletal	See sub-contractor Risk Assessment
Internal Floor Finishes	Dust, HAV, skin & respiratory problems	Musculoskeletal, Skin Diseases	See sub-contractor Risk Assessment

Kier Group Hand Arm Vibration procedure to be followed.

Vibration Magnitude levels for tools/equipment can be found by logging into the OPERC user account. Register on http://www.operc.com/pages/havteclogin.asp.

Health Assessments

Operations or Trades Identified as requiring health assessments and/or screening.	**Contractor**	**How will this be addressed?**
Kier Labour	Kier Construction	Medical, HAV Assessment, Manual Handling Assessments
Telehandler Operators	TBC	Medical
Crane Operators	TBC	Medical
Plant Operators	TBC	Medical
Scaffolders	TBC	Medical, Manual Handling Assessments
Others: Hoist Operator	Kier Construction	Medical
Others: Frequent hand tool operators	TBC	HAV Assessment

NB: It is an employer's duty to identify risks to health via risk assessment and address/control as necessary. During pre-order stage if a contractor has not adequately addressed health assessments then the Build UK health questionnaire should be provided for their use.

These are not to be returned to site management. The completed forms are to inform and assist the employer. Kier will need written confirmation that questionnaires have been issued, completed and taken into consideration by the contractor.

The following initiatives will be employed on site to reduce occupational health risks: -

- '**Ill-health can be prevented**' – it is possible and practical to carry out construction work without causing ill-health.

- '**Treat health like safety**' – managing health risks is no different to managing safety risks. Follow the Assess, Control, & Review steps.

- ‘**Everyone has a role to play**’ – everyone involved in construction has a responsibility in managing risks to health. Each must take ownership of their part of the process.

- ‘**Control the risk, not the symptoms**’ – monitoring and health surveillance programmes are not enough on their own. While they are an effective part of managing health risks, the first priority is to stop people being exposed to the risk in the first place.

- ‘**Manage risk, not lifestyles**’ – the law requires steps to be taken to prevent or adequately control work-related health risks. Helping workers tackle lifestyle issues like smoking or diet may be beneficial but is not a substitute for this.

Current HSE SHE targets/initiatives can be viewed at:
-http://www.hse.gov.uk/construction/healthrisks

Appendix J
Temporary Works Plan

Temporary works register attached. This is a live document and will be maintained throughout the project.



Figure 1: Types of Temporary Works

KIER

TEMPORARY WORKS CONTROL REGISTER

PROJECT/SITE NAME			11 York St.			PRODUCED BY/ROLE				Lee Williams / Project Manager						DATE		25/07/2017	
SCHEME NUMBER	STATUS (N, D, L, C)*	DESCRIPTION OF TEMPORARY WORKS	TW RISK LEVEL (L, M, H)**	SUB CONTRACTOR Name / Package	TW ON SITE BY:	DESIGN BRIEF			DRAWINGS		DESIGN CHECK CERTIFICATE		EXTERNAL APPROVALS		SSW FOR ERECTION/ DISMANTLING		CHECKLIST		DESIGNER INSPECTION		PERMIT TO LOAD/ UNLOAD		TEMPORARY WORKS SUPERVISOR	
						Req'd by	Ref. No.	Done	Req'd by	Done	Req'd by	Done	Req'd by	Done	Req'd by	Agreed	Req'd	Done	Req'd	Done	Req'd	Done	Appointed Supervisor	Appt. Made in Writing
					Date	Date		Date & Name	Date	Date & Name	Date	Date & Name	Date	Date & Name	Date	Date & Name	Y or N	Date & Name	Y or N	Date & Name	Y or N	Date & Name	Name	Date
1.0		**Site Establishment**																						
1.1		Site hoarding	H																					
1.2		Site sign board	H																					
1.3		Temporary office foundation	M																					
1.4		Stair access for double stacked office	L																					
1.5		Temporary road construction	M																					
1.6		Flag pole foundation	H																					
1.7																								
1.8																								
2.0		**Structural Stability**																						
2.1		Demolition of existing structure	H																					
2.2		Steelwork installation (Stability check)	M																					
2.3		Existing basement stability	H																					
2.4		New piled retaining wall on Milk Street	M																					
2.5																								
2.6																								
3.0		**Excavations**																						
3.1		Support / propping to existing basement walls	H																					
3.2		Stability of basement with piling rig at ground level	H																					
3.3		Excavation for services connections	M																					
3.4		Temporary ramp for basement access / egress	H																					
3.5																								
3.6																								
4.0		**Permanent Works**																						
4.1		Lifting of precast concrete elements	M																					
4.2		Lifting of rebar for slabs	M																					
4.3		Pressure testing of services	M																					
4.4		MEWP loadings on permanent concrete decks	M																					
4.5		Material movement and storage on permanent works	M																					
4.6																								
4.7																								
5.0		**Access**																						
5.1		Piling Matt to Area 2 and 3 (ext to basement)	H																					
5.2		Piling Matt to Area 1 (within existing basement area)	H																					
5.3		Internal scaffolding	L																					
5.4		Exterrnal scaffolding during demolition	H																					
5.5		Protection of existing services	M																					
5.6		Lift shaft scaffolding	M																					
5.7		Edge protection	M																					
5.8		Crash deck above temporary sub station	H																					

* - Current Status: N - Not started, D - Design, L - Live, C - Completed

** - TW Risk Level: L - Low, M - Medium, H - High (Refer to TW Procedure Table 1)

KIER

TEMPORARY WORKS CONTROL REGISTER

PROJECT/SITE NAME			11 York St.			PRODUCED BY/ROLE				Lee Williams / Project Manager								DATE		25/07/2017	
SCHEME NUMBER	STATUS (N, D, L, C)*	DESCRIPTION OF TEMPORARY WORKS	TW RISK LEVEL (L, M, H)**	SUB CONTRACTOR Name / Package	TW ON SITE BY:	DESIGN BRIEF			DRAWINGS		DESIGN CHECK CERTIFICATE		EXTERNAL APPROVALS		SSW FOR ERECTION/ DISMANTLING		CHECKLIST		DESIGNER INSPECTION		PERMIT TO LOAD/ UNLOAD		TEMPORARY WORKS SUPERVISOR	
						Req'd by	Ref. No.	Done	Req'd by	Done	Req'd by	Done	Req'd by	Done	Req'd by	Agreed	Req'd	Done	Req'd	Done	Req'd	Done	Appointed Supervisor	Appt. Made in Writing
					Date	Date		Date & Name	Date	Date & Name	Date	Date & Name	Date	Date & Name	Date	Date & Name	Y or N	Date & Name	Y or N	Date & Name	Y or N	Date & Name	Name	Date
5.9		Safety netting for metal deck installation	M																					
5.10																								
5.11																								
6.0		**Formwork and Falsework**																						
6.1		Metal decking check	M																					
6.2		Basement walls single sided shutter design	H																					
6.3																								
6.4																								
7.0		**Construction Plant**																						
7.1		Tower crane including base	H																					
7.2		Tower crane installation	H																					
7.3		Tower crane removal	H																					
7.4		Goods / Passenger Hoist	M																					
7.5		MEWP loadings on external ground	M																					
7.6		Crane outrigger loadings (Steel and Pre-cast)	M																					
7.7		Mast climbers for façade installation	M																					
7.8		Cradles for façade installation	M																					
7.9		Silo base	M																					
7.10		Safe off loading anchor point system	M																					
7.11																								
7.12																								

* - Current Status: N - Not started, D - Design, L - Live, C - Completed

** - TW Risk Level: L - Low, M - Medium, H - High (Refer to TW Procedure Table 1)

Appendix K
Services Plan

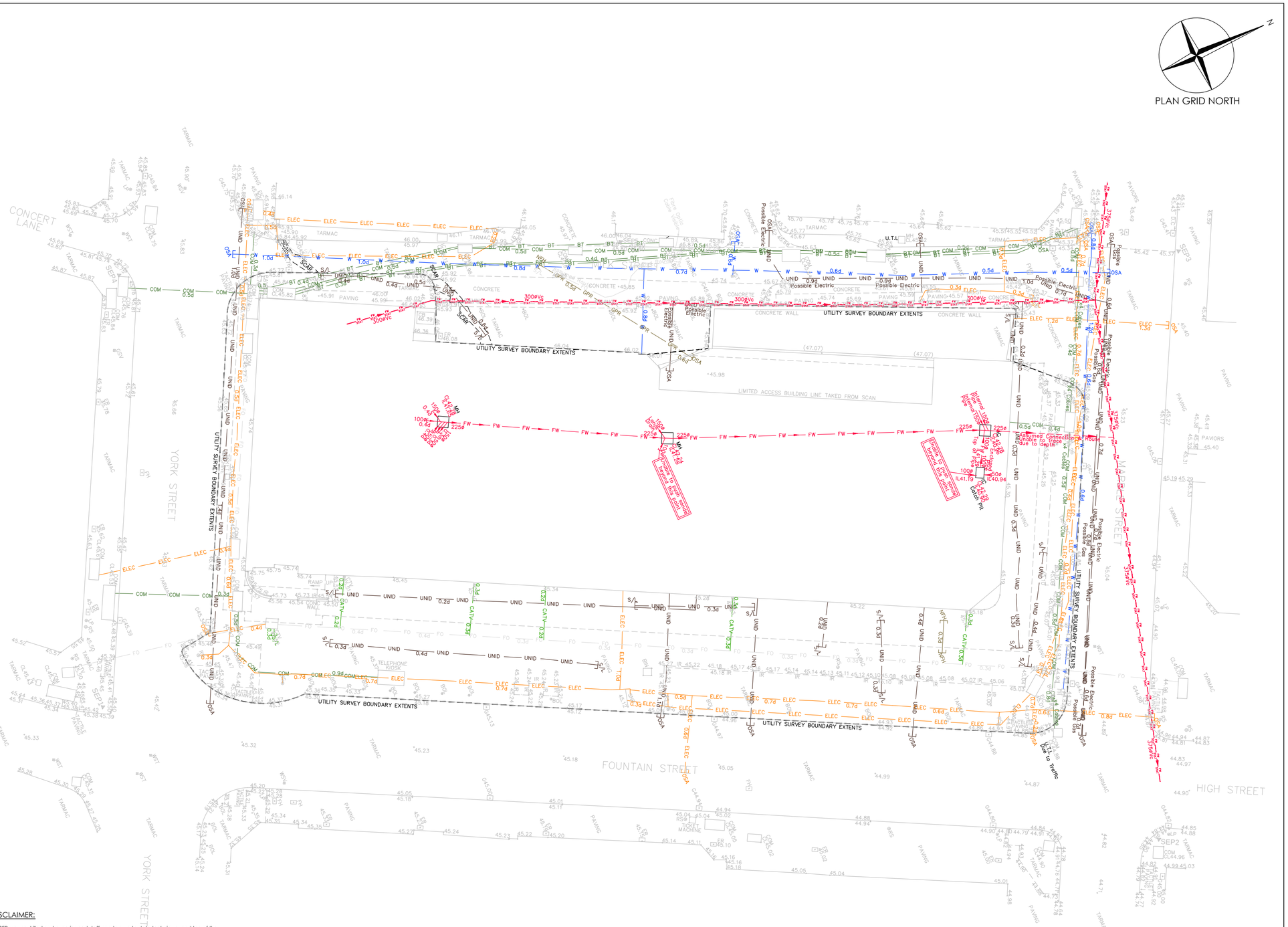
Refer to below ground services drawings.

The site Utilities Survey Drawing is attached included for reference however all utilities drawing must be utilised prior to commencing work on site.

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File Name: S14046-U-Manchester.dwg

PLAN GRID NORTH



LEGEND

AV	AIR VALVE
BT	BT INSPECTION COVER
CB	CONTROL BOX
CCTV	CCTV CAMERA POST
COM	COMMUNICATIONS COVER
CTV	CABLE TV COVER
DC	DRAINAGE CHANNEL
DP	DOWN PIPE
DR	DRAIN
EIC	ELEC INSPECTION COVER
ELB	ELECTRIC BOX
ER	EARTH ROD
EP	ELECTRICITY POLE
FFL	FINISHED FLOOR LEVEL
FH	FIRE HYDRANT
G	GULLY
GLT	GROUND LIGHT
GST	GAS TAP
GSV	GAS VALVE
IC	INSPECTION COVER
IL	INVERT LEVEL
KO	KERB OUTLET
LP	LAMP POST
MH	MANHOLE
MKR	MARKER
OP	OUTFALL PIPE
PN	PYLON
PP	PETROL PUMP
RE	RODDING EYE
RWP	RAINWATER PIPE
SOF	SOFFIT LEVEL
SV	STOP VALVE
TCB	TELEPHONE CALL BOX
TL	TRAFFIC LIGHT
TLB	TRAFFIC LIGHT BOX
TP	TELEGRAPH POLE
WM	WATER METER
WO	WATER OUTLET
WST	WATER STOP TAP
WSV	WATER STOP VALVE
EOT	END OF TRACE
OSA	OUT OF SURVEY AREA
UTL	UNABLE TO LIFT
UTS	UNABLE TO SONDE
UTT	UNABLE TO TRACE
S/L	SIGNAL LOSS
BLK	BLOCKED
NFH	NO FURTHER GPR CONTACTS
BD	BACKDROP PIPE
NVP	NO VISIBLE PIPE
ToP	TOP OF PIPE
⌊_	EOT SYMBOL

BT	CABLE DUCT
CATV	CABLE TV
CCTV	CCTV
COM	TELECOMS
ER	EARTH ROD STRIP
ELEC	ELECTRIC
F/O	FIBRE-OPTICS
FL	FUEL LINE
GPR	GPR DETECTION LINE
GAS	MAINS GAS
W	MAINS WATER
CW	SEWER CW
FW	SEWER FW
SW	SEWER SW
TS	TRAFFIC SIGNAL CABLE
UNID	UNIDENTIFIED TRACE
UC	UNIDENTIFIED CABLE
UP	UNIDENTIFIED PIPE
VDC	VEHICLE DETECTION CABLE
	SURVEY BOUNDARY

FROM STATUTORY AUTHORITY PLANS

BT	BT / STAT
CABLE DUCT	DUCT / STAT
CATV	CATV / STAT
CCTV	CCTV / STAT
TELECOMS	COMS / STAT
ELECTRIC	ELEC / STAT
MAINS GAS	GAS / STAT
MAINS WATER	WTR / STAT
SEWER CW	CW / STAT
SEWER FW	FW / STAT
SEWER SW	SW / STAT
FIBRE-OPTICS	F/O / STAT

NOTES:

All levels relate to O.S (Newlyn) Datum, Established using network RTK. Survey plotted on a plane local grid, orientated to National Grid.

Services shown as "From Statutory Authority Plans" line styles are taken from Statutory Records plans supplied by the relevant regional authority. These services were not located and are shown for indicative purposes only.

0 2m 4m 8m 12m 16m

SCALE BAR

REV	DATE	DESCRIPTION

SURVEY & ENGINEERING PROJECTS

Client
Kier Property
Mercury Way
Trafford Park
Manchester
M41 7LY

Project Title
Utility Survey of Land at:
11 York Street
Manchester
M2 3GR

Surveyed	Drawn	Checked
S Fenna	R Webb	J Gardener

Scale	Date	Drawing Ref.	No.	Size	Rev
1:200	April 17	S14046-U	1	A2	--

DISCLAIMER:

At SEP we use skilled and experienced staff, modern up to date techniques and top of the range electromagnetic and radar technology to locate and trace sub-surface utilities. However the performance of the equipment employed in non-invasive surveys can be adversely affected by factors outside the control of SEP. Therefore SEP cannot guarantee that all utilities present on site have been located. It is the responsibility of the Client to consult regional authority records and undertake trial digs where appropriate.

Where similar services run in close proximity it may be impossible to separately trace individual services as the trace signal can experience interference. In such cases, services will be shown as a single, annotated line. The displayed depth will refer to the shallowest detected utility.

Successful tracing of non-conductive materials may be limited. Drainage gulleys are dye tested where possible to prove connectivity but it is not always possible to introduce the sonde due to narrow pipe sizes and/or accumulated silt.

Depth information of underground services/features are generally accurate to within +/- 10% (i.e. a pipe at 2m deep may be accurate to +/-200mm) but this cannot be guaranteed. Depths shown usually refer to the top of the service. Gravity sewer and drain depths are usually to invert (base of drainage channel) unless otherwise stated.

Some above ground features may have been obscured at time of survey. It is not always possible to operate the Ground Penetrating Radar in areas including, but not limited to, dense vegetation, rubble, debris and/or rough/uneven ground.

Existing record information that was made available to SEP by the Client or by the statutory utility provider should be regarded only as an indication and cannot be guaranteed.

Excavation in the vicinity of services shown should be carried out with due diligence (Ref. HSG47).

Appendix L
Environmental Management Plan (EMP)

Project Name:	11 York St.	**Contract No:**	
Completed by:	D. Ledwidge	**Date:**	15/06/17
Revision Number:	**Description of changes made:**	**Updated by:**	**Date of Update:**
01 DRAFT	First Draft	DL	15/06/2017
02	General update	LW	14/07/2017
03	Contents table added	LW	25/07/2017

Section	**Heading**
1	Introduction
2	Environmental aspects & impacts
3	Specific Project Environmental Requirements
4	General Project Environmental Requirements
4.1	Waste Management
4.2	Storage of Fuel, Oils & Building Chemicals
4.3	Particulate Matter (Dust) & Noise
4.3.1	Mobile Crushing & Screening Process
4.3.2	General Site Activities
4.4	Previously Unidentified Issues
4.5	Subcontractor Environmental Reporting
4.6	Emergency & Incident Preparedness
Schedule I	Environmental Aspect & Impact Assessment
Schedule II	Register of Legislation
Schedule III	Subcontractor Environmental Report Template

1. Introduction

This EMP has been prepared in accordance with the Kier SHEMS Environmental Management Standards and Guidance. It identifies specific environmental issues associated with Windmill Green, and stipulates core procedures that will be used to manage them. Relevant environmental information will be communicated as required.

All amendments to this EMP must be made by project management in consultation with the Safety, Health and Environmental Manager or Environmental Manager / Adviser.

2. Environmental aspects & impacts

An Environmental Aspect and Impact Assessment (SHEMS-FOR-GR-040) for this project has been undertaken in accordance with the Risk and Impact Management Standard (SHEMS-STD-GR-014). Guidance on completing the assessment is available.

The assessment looks at each site activity against the following environmental aspects:

- Emissions to air
- Emission to land
- Emissions to water
- Waste generation
- Nuisance and environmental health
- Ecology and Biodiversity
- Cultural heritage
- Use of raw materials
- Use of natural resources

Details of the control measure identified in the assessment will communicated to relevant subcontractors. Subcontractors must manage all risks associated with their work activity / package in accordance with this document.

Where the subcontractor identifies additional environmental risk, it is the subcontractor's responsibility to inform the Project Environmental Co-ordinator (PEC) and request that the Environmental Aspect and Impact Assessment is reviewed and amended.

In the event subcontractors undertake works, details of the EMP and I and A assessment will be shared with them and their RAMS reviewed (SHEMS-STD-GR-014) to ensure compliance.

3. Specific Project Environmental Requirements

This section incorporates information derived from documents scheduled in 2.3.2 of the Construction Phase Plan – consider the following headings:

External (client' / enforcing authority) requirements

- **Planning consent conditions**
  Site hours: Monday to Friday – 07:30 to 18:00hrs
  Saturday – 08:30 to 16:00hrs
  Sunday – no working permitted

  No loading or unloading shall be carried out on the site outside of the hours of 07:30 to 20:00 Monday to Sunday.

  Site activities to be conducted outside agreed working hours must be approved in advance by EHO Environmental Health Department.

  Wheel washing requirements: The wheels of contractor's vehicles leaving the site shall be cleaned and the access roads leading to the site swept daily in accordance with the management scheme. This is achieved by hiring power washers at the vehicle exit gates and operated by the Gateman or designated site operative. A road sweeper contractor has been set up to clean the

surrounding roads as and when required. In general, this road sweeper will be organised daily for 2 hours from 2pm to 4pm. However, this can be increased if site and weather conditions change.

- **KPI monitoring requirements**

Noise: A baseline survey has been carried out before the main works commenced for any comparisons to be made during the construction phase if required. Refer to Acoustic & Engineering Consultants Limited report dated 16th July 2015.

Vehicle movements shall be kept to a minimum and speed limits enforced. No plant will be allowed to idle for long periods when not in use. Plant operators are encouraged to switch off the engine as soon as practically possible. Electric plant will be used instead of diesel or petrol engines, where feasible. The control of noise will also be detailed in the site induction, task specific risk assessments and method statements, briefings and toolbox talks. Continuous noise monitoring will be carried out around the perimeter of the site and recorded during the construction phase.

Dust: Construction activities which creates dust i.e. cutting, drilling, demolition etc. will be carried out in a manner which minimises the generation of dust. This is achieved by damping down work areas, using dust suppressant equipment (water bottles) and creating cutting zones in sheltered areas. Vehicle movements shall be kept to a minimum and speed limits enforced. Plant maintenance will be carried out on a routine basis. Plant found to be unacceptable will be prohibited from working until rectified, repaired or replaced. Plant will be routinely inspected, in line with prescribed requirements and to include emission checks. Particular attention to dust will be highlighted during high winds and dry weather. The control of dust will also be detailed in the site induction, task specific risk assessments and method statements, briefings and toolbox talks. Continuous dust monitoring will be carried out around the perimeter of the site and recorded during the construction phase.

Vibration: Construction activities which create vibration i.e. drilling will be carried out in a manner which minimises this. Continuous vibration monitoring will be carried out around the party wall between site and St. Georges building and recorded during the construction phase. Particular monitoring will required during piling works.

Tree protection: Ecological survey reported no issues.

Protected species: Ecological survey reported no issues. Therefore, no species are required to be protected.

Invasive species: Ecological survey reported no issues.

Waste: Remove rubbish, debris, surplus material and spoil regularly and keep the site surrounding area and Works clean and tidy at all times. Remove all rubbish, dirt and residues from voids and cavities in the construction before closing in. Ensure that non-hazardous material is disposed of at a disposal location approved by a Waste Regulation Authority. Remove all surplus hazardous materials and their containers regularly for disposal off site in a safe and competent manner, as approved by a Waste Regulation Authority and in accordance with relevant regulations. Retain waste transfer documentation on site. A waste management plan must be in place.

Power usage: Allowance for site wide temporary electrical power for all personnel. Meter readings will be taken before and during occupation of site and recorded on SmartWaste. During initial set up, a generator will be on site, supplied by a 1000l tank. The oil storage checklist will be completed for this fuel storage unit.

Water consumption: Water is available on site for temporary connections to the site. Meter readings will be taken before, during and after and recorded on SmartWaste

Commercial deliveries: Restricted routes to site and time constraints (see above). The main delivery route, via Foundation Street is part of a one way system. Deliveries will be pre booked via an online booking system. This will prevent vehicles having to wait outside of the site boundary for a suitable offloading time.

- BREEAM 2011
  Target: 70.00 – Excellent
  Potential: 74.58 – Excellent

- Considerate constructors scheme
  Minimum score: 40
  Target score: 40

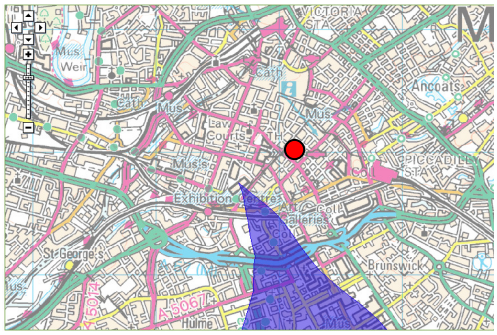
- Employment & / or training opportunities for local people
  See CSR engagement plan for targets and tracking document

- Liaison / working with schools & local community groups
  See CSR engagement plan for targets and tracking document

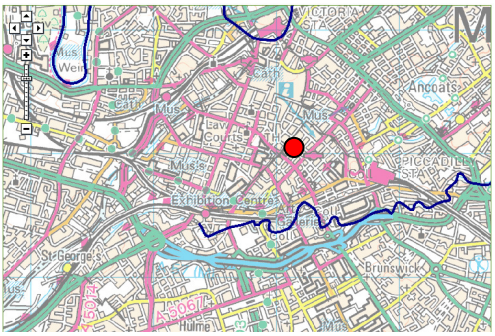
- Volunteering & charity work
  See CSR engagement plan for targets and tracking document

Water Management - Watercourses & wells

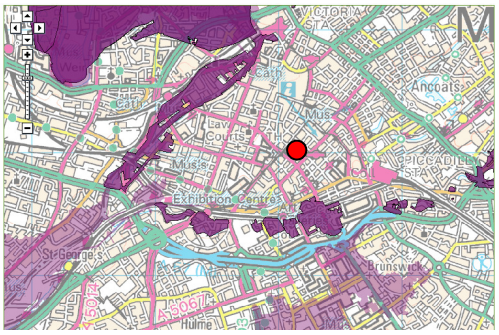
- The site is outside of Zone 3 of the groundwater source protection area (see below)



- The site is not within 10m of a main river (see below)



- The site is outside of any area where flood warnings or alerts are issued (see below)



- Protection required

A site drainage plan/constraints plan shall be produced to identify all surfaces (blue) and foul water (red) drains to aid water management on site and to aid emergency responses. All foul water gullies identified shall be protected as required by means of witches hats, (Drain Guards) sand bags, or similar, to prevent any unauthorised discharges.

Cleanliness of site hard standings shall be monitored by the project team, and necessary cleaning actioned.

Any discharges to foul sewers must have formal temporary Trade Effluent Consent (TEC) off UU or written informal permission from the Client to operate under their consent. Copies of the Consents will be kept in the EMP.

Discharges from excavations etc: where no TEC is present on site then rain water from excavations will be pumped onto ground, 10m away from drains (this is achievable on this site). Discharges to drains should always be free of silt, have a neutral pH (i.e. pH 6 to 9) and be free of any obvious polluting matter. Where discharges require treatment the use of a suitable, silt sock, siltbuster, settlement tank or lagoons will be used. These must be maintained to ensure that the discharge remains suitable at all times. RAMS will be in place for the work detailing who is responsible for managing the process / recording etc. and ensure the RAMS are signed off the Environmental Adviser before works begin.

Complete permit to pump prior to any pumping/discharging activity.

A simple 'bottle test' can be undertaken to ensure that the water clarity is fit to discharge The results will be recorded on the Dewatering Monitoring Log noting whether the water is clear, slightly cloudy or fail (i.e. can't see hand through bottle). Any other unusual observations (e.g. odour, floating matter, discoloration, etc) should also be noted. If failure is recorded pumping, stop and contact supervisor immediately. This log should be maintained in the EMP. Discharges under consent should be monitored as per the conditions of that consent.

Concrete Washout: Controls for dealing with concrete wash water should be put in place before concrete mixing or deliveries start on site. These should be in line with the Kier Minimum Standard. Where possible a concrete sock will be used or a contained concrete wagon. Where this is not possible the following should be undertaken: Concrete washout facilities can be formed from a lined watertight skip or polyethylene lined pits in the ground. This is the only area on site where concrete activities are permitted to wash out, including mixers, barrows and rakes. Concrete washout facility should only be used for washing off and washing out equipment and tools used in the concreting operation and not un-used concrete. Settled concrete washout waters can be discharged to foul drains with approval from UU under consent. Wash waters will be required to be treated before a discharge can take place. Citric Acid Granules can be used to reduce the pH of the water prior to authorised discharge, or a Siltbuster washwater pHD or similar. Try to minimize the amount of water used to wash off the equipment. Where possible the container should be covered to prevent the ingress of rain water. The positioning of the washout facility should be always as far as possible away from a watercourse or drain (a minimum of 10m). It should also be placed in a suitable area such as near the exit. Un-used/excess concrete should ideally be utilised on site in other ancillary works. In order to facilitate the disposal of concrete washout it is advised that sand and cement is used to set-off any excess liquids present

in the washout facility. Untreated Washout liquid should not be discharged over ground or to watercourses due to high chromium content and high PH.

- Consents required / obtained
  Environmental licencing requirements form completed and has identified:
  - Trade Effluent consent from United Utilities has been applied for
  - Planning permissions
  - Water installation
  - Listed buildings / conservation areas – TBC
  - Rights of way / Road closures – client obtained
  - Considerate Constructors Scheme (CCS) applied for
  - BREEAM 2014

Waste (significant waste streams that will be generated) - refer to the SMARTWaste site waste management plan

Adequate waste bins will be placed in work areas, storage areas and temporary site compounds for the depositing of work related waste and mixed welfare wastes.

Regular inspections will be carried out to monitor housekeeping and initiate action to clear litter and debris. Personnel are encouraged to avoid littering and to clear litter where it occurs within site boundaries.

The SmartWaste system will be used to document the requirements of the SWMP, and should be updated monthly.

Burning of Waste is prohibited on Kier sites

All waste must be stored in suitable containers to prevent escaping, leaching, blowing away and scavenging. Skips should not be damaged.

Waste will be collected in unsegregated skips and transported to a licenced recycling centre where materials will be segregated to ensure maximum recycling content is achieved. Total recycling content will be recorded and displayed monthly. This service will be carried out by our preferred supplier Premier Waste Services UK, http://www.premierwasteuk.co.uk.

Canteen and Hazardous Waste should be contained in covered skips/bins

Audits will be undertaken periodically to ensure waste disposal companies are dealing with all waste materials appropriately. Evidence of this check will be held electronically in the EMP.

Within 2 months of project completion a Smartwaste review will be undertaken by the site team to assess the: confirmation that the plan has been monitored on a regular basis to ensure that work is progressing according to the plan and that the plan was updated in accordance with the SWMP regulation; a comparison of the estimated quantities of each waste type against the actual quantities of each waste type; an explanation of any deviation from the plan; and an estimate of the cost savings that have been achieved by completing and implementing the plan.

Inert materials such as Bricks and Concrete ‘won on site’ will be crushed and reused, and is therefore never a waste. The materials will be screened in line with the T5 exemption, and crushed under the T7 exemption as it is less than 25,000 tonnes. No screening or crushing will take place until the exemptions are in place. A copy of the mobile operators permit will also be maintained on file. Where possible the use of prefabricated materials i.e. steelwork, precast concrete, cladding panels

Cess tank waste from the welfare

Road sweeper waste

Soils and stones from excavations and arisings from ground works and piling

Concrete washout waste

Plasterboard waste in a covered skip

Protec recycling take-back scheme

Timber waste

Paint & COSHH waste

Contaminated ground, issues with groundwater & dewatering

The Ground Investigation Report (T/16/1835/GIR) produced by Tier Consult dated 24th May 2017 notes the following conclusion within section 11.5;

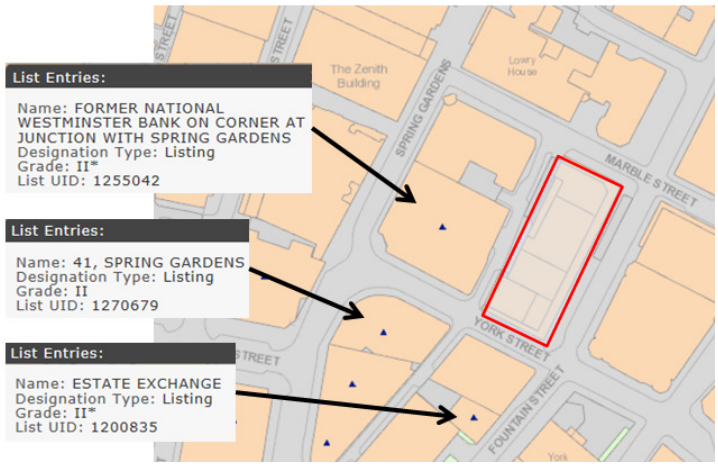
The results of a generic quantitative risk assessment, undertaken with current guidance and best practice, has demonstrated that no measured concentrations of concern exceed the respective screening criteria protective of human health.
Furthermore, no asbestos has been reported in any of the 6 No. samples submitted for asbestos screening.
On the basis of this, it is not considered that the site presents a potentially significant risk to human health for a commercial land use.

The results of groundwater sampling and laboratory chemical analysis demonstrate that only measured concentrations of fluoranthene have been reported in excess of the respective EQS value by a single order of magnitude. Given that the exceedances are marginal, that there is an absence of any significant PAH sources in the made ground, that there is a significant distance to the nearest surface water receptor (500m), that the site is set in an urban area, that there is a discontinuous groundwater body beneath the site which will restrict lateral flow, and that there is a significant potential for dilution between the site and the nearest significant receptor, it is not considered that the site represents a potentially significant risk to controlled waters.

Standing heritage & archaeology

- Listed buildings, i.e. Consents required / obtained

Listed buildings adjacent to 11 York Street



- Archaeological investigations & sensitive areas
  The archaeological survey report states that taking the currently available evidence into consideration, the proposed development area can be assumed to have a 'low' potential for the recovery of archaeological evidence.

Materials & design

- Materials with recycled content & low embodied energy
- BREEAM: Excellent
- Use of BRE green guide to specification & a web-based resource called Greenspec.
- Early design workshops will be arranged to consider eco materials & associated construction techniques?
- Timber purchasing policy, i.e. Use of FSC, PEFC
  Timber will be in line with the timber purchasing policy and information will be uploaded onto SmartWaste

Sensitive neighbours

- Primark
- Lowry Offices Bruntwood
- Local community meetings will be held at regular intervals to keep all of the neighbours informed of construction progress and upcoming activities.

Ecology & biodiversity

- Further to Bowland Ecology's ecological survey, no designated wildlife sites will be affected by the proposed development. It is noted that no mitigation requirements, with the exception of further bat surveys, are required to be undertaken.
- Note: No hedgerow, tree or shrub shall be removed from the site between 1st March and 31st August inclusive without the prior submission of a report to be submitted to and approved in writing by the Local Planning Authority which sets out the results of a survey to assess the nesting bird activity on the site and describes a method of working to protect any nesting bird interest. Any hedgerow, tree or shrub removal shall then be carried out in accordance with the approved details.

4. GENERAL PROJECT ENVIRONMENTAL REQUIREMENTS

4.1 Waste Management

All waste will be managed in accordance with the Waste Management Standard (SHEMS-STD-GR-065) and where relevant, the Earthworks and Contaminated Land Procedure (SHEMS-STD-GR-061).

Windmill Green, Mount Street will manage waste through the development and implementation of a bespoke version of the Building Research Establishment (BRE) SMARTWaste Plan. The project team will use this plan to identify waste streams, forecast waste volumes and identify suitable methods to eliminate, or where this is not practicable, reduce waste generated by the project.

When considering management options for identified waste streams, Kier and supply chain members will adhere to the principles outlined in the waste hierarchy below.



Kier and supply chain members will ensure waste is stored away from drains, boreholes, wells and controlled waters. Containers shall be in good condition and, where required, covered to prevent dust and litter being blown out. If there is any likelihood of stored waste contaminating the surrounding environs, all necessary steps will be taken to ensure no contamination occurs. This may include the use of containment bunds with rain shelters and the use of sealed containers, i.e. clip-top drums and fluorescent tube coffins.

Before waste is treated and / or removed from Windmill Green, all subcontractors / waste contractors must provide the project team with legible copies of the following documentation:

- Environmental permits (mobile plant licences) and exemption certificates authorising on-site crushing and screening activities;
- Waste Carriers Registration Certificates;
- Environmental Permits, (Waste Management Licences and PPC Permits);
- Notification certificate of exemption from environmental permitting.

The project team and, where applicable, subcontractors will ensure that the removal of all inert / non-hazardous waste is recorded on Waste Transfer Notes. These documents must be kept for a minimum of two years. These documents will be stored on site and made available on request.

The project team and, where applicable, subcontractors will ensure the removal of all hazardous waste is recorded on Hazardous Waste Consignment Notes. These documents must be kept for a minimum of three years. These documents will be stored on site and made available on request.

Legible copies of all Waste Transfer and Consignments Notes, recording the removal of waste from Windmill Green, Mount Street must be issued to Kier. This includes waste generated on site by subcontractors).

When removing hazardous waste from Windmill Green, the following Premises Code must be used on all Hazardous Waste Consignment Notes. This is the 6 digit alpha numeric code given to the project when registering the site as a producer of hazardous waste with the Environment Agency (in England and Wales). The relevant code for Windmill Green, Mount Street is KIER/CN/MS.

4.2 Storage of Fuel, Oils & Building Chemicals

Fuel, oil and chemicals will be managed in accordance with the Pollution Prevention Standard (SHEMS-STD-GR-064) and COSHH Standard (SHEMS- STD-GR-051).

Containers must be stored within a Spill Nappy (or similar), bund or any other suitable secondary containment system (SCS). All containers must be located in a safe place to minimise the risk of damage and locked-off when not in use.

For oil tanks, intermediate bulk containers and mobile bowsers the SCS must be able to hold:

- Where one container is being stored - a minimum of 110% of the total volume;
- Where more than one container is being stored - a minimum of 110% of the largest container's storage volume, or at least 25% of their total volume (whichever is greater);
- For drum storage, the interceptor tray must be able to hold at least 25% of the total storage capacity of the drums.

Bunded areas must be made impermeable to water and oil. The base and walls must not be penetrated by any valve, pipe or opening that is used for draining the system.

The oil storage checklist will be completed for all fuel tanks on site on a monthly basis in general.

4.3 Particulate Matter (Dust) & Noise

Dust and noise will be managed in accordance with the Nuisance Management Standard (SHEMS-STD-GR-063) and Pollution Prevention Standard (SHEMS-STD-GR-064).

4.3.1 Mobile Crushing & Screening Process

Crushing and screening will be managed in accordance with the Waste Management Standard (SHEMS-STD-GR-065).

Crushing and screening of demolition material must be conducted in accordance with the plant operators' manual and, where applicable, environmental permit (mobile plant licence) / waste exemption certificate. The operator must use the Best Available Techniques (BAT) for preventing or, where this is not practicable, reducing emissions from the installation. The following items must be considered when attempting to reduce the environmental impact of this process:

- Location; TBC
- Operation; TBC
- Maintenance; TBC
- On-site transfer of dusty materials; TBC
- Condition of roadways / haulage routes; TBC
- Stockpiling materials: TBC

4.3.2 General Site Activities

With regard to nuisance, the methodology in which work activities are undertaken must apply Best Practicable Means (BPM) in order to minimise negative impact on local, sensitive receptors, such as schools and domestic dwellings. However, if measures to reduce excessive dust and noise are unsuccessful, work must stop and an alternative method devised before work can resume.

The following measures must be considered when eliminating noise and dust:

- Use sheeted lorries and sealed / covered skips;
- Use dust extraction equipment when drilling and cutting;
- Damp down haulage roads and stockpiled materials in dry or windy weather;
- Sweep access roads regularly;
- Locate plant and equipment away from sensitive receptors;
- Use screens to act as acoustic barriers;
- Isolate plant and equipment when not in use;
- Fit white noise systems on vehicles to reduce noise nuisance when reversing;
- Keep engine compartment doors closed;
- Limit vehicle movements on-site, i.e. use of one-way system.

4.4 Previously Unidentified Issues

If one or more of the following is discovered, work in that location must stop immediately and the Project Environmental Co-ordinator (PEC) informed:

- Contaminated soils;
- Archaeological remains or features;
- Suspicious objects;
- Underground storage tanks;
- Invasive species, i.e. Japanese Knotweed;
- Protected species, i.e. badgers, bats, amphibians, reptiles and plant life.

4.5 Subcontractor Environmental Reporting

Subcontractors must report the following details on a monthly basis:

If bulk fuel used on site, this should be reported in litres each month, and detail its use i.e. plant or powering site accommodation.

Timber purchased. A copy of the Chain of Custody certificate must be accompanied by a copy of the delivery ticket detailing m3 of wood and its use.

All Waste removed from site. A copy of the Waste Transfer Note (WTN) or hazardous Waste Consignment Note (HWCN) Waste Carriers Licence (WCL) and Waste disposal details i.e. WML/permit /exemption must be provided.

Once this information has been received from the subcontractor it will be uploaded on SmartWaste

4.6 Emergency & Incident Preparedness

In order to minimise the risk of a pollution incident, subcontractors must ensure all operatives understand the environmental risks associated with their work activity and what control measures are in place to eliminate or reduce negative environmental impact.

Major Environmental Incidents shall be reported and managed in accordance with MIRP Standard (SHEM-GR-STD-013) Environmental emergency planning must be managed in accordance with the Fire Management Site Standard (SHEMS-STD-GR-021), Appendix H of the Construction Phase Plan.

The Major Incident Response Plan must be implemented where relevant.

Reporting and investigation of environmental incidents must be in accordance with the Incident and Near Miss Reporting Standard (SHEMS-STD-GR-011)

Schedule I - Environmental Aspect & Impact Assessment

SHEMS-FOR-GR-040

Schedule II - Register of Legislation

The Register of Environmental Legislation is available for reference on MyKier (hard copy not required on site)

Building UK environmental legislation requirements will be identified through “Activ Comply”

Schedule III - Subcontractor Environmental Report Template

Refer to Subcontractors file under Environmental section