

Construction Phase Plan

Site: Russell Road, Whalley Range
Reference: 17-013
Date: March 24





ACKNOWLEDGEMENT

ALL PERSONNEL ENGAGED IN THE PROJECT WILL BE REQUIRED TO:

- Attend a comprehensive health and safety briefing detailing the contents of the CPP and discussing all operational procedures at the beginning of the project on-site.
- Sign an acknowledgement form prior to the commencement of work.

PLEASE CONFIRM THE FOLLOWING:

SIGNED IN USING THE SIGN IN APP	
HAVE THE SERVICE DRAWINGS BEEN REVIEWED WITHIN THE CONTEXT OF THE PROPOSED EXPLORATION PLAN	
HAS THE REVIEW BEEN COMMUNICATED WITH THE SI TEAM / PROJECT MANAGER & REVIEWED BY A SENIOR CONSULTANT	
HAS THE PRE-COMMENCEMENT PERMIT TO WORK BEEN COMPLETED AND APPROVED PRIOR TO GROUND BEING BROKEN – SECTION 7.1	

THE CPP IS DEVELOPED THROUGHOUT THE LIFETIME OF THE PROJECT AND SHOULD BE REGARDED AS A LIVING DOCUMENT, WHICH IS REVIEWED AND UP-DATED SHOULD NEW HAZARDS BE IDENTIFIED, SITE CONDITIONS OR THE NATURE OF THE WORK CHANGE.

THE CPP IS AVAILABLE FOR ALL PERSONNEL INVOLVED WITH THE PROJECT AND SHOULD BE USED AS A TERMS OF REFERENCE.



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1. INTRODUCTION

The purpose of this Construction Phase Plan (CPP) is to establish and control the health, safety and environmental requirements for the project and required under CDM Regulations 2015. This plan should be read in conjunction with other applicable E3P health & safety and environmental policies and procedures, that form part of our ISO 45001 and ISO 14001 Integrated Management Systems.

The site specific CPP seeks to convey information provided by the client and other persons associated with the project to all concerned. The focus of this document is to highlight known major physical, chemical and biological hazards which may be present during the work undertaken. All reasonable care has been taken to identify the risks present, but the absence of a reference to a specific hazard should not be taken as a warranty that such a hazard is not present or cannot and will not arise during the works.

1.1. AUTHORISATION

To be signed by the on-site H&S supervisor to confirm the CPP has been read and understood.

ROLE	NAME
PROJECT MANAGER (E3P)	Elizabeth Fearn
ON-SITE H&S SUPERVISOR (E3P)	Harriet Mason
CPP APPROVED BY HSEQ MANAGER	Neil Meadow

2. PROJECT INFORMATION

Project Title:	Russell Road, Whalley Range
Project No:	17-013
Project Overview & Scope of Works:	✦ Ground Penetrating Radar Survey; ✦ 6 x 5m Window Sample Boreholes; ✦ 6 x Environmental monitoring well installs; ✦ 6 x Mechanically Excavated Trial Pits; ✦ 6 x BRE365 Soakaway Testing Pits; ✦ 4 x 15m Cable Percussive Boreholes.
Project Start Date:	Monday, 18 March 2024
Project Duration:	4 Days



Site Hours:	8:00 – 17.00
Client Name:	Rowlinson Construction Limited
Client Contact Details:	Paul Slater Mobile: 07900 991 138 Office: 0161 960 0033
Site Address:	Land east of Russell Road, Whalley Range, Manchester, M16 8AR.
Aerial View:	
Name, qualifications and contact details of site supervisor:	Harriet Mason Geo-Environmental Consultant 07534373705 - CSCS Academically Qualified - IOSH Avoiding Danger from Underground Services - Emergency First Aid at Work
Principal Contractor Duties:	- Plan, manage, monitor and coordinate the construction work - Consult and engage with workers and sub-contractor regarding health, safety and welfare during the works - Ensure all appointed contractors provide evidence of relevant training and qualifications and have received a site induction before starting work on site - Ensure suitable welfare facilities are provided - Ensure work site/work area is secured to prevent unauthorised access
HSE Objectives:	E3P is committed to providing a work environment that is both safe and free from risks to health. Our philosophy is not only to meet but where possible to exceed current statutory requirements, to integrate safety, health and environmental best practice through all phases of construction and to promote a positive safety culture with all parties striving towards the following objectives:



	✳ Zero notifiable injuries, diseases or dangerous occurrences ✳ Zero HSE, EA or LA enforcement action ✳ Demonstrate continual improvement in HSE risk management ✳ Provide an effective worker engagement process	
Site Description:	Access	✳ Access can be granted off Russell Road, via double gates. To be arranged by Rowlinson Construction.
	Site Operations	✳ None – derelict rough scrubland.
	Structures	✳ Electricity sub station present in north of site.
	Surface Conditions	✳ Asphalt and concrete hardstanding with localised areas of soft standing.
	Internal Works	✳ None.
	Unsafe Area	✳ TBC
	Site Security	✳ N/A.
Public Safety Considerations:	✳ Unauthorised pedestrian access ✳ No holes to remain open without appropriate fencing in place.	
Site Specific H&S Requirements:	✳ GPR clearance prior to breaking of ground.	
Ground Conditions:	Made Ground	To be confirmed during ground investigation.
	Drift	Glaciofluvial Sheet Deposits – SAND and GRAVEL.
	Solid	Wilmslow Sandstone Formation – SANDSTONE.
	Groundwater	To be confirmed during ground investigation.
Environmental Considerations:	✳ No environmental receptors are anticipated to be adversely affected by the proposed works ✳ No invasive species been identified through desk information	
Sub-Contractors on Site:	PM Sampling - Paddy Malone - 07518 458 787	Drilling contractor
	Geo Uk - 01942616110	Utility surveyor
	DP Drilling - Darren Pennington - 07778 881 316	Drilling contractor
Plant Hire and Machine:	SB Tippers - 01254 887 7030	JCB 3CX



Site Welfare Arrangements & Distance from Site:	ASDA Hulme – 100 Princess Road, Hulme, Manchester, M15 5AS (1.4 miles)	
Minimum Personal Protective Equipment (PPE) requirements:	Industrial safety helmets	BS EN 397:2012 +A:2012
	Earmuffs on safety helmets/ ear defenders SNR 25dB	BS EN 352-3:2002
	Protective gloves – mechanical risks	BS EN 166:2002
	Safety footwear – wellies or boots	BS EN ISO 20345:2011
	Safety glasses	BS EN 166:2002
	High visibility vest/jacket	BS EN ISO 20471:2013
	Nitrile gloves – disposable	–
Additional PPE:	N/A.	
Coordination of Contractors:	Verbal meetings at start of each day and each contractors on site to sign induction register before starting work on site.	
Site Inductions:	Site Supervisor to give verbal induction to all contractors prior to start.	
Emergency Procedures:	- Emergency assembly point at site entrance. 90 piece first aid kit including eye wash, cold packs and emergency blanket in E3P vehicle. - Site Supervisor EFAW qualified. - See Appendix II Emergency / Incident Procedure.	
What3words:	///falls.adults.ripe	



A&E:	1.7 miles away <u>Manchester Royal Infirmary.</u> Open for anyone under 16 years Opening times: Open 24 hours Open for anyone 16 years or over Opening times: Open 24 hours Oxford Road, Manchester, Greater Manchester, M13 9WL 0161 276 1234	
Urgent Care:	1.7 miles away <u>Manchester Royal Infirmary.</u> Open for anyone under 16 years Opening times: Open 24 hours Open for anyone 16 years or over Opening times: Open 24 hours Oxford Road, Manchester, Greater Manchester, M13 9WL 0161 276 1234	
Service Provider and Emergency Contact Number	Gas	Gas Emergencies Services - 0800 111 999
	Electricity	Electrical Emergencies - 105
	Water	United Utilities - 0345 672 3723
	Communication	BT - 0800 023 2023
	Coal Authority	01623 646333
	Environment Agency	0800 807060
Site Inspection Arrangements	 Site Supervisor to carry out visual inspections once a day.	
Mobile Phone Signal Coverage:	 Excellent	



Designated
Hydrant:
(Soakaways)



Site Rules:

- ✳ All personnel shall comply with all relevant health, safety & environmental law and E3P rules whilst on site.
- ✳ All personnel must be covered by sufficient Public and Employers Liability Insurance.
- ✳ Personnel must be competent to undertake their work safely.
- ✳ Personnel must sign in and sign out every time you enter and leave the site.
- ✳ Report all unsafe conditions, tools, equipment and practices so that any unsafe conditions can be corrected before it can cause an accident.
- ✳ It is in your own interest to report every injury and obtain treatment immediately. You must notify the appropriate person before leaving your work area for treatment.
- ✳ It is your responsibility to ensure that the injury is recorded, by you, or someone acting on your behalf in your company's Accident Book.
- ✳ Practical jokes, horseplay, drinking of alcoholic beverages, firearms, fighting or the use of drugs are prohibited on site.
- ✳ No-one will remove, displace, damage or destroy any safety equipment furnished for the use of the job nor interfere with its use.
- ✳ When applicable, permits to work will be implemented and strictly enforced.
- ✳ Welfare facilities, where provided, must be kept clean and tidy. Do not use any other areas.



- ✿ Personal protective equipment must be used on site whenever specified e.g. safety helmet, safety boots with steel mid soles, hi visibility vest or jacket.
- ✿ If applicable, use designated walkways whilst on site. Watch where you walk and keep alert to the movement of mobile plant and vehicles. Do not run except in extreme emergencies.
- ✿ Drive within the limits of all posted and known traffic regulations.
- ✿ All personnel shall maintain an orderly work area by good control and housekeeping.
- ✿ On hearing the fire or evacuation alarm stop what you are doing and make your way to the fire assembly point by the nearest/safest route. Do not re-enter the site until told it is safe to do so.
- ✿ Only authorised personnel are allowed to operate vehicles, equipment and power tools.
- ✿ Personnel should inspect their work areas at the end of every shift or day to ensure that applicable equipment is switched off and that no fire or ignition sources are left.
- ✿ Hazardous or flammable substances shall be stored and transported only in safety containers properly marked as to the content and any hazards involved.
- ✿ No person is allowed to pass or stand under loads handled by power operated equipment.
- ✿ You must take action to warn and guard persons against any openings or obstructions you create.
- ✿ Do not pass through or enter areas unless you have been authorised to do so.
- ✿ Observe all signs, notices and instructions given by E3P site personnel.
- ✿ No smoking on site unless in authorised areas.
- ✿ No vehicles to be taken off-road in any area that is not an adopted highway or dedicated hard standing, unless they are specifically off-road vehicles.



3. SUMMARY OF SIGNIFICANT HAZARDS

HAZARD TYPE	SITE OR PROJECT SPECIFIC HAZARDS	CONTROL MEASURES
Below Ground Utilities	Potential for personal injury or property damage	- Service clearance using CAT scanner will be undertaken by an E3P qualified engineer. - Permit to work to be issued prior to work commencement, for the cleared area only.
Excavations & Drilling Works	Use of mechanical plant Working near excavations	- Only trained and competent personnel to be allowed to operate plant on site. - Awareness of swing zone of excavator and field engineer acting as a banksman to keep in driver's line of site at all times. - Stand, measure and log from the narrow end of the trial pit opposite the excavator (approach from the corner) and minimize time spent doing this. - Take samples from the side of the spoil heap furthest from the edge of the pit, or from spoil contained within a resting excavator bucket.
Manual handling	Lifting of heavy materials, including drilling equipment, install materials and barriers, will be required	- Always follow E3P Manual Handling procedures. - Personnel are never to lift beyond their means. Use mechanical means wherever possible and get help where required. - Inform management of any injuries which may affect one's ability to do one's job.
Public	Potential for injury of members of the public	- Machinery and equipment to be secured at the end of each day. - All boreholes will be reinstated with either monitoring instrumentation and an appropriate cover, or will be backfilled with bentonite, cement or grout and the surface reinstated to its original condition. - Trip hazards or sharp objects will not be left at the surface. - All exploratory hole locations will be photographed before and after reinstatement and saved as evidence of satisfactory reinstatement.



HAZARD TYPE	SITE OR PROJECT SPECIFIC HAZARDS	CONTROL MEASURES
Weather	Sunburn from sun exposure leading to an increased chance of developing skin cancer Struck by lightning	 Prior to beginning any outdoor work, the weather forecast will be checked for all weather hazards.  Stay in during your breaks and especially at lunch time.  Use a high factor sunscreen of at least SPF15 on any exposed skin.  Drink plenty of water to avoid dehydration.  Check your skin regularly for any unusual moles or spots. See a doctor promptly if you find anything  Removal of personal protective equipment when resting to help encourage heat loss  On hearing thunder, or see any lightning adjacent to the work area, suspend all work and drilling operations.  Request all personnel on site get to a safe place immediately- vehicles with windows rolled up.  Remain in vehicles for at least 30 minutes after hearing the last sound of thunder.



4. ACTIVITY ASSESSMENT

The following activities have been identified as being applicable to this project. It is the responsibility of the E3P Site H&S supervisor to ensure that all applicable risk assessments have been identified and incorporated into this CPP. Checks should be made for each applicable risk assessment to ensure that all site specific hazards and their control measures are included and in place before works commence.

The following operational procedures and project specific method statements have also been identified as being applicable to this project. It is the responsibility of the E3P Site Supervisor to ensure that all applicable operational procedures and project specific method statements have been identified on the following table and incorporated into this CPP.

All operating procedures and project specific method statements are indicated below and can be provided as an attachment if required.

STANDARD OPERATING PROCEDURE	ACTIVITIES	DATE	RISK ASSESSMENT ATTACHED	ADDITIONAL CONTROL MEASURES
1,2,9,20	Environmental and Geotechnical Sampling	05/03/2024	Y	N/A
8,11,12,21	Borehole Drilling	05/03/2024	Y	GPR clearance prior to breaking ground
9, 10, 20, 36	Trial Pitting	05/03/2024	Y	GPR clearance prior to breaking ground
7	Permeability Testing	05/03/2024	Y	N/A
26	Site Visit / Lone Worker	05/03/2024	Y	N/A
25	Driving	05/03/2024	Y	N/A

5. UTILITY AND UNDERGROUND RISK

- ✳ All services, including redundant services shall be deemed to be live unless written confirmation from the service provider is issued and assessed by an E3P Director.
- ✳ All site engineers are to complete the Site Services Risk Assessment/Permit to Work prior to undertaking any excavation works.
- ✳ A copy of the proposed exploratory hole location plan and applicable utility plans can be observed in Appendix V.
- ✳ Utility Plans shall not be relied upon if start date on site is greater than 90 days since plans were obtained or 28 days for gas plans.

5.1. STATUTORY UTILITY PLANS

LINE SEARCH BEFORE YOU DIG

Affected LSBUD members

(LSBUD Members who have assets registered on LSBUD within the vicinity of your search area.)

Asset Owner	Phone/Email	Emergency Only	Status
Cadent Gas	0800688588	0800111999	Await response
Electricity North West Limited	08001954141	08001954141	Await response



	PLAN ATTACHED START DATE <90 DAYS <28 DAYS FOR GAS	SUMMARY OF SERVICES PRESENT ON OR WITHIN VICINITY OF SITE	CHECKED AGAINST EHLP	SAFE TO COMMENCE WITHOUT ADDITIONAL CONTROLS	INITIAL
Gas	Yes	None present within the site boundary.	☒	Yes	EF
Electricity	Yes	A 6V cable is present in the north of the site passing from Whalley Road to the electricity substation in the north of the site.	☒	No	EF
Water	Yes	A clean water comms pipe enters the site along the southern boundary	☒	No	EF
Sewers (Storm & foul Water)	Yes	None present within the site boundary.	☒	Yes	EF
Telephone	Yes	BT Openreach infrastructure is present along all boundaries of the site, with underground cables present entering the site on the northern boundary.	☒	No	EF
Cable	NA		☐	NA	
Street Lighting	NA		☐	NA	
Transport / Tunnels	NA		☐	NA	
National Fuel Distribution Network	NA		☐	NA	

Please specify any additional controls measures/information:

GPR clearance prior to breaking ground for all locations.

5.2. UNEXPLODED ORDNANCE RISK

UNDER- GROUND RISK	POTENTIALLY PRESENT	UXO INTERNAL RA COMPLETED BY PM	REPORT SENT FOR	REPORT PROVIDED	SAFE TO COMMENCE WITHOUT ADDITIONAL CONTROLS	INITIAL
UXO	Zetica moderate risk	Yes	No	No	Yes	EF

Please specify any additional control measures:

The site is located within a moderate risk area however the site remained an active hospital during WWII, with no notable damage.

5.3. ADDITIONAL UNDERGROUND RISKS

UNDER- GROUND RISK	POTENTIALLY PRESENT	PLANS/ REPORT SENT FOR	PLANS/ REPORT PROVIDED	FEATURES CHECKED AGAINST EHLP AND UTILITY PLANS	SAFE TO COMMENCE WITHOUT ADDITIONAL CONTROLS	INITIAL
Mine Entrances / Workings	No			☐	Yes	EF



Solution Features	No			☐	Yes	EF
Under-ground Tanks and Chambers	No			☐	Yes	EF

Please specify any additional control measures:

5.4. SITE OBSERVATIONS

Are any of the following features present within the subject site:

STRUCTURE	PRESENT ON SITE	FEATURES CHECKED AGAINST EHLP	SAFE TO COMMENCE WITHOUT ADDITIONAL CONTROLS	INITIAL
Manhole covers	Yes	☐	No	
Street lighting	TBC	☐	Choose an item.	
Electrical sub-stations	TBC	☐	Choose an item.	
Pylons/overhead cables	TBC	☐	Choose an item.	
Telecoms masts	TBC	☐	Choose an item.	
Gas governors	TBC	☐	Choose an item.	
Pipelines or pipeline indicators	TBC	☐	Choose an item.	
Others (specify)	TBC	☐	Choose an item.	

Please specify any additional control measures/information:

GPR clearance prior to breaking ground.

All features to be noted during initial preliminary site walkover before works commence. Any amendments to locations will be agreed with Project Manager prior to movement.

6. POTENTIAL CONTAMINANTS

Generic hazardous substance assessments for the sampling of soil and water has identified the following personal protection measures are to be worn:

Soil – Disposable nitrile gloves.

Water – Disposable nitrile gloves.

Free Phase Product – Disposable nitrile gloves, eye protection.



POTENTIAL CONTAMINANT	POTENTIAL LEVEL OF CONTAMINATION (NONE/LOW/MED/HIGH)	PRIMARY EXPOSURE PATHWAY	LIKELIHOOD OF EXPOSURE (NONE/LOW/MED/HIGH)	RISK RATING	CONTORL MEASURES	ADDITIONAL CONTROL MEASURES REQUIRED?
SOIL						
Metals	Low	Ingestion and inhalation of dust	Low	L	Disposal nitrile gloves and standard PPE will be sufficient	N
Petrol range hydrocarbons	Low	Inhalation of vapours, contact, flammable risk	Low	L		N
Diesel range hydrocarbons	Low	Contact	Low	L		N
Solvents	Low	Inhalation of vapours, contact, flammable risk	Low	L		N
Acids and alkalis	Low	Contact	Low	L		N
Asbestos	Low	Inhalation of dust	Low	L		N
Radionuclide	Low		Low	L		N
WATER / FREE PRODUCT						
Petrol range hydrocarbons	Low	Inhalation of vapours, contact, flammable risk	Low	L	Disposal nitrile gloves and standard PPE will be sufficient	N
Diesel range hydrocarbons	Low	Contact	Low	L		N
Solvents	Low	Inhalation of vapours, contact, flammable risk	Low	L		N
Acids and alkalis	Low	Contact	Low	L		N
GAS						
Landfill Gas	Low	Inhalation, flammable risk	Low	L		N
BIOLOGICAL						
Weil's disease	Low	Through cuts and grazes	Low	L	Disposal nitrile gloves and standard PPE will be sufficient. Cover any cuts and grazes with a plaster	N



7. SITE RISK MANAGEMENT

7.1. SITE RISK ASSESSMENT (PERMIT TO WORK)

SECTION 1 SAFETY EQUIPMENT			
Has CAT been checked			
Has Genny been checked			
SECTION 2 SITE SERVICES CHECK			
Have you checked all service records (gas, water, sewer, electric, telecoms)?	Yes/No	If the answer to any of the above is NO works CANNOT proceed within any part of the site. Contact the PM.	
Have you checked full site boundary been inspected for evidence of services entering the area of the site investigation?	Yes/No	If the answer is YES then proceed to Section 3.	
Have you fully inspected for manholes and evidence of service infrastructure noted with the direction of pipe runs, scarring and manholes noted?	Yes/No		
SECTION 3 SITE SPECIFIC ASSESSMENT			INITIAL/DATE
Check for above ground infrastructure	If not present	No further action	
	If present, you must	Ensure all locations are in excess of 5.0m from overhead cables. Repeat Section 2 assessment for new location	
Are any proposed locations within close proximity (5m) of identified services?	If not present	CAT scan Proceed with care	
	If yes, you must	Hand dig to 1.20m Extensively CAT scan Ensure E3P is present during drilling / excavation	
Are any of the services deemed 'high risk' infrastructure?	If not present	CAT scan Proceed with care	
	If yes, you must	Ensure works outside easement Hand dig to 1.20m Extensively CAT scan Ensure E3P is present during drilling / excavation If still in any doubt do not break ground. Contact PM	
Are any proposed locations within the potential line of identified manhole covers or scarring?	If yes, you must	Move location to somewhere more suitable Repeat Section 2 assessment for new location	
Has a Senior Consultant been informed of the above checks and approved the commencement of works		Insert name of Consultant and time of conversation/email/text	



7.2. DAILY HAZARD CHECKLIST

To be completed when:

-  Site conditions change through the duration of the project and are different from those identified in Section 2 and;
-  New site hazards are identified.

Use additional sheets if necessary.

DATE	HAZARD	ACTION



7.3. DAILY PROJECT CPP & INDUCTION SIGNING SHEET

Acknowledgement of receipt of information and instruction with respect to the following project:

PROJECT NAME: Russell Road, Whalley Range

PROJECT NUMBER: 17-013

By signing the sheet below, you are confirming that you have received information and instruction on the items listed below and are conversant with and understand the implications of:

PROJECT SPECIFIC CONDITIONS/ REQUIREMENTS	RISK ASSESSMENTS/METHOD STATEMENTS	COMPETENCIES	WELFARE	SITE RULES	ACCIDENT/NEAR MISS REPORTING
EMERGENCY EVACUATION/FIRE/FIRST AID	SIGNING IN/OUT	WASTE DISPOSAL	PPE		

DATE	NAME	CSCS CARD NUMBER	VEHICLE REG	COMPANY	ARE YOU FIT TO WORK	HAS EQUIPMENT BEEN CHECKED	TIME IN	TIME OUT

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7.4. SITE WORK COMPLETION AND SIGN OFF

All trial pits have been backfilled	
All trial pits have been levelled and are free of trip hazards and/or deleterious material	
All boreholes/window samples have been backfilled and/or left flush	
All waste material has been collected and/or skipped as appropriate	
Ensure that waste consignment notes are collected and that have been completely filled in with details of disposal site in full	
Any surplus materials have been collected or have been arranged to be collected	
All exploration locations/tracking routes etc photographed upon completion to demonstrate that they have been left in the required condition	
All contractors have signed out and left site	
Site has been locked and/or left as client requires	
Has safety equipment been inspected and checked that it is operational before return to the office – if not please make a note that this is has been reported to the office manager for immediate rectification	

The site works are now complete and the site has been assessed and left in a manner that is not considered likely to pose a risk to site or third party users.

FOR E3P

DATE

APPENDIX I

RISK ASSESSMENTS



Geo Sampling					
Hazard	Consequence	Persons Exposed	Risk Ranking Primary	Control Measures	Risk Ranking Residual
Collisions with heavy plant & machines	Injury Death	E3P employees Site operatives Public	HIGH	- Secure site and/or place warning signs/cordons. - Only competent (CPCS card) people to operate the machine. - Plant/machines supplied with valid service/LOLER certificate. - Operators to complete daily machine checks and ensure all safety devices are working and any quick hitch safety pin is inserted correctly. - Lines of communication clearly identified with engineer and operator before work commences. - Use a banksman during mobilisation and moving around the site. - Stay within sight of the driver at all times, make him aware of your intentions clearly. - Stand well away from plant and vehicles, beware of reversing vehicles and swing of excavator bucket. - Ensure spectators remain out of exclusion zone. - Do not ride upon or operate any plant or machinery. - Use pedestrian walkways where available. - Wear hi viz clothing. - Cone or protect the sampling location if necessary - Ensure site manager is aware of the sampling requirement and location of E3P/ contractor staff	LOW



Geo Sampling					
Hazard	Consequence	Persons Exposed	Risk Ranking Primary	Control Measures	Risk Ranking Residual
Gases & Vapours	Explosion Injury Ill health Nausea Death	E3P employees	HIGH	- Identify what hazardous gases could be present and establish a monitoring regime for those gases. - Establish an upper methane threshold above which drilling/excavation should stop. - Ensure operatives are trained in use of monitoring equipment. - If unknown or suspicious fumes or gases are encountered, stop works immediately and reassess. - Control and shut off, of any gas or water under pressure. - Do not use naked flames/smoking or use of mobile phones within a 20m radius. - Restricting access to those persons who are properly trained and equipped. - Ensure the work area is well ventilated. - Check that ventilation is not impeded during work. - Consider need for forced ventilation. - Stand upwind of intrusive holes. - RPE may be necessary depending on the nature of the hazardous gases. - Do not use petrol driven plant or vehicles on sites where flammable gases are likely to be encountered. - Use of flame proof or intrinsic safe equipment. - If an individual is suffering asphyxiation, attempt a rescue but do not place yourself in danger. - Do not enter a confined space, trench or excavation to try and pull somebody clear.	LOW
Asbestos containing materials	Asbestos related diseases	E3P employees	HIGH	- If asbestos is identified in the CPP an asbestos risk assessment needs to be completed see Joint Industry Working Group- Asbestos in Soil and Construction & Demolition Materials - Wear appropriate PPE as identified in the CPP including overall, masks, etc. - If asbestos identified during work, stop immediately and call the PM for advice. - All operatives to have Asbestos Awareness Training. - All operatives to have face fit masks. - Keep material damp to reduce airborne fibres. - Staff trained on donning and doffing PPE including decontamination.	LOW



Geo Sampling					
Hazard	Consequence	Persons Exposed	Risk Ranking Primary	Control Measures	Risk Ranking Residual
Chemical Free phase non-aqueous liquids, toxic, corrosive, carcinogenic and combustible substances	Ill health Disease	E3P employees	HIGH	- Refer to COSHH assessment of the risks posed by potential hazardous substances due to contamination at the site. - Wear PPE including gloves, safety boots and safety glasses. - First aid kit with appropriate equipment including an eye wash available in all vehicles. - If anyone begins to feel unwell, cease work immediately, contact PM and If necessary, seek immediate medical attention. - Wash off all spills on skin immediately. - High hygiene standards to be maintained- wipes and anti-bacterial gel provided. - If unexpected odour/vapour, buried containers, strange coloured soils are detected then stop work and seek advice. - Decontamination resources available if required. - Thorough cleaning of equipment that has been in contact with contaminated ground prior to demobilising.	LOW
Biological Pathogens, bacteria, viruses and fungi	Ill health Disease	E3P employees	HIGH	- Wear PPE including gloves, safety boots and safety glasses. - Ensure that any breaks in the skin on hands (i.e. cuts, sores and scratches) are covered with waterproof plasters. - High hygiene standards to be maintained- wipes and anti-bacterial gel provided. - Decontamination resources available if required. - Thorough cleaning of equipment that has been in contact with contaminated ground prior to demobilising.	LOW



Geo Sampling					
Hazard	Consequence	Persons Exposed	Risk Ranking Primary	Control Measures	Risk Ranking Residual
Physical Sharp objects, unstable/poorly compacted ground, open contaminated water and unstable derelict buildings	Cuts Slips/trips/falls Eye irritation	E3P employees	HIGH	- Where eye protection / face shield in particular when sampling water. - If there is a risk of encountering sharp objects within soils, additional protective gloves should be worn. - If skin is penetrated by a sharp object such as a needle or a sharp in waste material, seek medical attention immediately.	LOW
Lone Worker	Injury Serious injury	E3P employees	HIGH	- See Lone Worker Risk Assessment - Ensure mobile phone is charged and working. - Make contact with the PM/Office upon reaching site and upon leaving the site. - Report any suspect people/dogs/conditions. - Use lone worker safety device. - Do not enter site if is not considered safe to do so. - Staff first aid trained and first aid kit in all vehicles.	LOW
Dust	Ill health Respiratory problems	E3P employees	HIGH	- If contaminated soil dust that could give rise to respiratory problems, respiratory protective equipment (RPE) may be required. - Refer to CPP if dust suppression equipment is required. - Always clean boots and remove any overalls and place in a bag prior to leaving site. - Do not drive in dirty boots or overalls to avoid inhalation of contaminated dust. - Stand upwind of excavations to avoid dust blowing towards you.	LOW



Geo Sampling					
Hazard	Consequence	Persons Exposed	Risk Ranking Primary	Control Measures	Risk Ranking Residual
Manual handling of field/sampling equipment	Musculoskeletal disorders	E3P employees	MEDIUM	- Consider Task, Individual, Load and Environment (TILE) prior to manual handling activities. - Manual Handling Risk Assessment to be completed on activities that are outside of HSE guidelines. - Minimise load and distances carried wherever possible. - Use site transport or other mechanical aids to carry loads wherever possible. - Use correct manual handling techniques and share load if required. - Be aware of rough, uneven ground and any obstacles/obstructions. - Wear appropriate non slip safety footwear with ankle protection. - Staff to be manual handling trained.	LOW



Borehole drilling					
Hazard	Consequence	Persons Exposed	Risk Ranking Primary	Control Measures	Risk Ranking Residual
Underground/ Overground Services	Burns Electrocution Death Explosion	E3P employees Site operatives	HIGH	- The identification and marking out of known services and proposed exploratory hole locations is done at the design stage and agreed by all parties. - Comply with utility companies' guidance and ensure Utility Assessment is completed with the CPP document - Before drilling, engineer will use CAT scanner and/or Genny to check for utilities, services and pipelines at exploratory hole locations - always treat as live. - Work well away from any overhead power lines or arrange with the electricity supplier for overhead power lines to be shrouded (covered), or made dead or rerouted. - Rig operator to assess surroundings and be aware of any overhead power lines as identified in the CPP.	LOW
Operation of rig	Serious injury	E3P employees Site operatives	HIGH	- Only competent, assessed and authorised contractors used. - Contractor using only suitable plant with: Rig certification (LOLER) and compliance with PUWER (Dangerous rotating parts). - All drilling supervisors and operatives competent. - All site personnel will have a site induction which contains hazardous gas information and instructions contained in the Health & Safety Plan. - Rig inspected and documented by the Lead Driller at the start of each shift. - The emergency stop functional operation must be tested at the start of each shift and recorded. - Drillers must conduct gas monitoring if identified in the CPP.	LOW



Borehole drilling					
Hazard	Consequence	Persons Exposed	Risk Ranking Primary	Control Measures	Risk Ranking Residual
Hazardous Gases	Harm caused by migration of hazardous gases on-site and off-site	E3P employees Site operatives	HIGH	- Where proposed works will intersect, enter or disturb the Coal Authority's property, prior consent is obtained. - Desk study completed prior to work commencing. - Communication of desk study findings to the drilling contractor. - Complete gas monitoring on/off site and use gas alarms/RPE if identified in the CPP. - Use forced ventilation if identified in the CPP. - Where flammable gases are possible no naked lights, smoking, or storage of flammable liquids should be permitted within a minimum of 15m of the borehole. This zone can be extended should the CPP or prevailing conditions dictate. Consideration should be given to the direction of the wind. - Suitable warning notices should be posted warning of the restrictions and dangers. - Gas monitoring must be undertaken by the drilling contractor at the top of the borehole prior to starting the rig to ensure the absence of flammable gases. - Where the borehole position has to be fenced off then escape routes must be set up by the drilling contractor and kept clear while drilling operations are continuing. - The drilling contractor will ensure that emergency control measures should be ready to be implemented if required. - The drilling contractor will ensure that the planned gas monitoring is strictly followed during site operations and from the start of drilling operations.	LOW
Collisions with vehicles/ heavy plant	Injury Death	E3P employees Site operatives	HIGH	- Secure site and/or place warning signs/cordons. - Only competent (CPCS card) people to operate the machine. - Machine supplied with valid service certificate. - Drilling operator to complete daily machine checks and ensure all safety devices are working. - Lines of communication clearly identified with engineer and operator before work commences. - Stay within sight of the driver at all times, make him aware of your intentions clearly. - Stand well away from plant and vehicles, beware of reversing vehicles. - Ensure spectators remain out of exclusion zone. - Do not ride upon or operate any plant or machinery. - Use pedestrian walkways where available. - High visibility vests to be worn.	LOW



Borehole drilling					
Hazard	Consequence	Persons Exposed	Risk Ranking Primary	Control Measures	Risk Ranking Residual
Contamination	Ill health Disease Cuts	E3P employees Site operatives	HIGH	- Desk study completed to identify potential harmful substances. - Consult CPP for site specific control measures to ensure PPE is suitable for the site conditions. - COSHH Risk Assessment completed for known hazardous substances.	LOW
Flying debris (concrete breaking)	Head/eye Injury	E3P employees	HIGH	- Stand well back – always wear head protection. - Wear eye protection.	LOW
Noise	Hearing damage	E3P employees Site operatives	MEDIUM	- All drilling personnel must wear appropriate hearing protection within the defined hearing protection zone when the engine is running. - Hearing protection must also be worn by all other personnel entering the hearing protection zone.	LOW
Fumes Dust	Hearing damage Ill health	E3P employees Site operatives	MEDIUM	- Wear RPE if identified in the CPP. - Stand clear of exhaust - If in confined space allow for forced ventilation.	LOW
Ground conditions	Toppling/ overturning of rig Slips, trips, falls Injury	E3P employees Site operatives	MEDIUM	- Engineer and drilling contractor to assess ground conditions prior to commencing work to ensure stability. - Do not set up or operate rig in close proximity to crest of feature. - Maintain a safe operating distance both adjacent to and below steep faces. - Do not attempt to climb up or down steep/vertical faces. - Do not encroach onto marshy or other soft ground. - Utilise tracked plant and equipment to spread load and minimise sinking. - Take extra care in wet/muddy conditions. - Wear safety boots.	LOW



Borehole drilling					
Hazard	Consequence	Persons Exposed	Risk Ranking Primary	Control Measures	Risk Ranking Residual
Manual handling	Musculoskeletal disorders	E3P employees	MEDIUM	- Consider Task, Individual, Load and Environment (TILE) prior to manual handling activities. - Minimise load and distances carried wherever possible. - Use site transport or other mechanical aids to carry loads wherever possible. - Use correct manual handling techniques and share load if required. - Be aware of rough, uneven ground and any obstacles/obstructions. - Wear appropriate non slip safety footwear with ankle protection. - Staff to be manual handling trained.	LOW



Trial Pitting					
Hazard	Consequence	Persons Exposed	Risk Ranking Primary	Control Procedures	Risk Ranking Residual
Underground/ Overground Services	Electrocution Explosion	E3P employees Site operatives	HIGH	- Before digging check for utilities, services and pipelines - always treat as live. - The Identification and marking out of known services and proposed trial pits should be done at the design stage and agreed by all parties. - Comply with utility companies' guidance and ensure Utility Assessment is completed with the CPP Document. - Work well away from any overhead power lines when or using lifting equipment . Refer to HSE guidance GS6 for specific exclusion zones and/or arrange with the electricity supplier for overhead power lines to be shrouded (covered), or made dead or rerouted. - CAT scan area prior to breaking ground. - Plant operator to assess surroundings and be aware of any overhead power lines.	LOW
Collisions with heavy plant	Injury Death	E3P employees Site operatives Public	HIGH	- Secure site and/or place warning signs/cordons. - Only competent (CPCS card) people to operate the machine. - Machine supplied with valid service certificate. - Operator to complete daily machine checks and ensure all safety devices are working and any quick hitch safety pin is inserted correctly. - Lines of communication clearly identified with engineer and operator before work commences. - Use a banksman during mobilisation and moving around the site. - Stay within sight of the driver at all times, make him aware of your intentions clearly. - Stand well away from plant and vehicles, beware of reversing vehicles and swing of excavator bucket. - Ensure spectators remain out of exclusion zone. - Do not ride upon or operate any plant or machinery. - Use pedestrian walkways where available.	LOW
Drop load, lifting equipment failure	Injury Death	E3P employees	HIGH	- Lifting equipment to be certified and visually checked by operator before use. - No person is allowed to walk under a suspended load. - An exclusion zone will be maintained by engineer.	LOW



Trial Pitting					
Hazard	Consequence	Persons Exposed	Risk Ranking Primary	Control Procedures	Risk Ranking Residual
Falling into excavations	Falls from height	E3P employees Site operatives Public Livestock	HIGH	- Ensure site access/egress is secure. - Set up an exclusion zone to keep spectators out of work area if identified in the CPP. - Do not walk or work close to the edge of the pit. - Stand, measure and log from the narrow end of the trial pit opposite the excavator and minimise time spent doing this. - Where possible, place the rested excavator bucket inside the pit to provide an obstacle to prevent fall into the pit completely whilst logger approaches edge. - Obtain sample from excavator bucket were possible. - If sample cannot be obtained inform PM and organise alternative sample strategy. - Backfill the pit as soon as reasonably practicable after completion. - Do not leave an open pit unattended or unfenced. - Display 'danger deep excavation' signs on fenced excavations. - Do not work near excavations in poor light conditions.	LOW
Collapse of excavation	Falls from height	E3P employees	HIGH	- Excavations are not to be entered. - Do not operate plant machinery in close proximity to crest of feature.	LOW
Falling or dislodging material	Falls from height	E3P employees Public Site operatives	HIGH	Do not park plant and vehicles close to the sides of excavations. The extra loadings can make the sides of excavations more likely to collapse.	LOW



Trial Pitting					
Hazard	Consequence	Persons Exposed	Risk Ranking Primary	Control Procedures	Risk Ranking Residual
Contamination	Ill health Disease Cuts	E3P employees Site operatives	HIGH	Consult CPP for site specific control measures to ensure PPE is suitable for the site conditions.	LOW
Flying debris (concrete breaking)	Head/eye Injury	E3P employees	HIGH	- Stand well back – always wear head protection. - Always wear eye protection.	LOW
Noise Fumes Dust	Hearing damage Ill health	E3P employees Site operatives	MEDIUM	- Stand clear of exhaust, if in confined space allow for forced ventilation. - Operator to turn off plant when not in use. - Wear RPE – see CPP	LOW



Trial Pitting					
Hazard	Consequence	Persons Exposed	Risk Ranking Primary	Control Procedures	Risk Ranking Residual
Ground conditions	Toppling/ overturning of plant Slips, trips, falls Injury	E3P employees Site operatives	MEDIUM	- Engineer and operator to assess ground conditions prior to commencing work to ensure stability. - Do not set up or operate plant machinery in close proximity to crest of feature. - Maintain a safe operating distance both adjacent to and below steep faces. - Do not attempt to climb up or down steep/vertical faces. - Do not encroach onto marshy or other soft ground. - Utilise tracked plant and equipment to spread load and minimise sinking. - Operator to ensure that the capacity of the machine is not exceeded. - Caution to be exercised in wet conditions. - Operate machine in a smooth manner avoiding jerky movements. - Operator to always wear seatbelt. - Wear safety boots. - Take extra care in wet/muddy conditions.	LOW
Manual handling of testing/sampling equipment	Musculoskeletal disorders Hand/foot injuries	E3P employees	MEDIUM	- Consider Task, Individual, Load and Environment (TILE) prior to manual handling activities. - Minimise load and distances carried wherever possible. - Use site transport or other mechanical aids to carry loads wherever possible. - Use correct manual handling techniques and share load if required. - Be aware of rough, uneven ground and any obstacles/obstructions. - Wear non slip safety footwear with ankle protection. - Staff to be manual handling trained.	LOW
Poor backfilling of pits	Slips/trips/falls	E3P employees Site operatives Public	MEDIUM	- Trial pits to be carefully backfill to ensure that no trip hazards are present and that the pits are level. - Photographs of the backfilled pit to be taken. - Checklist and sign-off sheet to be completed – Refer to SOP 10	LOW



Trial Pitting					
Hazard	Consequence	Persons Exposed	Risk Ranking Primary	Control Procedures	Risk Ranking Residual
Unauthorised plant use	Injury	Public	MEDIUM	- Parked machines must have their keys removed. - Site secured to prevent unauthorised access if applicable.	LOW
Falls from cab	Injury	Plant operative	MEDIUM	- Always use handrail for assistance. - Ensure feet are placed securely in the steps on machine.	LOW



Soakaways					
Hazard	Consequence	Persons Exposed	Risk Ranking Primary	Control Procedures	Risk Ranking Residual
Underground/ Overground Services	Burns / Death / Explosion	E3P employees Site operatives	HIGH	- Before digging check for utilities, services and pipelines - always treat as live. - The Identification and marking out of known services and proposed trial pits should be done at the design stage and agreed by all parties. - Comply with utility companies' guidance and ensure Utility Assessment is completed with the HASP Document (SP7). - Work well away from any overhead power lines when or using lifting equipment . Refer to HSE guidance GS6 for specific exclusion zones and/or arrange with the electricity supplier for overhead power lines to be shrouded (covered), or made dead or rerouted. - Plant operator to assess surroundings and be aware of any overhead power lines. - CAT scan area prior to breaking ground	LOW
Collisions with heavy plant	Injury Death	E3P employees Site operatives Public	HIGH	- Secure site and/or place warning signs/cordons. - Only competent (CPCS card) people to operate the machine. - Machine supplied with valid service certificate. - Operator to complete daily machine checks and ensure all safety devices are working and any quick hitch safety pin is inserted correctly. - Lines of communication clearly identified with engineer and operator before work commences. - Use a banksman during mobilisation and moving around the site. - Stay within sight of the driver at all times, make him aware of your intentions clearly. - Stand well away from plant and vehicles, beware of reversing vehicles and swing of excavator bucket. - Ensure spectators remain out of exclusion zone. - Do not ride upon or operate any plant or machinery. - Use pedestrian walkways where available. - Vehicle shall be turned off when not in use with arms rested on the ground - any slew guards shall be used to prevent accidental operation.	LOW



Soakaways					
Hazard	Consequence	Persons Exposed	Risk Ranking Primary	Control Procedures	Risk Ranking Residual
Drop load, lifting equipment failure	Injury Death	E3P employees	HIGH	- Lifting equipment to be certified and visually checked by operator before use. - No person is allowed to walk under a suspended load. - An exclusion zone will be maintained by engineer.	LOW
Falling into excavations	Falls from height	E3P employees Site operatives Public Livestock	HIGH	- Ensure site access/egress is secure. - Set up an exclusion zone to keep spectators out of work area if identified in the HASP. - Do not walk or work close to the edge of the pit. - Stand, measure and log from the narrow end of the trial pit and minimise time spent doing this. - Backfill the pit as soon as reasonably practicable after completion. - Do not leave an open pit unattended or unfenced. - Fence off excavations if they are to be left open both around the pit and across the trial pit opening. Display 'danger deep excavation' signs on fenced excavations. - Do not work near excavations in poor light conditions.	LOW
Collapse of excavation	Falls from height	E3P employees	HIGH	- Excavations are not to be entered. - Do not operate plant machinery in close proximity to crest of feature.	LOW
Falling or dislodging material	Falls from height	E3P employees Public Site operatives	HIGH	Do not park plant and vehicles close to the sides of excavations. The extra loadings can make the sides of excavations more likely to collapse.	LOW



Soakaways					
Hazard	Consequence	Persons Exposed	Risk Ranking Primary	Control Procedures	Risk Ranking Residual
Contamination	Ill health Disease Cuts	E3P employees Site operatives	HIGH	Consult HASP for site specific control measures to ensure PPE is suitable for the site conditions.	LOW
Flying debris (concrete breaking)	Head/eye Injury	E3P employees	HIGH	- Stand well back – always wear head protection. - Always wear eye protection.	LOW
Noise Fumes Dust	Hearing damage Ill health	E3P employees Site operatives	MEDIUM	- Stand clear of exhaust, if in confined space allow for forced ventilation. - Wear ear protection if identified in the HASP. - Operator to turn off plant when not in use. - Wear RPE if identified in the HASP.	LOW



Soakaways					
Hazard	Consequence	Persons Exposed	Risk Ranking Primary	Control Procedures	Risk Ranking Residual
Ground conditions	Toppling/ overturning of plant Slips, trips, falls Injury	E3P employees Site operatives	MEDIUM	- Engineer and operator to assess ground conditions prior to commencing work to ensure stability. - Do not set up or operate plant machinery in close proximity to crest of feature. - Maintain a safe operating distance both adjacent to and below steep faces. - Do not attempt to climb up or down steep/vertical faces. - Do not encroach onto marshy or other soft ground. - Utilise tracked plant and equipment to spread load and minimise sinking. - Operator to ensure that the capacity of the machine is not exceeded. - Caution to be exercised in wet conditions. - Operate machine in a smooth manner avoiding jerky movements. - Operator to always wear seatbelt. - Wear safety boots. - Take extra care in wet/muddy conditions.	LOW
Manual handling of testing/sampling equipment	Musculoskeletal disorders	E3P employees	MEDIUM	- Consider Task, Individual, Load and Environment (TILE) prior to manual handling activities. - Minimise load and distances carried wherever possible. - Use site transport or other mechanical aids to carry loads wherever possible. - Use correct manual handling techniques and share load if required. - Be aware of rough, uneven ground and any obstacles/obstructions. - Wear non slip safety footwear with ankle protection. - Staff to be manual handling trained.	LOW
Poor backfilling of pits	Slips/trips/falls	E3P employees Site operatives Public	MEDIUM	- Trial pits to be carefully backfill to ensure that no trip hazards are present and that the pits are level. - Photographs of the backfilled pit to be taken. - Checklist and sign-off sheet to be completed – Refer to SOP 10	LOW



Soakaways					
Hazard	Consequence	Persons Exposed	Risk Ranking Primary	Control Procedures	Risk Ranking Residual
Unauthorised plant use	Injury	Public	MEDIUM	- Parked machines must have their keys removed. - Site secured to prevent unauthorised access if applicable.	LOW
Falls from cab	Injury	Plant operative	MEDIUM	- Always use handrail for assistance. - Ensure feet are placed securely in the steps on machine. - Operator shall work according to their Safe Working Procedures or E3P SHE Rules and Standards for Contractors.	LOW



Driving					
Hazard	Consequence	Persons Exposed	Risk Ranking Primary	Control Measures	Risk Ranking Residual
Competency of driver	Serious injury	E3P employees Public	HIGH	- Vehicles are operated in line with the E3P Driving for Work Policy. - Driver must hold a valid UK or European driving licence for the classes appropriate to the vehicle being driven. - Where a significant number of penalty points are present a further assessment will be required. - Drivers are required to declare any medical condition they may affect their ability to operate a company vehicle. - Drivers are required to operate the vehicle in line with the Highway Code, The Road Traffic Act 1991 and other associated legislation. - Do not use mobile phone whilst driving unless connected to a handsfree system. - All vehicle operators to read and sign a copy of the Driving for Work Policy. - Copies of licence documentation to be held on file and checked annually. - Drivers are required to declare and endorsements or penalty points incurred.	LOW
Road Traffic Accident (RTA)	Serious injury	E3P employees	HIGH	- In the event of an RTA the driver should exit the vehicle if able to do so and make their way to the nearest place of safety away from moving traffic. - If required the driver should contact the emergency services for assistance. - Following an accident the driver should follow the procedures as identified in the E3P Driving Policy.	LOW
Adverse weather conditions	Serious injury	E3P employees	HIGH	- Drivers should modify their driving to suit the conditions. - In exceptionally bad conditions drivers should pull off the road or as far to the side as possible. They should not continue their journey until it is safe to do so.	LOW
Drugs, Alcohol	Serious injury	E3P employees	HIGH	- No driver should attempt to operate a vehicle if they are, or suspect that they may be under the influence of drugs or alcohol. - All incidences relating to drugs or alcohol should be reported to their supervisor or manager.	LOW
Lone Working	Delayed medical assistance	E3P employees	HIGH	- Vehicles are fitted with tracking devices. - First aid kit in vehicles. - Personnel first aid trained. - Drivers are equipped with mobile phones. - Personnel have diarised schedule. - See E3P Lone working risk assessment. - Lone worker devices are supplied where identified as appropriate.	LOW



Driving					
Hazard	Consequence	Persons Exposed	Risk Ranking Primary	Control Measures	Risk Ranking Residual
Maintenance of vehicle	Serious injury	E3P employees Public	HIGH	- All vehicles to be serviced and maintained in line with manufactures recommendations and have a valid MOT. - All vehicles to be inspected in line with the requirement set out in the E3P Driving Policy. - All defects identified should be reported to the Operations Manager and rectified in a timely manner or if appropriate vehicle removed from use and stored off the public highway.	LOW
Loading & unloading	Vehicle stability, musculoskeletal injury	E3P employees	HIGH	- Manual handling should be carried out by competent persons - All tools, equipment and materials should be properly secured in the storage section of the vehicle - The loading of the vehicle should not exceed the permit SWL	LOW
Violence and aggression	Injury	E3P employees	MEDIUM	- Vehicles should be driven in a safe and courteous manner at all times in line with the Highway Code. - Drivers should avoid getting into verbal or physical conflict with other road users. - Any incidents should be reported to the Health and Safety Manager and recorded.	LOW
Breakdown	Injury	E3P employees	MEDIUM	In the event of a breakdown the driver should exit the vehicle and make their way to the nearest place of safety and call for assistance.	LOW
Security & theft	-	E3P employees	MEDIUM	- Drivers should ensure that the vehicle is left locked at all times and that the keys are never left in the ignition while unattended. - Valuables should be kept out of site and all tools equipment should be stored in the rear storage area or boot.	LOW
Fatigue and tiredness	Injury	E3P employees	MEDIUM	- Statutory minimum breaks and rest periods must be taken when required. - Driver should report any issues that may affect their ability to operate the vehicle safely. - Drivers should remain well hydrated throughout the day.	LOW



ENVIRONMENTAL RISK ASSESSMENT						
HAZARD	SOURCE	PATHWAY	RECEPTOR	RISK RANKING PRIMARY	RISK MANAGEMENT	RISK RANKING RESIDUAL
Travel to and from site	Vehicle Emissions	Air	Air Quality	MEDIUM	- Plan journey to ensure shortest/best route - Maintain speed limits - Do not let vehicles idle - Ensure vehicle is road worthy (tyre pressures etc)	LOW
Noise from machinery	On site operations	Noise through the air and vibration	E3P employees Site operatives	MEDIUM	- Machinery subject to regular inspection and maintenance schedules to maintain operational performance - Exclusion zone set up around drilling rig - Mandatory ear protection within exclusion zone	LOW
Diesel spill	On site operations	Percolation through soils, direct run-off from site across the ground and entering surface water or groundwater	Nearby natural habitats Pollution of nearby surface water	MEDIUM	- Clean up procedures will be implemented to deal with fuel. - All staff will be trained in the procedures and correct use of equipment and sufficient spill kits will be maintained on site.	LOW
Contaminated run-off/rainwater from site surfaces	Contamination from materials removed from excavations	Percolation through soils, direct run-off from site across the ground and entering surface water drains or natural channels/ditches	Nearby natural habitats Pollution of nearby surface water	MEDIUM	Material removed from excavations is reinstated so far as is practical in the order that it was removed.	LOW
Releases of dusts or particulate matter	Vehicle movements Work activities	Air transport and inhalation	E3P employees Site operatives Public	LOW	- In the unlikely event of dust generation caused by vehicle movements, roadways will be dampened down as appropriate to prevent the mobilisation of dust during dry and windy weather. - Consideration given to the need to dampen down soil during investigative works	LOW
Litter/Waste	Litter/Waste for work activity	Transportation through the air and over land	Site employees Public	LOW	- The site will be carefully managed including good housekeeping procedures and regular checks will be made within and around the site for any litter/debris. - All contractors to remove waste generated by their activity.	LOW



ENVIRONMENTAL RISK ASSESSMENT

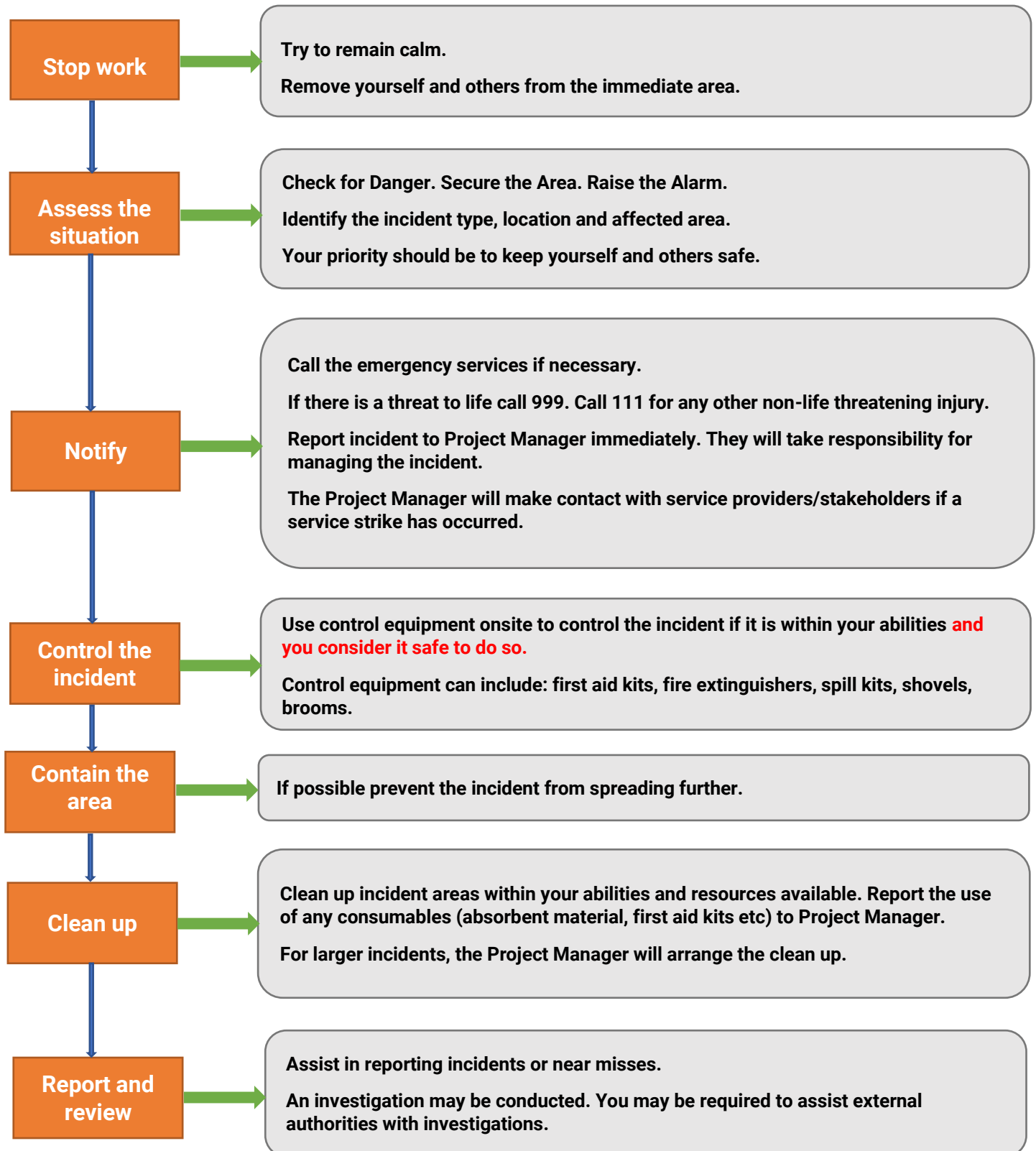
HAZARD	SOURCE	PATHWAY	RECEPTOR	RISK RANKING PRIMARY	RISK MANAGEMENT	RISK RANKING RESIDUAL
Excessive mud	Ground conditions Weather	Transportation of mud and debris onto public roads from site vehicles Direct run-off from site entering surface water drains or watercourses	Motorists Nearby natural habitat & Surface water	LOW	- Access mats/boards will be used depending on site conditions - Equipment/plant selected for ground condition and weather suitably - Do not drive into excessively muddy areas - Vehicle access restricted to one stable entry and exit point. - Remove excess mud before driving onto roads	LOW
Drilling/Excavating through contaminated material	In-situ contamination	Vertical migration through created preferential pathways	Deeper aquifers and surface watercourse	LOW	- Check the site history. - Plan works carefully - Stop drilling if unexpected conditions are encountered. - Safe drilling techniques if appropriate	LOW

APPENDIX II EMERGENCY / INCIDENT PROCEDURE

Emergency and Environmental Incident Response Flow Chart

This flowchart provides a basic guideline to emergency response. As such it cannot predict every emergency situation that could occur.

Never place yourself or others at risk when following these procedures. Doing nothing in the first instance might be best/safest option until help arrives.



Service Strike – Immediate Action to be Taken

Gas Strikes	Electric cable strikes	Water	Fuel Lines
STOP WORK IMMEDIATELY			
Shut down all plant and machinery and leave where they are. Extinguish any potential sources of ignition. Do not use your mobile phone in the vicinity of the damaged asset. Any slight spark can ignite the gas.	Treat the cable or overhead line as live – get back at least 10 metres Avoid all contact	Turn off water supply if possible. If not try to plug leak.	Evacuate area around leak.
Evacuate workers and others to a safe distance. At least 20 m away	Do not try to disentangle cables from excavator buckets.	Contact the water supply company or plumber.	Extinguish all naked flames and cigarettes.
Extinguish all naked flames and cigarettes.	In the event of an electric shock, don't touch the victim until you've had confirmation the source of electricity has been removed. Call an ambulance on 999.		Try to turn off fuel supply.
Call the fire service on 999 in the event of a fire or explosion. Call the PM who will call the national gas emergency number. 0800 111999	Call the fire service on 999 in the event of a fire or explosion. Call the PM who will call 105 Electrical Emergencies		Use oil absorbent materials to contain and clean up leaked fuel, as detailed in emergency spill procedure.
No smoking or naked flames.	Do not attempt to leave the excavator involved unless assured that the cable is no longer live.		If situation requires, contact emergency services.
Keep vehicles and members of the public away from the area.	Contact service owner and emergency services as appropriate		

You may need to warn service users if a service connection has been disturbed as this may result in a leak within the building.	Keep vehicles and members of the public away from the area.		
Co-operate with and assist gas supply company, police and fire authority as required.	Do not return to the area to take photos until the service provider has confirmed it is safe to do so – damage to electricity cables can cause dangerous arcing which is the release of an enormous amount of energy that may cause fires, severe burns and damage to eyesight and hearing.		
	Co-operate with and assist cable owner and emergency services as required.		

Hazardous Gas Release (Coal Mining) – Immediate Action to be taken

-  On hearing the gas monitor alarm **STOP WORK IMMEDIATELY.**
-  Cease drilling and all personnel must be withdrawn from the affected area.
-  Eliminate any potential sources of ignition – this includes mobile phones within the area of release.
-  Do not return to the affected area until a competent person has investigated and assessed that it is safe to do so.
-  Coal Authority's emergency call-out number **01623 646333.**

Spill Procedure

When a Large Chemical Spill has occurred

- ✳ Immediately notify the Project Manager
- ✳ Contain the spill with available equipment (e.g., pads, booms, absorbent powder, etc.)
- ✳ Secure the area and alert other site personnel
- ✳ Do not attempt to clean the spill unless trained to do so
- ✳ Attend to injured personnel and call the medical emergency number, if required
- ✳ Do not attempt lone rescues or rescues that may put you at harm
- ✳ Call a local spill clean-up company or the Fire Service (if arrangement has been made) to perform a large chemical spill clean-up
- ✳ Evacuate area as necessary

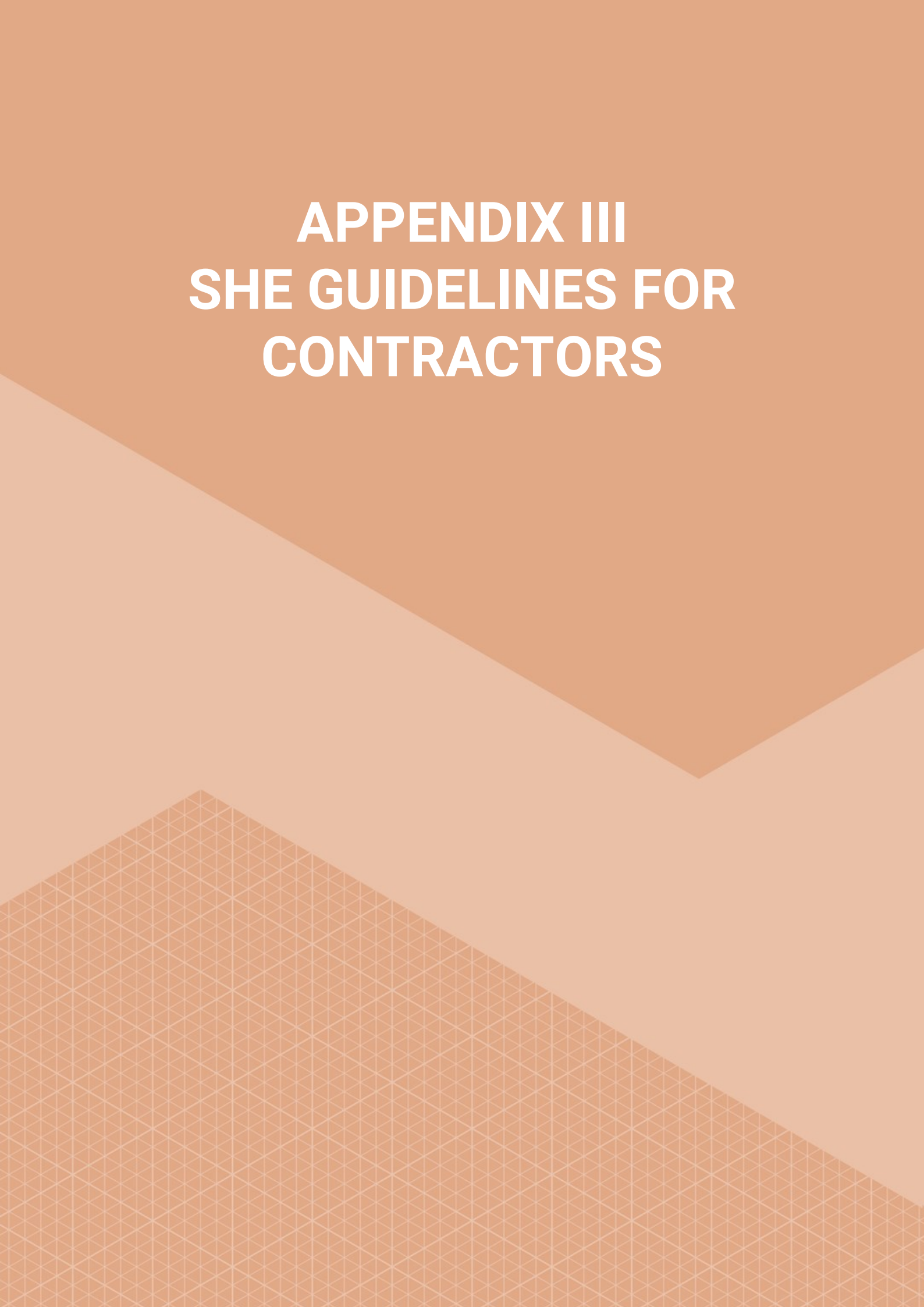
When a Small Chemical Spill has occurred

- ✳ Notify the Project Manager
- ✳ If toxic fumes are present, secure the area (with caution tapes or cones) to prevent other personnel from entering
- ✳ Deal with the spill in accordance with the instructions described in the Material Safety Data Sheet and COSHH Risk Assessment
- ✳ Small spills must be handled in a safe manner, while wearing the proper PPE

APPENDIX III

SHE GUIDELINES FOR

CONTRACTORS

The background of the page is composed of several geometric shapes in shades of orange and light orange. A large, dark orange shape occupies the top right corner. A lighter orange shape is on the left side. The bottom left corner features a light orange shape with a fine, white grid pattern. The overall design is modern and minimalist.

SAFETY, HEALTH AND ENVIRONMENTAL GUIDELINES FOR PLANT HIRE CONTRACTORS

This is a mandatory briefing note for all excavator operators and is to be delivered during the site induction of excavator operators.

Responsibility and competence:

As a machine operator, you are responsible for your own safety and for the safety of those working around you. You must operate the excavator in accordance with your training, the instructions on safe start-up and shut-down that are in the manufacturer's handbook and the project Health and Safety Plan on which you have been briefed.

To operate an excavator on a E3P site you must have the appropriate CPCS card and be authorised. In addition, if you will be involved in lifting operations or the use of quick-hitch devices, you must have had suitable training on these activities.

Induction and authorisation:

On arrival on site you will be given a site specific induction.

This will include an assessment of your competence and your understanding of the machine you will be operating. During this assessment you will be required to carry out an inspection of the excavator.

When you have satisfactorily completed the induction assessment, the E3P Supervisor will authorise you to operate the excavator. Those who are not authorised must not operate the equipment.

Before operating the excavator:

If you are not familiar with the machine, study the manufacturer's handbook before starting and operating the excavator. The handbook will normally be behind the seat in the cab.

Make sure that you know the position and function of the various safety features, interlocks, gauges and operating controls in the cab.

Make sure you know which type of quick-hitch system is fitted. Refer to the quick-hitch manufacturer's handbook to confirm how it works and how to check that the bucket is secure (see below).

Carry out a pre-use inspection of the excavator and record the result on your company inspection form. If there are any defects, report these to your E3P supervisor - do not start or operate the machine until the defects have been rectified.

'Quick-hitch' devices for bucket attachment:

A 'quick hitch' on an excavator is a latching device that enables different buckets and attachments to be connected to the dipper arm and interchanged quickly.

There are three types of quick hitch system:

Manual: To change a bucket, a screw has to be turned manually to open or close a latch or a bar has to be used to open a spring-actuated latch. This system is often fitted on smaller machines, such as those of less than 10t capacity.

Semi-automatic: After operating the 'quick-hitch' latch, the operator has to leave the cab to insert a retaining pin in the quick hitch as an additional security. This pin (often referred to as the 'safety bar') is not a load-bearing part of the hitch - it usually works by locking the latch in its closed position. The safety bar cannot be inserted unless the latch is in the fully-closed position.

Automatic: Automatic systems can be operated entirely from the cab and usually have an independent automatic locking system which does not rely on hydraulic pressure to hold the latch in its closed position. Normally the automatic system has a means for operators to check that the hitch is locked: for example, locking pins may protrude from the side of the hitch when the latch is in the unlocked state. Larger attachments such as rammers may prevent the locked condition being verified from the cab, in which case the operator will need to get out of the cab to check the locked condition.

Before starting work and whenever a different attachment has been fitted, always check that the safety pin has been correctly inserted. If it cannot be inserted or you are having problems in doing so, report this to the E3P Supervisor.

Further instructions on the fitting of safety pins:

Only use retaining pins that are purpose-designed by the manufacturer of the excavator. The use of a large bolt, wire or another substitute is not permitted in any circumstances.

If the hitch has two holes for the safety pin (to suit different bucket sizes), ensure that the pin has been inserted into the correct hole.

Do not use the machine until you are satisfied that the hitch is correctly secured — if you cannot see this from the cab, you must climb down to check.

Use a method of checking the security of the hitch that is recommended by the manufacturer or agreed with your company supervisor. Some manufacturers advise the 'shake, rattle and roll' method (in a safe location), others suggest placing the bucket flat on the ground and then trying to uncrowd it so that the bucket tries to disengage from the hitch.

Ensure that any loose pins or clips are retained or attached to the quick hitch.

If the quick hitch is used for lifting (many quick hitches have a lifting eye for this purpose), the weight of the quick hitch has to be deducted from the SWL of the excavator.

Ensure that nobody works close to or underneath the bucket of your excavator.

When is a banksman required?

A banksman is required for all activities involving an excavator except where the risk assessment has determined that a banksman is not required.

Before carrying out a work activity:

Before starting a work activity, make sure you have been properly briefed on the risk assessment, method statement and, if applicable, the 'Permit to dig'. If the work involves lifting operations, you must also be briefed on the Lifting Plan. You will be required to sign the CPP, Lifting Plan or briefing note to confirm you have received and have understood the instructions. If the nature of the work subsequently changes significantly from that planned, you should stop work and consult your E3P supervisor.

Make sure you know who is in charge of the work area.

Agree with the E3P supervisor/banksman the method to be used for communicating - the method must be simple and easy to understand. Stop the excavator immediately if the E3P Supervisor/banksman disappears from your view.

Carry out a visual check around the excavator to ensure that the slewing radius and/or tracking area is clear of people or obstructions that could be struck - there should be a minimum of 600mm of clearance from fixed objects.

If your vision is restricted, do not start work until the banksman has confirmed that the area around the excavator is clear and that it is safe to start the machine and commence work.

Assess your surroundings and ground conditions.

Be aware of any powerlines or unsafe areas that have been identified in the site induction.

Always start the excavator as recommended in the manufacturer's handbook

Follow the safe system of work in accordance with your training.

Remove any 'Bluetooth' earpieces.

During work activity:

Complete excavations as directed by the E3P Supervisor.

Only release the Dead Man's Handle when fully in control of the excavator.

Make sure that your clothing cannot get in the way of controls.

All excavator vehicle movements to exploratory hole locations will be at walking speed under the supervision of a banksman.

Never permit riders in the bucket, cab, or anywhere else on the machine. Excavators only have one seat, which is meant for the operator.

Never attempt to operate the excavator unless you are sitting in the seat and in full control.

Reduce the excavator's speed when working on rough terrain or within congested areas.

Carry the bucket low to the ground during transport. This will increase visibility and machine stability.

When moving the excavator around the job site, select a route that is as flat as possible.

Steer the machine as straight as possible and only make small gradual changes in direction when turning is needed.

Travel directly up slopes vertically instead of diagonally.

When propelling up slopes, the boom and the arm should be extended with the bucket carried low and rolled out. This will allow you to drop the bucket and prevent the equipment from sliding if necessary.

When propelling down a slope, the bucket bottom should be low and parallel to the ground.

When using the excavator for trenching, make sure the machine is level by placing dirt underneath the tracks. Being level will make the trench vertical and will help to avoid cave-ins.

For better stability, work with the propel motors to the rear of the machine.

Dump spoil piles as directed by the E3P Supervisor as far away from the excavation as possible to avoid cave-ins.

When doing excavation jobs on slopes, level the machine by digging a shelf (or bench cut). Material removed from the upper slope can be used to build up the lower slope and create a level surface.

On steep bench cuts, cut enough away from the upper bank to allow for adequate swing clearance when casting downslope.

Never dig underneath the excavator.

When backfilling a cave-in, the excavator's tracks should be at a 90-degree angle to the excavation with the propel motors to the rear of the machine.

Never attempt to clean the excavator's bucket by striking it on the ground or against another object.

Power down and turn off engine when anyone approaches the excavator.

Finishing the work or leaving the excavator unattended:

Always park the excavator in a safe place. If you cannot see to park the machine, your banksman should guide you to a place of safety for you to park.

Always lower the excavator bucket to the ground and set the lock lever (the dead man's handle) into the locked position. Never switch the excavator off when the bucket or main boom is in a raised position — accidental operation of the levers is not uncommon and this can cause the boom or the bucket to move unexpectedly.

Always remove the keys and take them with you.

All operatives must sign this form after reading and understanding the SHE Guidelines for Plant Hire Contractors and agree to not deviate or improvise from the guidance and operate in a safe manner at all times.

Print Name

CPCS Number

Sign

Date

SAFETY, HEALTH AND ENVIRONMENTAL GUIDELINES FOR DRILLING CONTRACTORS

Responsibility and competence:

All site staff have a responsibility to work safely and act to stop unsafe operations when encountered.

Contractor managers have a duty of care under the Lifting Operations and Lifting Equipment Regulations (LOLER) and the Provision and Use of Work Equipment Regulations (PUWER) to provide plant and equipment which is 'fit for purpose' and safe to use.

Competent drilling contractor managers/supervisors/operators should carry out suitable and sufficient checks to ensure that the plant and equipment is safe to operate comprising of annual servicing, planned preventative maintenance and pre start checks under LOLER and PUWER.

Checks should be planned based upon the amount and type of use and for most drilling rigs working in harsh conditions should comprise both daily and weekly checks as well as a minimum annual service.

All drillers must have as a minimum a NVQ Level 2 in drilling and industry related CSCS cards.

Induction and authorisation

On arrival on site drillers will be given a site specific induction in conjunction with our project Health and Safety Plan.

The E3P engineer and drillers will complete a general site check and all exploratory hole locations will be CAT and/or Genny scanned and marked out.

When the drilling crew have satisfactorily completed the induction, the E3P Supervisor will authorise them to commence work. Those who are not authorised must not begin work.

Before operating the rig

Assess the safest, authorised route to the borehole location, taking into account ground conditions, gradient, obstacles and other hazards.

Contractors will ensure the rig is safe to use by:

Producing a valid LOLER certificate corresponding to the rig and associated lifting equipment.

Conducting a general visual inspection of rig and associated equipment, looking for damage, bends, cracks, leaks and general appearance.

Checking all safety devices including guards and emergency stop buttons.

Completing their company pre use check sheet.

The drill crew must be all be wearing appropriate PPE as detailed in the contractor RAMS including, hearing protection, safety glasses, hard hat, safety boots and high visibility jacket.

An in date fire extinguisher must be present at the work site.

Under no circumstances should rigs be operated with guards removed or not operating correctly.

During work activity

Ensure a cordon/fencing/signage is placed around the work area if deemed necessary in the project CPP.

Wear PPE at all times.

Operate the rig following your safe systems of work and industry approved code of practice.

Complete work as directed by the E3P supervisor and only complete work at the agreed borehole locations.

Consult E3P supervisor immediately if there are any safety issues.

Maintain good housekeeping practices.

Finishing the work

De-rig and demobilise rig safely.

All boreholes must be reinstated to a safe standard.

Any uncompleted borehole should be fenced or temporarily capped in a safe manner when the rig has moved off and until the hole is finally capped.

The site should be left in a safe, clean and tidy state, with all gates and fences left as found.

References and Further Guidance

-  Provision and use of work equipment regulations (PUWER), 1998, HSE
-  Lifting operations and lifting equipment regulations (LOLER), 1998, HSE
-  Guidance for the safe operation of cable percussion rigs and equipment, 2017, BDA
-  Guidance for the safe operation of dynamic sampling rigs and equipment, BDA
-  Guidance notes for the protection of persons from rotating parts and ejected material involved in the drilling process, 2000, BDA
-  The Prevention of Entanglement in the Rotating Parts of Drilling and Piling Rigs, 2015, HSE

All operatives must sign this form after reading and understanding the SHE Guidelines for Drilling Contractors and agree to not deviate from the guidance or improvise and operate in a safe manner at all times.

Print Name

Sign

Date

APPENDIX IV

CONTRACTOR RAMS

SB RISK ASSESSMENT

Ref:	RR/GB/
Issue:	One
Date:	
Page:	1 of 3

Company Name:	STANLEY BROTHERS (TIPPERS) LTD
Task/Operation/Activity:	Break out and excavate new machine bed
Site Address:	VTM, Rolls Royce, Barnoldswick

Significant Hazard (See Guidance Notes SF-H&S-23)	Who Might be Harmed	Risk Factor S X P (See Guidance Notes SF-H&S-23)	Control Measures Low Risk : List Control Measures Necessary Medium & High Risk : Method Statement Required
Overhead Obstructions i.e. doorways, cables, ducting	All persons within said area	1x2 = 2	⬇ A banksman to guide machine into building and be aware of any obstructions and make area safe to enable machine to enter building safely
Falling objects Regulation 10 of the Work at Height Regulations 2005	All persons inc. public will receive head injuries or worse.	1x5 = 5	⬇ Ensure no persons walk beneath excavator bucket whilst moving loads Safety helmets and boots to be correctly worn at all times. Supervisor to monitor use of safety hats and suitable protective foot ware.
Manual handling	All workers could suffer back or multiple skeletal disorders from regular lifting.	1x1=1	⬇ Materials to be moved and lifted by mechanical means

This Risk Assessment once Completed & Approved must be signed onto using the Site Personnel Details

STANLEY
BROS

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SB RISK ASSESSMENT

Ref:	RR/GB/
Issue:	One
Date:	
Page:	2 of 3

Contact with vehicles Regulation 13 CDM Regulations 2015	All persons can suffer serious or fatal injuries from contact with plant / vehicles	2x6=12	✚ Fencing or barriers to be in place ✚ Persons made aware during induction ✚ Hi Visibility vests worn at all times. ✚ Plant driven by trained persons only. ✚ Ensure suitable signage is in place. ✚ Ensure speed limit is not exceeded. ✚ Banks man to guide plant.
Slips and trips Regulation 26 CDM Regulation 2015	All workers and public could suffer sprains or fractures. Trips at height can be fatal.	2x3=6	✚ Good house keeping maintained at all times. ✚ Waste banding or packaging removed and skipped immediately. ✚ Suitable foot ware to be worn at all times. ✚ Safe access and egress provided and maintained at all times. ✚ Monitor house keeping on a daily basis.
Noise The Control of Noise at Work Regulations 2005	All persons inc. public could receive ear damage or tinnitus.	2x3=6	✚ Always keep plant sited away from workers where possible. ✚ Use silenced plant or acoustic barrier ✚ Carry out Noise Assessments where applicable ✚ Issue ear protection to all in the area. ✚ Switch off plant when not in use. ✚ Monitor to ensure protection is worn.
Vibration The Control of Vibration at Work Regulations 2005	All persons using vibrating tools can develop VWF (vibration white finger) or WBV	1x1=1	✚ Assessment to be carried out for Whole Body Vibration is jack hammering is required
Fire / explosion Regs 21 – 32 CDM Regulations 2015	All persons inc. public and emergency services.	6x1=6	✚ Fire plan to be in place ✚ Do not allow build up of combustible materials. ✚ Store petrol, gas bottles etc in suitable storage containers.

This Risk Assessment once Completed & Approved must be signed onto using the Site Personnel Details

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SB RISK ASSESSMENT

Ref:	RR/GB/
Issue:	One
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Electrocution	All persons	6x1=6	⚡ Check tools before use ⚡ Repairs to be carried by trained competent persons only. ⚡ CAT Scan ground for cables
Welfare / First Aid Regulation 13 CDM Regulations 2015	Good facilities help to prevent dermatitis etc.		Welfare facilities will comply with the CDM regulations on welfare i.e. flushing toilets, hot running water, heating etc. Principle contractor to keep toilets and facilities clean at all times.
Print Name :	Date :14/9/17	Signature :	G Bolton
GARRY BOLTON			

This Risk Assessment once Completed & Approved must be signed onto using the Site Personnel Details

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Method Statement S B Tippers Ltd	Ref:	P/858
	Issue:	One
	Date:	
	Page:	1 of 3

Contract Name:	Huncoat power station		6/02/17
Task / Activity:	Form access road	Risk Assessment No:	Sb358
Name of Company Carrying Out Work:	Stanley Brothers Tippers LTD	Supervisor In Charge:	
Name of Person Completing MS:	Garry Bolton SB Tippers 01254887030 / 07932086074		
Location of Work:	Huncoat power station		
Start Date:	07/02/17	Duration: TBA	1 week
List of Sub/C to be Used	None		

Plant and Equipment to be Used (Including Inspection Requirements): 17 ton wheeled excavator All above plant operated by trained, licensed operatives All plant will be subject to Daily visual checks and Weekly recorded checks
--

Details of Supervision: Trained/Competent Personnel to be used: Stanley Brothers Tippers Excavator operator CPCS card holder Operators to carry a copy of there licences while on site at all times
--

Details of Emergency Procedures, First Aid Procedures & Security Procedures: Under site instruction

Personal Protective Equipment to be Used: (Note Specific Type of PPE)							
Head	Eye	Face	Ear	Hand	Foot	Hi-Visibility	Other
Yes Hard Hats To be worn At all times	Yes Safety glasses To be worn at all times	Yes Dust masks and ear defenders to be worn at all times	Yes Suitable Ear protector s	Yes Rigger Gloves or Similar approved	Yes Safety foot ware	Yes	As specified In site Specific risk assessments

Working Area, Access and Storage Area (Including Details of Barriers, Signage, etc.):
--

S B Tippers Ltd

Method Statement
S B Tippers Ltd

Ref:	P/858
Issue:	One
Date:	
Page:	2 of 3

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Details of Temporary/Preparatory Works Required to be Undertaken eg Surveys, Information Requirements:

Operator to have a full site induction
Regular tool box talks

Survey the entrance and measure the doorway if required before entering with the excavator
Survey any obstructions before entering the building

Electrical service drawings identified a live cable on site – The area to be identified and care taken when working in vicinity.

As built service drawings received – to be available on site
Existing Services/service drawings will form part of the site induction

Details of How Work Procedure is to be Undertaken (Including Time Scales & Materials Where Applicable):

Deliver the excavator and unload in a safe area
Dig out and form an access road
Stone up and compact
No fuel will be stored on site
Fuel will be delivered as and when required

Assessments / Permits Required

	Yes	No		Yes	No
COSHH		No fuel stored on site we will deliver as and	Manual Handling	Yes Risk assessment required	

S B Tippers Ltd

Method Statement S B Tippers Ltd	Ref:	P/858
	Issue:	One
	Date:	
	Page:	3 of 3

		when required			
Noise	yes		Crane Checklist	yes	No
Hot Works		No	Confined Space		No
Excavation	YES		HAV		No
Electrical		No	Other (State)		None

We agree to implement the controls above. If work cannot proceed in accordance with the controls given in this method statement or hazards arise which have not been identified in the risk assessment, then we agree that work should stop and further guidance be sought.

	Print Name	Signature	Date
Company Undertaking Work			
Stanley Brothers Tippers LTD	Garry Bolton		06/01/17



METHOD STATEMENT FOR DRILLING & SAMPLING WITH COMPETITOR DART RIG/HAND HELD

General

The rig is designed to sink boreholes up to 130mm diameter through soils and weak rock, including clays, silts, sands, gravels and chalk. The rig is primarily used for shallow site investigations to a maximum depth of 10 metres, and for carrying out in-situ tests (SPT and DP) to a maximum depth of 15 metres. In practice the actual depth achieved is dependent on local ground conditions

The rig consists essentially of a mechanized drop weight that repeatedly falls onto an anvil, driving attached sample tubes or probe rods into the ground. The method can therefore be classified as a form of drive sampling in which a tube or split tube sampler having a sharp cutting edge at its lower end is forced into the ground by dynamic impact (BS 5930:1981).

After driving samplers to the required depth, they can be simply extracted using an integral hydraulic ram on the rig. No separate jacking system is required.

Soil samples obtained by this method can be classified as either disturbed, or undisturbed, depending on the type of sampling apparatus used in conjunction with the rig (see below for characteristics of compatible sampling apparatus).

Although the rig operates primarily as a soil sampling tool, the competitor is also capable of conducting Standard Penetration Tests (SPT and SPT(C)) and Dynamic Probing (DP), to BS 1377: Part 9 :1990. The drop weight and drop height can be adjusted on the competitor to suit either test.

The rig has facility to drive casing into the ground, simultaneously with a soil sample tube. Using this system means that any overburden/loose ground can be sampled without hole collapse, ensuring that successive samples are accurate from the depth taken. This system also allows for easy installation of standpipes, gas monitoring tubes or other instrumentation, within the restrictions of the borehole diameter.

The Competitor can be used in conjunction with a concrete core drill fastened to the anvil at the base of the rig. This enables hard surfaces to be cored prior to the sampling or testing the ground underneath. There is however no facility for rotary coring of the sub-surface at depths greater than 1 metre BGL.

The Competitor method has been found to be significantly more efficient than Cable Percussion Boring in situations where several shallow boreholes (<10 metres depth) are required. The rig can be mobilized rapidly between different borehole locations and there is virtually no set up time. Under favourable conditions 30 metres of borehole sampling can be achieved during one 8 hour shift.

The method is ideally suited for restricted access and limited-headroom work. The rig can pass through a domestic doorway and work inside a building with a minimum headroom of 2750 mm. The rig is adept at sampling on slopes and embankments up to 20 degrees. However, the method is limited in the depth and diameter of sampling that is possible. The maximum borehole diameter produced by the Competitor is 130 mm, and the maximum sample diameter is 100 mm, reducing as the borehole becomes deeper.

Sampling Procedure

A) The Operator when working as a sub-contractor shall communicate with the Engineer/Client prior to visiting the site to determine the nature and scope of the work required. The Operator shall ascertain the nature and location of any risk and the level of precautions recommended for safe site work. The Operator shall also ascertain whether the Engineer/Client is providing any special measures to prevent or adequately control exposure to contamination, eg portable hygiene facility, disposable clothing etc.

Communications should be in writing, and shall be incorporated into the contract documentation at the specification and procurement stage of the project.

B) The locations to be drilled are to be shown on a site plan or as indicated by the Engineer/Client. Such locations are to be clearly agreed and marked out on site before proceeding.

C) At each borehole position the Operator shall test the ground for buried cables using a CAT or similar device prior to drilling. If any doubt exists concerning the safety of drilling at a particular location, a trial pit shall be dug by hand or an alternative borehole position shall be agreed in consultation with the Engineer/Client.

D) The sampling rig is moved into position over the prospective borehole. Stabilizing legs are fitted to the base of the rig and are secured by locking pins. The rig is then jacked level to ensure maximum stability during the sampling procedure. Using the rig hydraulics, the sliding carriage is raised and the sample tube is screwed onto the anvil adaptor. The carriage is then lowered until the cutting edge of the sampling tube rests on the ground surface. The hydraulic cylinder is lowered and the drop-weight is activated, driving the sampler into the ground. Once the sampling tube has been driven to its full length, the hydraulic cylinder is activated pulling the sample tube from the ground.

E) Sampling proceeds to greater depths by successively adding drill rods between the sample tube and the anvil adaptor, repeating the procedure described in (D) above. In order to reduce any tendency of the sampler tubes to stick within the borehole, the diameter of the sample tube used may be decreased as the borehole becomes deeper. A succession of sample tubes in reducing diameters may be used to obtain the full depth of the hole.

F) Sampling shall continue until the depth required by the Engineer/Client is reached, or until a "refusal" occurs, whichever occurs first. A refusal is defined as occurring when penetration of the sample tube ceases, or is barely perceptible. When penetration stops, the drop weight may be observed to "bounce" on the anvil and at this point drilling must cease immediately in order to prevent mechanical damage to the rig. If requested by the Engineer/Client the depth at which a refusal occurs may be confirmed by carrying out a Standard Penetration Test (see below).

G) Care must be taken when withdrawing sample tubes from the ground as the mast of the rig is not designed to withstand full cylinder force at the travel extremes of the carriage. Once the sample tube is clear of the ground, the hydraulics must be made safe before the sample tube is unscrewed and the sample extracted.

H) The preparation for and methods of taking samples, together with their size, preservation and handling will be in accordance with British Standard BS 5930: 1981 – Code of Practice for Site Investigation, and the Contract Documents.

l) Samples will be labelled both inside and out with the project name, project number, hole number and depth of top of the sample. All samples will be protected from temperatures below 5 and above 25 degrees Celsius, and from wetting or drying out due to weather exposure.

Sampling Apparatus

A. The sampling apparatus shall be selected on the basis of the quality of the sample that is required, and should be assessed largely by the suitability of the sample for appropriate laboratory tests, in accordance with BS 5930: 1981. The appropriate apparatus should be selected in close consultation with the Engineer/Client.

B. A **window Sampler** consists of a steel tube incorporating a longitudinal slot or "window" along one side, through which a soil sample can be removed. Typically, such tubes range in diameter from nominal 90 mm to the smallest diameter nominal 40 mm. The tube may be chamfered at its lower end to form a cutting edge, or provided with a heavy-duty cutting shoe. The sample tubes have an area ratio ranging from 24% for the largest diameter tubes to 64% for the smallest diameter tubes. The soil profile obtained by this method can be visually examined and photographed if necessary. Pocket penetrometer tests can be carried out on the sample through the open window of the tube. In the process of removing a sample from the tube, the soil becomes highly disturbed and can only be regarded as a Class 3 sample as defined by BS 5930: 1981. Therefore the samples obtained are only suitable for classification, determination of moisture content or for contaminant analysis. In geo-environmental investigations care must be taken to thoroughly clean out the tubes between successive uses, to prevent cross-contamination of samples. This can be problematic on sensitive sites where use of a jet wash or steam cleaner may cause unacceptable disturbance.

C. A **Windowless Sampler** is very similar in principle to a Window Sampler (see B above) but in this case the sample tube lacks a window, and incorporates a plastic liner that retains the sample. The plastic liner greatly facilitates handling, presentation and preservation of the soil sample and enables a complete ground profile to be presented to the Engineer/Client for subsequent analysis. Windowless Samplers range in diameter from nominal 100 mm down to nominal 50 mm. The area ratio of a Windowless Sampler is somewhat greater than a Window Sampler of the same diameter, due to the presence of the plastic liner and the thicker cutting shoe required to retain it. Soil samples are disturbed by driving process and can be regarded as Class 3 samples. The major advantage of using Windowless Samples is that the plastic liner greatly reduces the possibility of cross-contamination between successive samples. This is the preferred method of sampling in geo-environmental investigations.

D. A **Shelby Tube Sampler** (or Thin-walled Sampler) is used for soils that are particularly sensitive to sampling disturbance, and consists of a thin-walled steel tube with a chamfered cutting edge. Samples of nominal diameter 75 mm or 100 mm are generally obtained and the area ratio is about 10%. These samplers are suitable only for fine soils up to a firm consistency, and free from large particles. They generally give Class 1 samples in all fine cohesive soils, including sensitive clays. It is to be noted that disturbance at the base of the borehole will occur in weak soil below a certain depth due to stress relief. Shelby tubes that penetrate well below the base of the borehole are therefore preferable, but in practice tube length is restricted by the weight of sample that can be retained successfully during extraction of the sampler.

E. **U100 Samplers** can be used in all cohesive soils and in weak rock, such as chalk, producing a nominal 100 mm diameter sample. In non-sensitive, fine cohesive soils the equipment may give Class 1, or more likely Class 2 samples. In brittle or closely fissured materials such as weak rock, hard clay and stoney materials the sampler gives Class 3 samples. The design of the sampler to be used in conjunction with the Competitor rig consists of a 115 mm OD sample barrel, enclosing a thin aluminium liner with an internal diameter of 101.6 mm. A cutting shoe screws onto the base of the sample barrel and retains the aluminium liner. The area ratio is 29.5%. The sample barrel may be driven into the ground concurrently with, but slightly in advance of a 128 mm OD casing tube. This prevents the borehole from collapsing during extraction of the sampler. Once the upper section of the borehole has been stabilized, the U100 can be driven below the casing to the required depth. Sample recovery can be improved by inserting a core catcher between the cutting shoe and the sample barrel, but when using the core catcher sample quality is unlikely to be better than Class 3. The aluminium liner containing soil sample can be removed directly from the sample barrel, and can be provided with plastic end caps. To enable extrusion of the recovered sample using a standard laboratory universal extruder, the aluminium liner is designed to fit neatly inside a standard steel U100 sample tube.

Standard Penetration Test

- A. The Standard Penetration test (SPT) shall be carried out as per BS 1377: 1990
- B. The SPT Assembly shall be lowered to the base of the hole and then any penetration due to self-weight shall be recorded.
- C. The test involves the driving of a standard sampler tool a distance of 450 mm into the bottom of a borehole using the standard weight of 63.5kg falling through 760 mm.
- D. During the test, the number of blows for two increments of 75 mm, or the penetration of the tool after 25 blows will be recorded as the "seating drive". The seating drive will be terminated after 150 mm penetration or 25 blows, whichever is reached first and the test drive will then be started.
- E. After the seating drive, the number of blows required for each of four increments of 75 mm penetration will be recorded as the test drive. The test drive will be terminated after 300 mm penetration or a total of 50 blows, whichever is reached first. In the case of weak rocks, a total of 100 blows for a test drive will be recorded. If the full penetration is not obtained then the number of blows and actual penetration for the increments will be recorded.
- F. A small disturbed sample from the split spoon sampler will be taken, or a bulk disturbed sample of soil in the zone of the test if no split spoon sample is available.
- G. The details of the SPT will be recorded on the borehole log. The size and depth of the casing and depth of water will be recorded.
- H. The test can also be conducted in gravels or gravelly sand in which case the open drive shoe may be replaced by a solid 60 degree cone, but when this is used the result should be reported separately from the standard test using the open drive shoe, and with the prefix SPT(C).

Dynamic Probing

- A. Dynamic Probing Test (DP) shall be carried out as per BS 1377: 1990

- B. The test involves driving a solid steel or cast iron 90 degree cone into the bottom of the borehole. The cone is driven at a rate of between 15 to 30 blows per minute and the number of blows is recorded for each 100 mm increment of penetration.
- C. Heavy Dynamic Probing (DPH) involves the use of a cone 43.7 mm in diameter, driven by a weight of 50 kg falling through 500 mm. Super Heavy Dynamic Probing (DPSH) involves the use of a cone 50.5 mm diameter driven by a weight of 63.5 kg falling through 760 mm.
- D. The diameter of the driving rods shall not exceed 35 mm and their mass shall not exceed 6 kg/metre.
- E. Driving shall be done continuously as far as this is practicable. Any interruptions which are longer than 5 min. shall be recorded in the borehole log.
- F. A torque measuring wrench shall be used to rotate the extension rods at a rate of 1.5 turns every metre in order to observe the friction and to record the maximum torque required to rotate the rods at each test level.
- G. The test report shall conform to the requirements of clause 3.2.5 in BS 1377: Part 1: 1990

Hand Held Sampling

Hand held sampling is used where a rig is unable to go due to access or height restrictions. A jack hammer powered from a hydraulic power pack, replace the drop-weight as a way of driving attached sample tubes into the ground. The method can therefore be classified as a form of drive sampling in which a tube or split tube sampler having a sharp cutting edge at its lower end is forced into the ground by a dynamic impact (the same method as using a rig). Although SPT's, dynamic probing and the use of casing cannot be used whilst operating the hand held method of sampling.

Installations

On completion of the borehole, either standpipes or monitoring well can be installed. The installation usually consists of an open-ended tube, perforated near the base, which is inserted into the borehole to allow the monitoring of water and/or gas. Spoil, gravel or bentonite is backfilled around the tube. A lockable cover may be installed at the top of the borehole if so requested by the Engineer/Client.

Reinstatement

- A. On completion of the work, the boreholes may be backfilled with arisings or reinstated with imported material, usually gravel.
- B. If the borehole is to have instrumentation installed then this will be to the instructions of the
- C. Backfilling will be carried out sensibly in layers, and each borehole will be properly reinstated so that no depression is left. The surrounding areas will be reasonably clean and clear of any debris.
- D. Any tracks, paths, fences etc. used for access will be reinstated and all spoil will be removed in a workman-like manner.

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Risk Assessment Soil Sampling & Site Investigations

Potential Hazards	Who is affected			Risk before Control				Control Measures	Person(s) Responsible	Risk After Control		
	Cont'r	Client	Public	P	S	RF	RL			P	S	RF
	YES	NO	NO	1	3	1	TR			1	1	1
								All team members to be issued with a copy of the Project Instruction Sheet and Risk Assessment & H & S questionnaire prior to project commencement. All surveyors to be given a H & S briefing prior to commencement Always refer to site control measures as stated in site induction	Project Manager			
Access to site	YES	YES	NO	3	3	9	M	All access to and from site via an approved access gate. Vehicles to be parked carefully to avoid obstruction to other site users. Do not restrict access or egress from buildings or the site. Do not restrict emergency exits.	Client Lead Driller	1	3	3
Slips, trips and falls	YES	NO	NO	2	2	4	TO	Wear personal protective overalls, gloves, safety footwear, light eye protection and safety helmet. Survey equipment to be carried to site by hand using suitable carrying containers.	Whole Team	1	2	2
Transporting soil-sampling rig to and from site	YES	NO	NO	3	3		M	Rig must be securely anchored to the van/trailer floor when in transit. Van to be fitted with a steel bulkhead to protect the passengers, or use trailer. Ramps to be securely fitted to the van/trailer when the rig is being loaded and unloaded	Lead Driller	1	3	3
Manual Handling	YES	NO	YES	3	3		M	Use correct manual lifting techniques. Use adequate personnel. Wear appropriate PPE – gloves, safety boots.	Lead Driller	1	3	3

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Risk Assessment

Soil Sampling & Site Investigations

Starting the rig engine	YES	NO	NO	3	3	9	M	Ensure the engine is primed for starting. Release the starter handle at its greatest extent to prevent injury from recoil	Lead Driller	1	3	3
Engine Fumes	YES	YES	YES	4	4	16	S	Ensure the area is well ventilated. Do not stand downwind of the exhaust.	Whole Team	1	4	4
Hit by moving machinery	YES	YES	NO	4	5	20	I	Ensure the corer is securely fastened to the ground in a level position	Lead Driller	1	5	5
Contact/entrapment with moving parts	YES	NO	NO	5	3	15	S	Operative to be suitably protected by guarding and maintaining distance during operation.	Lead Driller	1	3	3
Production of heat and dust from the operation of the corer	YES	YES	YES	5	3	15	S	Maintain a constant supply of water to the corer head	Lead Driller	1	3	3
Hit by flying objects	YES	YES	YES	5	4	20	I	Check the condition of the teeth and corer. Check guarding on drop weight & moving parts. Ensure the coring head and bit is attached correctly and tight. Wear eye protection.	Lead Driller	1	4	4
Contact with utilities	YES	YES	YES	3	4	12	S	Ensure area for drilling has been investigated for utility services. Always use a CAT scan before drilling. If unsure always had dig a trial pit to 1.2 maximum. Refer to site drawings, if available.	Project Manager	1	4	4
Flammable release as a result of the ground conditions	YES	YES	YES	3	4	12	S	No smoking on or within the vicinity of the site. Wear appropriate PPE. Vacate area if pungent or irritant smell detected & report to engineer.	Lead Driller	1	4	4
Cuts to limbs from knife when taking soil sample	YES	NO	NO	4	3	12	S	Ensure the blade is sharp. Always cut the core liner away from the body. Wear appropriate gloves.	Lead Driller	1	3	3

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Risk Assessment

Soil Sampling & Site Investigations

Contact with contaminated materials when obtaining samples	YES	NO	NO	4	4	16	S	Operatives to be informed of the possibility of Weil's disease and issued with cards outlining symptoms and preventative measures. Use the appropriate PPE in accordance with the category of site (red, yellow or green). Good hygiene. Operatives to wash before consuming food & drink or smoking (off site)	Project Manager	1	4	4
Cement and Bentonite	YES	NO	NO	4	4	16	S	Work to be carried out implementing control measures stated on the COSHH assessment to be kept in the vehicle for inspection. The appropriate PPE, gloves etc must be worn. Prevent dust from becoming airborne	Lead Driller	1	4	4
Work Equipment	YES	NO	NO	3	2	6	M	Operative should have undertaken the appropriate training and instruction in the use of all equipment. Should be fit for the purpose for which they are used. Equipment should be regularly maintained and inspected prior to use.	Project Manager	1	3	3
Leptospirosis	YES	NO	NO	3	5	15	S	Staff to be made aware of the hazards. Where applicable utilize experience gained through Confined Space Entry training.	Project Manager	1	5	5
Outside Working	YES	NO	NO	2	2	4	TO	Ensure sufficient lighting is available when required. Effects of adverse weather conditions need to be considered with regard to protection against extremes of temperatures, high winds. Cover up policy to be adopted during hot weather. Regular communication to be established with the use of mobile phones or radios.	Whole Team	1	2	2

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Risk Assessment Soil Sampling & Site Investigations

Potential Environmental Hazards	What is Affected			Risk before Control				Control Measures	Person(s) Responsible	Risk after Control		
	Air	Land	Water	P	S	RF	RL			P	S	RF
Fuel use & fumes	YES	NO	NO	4	4	16	S	Ensure all vehicles are maintained. Engine should be switched off when not in use. Vehicles should be driven in a controlled manner	Purchasing Staff Driver	1	4	4
Leakage of fuel/oil onto ground/entering water courses	NO	YES	YES	3	3	9	M	Driver to check vehicle as per company vehicle policy Vehicles and equipment maintained by staff and by dealership. Check vehicle for signs of signs of vandalism. Spill kits located on each vehicle. Drip tray to be used if any leaks detected.	Driver	1	3	4
Noise from drilling rig	YES	NO	NO	4	2	8	M	Keep distance from public Do not rev the engine unnecessarily. Always wear ear defenders while drilling.	Whole Team	2	2	4
General waste left behind by operators	NO	YES	YES	4	2	8	M	Clear up before leaving site	Whole Team	1	2	2
Surveyors spray paint	YES	YES	YES	4	3	12	S	Use of CFC free sprays. Water based non-toxic. Temporary marker paint to be used in preference to the permanent variety.	Whole Team	1	3	3
Contaminated Soil	NO	YES	YES	4	4	16	S	All soil brought away from site is to be disposed of in dedicated skip	Whole Team	1	4	4

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**Risk Assessment
Soil Sampling & Site Investigations**

Key to Risk Assessment Coding

Risk Headings

P	Probability
S	Severity
RF	Risk Factor
RL	Risk Level

Risk Levels

Risk Level	Action and Timescale
TR – Trivial (1 – 2)	No action is required. Keep Documentary records to confirm assessment carried out.
TO – Tolerable (3 – 4)	No additional controls are required. Consideration may be given to a more cost effective solution or improvement that imposes no additional cost burden. Monitoring is required to ensure that the controls are maintained.

Probability and Severity Scales

Probability		Severity	
5	Likely	5	Fatality/Catastrophic environmental impact (permanent damage)
4	Probable	4	Major Injury/Environmental impact (lasting damage)
3	Possible in time	3	3-day Injury/Significant environmental damage
2	Remote chance	2	Minor Injury/Local environmental damage
1	Improbable	1	No Injury/Impact

Risk Factors (Probability x Severity)

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Risk Assessment

Soil Sampling & Site Investigations

			5	4	3	2	1
Probability		5	25	20	15	10	5
		4	20	16	12	8	4
		3	15	12	9	6	3
		2	10	8	6	4	2
		1	5	4	3	2	1

M – Moderate (5 – 9)	Efforts should be made to reduce the risk, but the costs of prevention should be carefully measured and limited. Risk reduction measures should be implemented within a defined time period. Where the moderate risk is associated with extremely harmful consequences, further assessment may be necessary to establish more precisely the probability of harm as a basis for determining the need for improved control measures.
S – Substantial (10 – 16)	Work should not be started until the risk has been reduced. Considerable resources may have to be allocated to reduce the risk. Where the risk involves work in progress, urgent action should be taken.
I – Intolerable (20 – 25)	Work should not be started <i>or continued</i> until the risk has been reduced. If it is not possible to reduce the risk even with unlimited resources, work has to remain prohibited.

Method Statements Cable Percussion Boring

METHOD STATEMENT FOR CONTRACTS

Pre-Start Meeting/Induction

Check

For access level ground, any obstructions to negotiate, eg. Streams, ditches, steep hills

That planning permission has been obtained and that the local landowner has been informed

That the presence of underground services have been marked, and overhead power cables are identified so that all required clearance requirements are follows.

Approve

Access route; avoiding low bridges, with permission to cross over private land if required to reach the borehole

Define

Methods to contain any accidental spillage of any hazardous liquids, eg. Diesel/drilling compounds in a bund and in accordance with Control of Pollution (Oil Storage) Regs 2001.

All relevant paperwork and TEST CERTIFICATES should be discussed at this meeting.

Setting up on Site

If ground conditions are such that a temporary platform is necessary, then it must be sufficiently sturdy and stable to provide a solid footing and strong enough to take the weight of the rig and equipment.

them – use substantial timber blocking

Mast guys should be correctly positioned and securely anchored, properly tensioned and frequently checked.

Tools should be laid down HORIZONTALLY on timber slats and not left in an upright position.

Drilling

The equipment should always be operated in a safe manner in accordance with the manufacturers hand book and any other methods issued by the company.

The correct tool should always be used for the operation undertaken.

Personnel must be kept clear of suspended equipment and use a rope, strap or bale hook to swing tools away from the borehole. They should never look down a borehole beneath a suspended tool.

Tools should not be held in suspension by means of only hand or foot control when personnel are working on

The winch operation should be in accordance with the manufacturers handbook, and should be never be overloaded when pulling casing. When additional force is needed, proper casing equipment with positive connections between the jack head and casing should be used or an appropriate casing jar.

When driving casing, personnel must not place their fingers or hands in tommy bar holes or over the lip of the

All worn or splintered equipment should be replaced as this is the cause of many accidents. Crushed, bruised or damaged wire lines must be replaced immediately.

Sheave wheels, shafts and pins should be checked daily, kept well lubricated and replaced when worn. All equipment is inspected & maintained regularly in our own workshop under POWER 98.

Personnel should be alert for indications of broken strands and of shackles becoming undone.

Cuttings at the hole collar must not be cleaned by hand or any tool unless the rig is in neutral and the clutch disengaged.

Slurry pits should be positioned so that they can be reached safely and easily by the balers without danger to the rig crew or undue stress on the bailing line. They must not be so close to the rig as to undermine the rig base.

When spudding-in, always use the tool guide, DO NOT SEND A HELPER UP THE MAST TO STEADY THE WINCH ROPE.

A safety harness must be used and securely fastened to the mast if it is necessary to climb the mast.

GENERAL SAFETY REQUIREMENTS

No alcoholic drinks to be consumed on the site. Any personnel reporting for duty in an intoxicated state will be sent off site and will forfeit pay until reporting in a fit state. A minimum of one day's pay will be forfeited.

Pranks and horseplay will be dealt with by means of the company DISCIPLINARY PROCEDURE

Employees should not attempt to lift or carry any load which is likely to cause injury in accordance with Manual Handling Regulations. Handling of equipment is in-housed trained by following the Lead Driller's instructions on site.

Drilling pipes or tubular goods can be rolled safely, provided hands are kept away from the ends.

All visitors should be kept away from drilling operations, this is to be controlled by the client

All gas bottles, including any oxy-acetylene and propane, must be stored separately, outside in an upright position and secured to prevent falling over.

ALL RELEVANT MACHINE GUARDS MUST BE IN PLACE BEFORE STARTING UP ANY MACHINE .

Diesel engine exhaust manifold, pipes and silencers should be checked against the emission of flames or sparks, and any faults found should be rectified. Any hot surface on which hot oil droplets may fall, vaporise and ignite should be protected.

The tail pipe of the exhaust system should be above head height to reduce the likelihood of breathing in the fumes.

The site must be kept in a well organised, tidy state and clear of all debris and rubbish.

Bulk stocks of fuel and oil should be stored in a designated compound away from the immediate working area., in accordance with Control of Pollution (Oil Storage) Regs 2001.

Chains, belts, sprockets, shaft couplings, clutches or any other moving part liable to cause accident or injury should be properly guarded,. The guard must be strong enough to withstand the impact of that part breaking up.

Noise at Work Regulations 1989

Hearing protection (ear defenders) are provided and must be worn at all time if the noise level is at or greater than 85Db(A).

Every effort must be made to contain noise at the source so that hearing protection is not needed.

First Aid Regulations 1981

As an absolute minimum, the following equipment must be close by the rig during drilling operations.

First Aid Box – Sufficient in size for the number of men working
Replace any item as it is used to prevent the contents becoming depleted.

Eye Wash Bottles – filled with the correct liquid an no half bottles.

Where applicable, a nominated first aider is responsible for taken the necessary action if required.

R.I.D.D.O.R. – Reporting of Injuries and Diseases or Dangerous Occurrence Regulations 1995

Internal reporting systems are needed to satisfy management requirements for safety monitoring. This is a direct responsibility of Sub-Contractors.

Competence Certificates

Employees must be competent for the work they undertake. Sub-Contractors must satisfy themselves as to their own employees level of competence before signing them to any contract.

Drillers should have a Certificate awarded by the BDA or other certifying organisation, or be able to show relevant experience or skill for proof of competence.

Helpers competence can be assessed by the Employer after satisfying themselves of the skill, knowledge and understanding of the work.

Method Statement

If required, a method statement must be produced to show proposals on how the Company intends to carry out the Contract, including:

Proposals for the construction and completion of the boreholes.
Proposals to comply with any restrictions placed on this Contract
Type and capacity of the proposed rig- DANDO 150 CP RIG
Number of men to be employed - 2NO. DRILLER & ASSISTANT

Messing Arrangements

If required, these arrangements should be to the minimum required by the CONSTRUCTION (HEALTH AND WELFARE) REGULATIONS 1996.

Fire Extinguishers

Sufficient in number and type to deal with various fires which may occur.

It will be assumed that any PERSONNEL working for TDS LTD will have, and be aware of, all of the above LEGAL requirements in hand before starting any Contract.

The above list is not exhaustive, but contains the major items which are applicable to the drilling industry.

New Starters

Sometimes inexperienced personnel are employed. This becomes a high risk if certain conditions are formulated and not adhered to by the supervisors. Time needs to be taken to explain and check understanding of safety procedures, hazardous methods and machinery. Good practice must be taught in the handling of plant and associated equipment. The training for this is carried out in-house under supervision of the lead driller.

Excess Spoil

Any excess spoil has to be included with the backfilling of the boreholes on completion of installation.

Any addition to this has to be bagged and removed from the site for suitable disposal. Plastic sheeting & bags will be required for this. The site has to be re-instated to the approval of the engineer in charge of the project.

Installations

Installation details are to be set out by the Engineer in charge of the project. The drilling crew are to follow his direct instructions and as per their specification.

Activity Cable Percussive Boring

No	Hazard	Harm/Damage	Persons Affected	Worst Case (without Control Measures)			Control Measures/Comments	With Control Measures in Place		
				S	L	Risk Rating		S	L	Risk Rating
1	Overload, Plant Failure	Falling objects, rig collapses	T	H	QP	High	Depot Manager to ensure all lifting equipment to be checked and recorded in accordance with PUWER regulations	H	P	Low to Medium
2	Mobilising to and accessing the site	Road Traffic Accident	T, C, P, V, YP	VH	QP	High	Operator to check all equipment (tow hitches, wheel nuts, lights etc) before setting off. On no account must the rig be overloaded. All equipment to be securely fastened down	VH	P	Medium
		Contract with moving vehicles/plant/pedestrians	T, C, P, V, YP	M	QP	Medium	Contract co-ordinator to ensure all site personnel are aware of the hazards before they mobilise to site. The access route to the			
3	Moving to & setting up on the exploratory hole	Contact with plant/equipment	T, C, V	M	QP	Medium	All positions to be visually checked by the Contract Co-ordinator. Clear written instructions to be issued to crews on access routes. Speed limit to be imposed	L	O	Low
		Unstabilising/sloping ground	T	H	QP	High	As Above	H	NL	Low
		Contact with others, plant/equipment whilst reversing	T, P, C, V, YP	H	P	Medium to High	Where possible avoid the need for reversing Where necessary use banksmen. Vehicle should be fitted with audible warning	M	P	Low to Medium
4	Workplace	Trips, Sprains, Falls, Manual Handling injuries	T	M	QP	Medium	Driller to ensure working area to be set out in orderly fashion. Trestles to be used for rods, casing etc. Samples to be placed out of the working area. Working area to be clearly defined to ensure others do not enter	M	P	Low to Medium

KEY: S = Severity; L = Likelihood; - H = High; VH = Very High; M = Medium; QP = Quite Possible; P = Possible; L = Low; NL = Not Likely

'Persons Affected' column - C = Contractors; T = T.D.S. Site Personnel & Sub-contractors; P = Public; V = Visitors; YP = Young P

DP Drilling Ground Investigation Method Statement – Cable-Percussion Drilling

DPD Project No:	17-013	Site Name:	Russell Road, Whalley Range
This document provides information regarding the proposed ground investigation works at the above site and should be read in conjunction with the site specific risk assessment document provided by DP Drilling. All site personnel will be provided with a copy of this method statement.			
Scope of Works:	Four boreholes, to a maximum depth of 15 metres, will be used to investigate the ground conditions within the site area and to recover samples for future chemical analysis and geotechnical testing. Borehole locations have not yet been determined.		
Known Hazards:	A detailed site specific risk assessment is provided by DP Drilling Ltd. In summary the principal hazards are: • Moving and operating plant. • Underground services		
Personnel:	Drilling activities will be carried out by three people. The BDA accredited cable percussion drilling team (with relevant NVQ Level 2 – Land Drilling (Construction) qualification and CSCS card) will comprise a two man crew (DP Drilling Ltd) and will be supervised by a suitable qualified geotechnical engineer/geologist (E3P). Proof of competence of drilling staff to be available for inspection on site.		
Plant and Equipment:	The cable percussive equipment comprises a standard trailer mounted cable tool percussion boring rig towed to each drilling location using a Land Rover or similar vehicle. The rig used will be of the tripod light cable percussive type powered by a diesel engine. Typical noise output is 74db (Defra: Update of noise database for prediction of noise on construction and open sites, 2005), with peak levels (SPT tests etc) of 115dB. Appropriate ear defenders or plugs to be worn by crew and bystanders. All appropriate equipment certification (e.g. cable testing and works equipment register) must be up to date, and available for inspection on site.		
Location Assessment:	Where necessary trial locations and access routes will be agreed with the Client and/or landowner prior to commencing site works. Engineer to check all services against supplied drawings (if available). A Cable Avoidance Tool (C.A.T.) scan will be carried out before any excavation. All field staff have received in-house training in CAT use, and use this equipment regularly. If there is reasonable suspicion of the existence of services, either a hand-dug trial hole will be carried out or a new location will be chosen. If there is reasonable suspicion of the existence of services, either a hand-dug trial hole will be carried out or a new location chosen. If a hand-dug trial hole is required this will be carried out using appropriate digging equipment (e.g. spade, spoons etc) to a maximum depth of 1.2m (approximately 0.3m wide x 0.3m long). Drilling locations should be screened off by road cones, barriers or Heras fencing as appropriate to site conditions.		
Drilling and Logging:	The boreholes will be drilled using the methods given in BS5930 ('Code of Practice for Site Investigations') and BDA recommended safe working practice. Boring will be carried out at a suitable diameter, dependant on the depth, typically 100mm but possibly as much as 250mm for deeper boreholes. If a borehole is not completed in one working day the borehole shall be left safe using the boring tools to prevent objects being misplaced or falling into the borehole. The working area shall be left safe, clean and tidy. The soil recovered is logged and soil samples retained for laboratory analysis/testing.		
Backfilling:	All boreholes will be backfilled with arisings unless an installation is required. Where applicable a plug of "cold-lay" tarmac or concrete will be applied to the top of the back-fill.		
COSHH:	Hazardous substances associated with drilling activities are as follows: Diesel – to fuel diesel engine plant. Storage is in proprietary containers filled at highway pumps and transported to the work location.		

	Ordinary Portland Cement (OPC) - to form cement grout to back-fill borehole. Also used during the installation of instruments and the construction of headworks. Bentonite pellets/powder - to back-fill borehole. Also used during the installation of instruments and the construction of headworks Appropriate COSHH data sheets available. (N.B. The lubricating oils and greases used to lubricate plant and tools are vegetable based and so are not considered hazardous). Monitoring of ground gases during drilling is not proposed as no significant sources (i.e. landfills within site, coal bearing strata, peat etc) have been identified. If the presence of potentially hazardous ground gases/odours/vapours is suspected during drilling, the works should cease immediately, engines should be switched off and site management immediately informed.
PPE:	Appropriate protective equipment to be worn by all personnel. This will include hi-viz jackets, hard hats, gloves, safety footwear and ear defenders. Disposable rubber gloves should be worn when handling soils, groundwater and contaminated drilling/sampling equipment. Appropriate fire extinguisher to be located close to rig. Disposable coveralls and full face mask should be worn by all site staff when drilling in areas with suspected contaminated groundwater.
First Aid:	All DPD site personnel are First Aid trained (Emergency First Response Ltd course approved by HSE certificate no. 54/03) and carry appropriate first aid kits in their vehicles.
Emergency Procedures:	DPD's Accident/Incident Field Response procedure.

Signed:

[Darren Pennington](#)
Director / Lead Driller
(on behalf of DP Drilling Ltd)

Date:

[7th March 2024](#)

Risk Assessment

Location of work:	Russell Road, Whalley Range
DPD Project Reference:	17-013
Nature of work:	4 x 15m boreholes
Risk Assessment carried out by:	E Fearn
Date of initial assessment:	07/03/2024
Date last reviewed:	N/A
Nearest Washroom/toilet:	As per E3P CPP

Activity	Hazard	Who is at risk	Risk prior to mitigation			Controls/Procedures	Risk after controls are in place		
			Probability	Severity	Overall Risk		Probability	Severity	Overall Risk
Cable-percussion drilling - Unhitching/Setting up of cable-percussion rig	Overturning/collapse	Drillers, Bystanders	3	5	15	Driller to assess site conditions prior to commencing work. Vehicle manoeuvring to be at minimal speed. Engineer to observe from a safe distance. Bystanders to be kept well away from area of operations, using barriers if necessary	2	3	6
Cable-percussion drilling - Lifting drilling equipment including casing, SPT hammer etc	Back-injury, trapped fingers and feet.	Drillers	3	4	12	Operatives to be suitably trained in heavy lifting. Suitable boots to be worn. Gloves to be worn whenever practical.	2	4	8
Cable-percussion drilling - Drilling and testing operations	Loud noise	Drillers, Bystanders	4	4	16	Bystanders to be kept well away from area of operations, using barriers if necessary. Drillers and Engineer to wear ear defenders.	1	4	4
Cable-percussion drilling - Drilling and testing operations	Crushed/trapped fingers	Drillers	4	4	16	Drillers to be appropriately trained in drilling activities. Gloves to be worn whenever practical.	2	4	8
Cable-percussion drilling - Drilling and testing operations	Being hit by lashing cable.	Drillers, Bystanders	2	4	8	Bystanders to be kept well away from area of operations, using barriers if necessary. Engineer to keep away from immediate vicinity of rig. Drillers to be appropriately trained in drilling activities.	1	4	4
Groundwater sampling	Contact with contaminated groundwater	Driller/Technician	4	3	12	Use of appropriate PPE - goggles, gloves, overalls where appropriate.	2	3	6

Risk Assessment

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Risk Assessment carried out by:	E Fearn
Date of initial assessment:	07/03/2024
Date last reviewed:	N/A
Nearest Washroom/toilet:	As per E3P CPP

Activity	Hazard	Who is at risk	Risk prior to mitigation			Controls/Procedures	Risk after controls are in place		
			Probability	Severity	Overall Risk		Probability	Severity	Overall Risk
Groundwater sampling	Electric shock from pump	Driller/Technician	2	4	8	Check integrity of connections and cables prior to operation.	1	4	4
Visiting active construction sites	Being hit by moving vehicles/plant	Driller/Technician	3	5	15	Follow site induction recommendations. Keep to marked footpaths. Use appropriate PPE - (hi-viz clothing)	1	5	5
Visiting active construction sites	Falling down open excavations	Driller/Technician	2	4	8	Follow site induction recommendations. Keep clear of open excavations where possible. Stand at end of excavation, not side.	1	4	4
Visiting active construction sites	Collapse of excavation - burial	Driller/Technician	3	5	15	If possible avoid entering excavations. Do not enter unsupported excavations deeper than 1.2m. Assess conditions of sidewalls and surroundings prior to entry. Ensure another person is present, and remains out of the excavation.	1	5	5
Visiting active construction sites	Hitting head on overhead objects/projections	Driller/Technician	3	4	12	Wear appropriate PPE - hard hat.	3	1	3
Visiting active construction sites	Being hit by falling objects	Driller/Technician	2	5	10	Wear appropriate PPE - hard hat. Avoid walking beneath people working overhead or potentially unstable objects.	2	5	10
Visiting active construction sites	Loud noises from machinery/plant	Driller/Technician	4	4	16	Wear appropriate PPE - ear defenders/plugs	1	4	4

Risk Assessment

Location of work:	Russell Road, Whalley Range
DPD Project Reference:	17-013
Nature of work:	4 x 15m boreholes
Risk Assessment carried out by:	E Fearn
Date of initial assessment:	07/03/2024
Date last reviewed:	N/A
Nearest Washroom/toilet:	As per E3P CPP

Activity	Hazard	Who is at risk	Risk prior to mitigation			Controls/Procedures	Risk after controls are in place		
			Probability	Severity	Overall Risk		Probability	Severity	Overall Risk
Phase 1 site inspection	Collapse of existing structures	Driller/Technician	3	5	15	Assess integrity of structure prior to entry. If any doubt - do not enter. Wear appropriate PPE - hard hat	2	5	10
Phase 1 site inspection	Getting stuck in soft ground	Driller/Technician	3	1	3	Assess ground prior to crossing. If any doubt - take alternative route.	2	1	2
Phase 1 site inspection	Falling down steep slopes	Driller/Technician	3	4	12	Assess ground prior to crossing. If any doubt - take alternative route.	2	4	8
Phase 1 site inspection	Stepping on sharp objects (nails, needles etc)	Driller/Technician	3	3	9	Wear appropriate PPE - safety boots	3	1	3
Phase 1 site inspection	Dogs	Driller/Technician	2	3	6	Keep eyes and ears open - if in doubt avoid entry to site	1	3	3
Phase 1 site inspection	Hostile people	Driller/Technician	2	2	4	Keep eyes and ears open - if in doubt avoid entry to site	1	2	2
Phase 1 site inspection	Tripping or falling due to poor light conditions	Driller/Technician	4	3	12	Avoid areas with poor light conditions unless suitably equipped with lighting etc.	1	3	3
Phase 1 site inspection	Enclosed/confined spaces	Driller/Technician	3	5	15	Do not enter enclosed spaces without appropriate training, equipment.	1	5	5
Phase 1 site inspection	Unplanned contact with hazardous substances	Driller/Technician	3	4	12	Wear appropriate PPE - minimum safety boots. Do not handle unknown substances.	1	4	4
Phase 1 site inspection	Falling down old excavations incl. wells and shafts.	Driller/Technician	3	5	15	Assess risk of presence prior to site visit (historic mapping, mine records etc). Move slowly/carefully around site.	2	5	10

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Risk Assessment carried out by:	E Fearn
Date of initial assessment:	07/03/2024
Date last reviewed:	N/A
Nearest Washroom/toilet:	As per E3P CPP

Activity	Hazard	Who is at risk	Risk prior to mitigation			Controls/Procedures	Risk after controls are in place		
			Probability	Severity	Overall Risk		Probability	Severity	Overall Risk
Working outside	Sun burn	Driller/Technician	5	2	10	Wear appropriate clothing and sun protection. Limit time in direct sunlight if possible.	2	2	4
Working outside	Overheating/dehydration	Driller/Technician	2	2	4	Wear appropriate clothing, drink plenty.	1	2	2
Working outside	Cold/hypothermia	Driller/Technician	4	5	20	Wear appropriate cold/wet weather clothing. If get too cold seek shelter.	1	5	5
Sampling	Contact with contaminated soils/dust	Driller/Technician	4	3	12	Wear appropriate PPE - gloves, goggles and mask where appropriate.	2	3	6
Sampling	Contact with contaminated water	Driller/Technician	4	3	12	Wear appropriate PPE - gloves, goggles and mask where appropriate.	2	3	6
Sampling	Contact with hazardous substances	Driller/Technician	3	4	12	Wear appropriate PPE - gloves, goggles and mask where appropriate. Avoid direct handling (even with gloves), if possible. If type of substance is known, refer to COSHH for further information and recommendations.	2	4	8
Excavation and Sampling	Contact with asbestos containing materials in soil	Driller/Technician	3	4	12	If ACM's are observed in exploratory holes, excavation to be immediately backfilled and ACM's covered. Where sampling is required appropriate PPE must be worn.	2	4	8

APPENDIX V

UTILITY PLANS & EHLP



- NOTES**
1. This drawing is copyright and the property of Shepherd Gilmour and must not be copied in whole or part without their prior written permission.
 2. This drawing is to be read in conjunction with the appropriate Architect's and M&E Engineer's drawings, together with any other relevant Shepherd Gilmour drawings, sketches and specifications etc.
 3. This drawing must not be scaled, the Contractor must report any dimensional discrepancies and errors or omissions to the Engineer prior to construction commencing.
 4. Significant Risks (as described in the 2007 CDM Regulations) are listed in the Pre-Construction Information Register.

- KEY**
- Site Boundary
 - Proposed Borehole
 - Proposed Window Sample
 - Proposed Trial Pit
 - Proposed Trial Pit with Soakaway Test
 - Root Protection Zones

P03	Updated plan to include root protection zones	DG	11/03/24
P02	Updated plan as discussed with e3p	DG	19/02/24
P01	First issue	OJ	06/12/23
Rev.	Description	By	Date

SGI Shepherd Gilmour Consulting Engineers
Phoenix House, 45 Cross Street, Manchester, M2 4JF
t: 0161 837 1500 w: www.sgiconsulting.co.uk

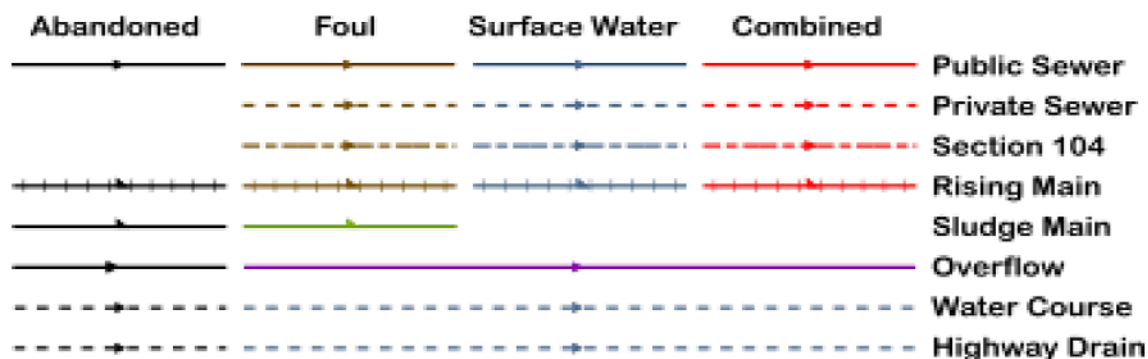
Client
GREAT PLACES HOUSING GROUP

Project
RUSSELL ROAD EXTRA CARE HOUSING

Title
EXPLORATORY HOLE LOCATION PLAN

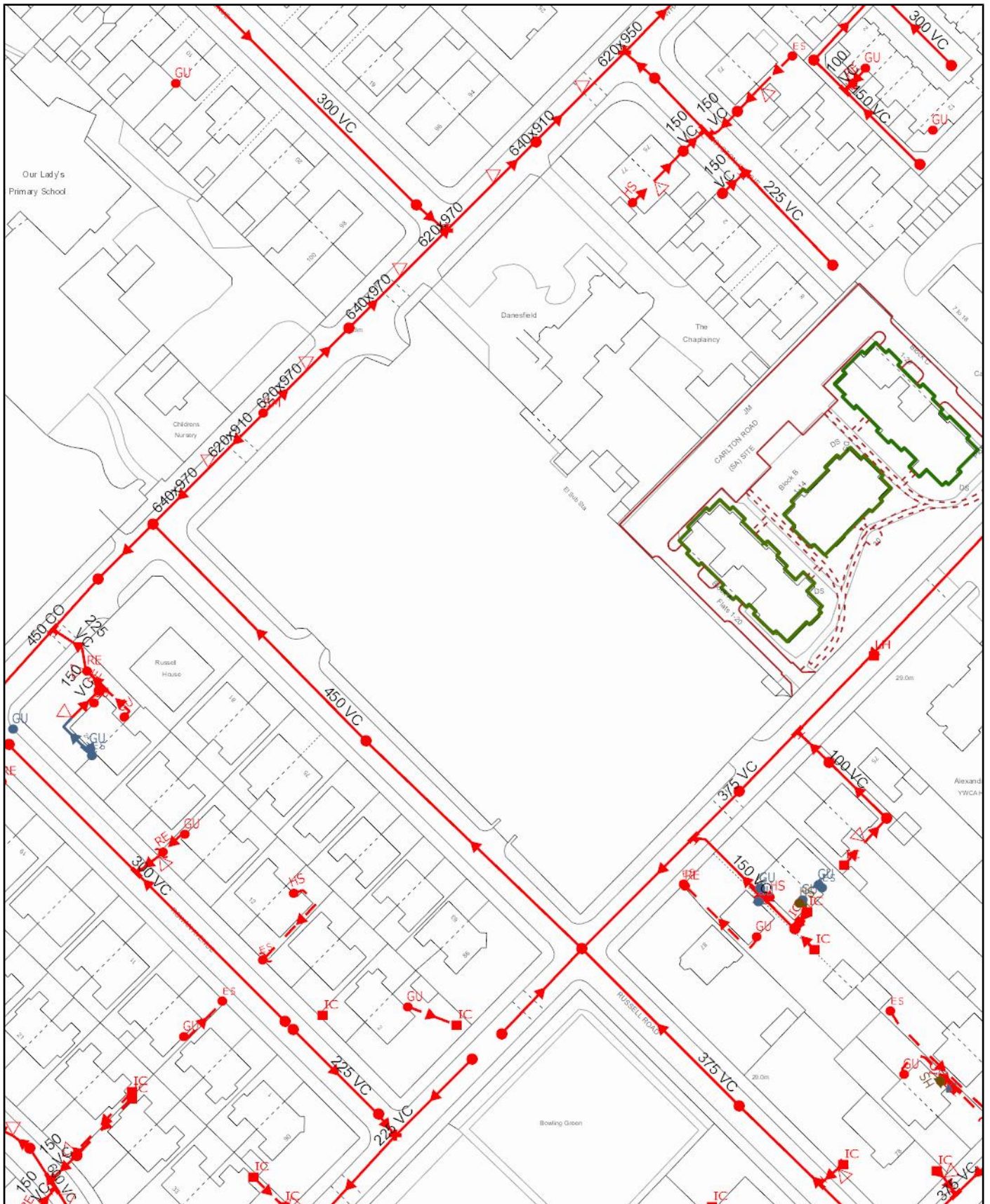
Date	DEC'23	Drawn By	ORJ				
Size	A1	Checked By	DG				
Scale	As Shown	Approved By	EAJ				
SGI Proj No.	RIBA	Status					
C1811	2	PRELIMINARY					
Proj No.	Orig.	Zone.	Level.	Type.	Role.	Dwg No.	Rev.
C1811-SGI-XX-XX-DR-C-	SK100-	P3					

Wastewater Symbolology



All point assets follow the standard colour convention: **red** – combined **brown** - foul
blue – surface water **purple** - overflow

Manhole	Side Entry Manhole
Head of System	Outfall
Extent of Survey	Screen Chamber
Rodding Eye	Inspection Chamber
Inlet	Bifurcation Chamber
Discharge Point	Lamp Hole
Vortex	T Junction / Saddle
Penstock	Catchpit
Washout Chamber	Valve Chamber
Valve	Vent Column
Air Valve	Vortex Chamber
Non Return Valve	Penstock Chamber
Soakaway	Network Storage Tank
Gully	Sewer Overflow
Cascade	Ww Treatment Works
Flow Meter	Ww Pumping Station
Hatch Box	Septic Tank
Oil Interceptor	Control Kiosk
Summit	
Drop Shaft	Change of Characteristic
Orifice Plate	



Scale: 1:1250
Date: 05/03/2024

SEWER RECORDS

Address or Site Reference: 98 WHALLEY ROAD, MANCHESTER, M16 8AW
Printed by: Property Searches



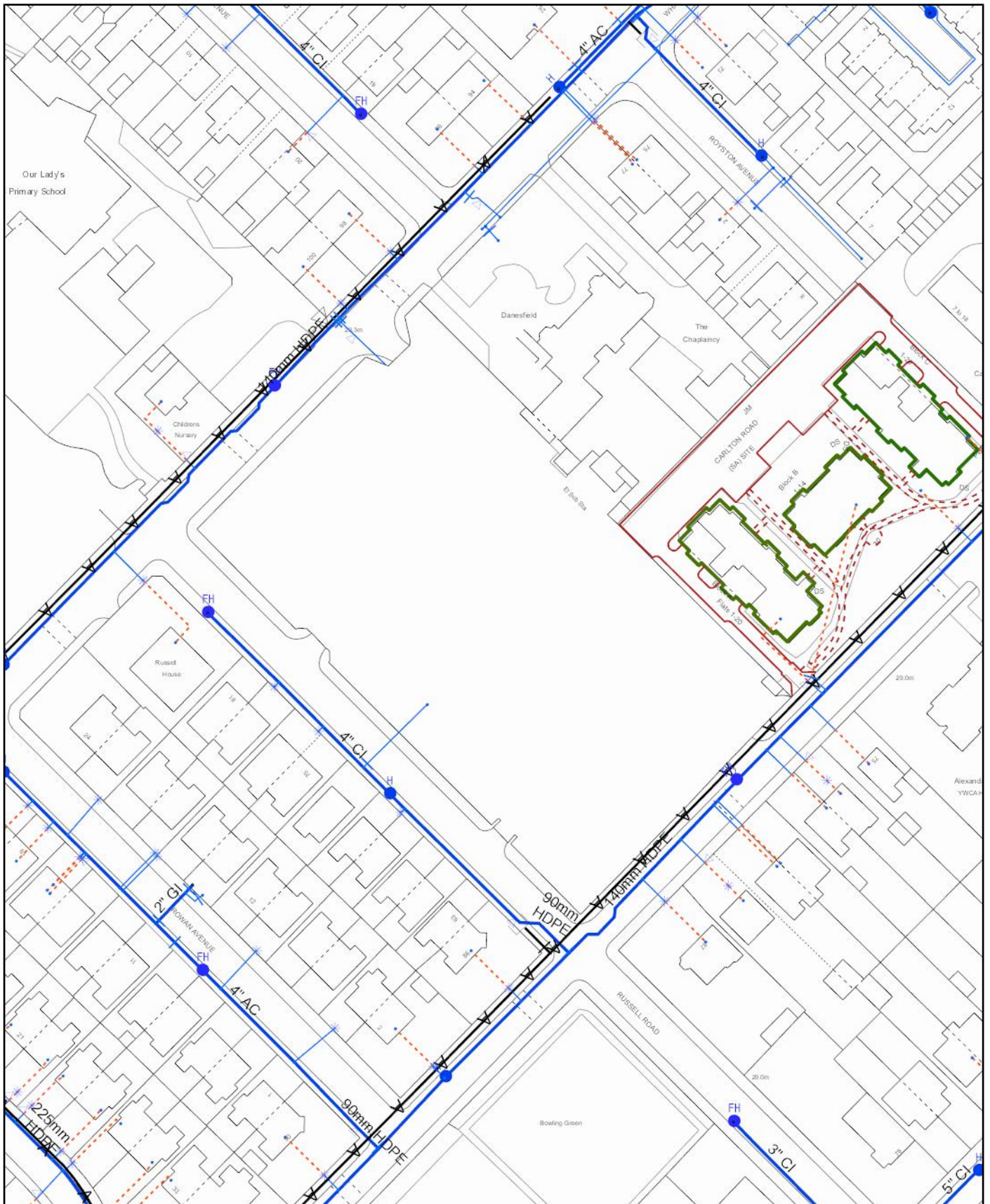
The position of the underground apparatus shown on this plan is approximate only and is given in accordance with the best information currently available. United Utilities Water will not accept liability for any loss or damage caused by the actual position being different from those shown.

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Clean Water Symbolology

Proposed	Abandoned	Live	
			Distribution Main
			Trunk Main
			Comms Pipe
			Private Pipe
			Concessionary Service
			Raw Water
			LDTM Raw Water
			LDTM Treated Water
			Air Valve
			AC Valve, open
			AC Valve, closed
			CC Valve, open
			CC Valve, closed
			Non Return Valve
			Pressure Management Valve
			OMS Valve
			Stop Tap
			Flow Meter
			Domestic Meter
			Commercial Meter
			Pump
			Hydrant
			Fire Hydrant
			Anode
			Chlorination Point
			De-chlorination Point
			Strainer Point
			Access Point
			Hatch Box
			IP Point
			Sampling Station
			Logger Box
			Bore Hole
			Inlet Point
			Bulk Supply Point
			End Cap
			Site Termination
			Change of Characteristic
			Condition Report
			<u>Property Types</u>
			Water Tower
			Valve House
			Booster Pumping Station
			Intake Pumping Station
			Water Treatment Works
			Supply Reservoir
			Service Reservoir
			Impounding Reservoir
			Pipe Bridge

Symbology for proposed assets is the same as above, but shown in **green**
 Symbology for abandoned assets is the same as above, but shown in **black**



Scale: 1:1250
Date: 05/03/2024

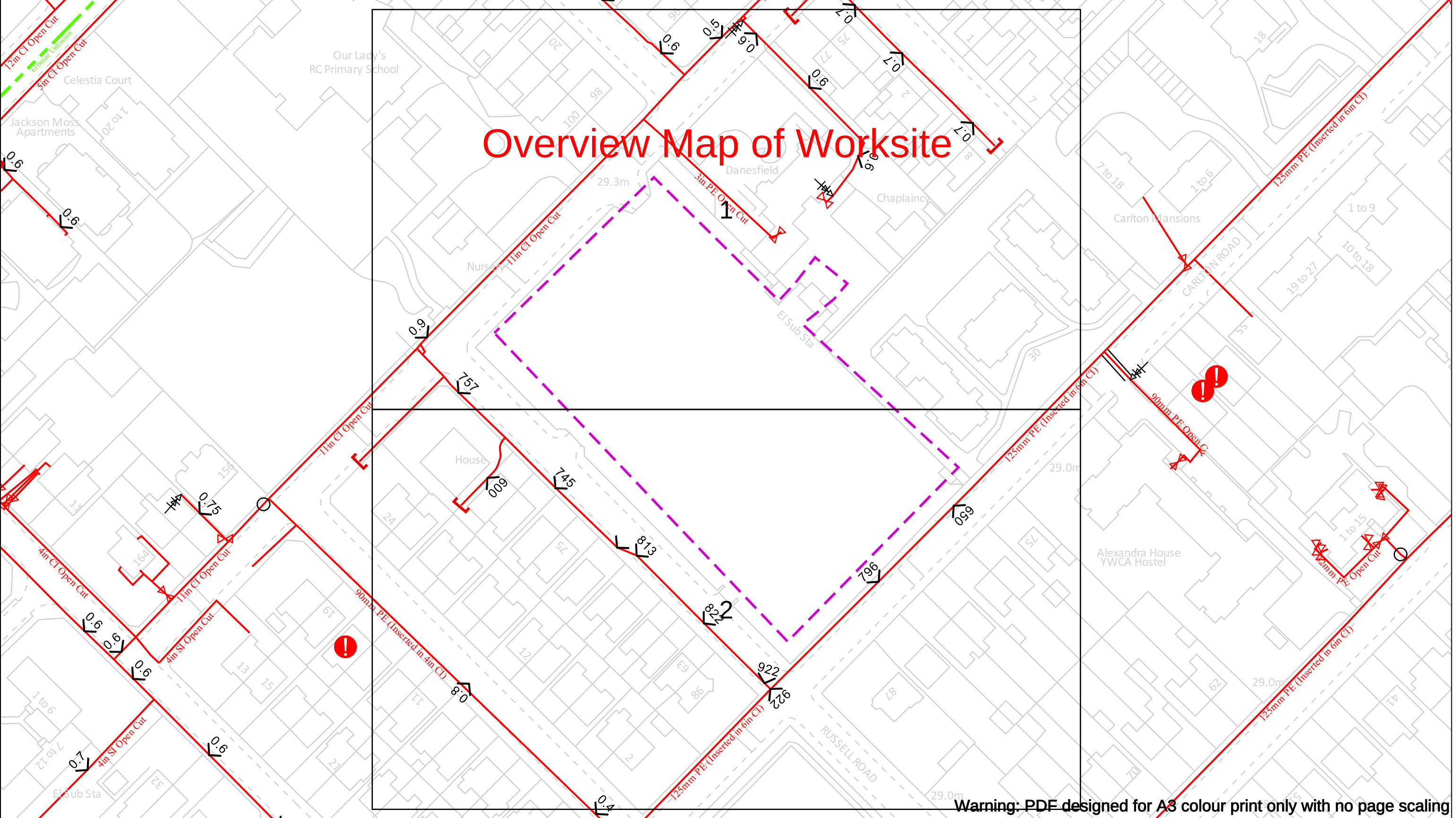
WATER MAINS RECORDS



Address or Site Reference: 98 WHALLEY ROAD, MANCHESTER, M16 8AW
Printed by: Property Searches

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Date Requested: 01/03/2024
Job Reference: 32644119
Site Location: 382638 395211
Requested by:
Miss Claire Gleave
Your Scheme/Reference: 17013

Scale: 1:1025 (When plotted at A3)

View extent: 200m, 115m

IMPORTANT NOTICES

This plan shows these pipes owned by Cadent Gas Limited in its role as a Licensed Gas Transporter (GT). Gas pipes owned by other GT's or otherwise privately owned may be present in this area. Information with regards to such pipes should be obtained from the relevant owners. The information shown on this plan is given without warranty, the accuracy thereof cannot be guaranteed. Service pipes, valves, syphons, stub connections etc. are not shown but their presence should be anticipated. No liability of any kind whatsoever is accepted by Cadent Gas Limited or their agents, servants or contractors for any errors or omission. Safe digging practices, in accordance with H5(G)47, must be used to verify and establish the actual position of mains, pipes, services and other apparatus on site before any mechanical plant is used. It is your responsibility to ensure that this information is provided to all persons (either direct labour or contractors) working for you on or near gas apparatus. The information included on this plan should not be referred to beyond a period of 28 days from the date of issue.

In case of an emergency call 0800 111 999

Dig Sites	Area:	Line:
LP Mains		
MP Mains		
IP Mains		
LHP Mains		

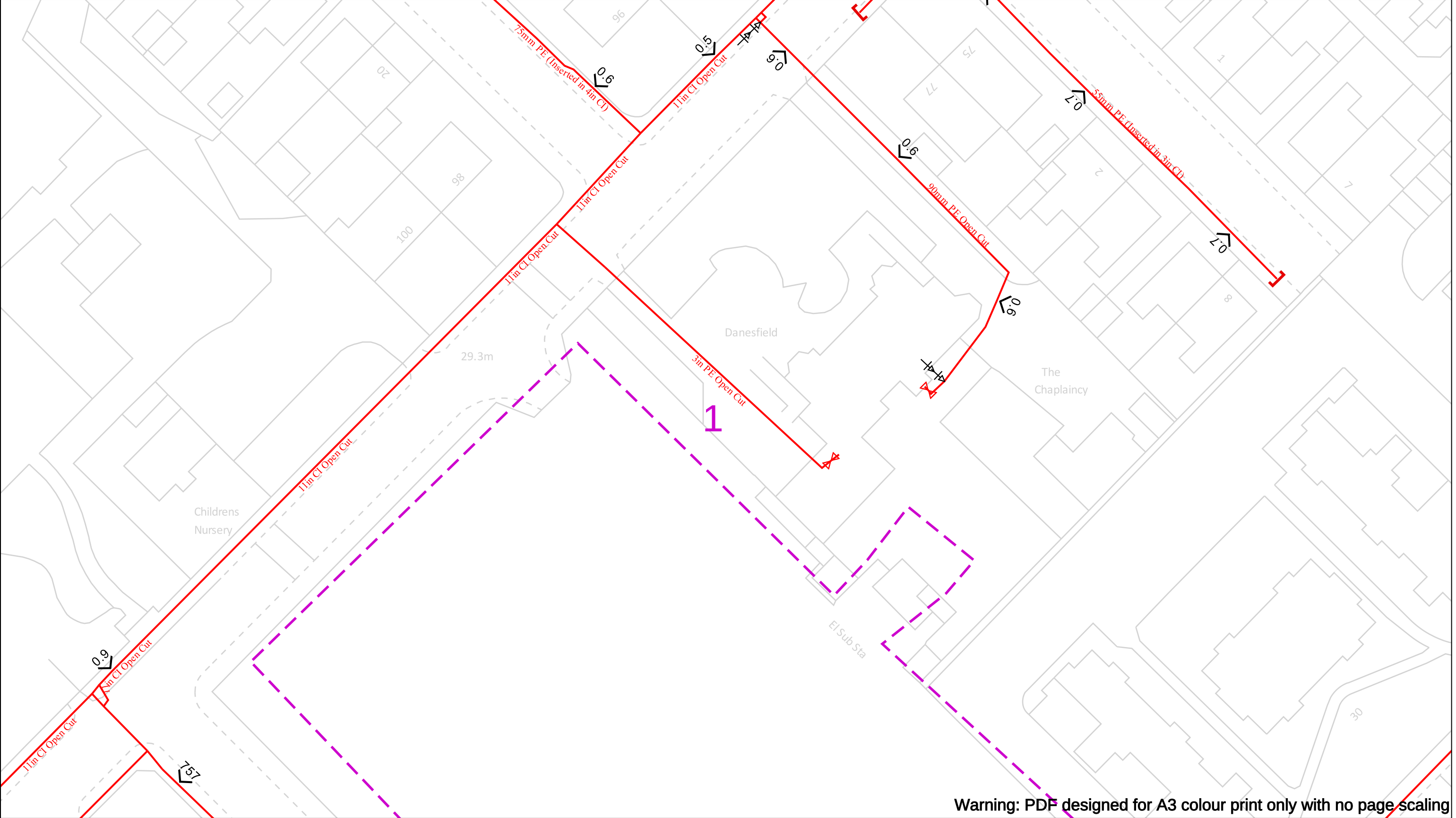
Where an out-of-standard service is present please contact plant protection 0800 688 588 for further information. Out-of-standard service symbology may be used to indicate one or more of the following:

- Identification of shallow services
- Identification of dual services
- Recording of non-perpendicular services

A perpendicular service/connection is laid in a straight line from the entry point at the property to the connection at the main – this includes a pipe that has a perpendicular connection and is not straight but does not deviate more than 1m off centre line.

Cadent
Your Gas Network

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Date Requested: 01/03/2024
Job Reference: 32644119
Site Location: 382638 395211
Requested by:
Miss Claire Gleave
Your Scheme/Reference: 17013

Scale: 1:500 (When plotted at A3)

View extent: 200m, 115m

IMPORTANT NOTICES

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In case of an emergency call 0800 111 999

50m

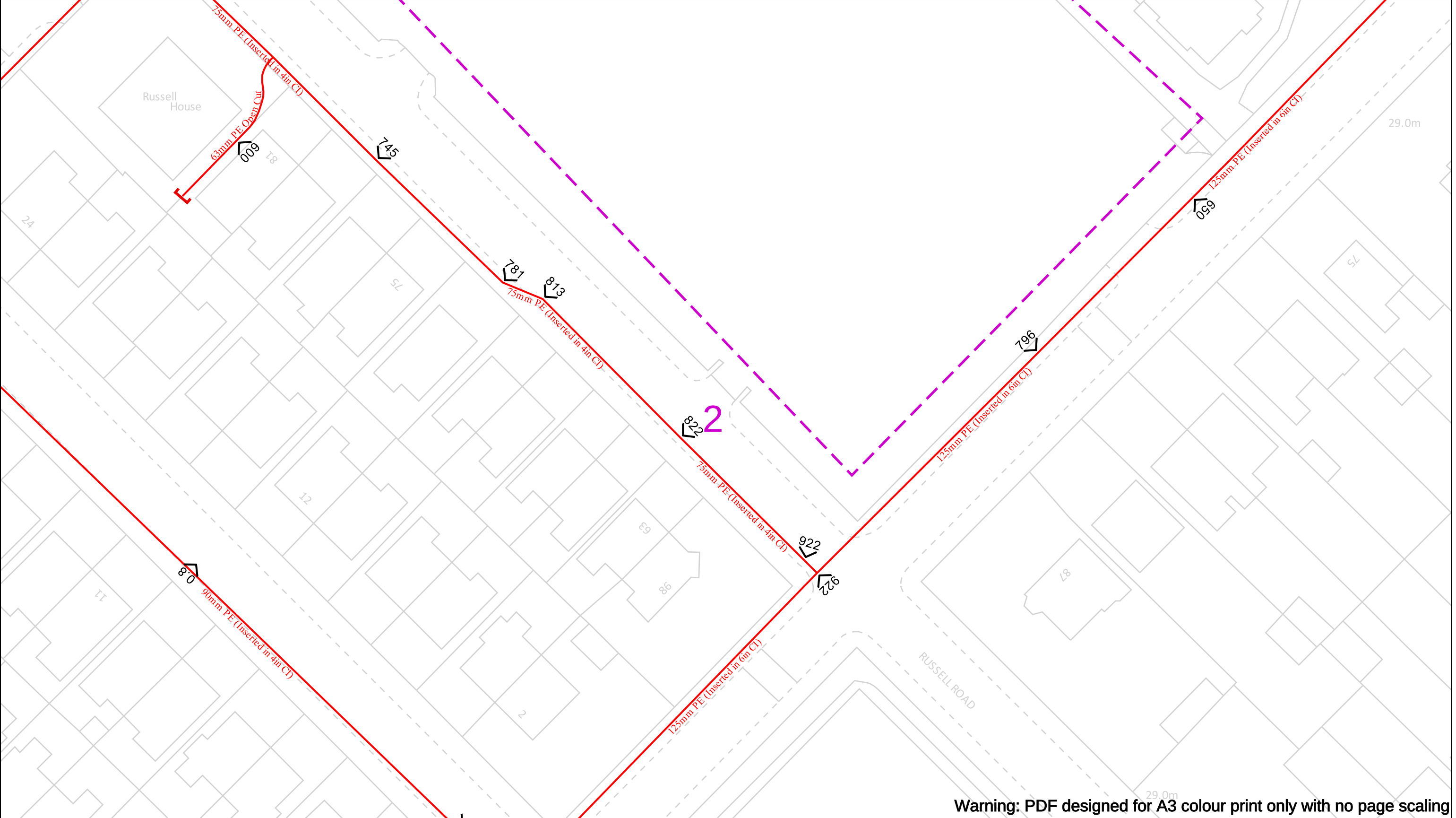
Dig Sites	Area:	Line:			
	LP Mains		Valve		Diameter Change
	MP Mains		Depth of cover		Material Change
	IP Mains		Syphon		Out of Standard Service
	LHP Mains				

Where an out-of-standard service is present please contact plant protection 0800 688 588 for further information. Out-of-standard service symbology may be used to indicate one or more of the following:

- Identification of shallow services
- Identification of dual services
- Recording of non-perpendicular services

A perpendicular service/connection is laid in a straight line from the entry point at the property to the connection at the main – this includes a pipe that has a perpendicular connection and is not straight but does not deviate more than 1m off centre line.

Your Gas Network



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In case of an emergency call 0800 111 999

Dig Sites

LP Mains

MP Mains

IP Mains

LHP Mains

Area: [Symbol]

Line: [Symbol]

Valve

Depth of cover

Syphon

[Symbol]

Diameter Change

Material Change

Out of Standard Service

Where an out-of-standard service is present please contact plant protection 0800 688 588 for further information. Out-of-standard service symbology may be used to indicate one or more of the following:

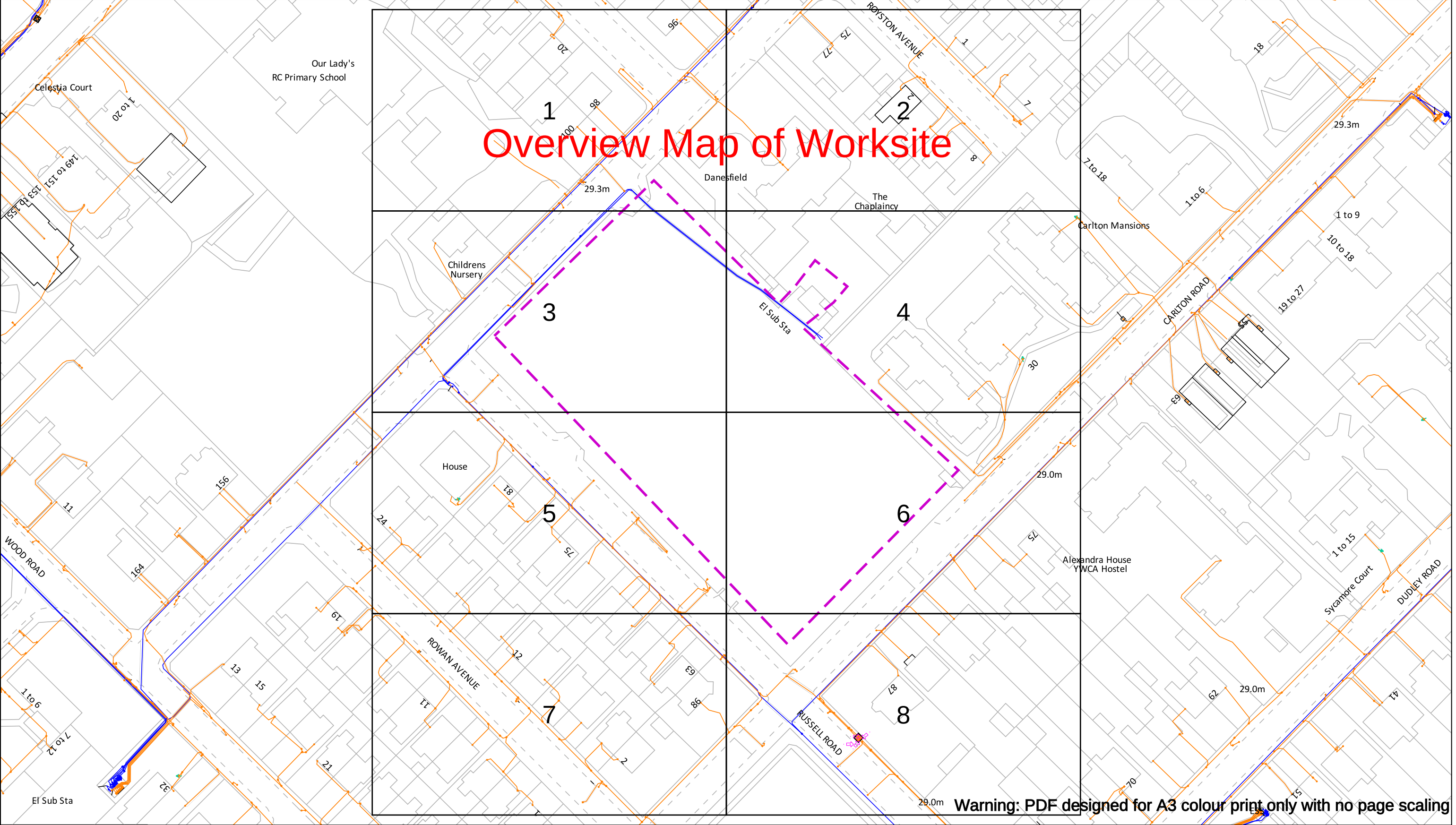
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Cadent

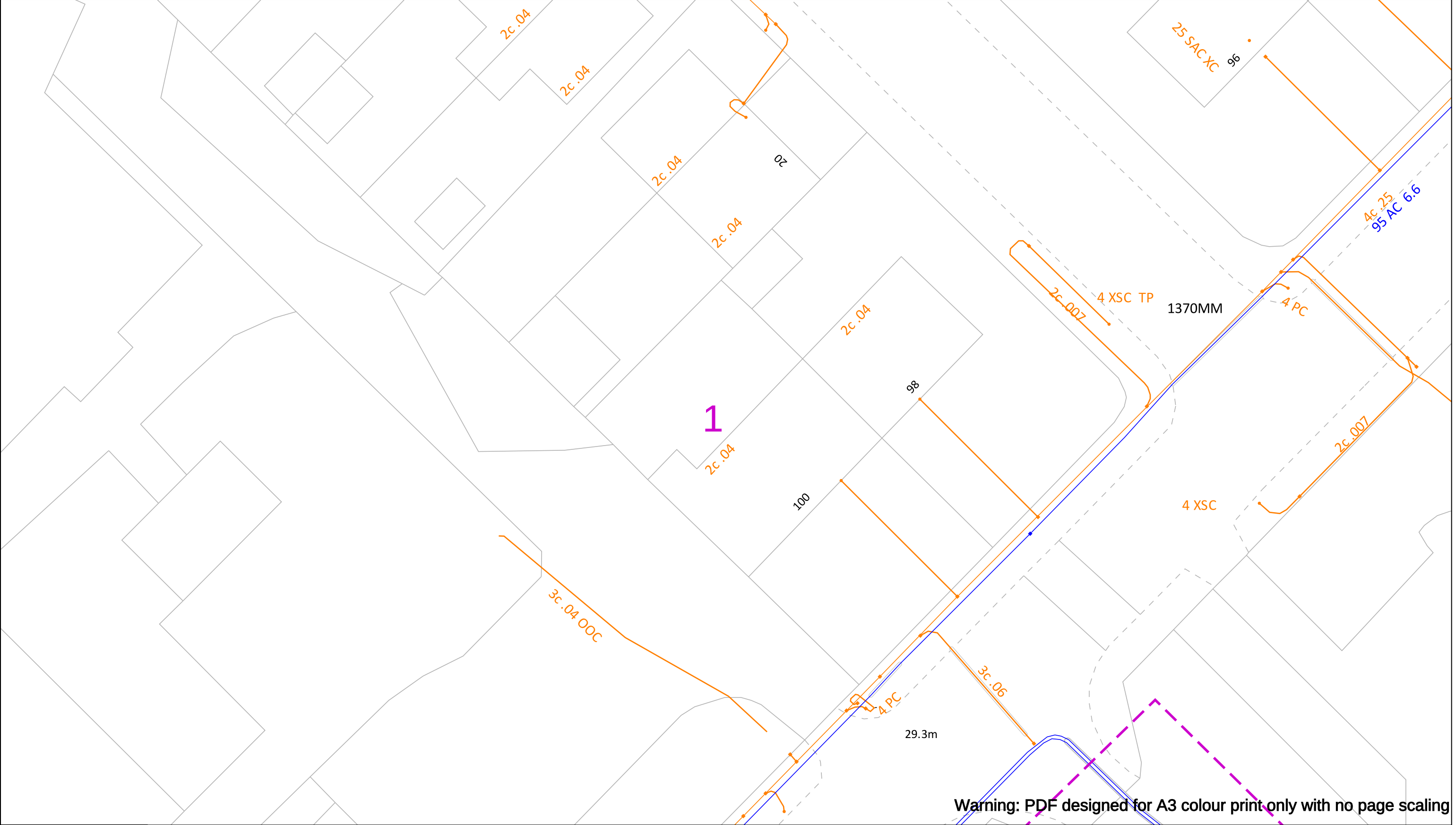
Your Gas Network

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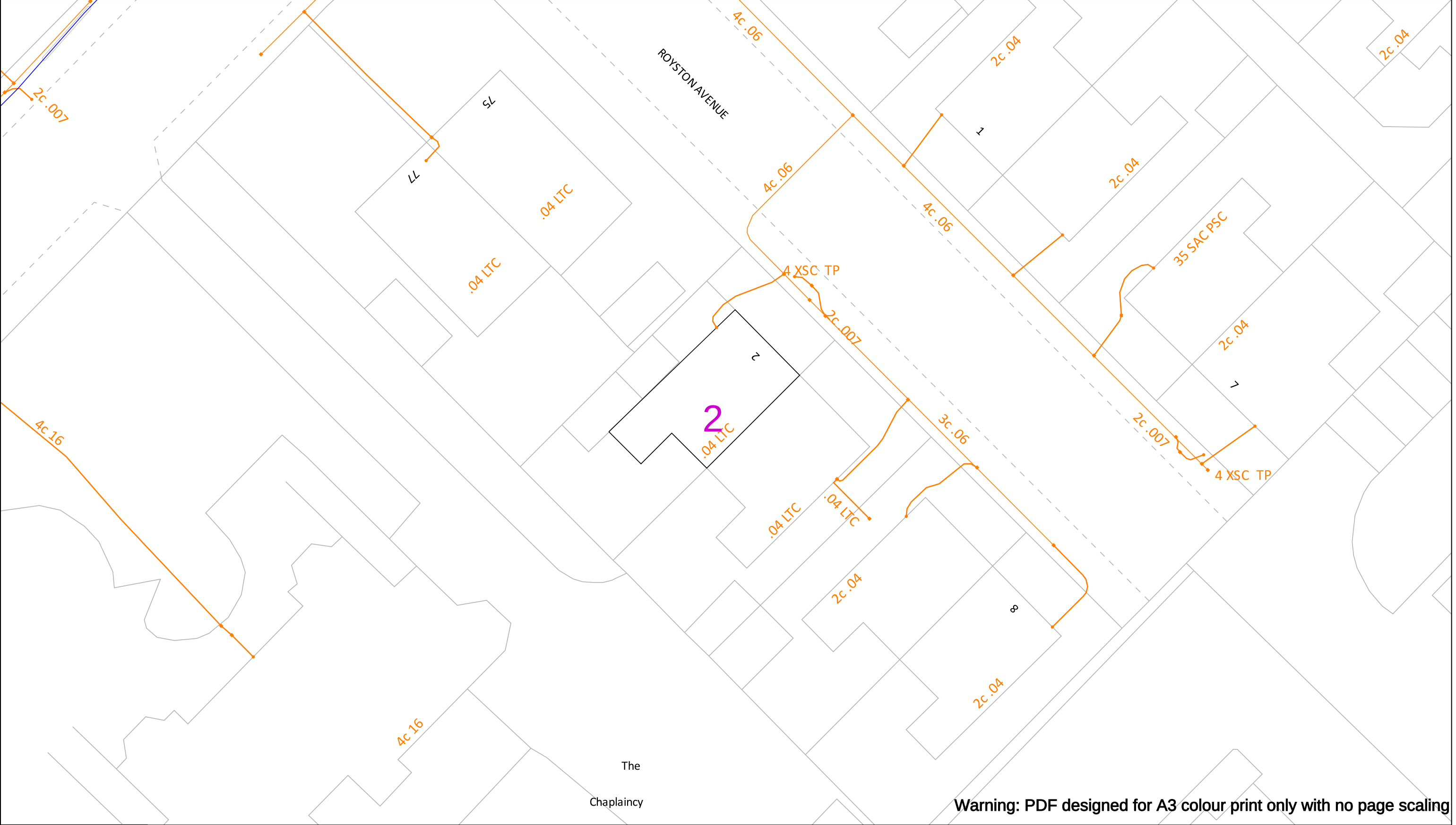
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In an emergency call 105, 24 hours a day	IMPORTANT INFO Unless otherwise indicated the depth of Electricity North West Limited cables are in accordance with NJUG (450mm for Low Voltage & 600mm for 11kV cables) 33kV and 132kV cables are laid at depths as marked. The depth and positions of Electricity North West Limited equipment was accurate as shown when the equipment was installed. However third parties may have altered the level & other reference data. Therefore Electricity North West Limited accept no responsibility for the position of Electricity North West Limited equipment being different from shown. No person, body or company, shall be relieved from liability for damage caused to Electricity North West Limited equipment by reason of being located differently to the indications on this drawing or from any regulatory loss of income or incentive, or expense, which may be suffered by Electricity North West Limited and which is caused or contributed to by any loss of supply as a result of any damage caused to Electricity North West Limited's equipment. Service cables are not necessarily shown but must be assumed to exist to all premises, streetlights and signs. There may be other Electricity North West Limited apparatus in the vicinity which is not indicated on the cable records. Other apparatus may also be present which is owned by a third party other than Electricity North West Limited. Reference should be made to HSE Guidance, HS(G)47 "Avoiding Danger from Underground Services" and GS6 "Avoiding Danger from Overhead Power Lines". Electricity North West Limited, Borron Street, Portwood, Stockport, Cheshire, SK1 2JD Registered in England and Wales. Registered No 02366949	<table><tr><th>Operating Voltage</th><th>Colour Code</th><th>Line Colour</th></tr><tr><td>132kV</td><td>Black</td><td> </td></tr><tr><td>33kV</td><td>Green</td><td> </td></tr><tr><td>22kV-25kV</td><td>Yellow</td><td> </td></tr><tr><td>11kV</td><td>Red</td><td> </td></tr><tr><td>6kV-6.6kV</td><td>Blue</td><td> </td></tr><tr><td>1kV-6kV</td><td>Violet</td><td> </td></tr><tr><td>LV</td><td>Orange</td><td> </td></tr><tr><td>Unknown Voltage</td><td>Brown</td><td> </td></tr></table>	Operating Voltage	Colour Code	Line Colour	132kV	Black		33kV	Green		22kV-25kV	Yellow		11kV	Red		6kV-6.6kV	Blue		1kV-6kV	Violet		LV	Orange		Unknown Voltage	Brown		<table><tr><th>Dig Sites</th></tr><tr><td>Area: </td></tr><tr><td>Line: </td></tr></table>	Dig Sites	Area:	Line:	 Electricity North West Borron Street Portwood, Stockport Cheshire, SK1 2 JD Phone: 0800 195 4141 Email: planrequest@enwl.co.uk
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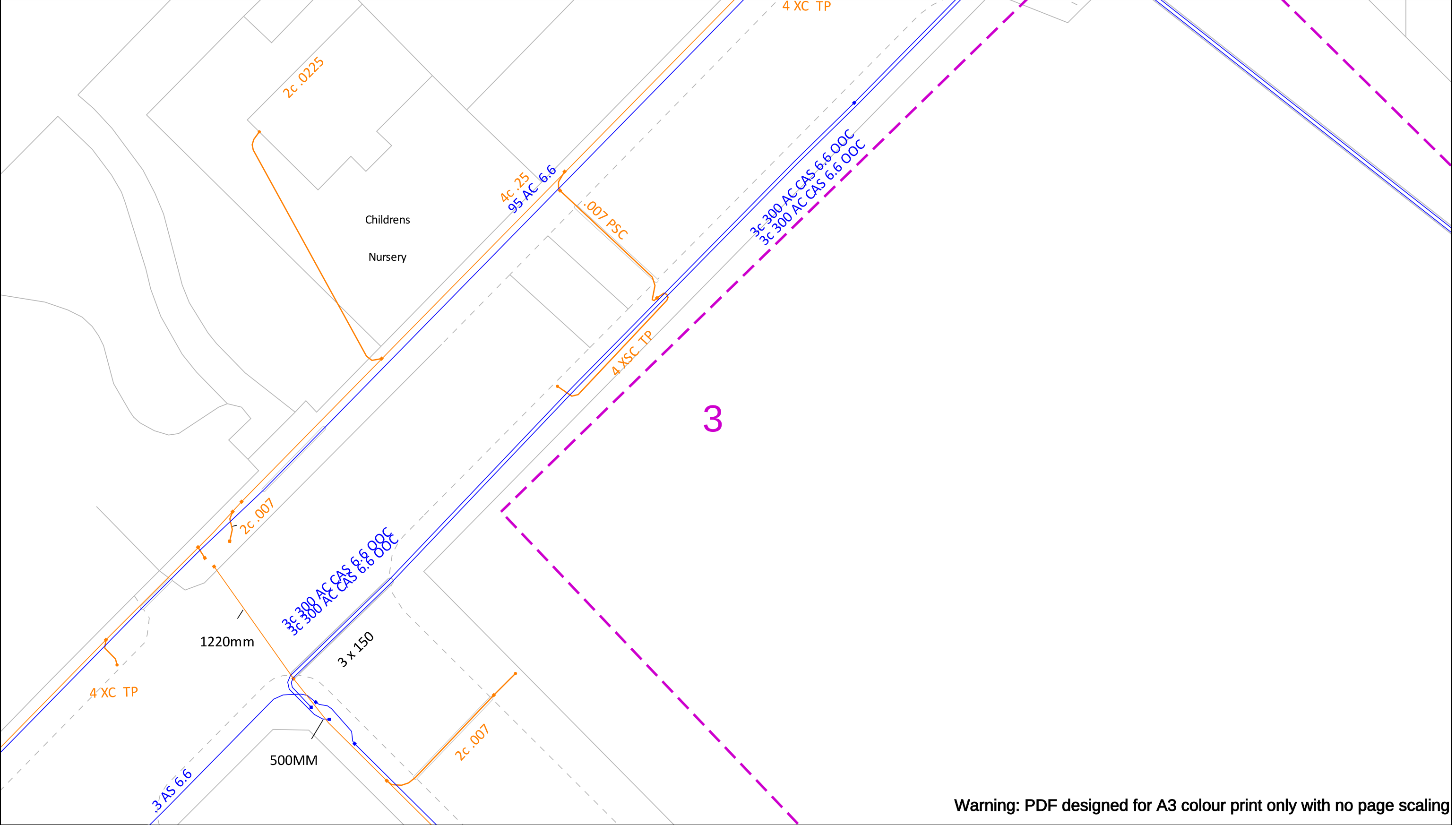
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**In an emergency call 105,
24 hours a day**

Date Requested: 01/03/2024
Job Reference: 32644119
Site Location: 382638 395211
Requested by:
Miss Claire Gleave
Your Scheme/Reference: 17013

Scale: 1:250 (When plotted at A3)

IMPORTANT INFO

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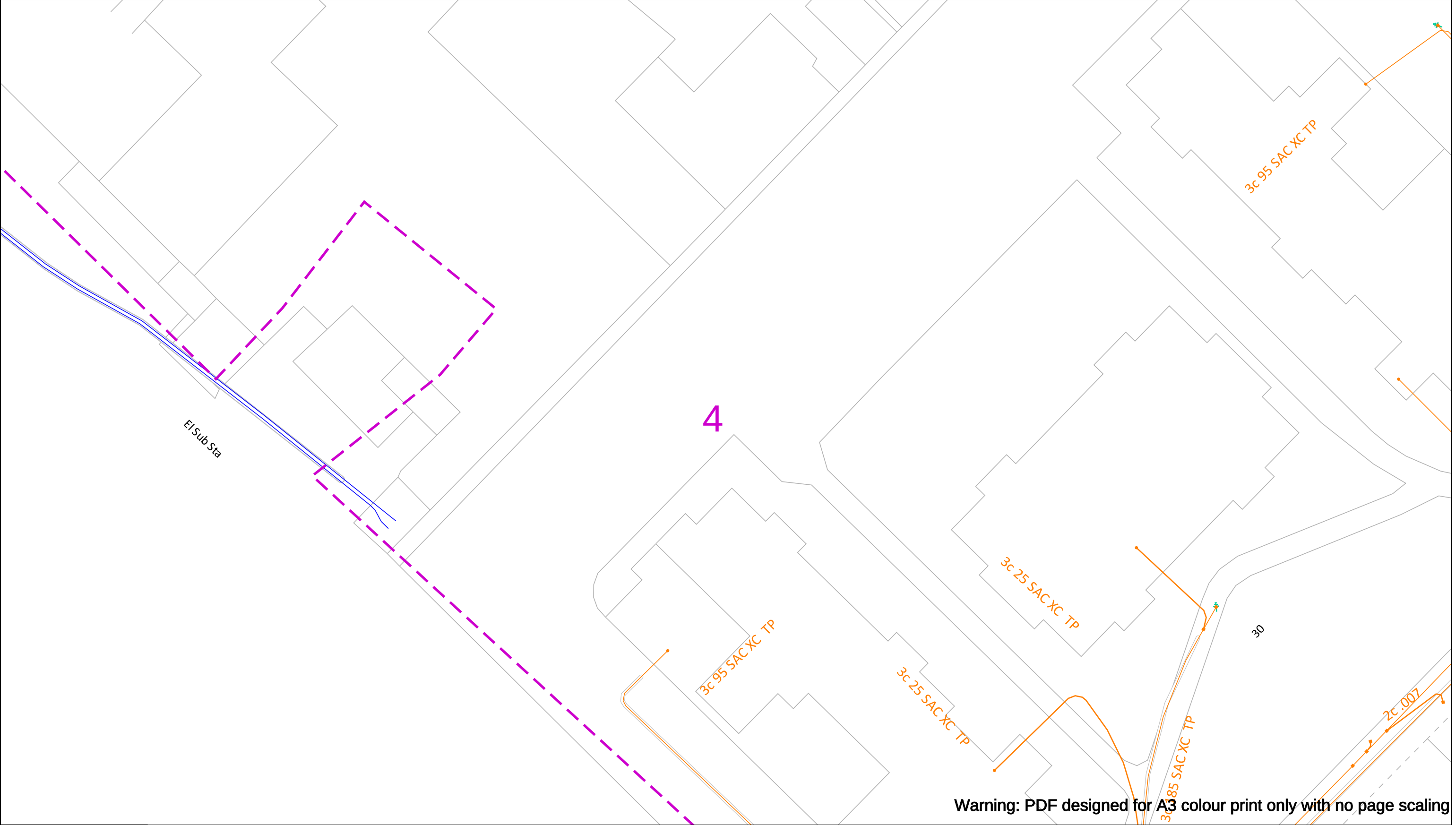
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Operating Voltage	Colour Code	Line Colour	Dig Sites
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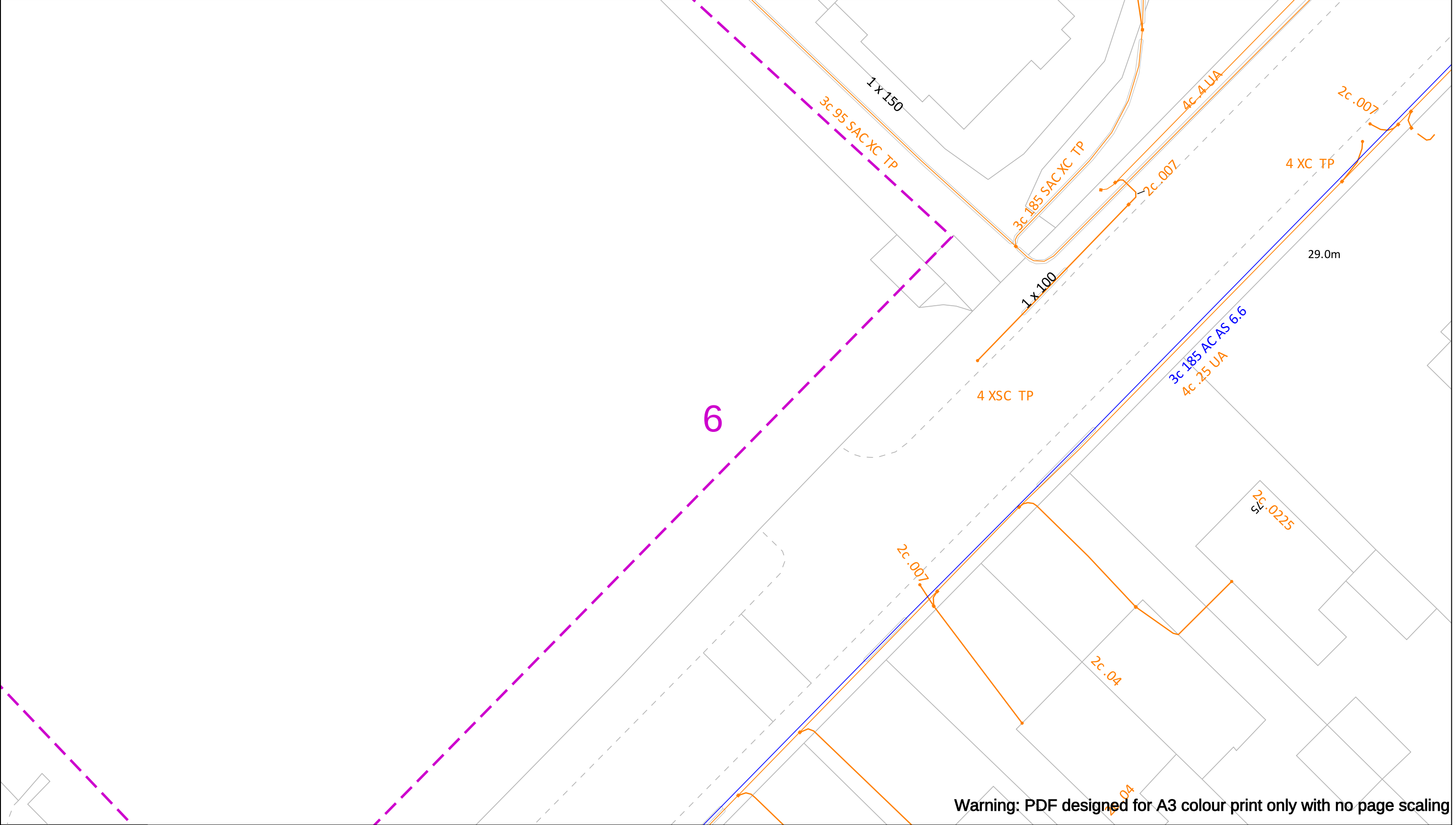
Electricity North West
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Email: planrequest@enwl.co.uk

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In an emergency call 105, 24 hours a day	IMPORTANT INFO Unless otherwise indicated the depth of Electricity North West Limited cables are in accordance with NJUG (450mm for Low Voltage & 600mm for 11kV cables) 33kV and 132kV cables are laid at depths as marked. The depth and positions of Electricity North West Limited equipment was accurate as shown when the equipment was installed. However third parties may have altered the level & other reference data. Therefore Electricity North West Limited accept no responsibility for the position of Electricity North West Limited equipment being different from shown. No person, body or company, shall be relieved from liability for damage caused to Electricity North West Limited equipment by reason of being located differently to the indications on this drawing or from any regulatory loss of income or incentive, or expense, which may be suffered by Electricity North West Limited and which is caused or contributed to by any loss of supply as a result of any damage caused to Electricity North West Limited's equipment. Service cables are not necessarily shown but must be assumed to exist to all premises, streetlights and signs. There may be other Electricity North West Limited apparatus in the vicinity which is not indicated on the cable records. Other apparatus may also be present which is owned by a third party other than Electricity North West Limited. Reference should be made to HSE Guidance, HS(G)47 "Avoiding Danger from Underground Services" and GS6 "Avoiding Danger from Overhead Power Lines". Electricity North West Limited, Borrton Street, Portwood, Stockport, Cheshire, SK1 2JD Registered in England and Wales. Registered No 02366949	<table><tr><th>Operating Voltage</th><th>Colour Code</th><th>Line Colour</th></tr><tr><td>132kV</td><td>Black</td><td> </td></tr><tr><td>33kV</td><td>Green</td><td> </td></tr><tr><td>22kV-25kV</td><td>Yellow</td><td> </td></tr><tr><td>11kV</td><td>Red</td><td> </td></tr><tr><td>6kV-6.6kV</td><td>Blue</td><td> </td></tr><tr><td>1kV-6kV</td><td>Violet</td><td> </td></tr><tr><td>LV</td><td>Orange</td><td> </td></tr><tr><td>Unknown Voltage</td><td>Brown</td><td> </td></tr></table>	Operating Voltage	Colour Code	Line Colour	132kV	Black		33kV	Green		22kV-25kV	Yellow		11kV	Red		6kV-6.6kV	Blue		1kV-6kV	Violet		LV	Orange		Unknown Voltage	Brown		<table><tr><th>Dig Sites</th></tr><tr><td>Area: </td></tr><tr><td>Line: </td></tr></table>	Dig Sites	Area:	Line:	 Electricity North West Borrton Street Portwood, Stockport Cheshire, SK1 2 JD Phone: 0800 195 4141 Email: planrequest@enwl.co.uk
Operating Voltage	Colour Code	Line Colour																																
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Dig Sites																																		
Area:																																		
Line:																																		
Date Requested: 01/03/2024 Job Reference: 32644119 Site Location: 382638 395211 Requested by: Miss Claire Gleave Your Scheme/Reference: 17013 Scale: 1:250 (When plotted at A3)																																		
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Operating Voltage	Colour Code	Line Colour	Dig Sites
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6kV-6.6kV	Blue		
1kV-6kV	Violet		
LV	Orange		
Unknown Voltage	Brown		



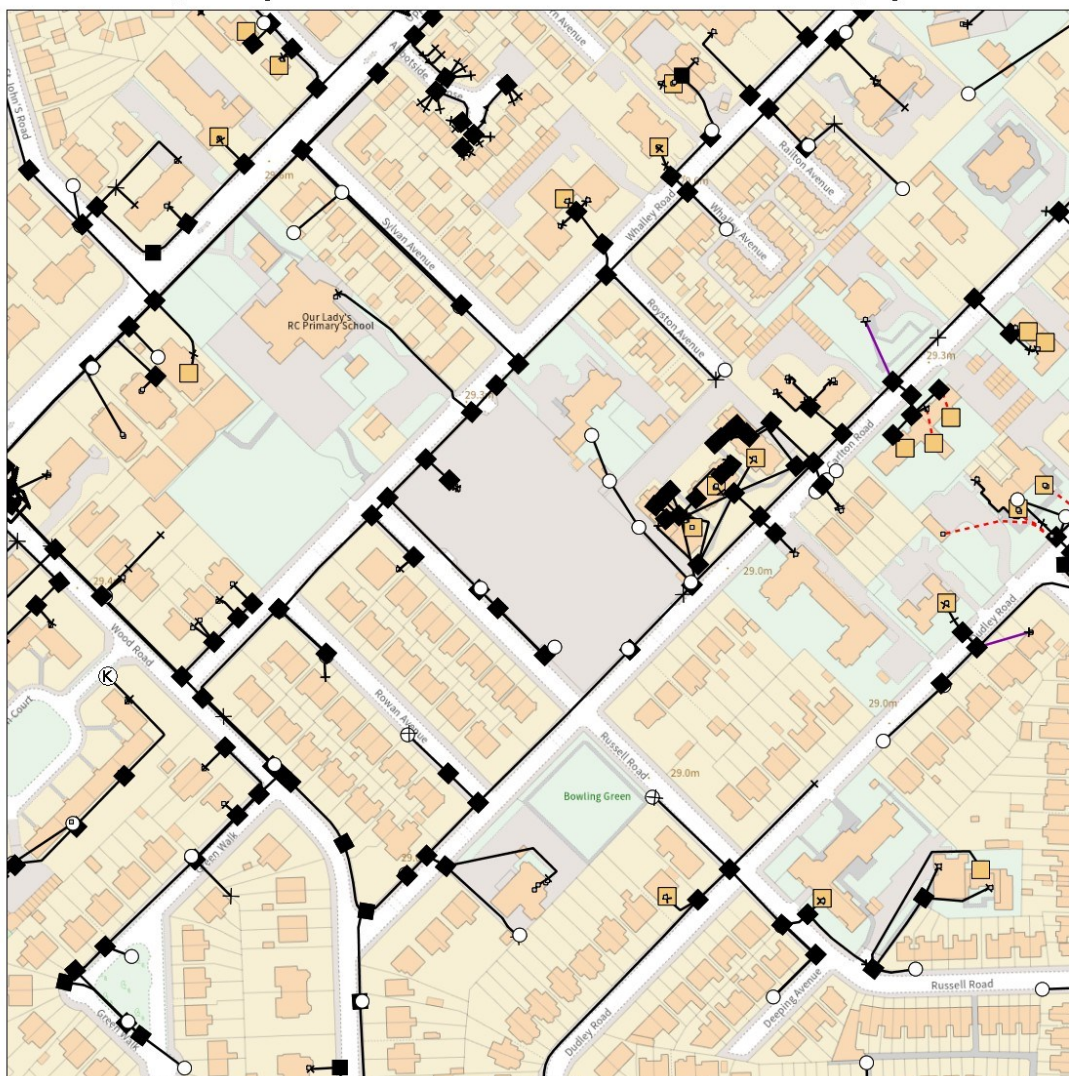
Electricity North West
Borron Street
Portwood, Stockport
Cheshire, SK1 2 JD
Phone: 0800 195 4141
Email: planrequest@enwl.co.uk

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Maps by email Plant Information Reply



IMPORTANT WARNING

Information regarding the location of BT apparatus is given for your assistance and is intended for general guidance only. No guarantee is given of its accuracy. It should not be relied upon in the event of excavations or other works being made near to BT apparatus which may exist at various depths and may deviate from the marked route.



openreach

CLICK BEFORE YOU DIG

FOR PROFESSIONAL FREE ON SITE ASSISTANCE PRIOR TO COMMENCEMENT OF EXCAVATION WORKS INCLUDING LOCATE AND MARKING SERVICE

email cbyd@openreach.co.uk

ADVANCE NOTICE REQUIRED
(Office hours: Monday - Friday 08.00 to 17.00)
www.openreach.co.uk/cbyd

Accidents happen

If you do damage any Openreach equipment please let us know by calling 0800 023 2023 (opt 1 + opt 1) and we can get it fixed ASAP

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KEY TO BT SYMBOLS

	Planned	Live	Change Of State	+	Hatchings	
PCP			Split Coupling		Built	
Pole			Duct Tee		Planned	
Box			Building		Inferred	
Manhole			Kiosk		Duct	
Cabinet			Other proposed plant is shown using dashed lines. BT Symbols not listed above may be disregarded. Existing BT Plant may not be recorded. Information valid at time of preparation. Maps are only valid for 90 days after the date of publication.			
	Pending Add	In Place	Pending Remove	Not In Use		
Power Cable						
Power Duct				N/A		

BT Ref : LWX11306H

Map Reference : (centre) SJ8262295175

Easting/Northing : (centre) 382622,395175

Issued : 01/03/2024 11:30:24

WARNING: IF PLANNED WORKS FALL INSIDE HATCHED AREA IT IS ESSENTIAL BEFORE PROCEEDING THAT YOU CONTACT THE NATIONAL NOTICE HANDLING CENTRE. PLEASE SEND E-MAIL TO: nnhc@openreach.co.uk