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METHOD STATEMENT

1.0 PROJECT PARTICULARS				
01.1	PROJECT NAME: Southend On Sea - Fossett Way			
1.2	PRINCIPAL CONTRACTOR: Houlihan's	1.3	CLIENT: Keepmoat	
1.4	TITLE/TASK: WORKING AROUND LIVE SERVICES	1.5	REV NO:	MS-SCC-1002
1.6	DATE OF ISSUE: 07/04/26	1.7	SITE CONTACT:	Pat Houlihan
	Date of Review 20/04/26			
	DATE OF REVIEW			

2.0 SUPERVISION				
2.1	CONTRACTS MANAGER:	NAME: Conar Gough	TEL: 07947 984996	
2.2	SITE SUPERVISOR:	NAME: Matt McEvoy	TEL: 07435 128643	
2.3	RESPONSIBILITIES AND SITE ORGANISATION:	NAME:	Matt McEvoy Site Supervisor TBC Site Engineer Conar Gough Contracts Manager Richard Carrol Managing Director Patrick Byrne H & S Manager	

3.0 TASK DETAILS				
3.1	PROPOSED START DATE:	20/04/2026	3.2	DURATION: 4 weeks
3.3	HOURS OF WORK	No noisy works are permitted before 0800 hours. Noise & vibration procedures follow guidance contained within BS 5228-Noise control on construction and open sites. Servicing and site preparation can be carried out prior to this. Mon – Fri 0800 – 1800 hours Sat 0800 - 1230 No work is permitted on Sundays or Bank Holidays.		



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3.4

EXACT
LOCATION(S)
ATTACHED
PLAN:

This MS is in conjunction to M0601 MS 2501 Groundworks Rev 2. The works is in the road. Leading into the main site.
References: Q16230WDK XX XX DR C 33104 Drainage layout.
Permit: ARN-1590-17652377



Google Maps Red Outline Electric- Sub Station



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		<p style="text-align: center;">TMP Sheet 2</p>		
<p>3.5</p>	<p>DOCUMENTATION PREPARED BY:</p>	<p>Patrick Byrne</p>	<p>DOCUMENTATION REVIEWED BY:</p>	<p>Matt McEvoy</p>
<p>3.6</p>	<p>SCOPE WORKS:</p>	<p>The scope of the works covered by this method statement is to excavate near live services, to facilitate service connections or any other purpose. This Method Statement must be confirmed by the Principal Contractor, or his agent, prior to any work commencing on the site.</p> <ul style="list-style-type: none"> • Saw cut and open trench across existing road, <ul style="list-style-type: none"> ○ Depth of trench circa 2m ○ Install trench TW • Install drainage and connection • QA Record • Trench backfills and reinstatement <p>This Safety Method Statement is prepared for this specific operation, excavating near live services. However, as it is only part of the overall scope of works, it should be recognised that the activities on the site covered by other Method Statements may have a bearing on this operation and it should therefore be read in conjunction. In certain circumstances</p>		



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		<p>the Principal Contractor may have to co-ordinate this and other work activities due to the interface. Irrespective of programme implications, the Principal Contractor will have the final veto.</p> <p>This Method Statement will be conveyed via a ‘Method Statement Briefing’ by the Houlihan & Co Site Supervisor, Matt McEvoy, where upon this Method Statement will be thoroughly explained and any questions answered as raised by those attending.</p> <p>The ‘Method Statement Briefing’ will be given before the operation commences and a copy shown and explained to those operatives involved. Method Statements and signed briefing registers will be placed in the Health and Safety File.</p> <p>The Site Supervisor, will be responsible for the ‘Method Statement Briefing’:</p> <ul style="list-style-type: none"> - Explaining the content of the Method Statement and Risk Assessments to all operatives. - Explaining the content of the Traffic Management Plan to all operatives. - Ensuring that all persons comply with the site rules laid down by the Principal Contractor. - Ensuring that all persons comply with the safe systems of work laid down by Houlihan & Co (Excavations) Ltd in this method statement and associated risk assessments. - Completing any Client permits to work. <p>All RA/MS must be agreed and approved, prior to any work commencing.</p>
<p>3. 7</p>	<p>DETAILED METHOD OF WORKS:</p>	<p>Regulation 14 Work on or near live conductors</p> <p>No person shall be engaged in any work activity on or so near any live conductor (other than one suitably covered with insulating material to prevent danger) that danger may arise unless –</p> <ul style="list-style-type: none"> • it is unreasonable in all the circumstances for it to be dead; and • it is reasonable in all the circumstances for him to be at work on or near it while it is live; and • suitable precautions (including where necessary the provision of suitable protective equipment) are taken to prevent injury. <p>Guidance: HSG47, updated:</p> <p>The assumption that live working can be avoided as the default position is set out in Reg.14 and a full justification of any live working must be detailed before this is considered.</p> <p>A method statement for live working will be required as live working is not considered to be properly controlled by any permit to work system.</p> <p>HSG47, rev. Feb.2014, states “Where new services such as electrical or gas supplies are being installed, it may be possible to reduce risks by not installing or commissioning them until other groundworks and work on the installation have been completed. This should be considered early in the design process to allow the works to be sequenced accordingly.” Electrical utilities regard the fact that damage to a live service triggers a release of energy sufficient to kill or maim as an acceptable fault-finding exercise.</p> <p>Reference Utility PAS 128 Report.</p>



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Known services Electric/BT/Water.

Dial Before you Dig.

Houlihan internal Safety team, must be notified 48hrs before any work around live services commence. During this time, they will risk assess the operation, and contact [User Overview - LSBUD](#). Only then will he give the green light and the process can continue. If not, a HOLD POINT will be implemented until such time as the conditions are satisfactory.

Enquiry Confirmation Date of enquiry: Time of enquiry: 07/04/2026 15:56 LSBUD R

Asset Owner	Asset Type	Phone/Email	Emergency Only
Cadent Gas	🔥 Gas	0800688588	0800111999
Energy Assets Networks	+ Multi-utility	Gas 01506425362	Gas 0800111999
		Electricity 03336662008	Electricity 03338002016
Essex & Suffolk Water	💧 Water	03702417408	03702417408
UK Power Networks	⚡ Electricity	08000565866	08000565866

Setting out.

- The area to be excavated will be set out and marked using spray paint. Use of the CAT scan and transmitter to identify locatable services, service drawings, if any exist, will be sought and issued, and **assume all services are live until disconnected and proven safe at the point of work. Obtain written confirmation of disconnection from the owner/ operator before removing a redundant service (HSG47)**. If services are located, trial holes will be dug to identify services. Where these services impact on the dig area, no mechanical excavation will take place within 500mm of identified service. The air pick will be used, as per the training given on site, to expose services and any connections in the services trench. Once services are exposed, they will need to be supported. During the works, take every precaution to avoid personal injury or damage to our assets.

Excavating service trench

EXCAVATION.

Initial braking of ground by saw cutting tarmac and peeling back.

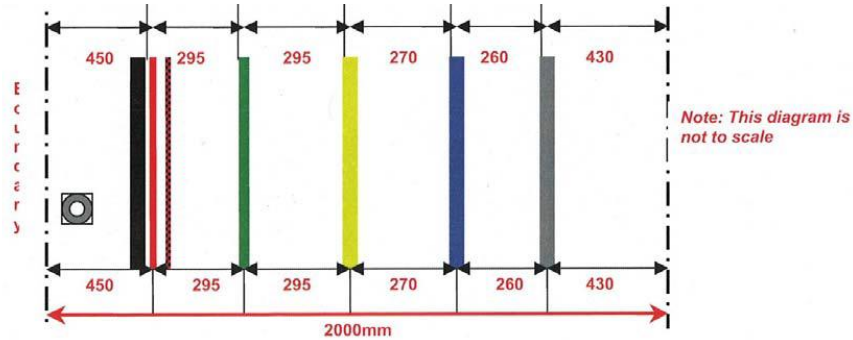
Excavator Bucket must not come within 500mm of a live service at any time. An excavator may be used to remove top surfaces such as tarmac. After which, use of vacuum extraction must be considered. If impractical, use of air pick may be used as specified below.

All excavation works will be carried out in accordance with Construction (Design and Management) Regulations 2015 and the Guidance contained in Health and Safety in Excavations HS(G) 185 "Be Safe and Shore" and CIRIA guide to Trenching Practice. Trench depth limited to no greater than 1.5m, service trench run opened and will not exceed 50m. Where practicable we will backfill excavations overnight. If excavations are left open, they will be physically sectioned off with barriers and road plates. The face of the excavation will be checked by the foreman before the start of the shift. Any excavation will be checked after events such as heavy rain which might affect its stability.



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The checks will follow Houlihan & Co.'s checklist. All inspections will be recorded in the Houlihan Record book.



- Pre-tender information and Construction Phase Plan will be used and considered in light of additional information from utilities' plan drawings, section drawings from utility companies recording depth of services and commissioned ground probing radar surveys as necessary.
- The assumption that live working can be avoided as the default position is set out above and a full justification of any live working must be set out before this is considered. A method statement for live working will be required as live working is not considered to be properly controlled by any permit to work system. HSG47, rev. Feb.2014, states "Where new services such as electrical or gas supplies are being installed, it may be possible to reduce risks by not installing or commissioning them until other groundworks and work on the installation have been completed. This should be considered early in the design process to allow the works to be sequenced accordingly."
- A cable avoidance tool in conjunction with a transmitter will be used by a competent person, prior to the commencement and during any work, to identify all services capable of being identified. The intention will be to bring up to date records of existing services and to supplement these records where they are deficient. Services found will be clearly identified to avoid the risk of damage and where necessary, we will hand dig around them to expose the services prior to full excavation. Hand digging will require the use of air picks to expose services, starting immediately under the hard cover. Record drawings will be red lined to show the most up to date information, held available on site for consultation and details communicated at inductions, toolbox talks and in careful briefing on site prior to excavation.
- If any service is exposed, it will be photographed and sketched with off sets noted to inform future re-visits.
- Back fill will be with self-compacting granular material to a level where compaction is acceptable and then in suitable material, including selected as dug, which must be



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		<p>possible to excavate with the air pick in future: i.e., dense cohesive material like clay must NOT be used. If suitable backfill material as described is not available, the excavation should not proceed.</p> <ul style="list-style-type: none"> • Warning tape will always be placed, and if it has not been provided by the utility, we will have rolls to use. If physical protection is specified, then the backfill will not be completed until the protection is in place. • Great care will be taken to establish what is meant by “terminations” or “diversions” and any assertion that there are “no” services will be treated with caution. • We will comply with the Permit to Dig system in place on-site. <p>Traffic management will set up traffic control through the entire route in stages to keep disruption to a minimum. The operatives will barrier the work area at all times to keep the general public safe, as well as all other site users. The trench to be excavated will be scanned by cat and genny to mark up all identifiable existing services and all appropriate drawings will be read. If in any doubt, trial holes will be hand excavated to confirm any existing services. The trench will be marked out in the footpath or verge so the tarmac or turf can be removed so the service trench can be excavated to allow the installation of the service main. All arising to be removed to site stockpile by use of a forward tipping dumper, for reuse or removal from site at a later date, as per the SWMP. The trench will be reinstated to the HAUC spec. Once the services are laid, installation records will be taken, and GPS positions of the services will be noted on the site drawing for the as installed records as per the requirements of PAS 258. On completion of the works the traffic management and site equipment will be removed, the area will have any surplus materials and rubbish removed. On completion of the works, or at the end of the working day, all tools and equipment will be removed from the compound and the site left tidy. This process will be the same on all service trenches until all the services are laid.</p> <p><u>Excavating Round Live Services.</u></p> <ul style="list-style-type: none"> • Accidents may occur, if care and attention is not exercised, when carrying out excavations to locate underground cables. Hand-held power tools and mechanical excavators are the main cause of accidents therefore they shall not be used in close proximity to underground cables, specifically 500mm. The risk of danger arising can be avoided by following a few basic rules. <p><i>Before starting work :</i></p> <ul style="list-style-type: none"> • Complete the appropriate Houlihan Site Procedure, “When Requested to Work on Near Live Services”, paperwork. • Complete the appropriate DANDARA permit to dig, ensuring the service drawings are issued.
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		<ul style="list-style-type: none"> • Complete an appropriate Risk Assessment safety check. • Wear the appropriate Arc Flash Protective Suit that has been issued, as well as the protective face shield and gauntlets. Specifications of the protective clothing is available in the Houlihan's site office. • Check the service drawings to determine the number of cables, voltage rating and physical dimensions of the cable(s). • Use as built records to determine the approximate line of the cables. • Use a cable avoidance tool (C.A.T. & Transmitter) to trace the line of the cables and mark the route of the cables on the ground. Supervisor or Engineer only must carry out this task. • Have all other utility drawings on site and mark position of these prior to digging. • Only trained operatives to undertake the works. <p>On commencement of work:</p> <ul style="list-style-type: none"> • Do not use a hand-held power tool or mechanical excavator within 500mm of a known cable or other utility. • Use a mechanical excavator or a power tool only to break the top surface of the footpath or carriageway. • First, using the air pick do a trial hole normally covering full width and the depth of the trench that will be dig, to physically locate the services. • An air pick is to be used with care to displace porous and semi porous soils. Hand dig, using certified insulated spades that have been issued to site. Under no circumstances shall uninsulated equipment to be used. <i>Forks or hand-held picks or another pointed instrument shall never be used.</i> • During excavation make repeat checks with the CAT to determine more precisely the position of any cable(s). • Treat all cables found as live, until proven otherwise. • Any duct exposed during excavations must not be cut under any circumstances. Once a duct is installed it can only be exposed using safe practices at the request of the PC but must be treated as live and never be cut by Houlihan's operatives. <p>N.B. If in doubt as to the identification of any cable, you must stop work immediately, withdraw and seek advice from your supervisor. Remember - there may be no apparent physical differences between LV and HV cables -each may have tape or wire armour. In exceptional cases some older LV and HV cables may be un-armoured.</p> <p>ADDITIONAL GUIDANCE FOR THE LOCATION OF UNDERGROUND CABLES</p> <ul style="list-style-type: none"> • Where any signs of distress are evident in the cable or a joint e.g., smell, heat, noise, or damage – stop work, withdraw and consult the Supervisor.
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		<ul style="list-style-type: none"> • Backfill around cables with a fine material, do not use hardcore as this is likely to cause damage. • Replace any warning tiles or tape that may have been disturbed. • Ensure that material removed from the service trench is positioned in such a manner that it does not pose a threat to you, fellow workers or members of the public. • Treat other utilities in the service trench e.g., gas, water and telecommunications with as live. • Report any damage sustained to the other services to your supervisor. • Do not use cables as a convenient step in or out of a service trench. <p>GUIDANCE ON EXCAVATING UNDER FAULT CONDITIONS</p> <ul style="list-style-type: none"> • Should any signs of a fault become evident e.g., smell, heat, noise or signs of cable damage – stop work, withdraw and consult the Supervisor immediately. • Never - work on or near a known faulty/damaged cable or joint. <ul style="list-style-type: none"> • N.B. Remember - if in any doubt - stop work, withdraw and consult your Supervisor IMMEDIATELY. <p><i>ADVANTAGES OF EXCAVATING WITH AN AIR PICK</i></p> <p>Use of Air Picks has become a preferred method for digging on many jobs ranging from utility work to advanced tree care. Excavating with the Air Pick offers several advantages over conventional tools, including:</p> <ul style="list-style-type: none"> • Two to three times faster than hand excavation. • Less worker fatigue than a pick or shovel. • Eliminates sharp metal edges as featured on picks, digging blades, or buckets. • Harmless to bury, solid objects such as utility lines, telecommunication cables, tree roots, hazardous waste containers, or military ordinance. • Excavates some rocky soils where a shovel is difficult to use. • Breaks soil into small particles that are ideal for re-compaction. • Powered by common, tow-behind air compressors. <p>The Soil Pick is a selective excavator. Selective in the sense that it fractures, pulverizes and displaces porous and semi-porous soils, yet leaves nonporous objects unaffected. The Soil Pick excavates soil without risk of damaging buried utilities. As the Air Pick employs converging/diverging nozzle technology to accelerate compressed air to supersonic speed (to 1500 mph), the Air Pick will not be pointed at personnel. The high velocity air stream travels approximately 4 inches from the distal end of the Soil Pick, "the cutting edge" before decompressing to atmospheric pressure, with sufficient violence to pulverize and displace soil.</p>
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	<p>A pressure gauge on the handle assembly advises the operator if the tool is working at acceptable pressure. The Soil Pick weighs 6.5 lbs., has zero hand/arm vibration and can be used for extended periods without fatigue.</p> <p>Excavated Materials</p> <p>All excavated arisings will be stored away from the excavation, removed and stock piled for later use in the reinstatement of the excavation. Depending on the depth required from the slit trench operation, any excavation over 900mm deep will require the edges to be battered back for safety, or the installation of trench sheets or adequate shoring to prevent collapse should the ground conditions require. All excavations will have barriers erected around any open trench, typically Heras fencing, double clipped, if excavation is to remain open for any period, in the case of service trenches, interlinked crowd barriers can be used. Access/egress to and from the excavation is to be provided by a class 1 industrial timber pole ladder, more than one access/egress point is to be provided. The arisings will be removed by use of a forward tipping dumper. The materials will be stock piled in an area as determined by Houlihan & Co site management team and Linden Homes.</p> <p><u>Backfilling:</u></p> <p>Once the service connections have been made and the utility company indicates that the trench can be back filled,</p> <ul style="list-style-type: none"> • Backfill around cables with a fine material/ building sand, and do not use hardcore as this is likely to cause damage to protective sheath or pipework. • Replace any warning tiles or tape that may have been disturbed. • In the first stages of backfill, selected material should be placed uniformly on both sides of the service by hand in layers not exceeding 100mm in thickness, each layer being compacted by hand tamping until the pipe has a minimum of 150mm compacted cover. • Further backfill with sand must be done to reach 250-300mm over top service then use the marker tape provided by utilities. • Cover the width of the trench using orange debris netting following Houlihan backfilling procedures. • The other backfilling material should be placed in layers not exceeding 300mm, each layer being well compacted. <p><u>Emergency Plan:</u></p> <ul style="list-style-type: none"> • If any service is found damaged or the damage is caused during excavation work, STOP the work immediately. • Make the area safe with barriers, at a safe distance from site of damage. Warn others to stay well clear and do not let anyone return to the area, as cables may re-energise without warning. • If machine has struck the service, turn the machine off remove the key and jump well clear so that no contact is made between you, machine and the ground at the same
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		<p>time. Never touch the machine whilst on the ground, run well clear and do not return to the machine.</p> <ul style="list-style-type: none"> • Notify supervisor and Site Manager. They must call the service provider. Number will be in emergency form in the site office board. • Never - work on or near a known faulty/damaged cable or joint. • Never attempt to make any repair. • Return to the work area only after the service has been repaired and clearance is given by service company. • If there is an emergency at the bottom of an excavation, then initial assessment by first aiders will establish if the IP can be moved or must be stabilised in situ pending arrival of paramedics.
<p>3.8</p>	<p>WELFARE FACILITIES: Describe the facilities that will be provided and who will be responsible for their provision and maintenance.</p>	<ul style="list-style-type: none"> • Facility on site under CDM. • Drinking water, if not supplied from the mains, must be supplied in sealed containers, traceable to a hygienic source where they have been filled under controlled conditions. Filling empty containers by site staff is unacceptable. <p>Houlihan & Co Operatives are to keep the facilities tidy, cleaning up rubbish from tables after use, using the washing facilities in the canteen area, keeping the microwave and fridge clean and usable for others on site.</p>

TO BE READ IN CONJUNCTION WITH IN SITE MS

<p>4.0</p>	<p>RISK MANAGEMENT</p>	
	<p>Multiply the LIKELIHOOD by the SEVERITY to determine the RISK RATING.</p>	
<p>4.1</p>	<p>RISK ASSESSMENTS ATTACHED: A list of identified risks throughout the task will be noted here. The full Risk assessments to be attached. Following further assessment, more RA could be added during the project.</p>	<p>The risk assessments that are relevant to these operations are:</p> <ul style="list-style-type: none"> RA 10. Use of FTD RA 11. Operating 360 RA12. Excavations RA16. Use of Laser equipment



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	<p>Apply Hierarchy of Control in identifying control measures:</p> <p>1 Elimination</p> <p>2 Substitution</p> <p>3 Engineering controls</p> <p>4 Signage/warnings and/or administrative controls</p> <p>5 PPE (Personal Protective Equipment)</p>	RA26. Work near underground services.
4.2	<p>COSHH: Data sheets required for all hazardous materials listed in Section 4.2</p>	Relevant CoSHH assessments include: See CoSHH statements on site notice board or in site folder.
4.3	<p>MANUAL HANDLING: What manual handling activities require a specific assessment?</p>	Moving/positioning backfill materials, PCC pipes, placing concrete
	Can manual handling be avoided?	Not completely
	Are the operatives trained in manual handling?	Yes
	Are the manual handling Risk Assessments attached?	Yes
4.4	<p>NOISE/DUST/VIBRATION: What activities will generate noise, dust or vibration?</p>	Working with Machinery Use of cut off saw
	Are there Risk Assessment attached?	Yes
4.5	<p>OTHERS AFFECTED: Identify other persons that may be affected by the works being carried out.</p>	<ul style="list-style-type: none"> • Other site personnel • Neighbours • Members of the public

5.1 RISK ASSESSMENTS

Assessor: P Byrne		Date: 07.04.2026	Ref.: RA10
Work activity assessed: USE OF FORWARD TIPPING DUMPER			
Persons at risk: Driver, other operatives nearby, public		Persons especially at risk: Public, anyone not aware of proposed operation of dumper	
<p>Hazards identified:</p> <ol style="list-style-type: none"> 1. Vehicle overturning 2. Vehicle falls into excavation. 3. Noise 4. Striking pedestrian (including public and operatives on foot) 5. Driver falls from vehicle. 6. Unplanned movement of dumper 7. Skip falls during maintenance 8. Object strikes driver. 9. Trapped limb 		<p>Problems identified:</p> <p>Safe building of spoil heaps. Dumper when turning and climbing brings skip of articulated machine close to body of machine allowing fingers and hands to become trapped. Swivel tip and high tipping dumpers have high centre of gravity. Centre pin on dumper MUST be greased regularly</p>	



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Specific legislative requirements applicable: Provision and Use of Work Equipment Regulations 1998, and ACOP Construction (Design and Management) Regulations 2015				
References: HSG 150 Health and Safety in Construction. HSE Working with small dumpers. HSE Construction site transport safety: safe use of site dumpers. CIS52rev. HSE A5 safe use of dumper leaflet. Houlihan & Co. Thwaites operators' manuals.				
ASSESSMENT OF RISK				
Risk Rating Score				
Hazard	Numbers	Severity	Likelihood	Risk rating
1,2,4,5,7,8	1	10	5	50
3	1	5	5	25
6	1	10	1	10
9	1	10	1	10
Hierarchy of control measures followed: Selection of plant appropriate to tasks. Vehicle movements kept to a minimum. Traffic management planned to separate moving plant from pedestrians. Instruction, training, independent assessment of driver competence. Maintenance by our team of fitters is planned to keep dumpers in good working order. This is checked and recorded on a weekly basis in Construction Confederation plant record book (green book).				
Current control measures:				
<ol style="list-style-type: none"> 1. Plant driven on level ground so far as practicable; manufacturers' recommendations followed for maximum safe gradient. Safe distance maintained from excavations. Spoil heap regularly graded by 360°. Safe distance maintained from edges of spoil heap. Slopes approached at right angles, not traversed. ROPS fitted. Swivel and high tipping dumpers must not be used off the level, including spoil heaps. 2. Dumpers will not tip directly into excavation (material carried for 360° to place). Driving parallel to excavation, keep depth of excavation clear, minimum 1.5m., to avoid surcharge side of trench. 3. Plant selected for low noise emission as part of purchasing policy. Maintenance regularly. 4. Traffic management planned in association with other site users to separate moving plant and pedestrians where practicable. Flashing warning light fitted and used. Banksman used where driver would be blind, eg. emerging into traffic. Reversing movements kept to minimum by site and task planning. Speed limits observed. 5. Seat belt to be worn at all times. Driver care in relation to site hazards. Mounting and dismounting from driver position use steps and handholds provided and always face machine, as recommended in Thwaites manual. Green light system installed retro- actively on fleet. 6. Vehicle immobilised when not in use: key never left with machine. Dumper must be parked on level ground, within site boundary or secure compound. 7. Maintenance tasks to be carried out by personnel trained for task: common maintenance expected of driver includes lubrication, especially of centre pin where dumper articulates, and cleaning of rams to skip, and for this skip must be blocked up so that it cannot fall. Detail in manufacturer's manual. 8. FOPS are not currently required for sites we work on. If working with demolition then risk assessment would be carried out. Drivers must get off dumper completely when being loaded. Drivers must wear full PPE as on foot. 9. Drivers are trained, authorised as competent by our site foremen and subject to independent assessment. 10. Dumpers used on public highway will be licensed and drivers will have appropriate driving licence. 11. No passengers will be carried under any circumstances. 				



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12. Only use designated handholds, steering wheel, controls while driving machine. Do not "rest" hand on any other part of dumper.		
Summary of risks: Site hazards are almost always present and driver awareness is essential: training must include all facets of operation, type of dumper and appreciation of hazard.		
Control measures required:	Completed	Date
Supervision must ensure seat belts worn, speed limits observed etc. Repeat offenders will not be allowed to drive dumpers, and NVQ assessment suspended for them.	Ongoing	
Health surveillance required: Whole body vibration from manufacturers' figures is less than dose which could cause harm.		
Company Procedures applicable: Manufacturer's operating instructions to be followed.		
Overall Resultant Risk: Low, with control measures in place		
Next Review date: NA		

Assessor: P Byrne		Date: 07.04.2026	Ref: RA11
Work activity assessed: OPERATING 360° EXCAVATORS			
Persons at risk: Operators, operatives on site, public		Persons especially at risk: Public, inexperienced site workers, anyone unfamiliar with machines	
Hazards identified: <ol style="list-style-type: none"> 1. Unplanned drop of load 2. Machine overturns 3. Materials drop from bucket 4. Machine strikes person 5. Noise from machine/ operation 6. Vibration from machine/ attachments 7. Underground service strike 8. Hydraulic line bursting 9. Environment damage from spills 10. Bucket falls 11. Fall from machine 12. Toxic exhaust fumes if operated in or near confined space 13. Contact with overhead obstructions 14. Machine displaces material into trench 15. Creation of spoil heaps too close to excavations; face of spoil heap too shear 16. Machine strikes structure, plant 17. Driver struck by debris 18. Unauthorised driver takes machine 		Problems identified: <p>Restricted vision of driver. Site conditions. Uncertainty about line and depth of services. Weight of load unknown. Refuelling, maintenance on open site</p>	
Specific legislative requirements applicable: Provision and Use of Work Equipment Regulations 1998 Lifting Operations and Lifting Equipment Regulations 1998			
References: CIRIA Trenching Practice			



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Manufacturers' operating manuals				
ASSESSMENT OF RISK				
Risk Rating Score				
Hazard	Numbers	Severity	Likelihood	Risk rating
1-18	1	10	5	50
<p>Hierarchy of control measures followed: Purchasing policy is to select plant with reference to noise emissions, vibration, including WBV, all round visibility/awareness. The incorporation of quick-hitch mechanisms eliminates the need to manually place a detachable safety pin. All our drivers are undergoing continuing assessment towards full NVQs in addition to CPCS certification.</p> <p>Current control measures:</p> <ol style="list-style-type: none"> 1. Check valves fitted to all rams 2. Machine selected for ground conditions, capacity of machine. Driver trained in all operations required of him: e.g. Use of Hammer master. Travel and operation on sloping ground to be monitored to ensure machine stability. 3. Bucket not to be overfilled, no-one ever under bucket. Dumper driver off machine before loading. 4.6. No-one to stand within operating radius of machine unless driver permits. All 360° excavators have mirrors and cameras to reduce blind spots. 600mm clearance minimum to be allowed. Driver not to be approached from blindside. In congested site areas, banksman to guide machine. 5.6 Machines selected for low noise and vibration emission. Where possible no-one to work within 10.0m. of machine or if essential, ear protection will be worn. 7. No excavation allowed before drawings, records consulted and scanning. Scanning will be continuous through excavation. 8. Planned maintenance programme for excavators. Inspection by driver every day before work and weekly inspection recorded in F91 equivalent. 9. Refuelling in designated area with spill tray, spill emergency kit available. 10. On some but not all machines it is possible to see from the cab whether the bucket is correctly engaged. It is therefore essential that when a bucket is attached, it is immediately tested by uncurling the arm, with minimum ground clearance, and shaking it. If there is a load in the bucket that would prevent this, the driver must get out of the cab to inspect the bucket pins. On the new JS160 and JS145 there is a different procedure advised by JCB. To check whether the bucket is correctly attached, it must be pushed into the ground when the message Q/HITCH ? appears and the buzzer sounds. Only after this check has been performed can the ACK (for acknowledge) button be pressed to turn off the warning buzzer. Areas to change the buckets will be designated, as work progresses. Wherever the buckets are to be changed, an exclusion zone for pedestrians will be set up. The driver will not start or continue operations if anyone comes within 5.0m.: this will be within his area of vision constantly. 11. If the machine is iced, care must be taken in climbing on to the chassis. There are roughened steps to walk on. If the operation is to secure security covers, help from another operative must be sought, especially in high winds. 12. Machine will be placed so that exhaust does not enter trench. If this cannot be avoided, all operatives will be taken out of trench and no return until gas monitoring for adequate oxygen and absence of toxic fumes has been carried out. 13. If transitting under overhead obstructions, including services, the clearance necessary will be made known to the driver and marked with warning tape on goal posts. If working under overhead obstructions, additional precautions will be necessary: selection of plant which cannot enter the clearance zone or physical restrictors on the boom. 14. No machine will be allowed to track parallel to a trench within a distance equal to the trench depth: this would surcharge the trench sides, or cause the trench wall to slide. 15. Spoil heaps must be more than the trench depth distance from the edge of the trench. Spoil heaps must be prevented from becoming too steep: the excavator driver will monitor the building of the heap and will 				



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<p>knock it down to a safe angle as required. When using the spoil heap, no sheer face must be left standing after material is excavated.</p> <p>17. The cab of the excavator will have falling object protection where there is the risk of material falling on the cab.</p> <p>18. There will be a duty chart for lifting operations in the cab of all machines, either on display or readily available in the manufacture’s manual. Lifting eyes are stamped with safe working loads. All machines are thoroughly examined every 12 months and the certificate resulting from the examination is kept in the cab.</p>		
<p>Summary of risks: The excavators used by the company are of recent manufacture and selected for the tasks in hand. All machines have blind spots which restrict drivers’ vision and this must be controlled. If not driven by competent drivers they can overturn and any contact with the machines in motion will result in damage or injury.</p>		
<p>Control measures required:</p>		
<p>Additional training for site operatives Driver competence is continually assessed by site foremen.</p>	<p>Ongoing Ongoing</p>	<p>Date</p>
<p>Health surveillance required: No</p>		

<p>Assessor: P Byrne</p>		<p>Date: 07.04.2026</p>	<p>Ref.: RA12</p>
<p>Work activity assessed: EXCAVATIONS (for drainage, service trenches, ground remediation, structures below ground level)</p>			
<p>Persons at risk: Groundworkers, excavator drivers</p>		<p>Persons especially at risk: Public, visitors to site</p>	
<p>Hazards identified:</p> <ol style="list-style-type: none"> 1. Collapse of trench sides 2. Fall of materials into excavation 3. Fall of operatives into “ 4. Fall of machinery into “ 5. Contact with live services 6. Flooding of excavations 7. Presence of hazardous atmosphere 8. Contact with contaminated land 9. Undermining adjacent temporary or permanent structures 10. Casualty at bottom of excavation 		<p>Problems identified:</p> <p>Lack of design details preventing forward planning of expected trench depths to allow provision of support</p> <p>Uncertainty of position of existing services both to avoid or make connections</p> <p>Position of services precludes use of trench box</p> <p>Inadequate site investigation not revealing extent of contamination</p> <p>Casualty in excavation should not be moved until paramedics have triaged, but they need access and egress for IP, and casualty may have to be moved if there is continuing exposure to harm.</p>	
<p>Specific legislative requirements applicable: Confined Spaces Regulations 1997 Construction (Design and Management) Regulations 2015 Management of Health and Safety at Work Regulations 1999 Personal Protective Equipment at Work Regulations 2002 Provision and Use of Work Equipment Regulations 1998 Control of Substances Hazardous to Health Regulations 2002 Lifting Operations and Lifting Equipment Regulations 1998 Health and Safety at Work etc. Act 1974</p> <p>Other standards:</p>			



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ACOPs to above Legislation Thames Water Code of Practice for Work in confined Spaces, issue 4, Aug. 2000 Trenching Practice, CIRIA Proprietary Trench Support Systems, CIRIA Trenchless Construction for Underground Services, CIRIA				
ASSESSMENT OF RISK Risk Rating Score				
Hazard	Numbers	Severity	Likelihood	Risk rating
1-8	1	5	5	25
9	2	10	5	100
10	1	5	5	25
Hierarchy of control measures followed: Avoidance of excavation by use of trenchless technology which does not involve man entry (augur boring, directional drilling, moling, bursting existing pipes, pipe ramming and micro-tunnelling); avoidance of excavation by use of pipejacking or tunnelling which does involve man entry; open trench excavation with control measures. Reducing site levels generally or installation of drainage etc. before site levels are raised will be considered before work starts.				
Current control measures: <ol style="list-style-type: none"> 1. Collapse will be prevented by battering trench sides to safe angle of repose for ground conditions; benching (stepping) sides, again using the safe angle of repose to determine the size of the steps; use of proprietary systems of support; use of trench sheets with hydraulic waling frames; use of hydraulic vertical shores with sheeting or hit and miss; or designed king post systems. 2. Fall of materials will be prevented by the shoring system selected, which will be allowed to project above ground level to form at least the equivalent of a toe board. Spoil heaps will be kept back from the edge of the trench by at least 1.0m. (or more if the trench is deeper than 1.0m. and the weight of the spoil heap as a charge on the side of the trench must be avoided in the calculations for loading). No lifting will be permitted over head of operatives in the trench, and tag lines will be used if guidance is needed to land a load. 3. Access will be by ladders of suitable length. Proprietary ladder/ access units will be preferred. No climbing will be allowed on trench supports. If necessary, there will be properly designed trench crossing points, but the need for crossing will generally be avoided by excavating lengths short enough to be backfilled within the shift, using lasers to keep to line and level. If the trench support system does not project above ground level by at least 1.0m., guard rails will be attached to the top of the trench supports: proprietary guard rail systems will be ordered in or adjustable post clamps which adjust from trench sheet thickness to trench box side wall thickness attached to allow attachment of scaffold tubes horizontally. 4. Excavators will keep clear of excavation sides when tracking parallel. Backfilling will be done by excavator where possible instead of dumpers tipping in. If dumpers are tipping into the excavation, no-one will be in it, and anchored stop blocks will be placed at a safe distance from the edge of the excavation. The excavation will be marked with orange netting on road pins if there is a possibility of drivers not being aware of the presence of the excavation. 5. Before any excavation takes place, utility drawings, results of radar and electromagnetic detection scanning will have been consulted. Previous demolition reports on decommissioning services will be confirmed and meetings with the utility companies arranged to confirm details particularly positions of terminations and diversions. Scanning using a Cable Avoidance Tool and transmitter will take place before work starts and as the dig progresses. Known services will be marked using offsets, and depth of services confirmed by safe digging techniques. 				



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6. Presence of water mains, watercourses and highwater tables will be treated as high risk. Dewatering techniques will be employed as necessary and any ingress of water will be risk assessed to allow a site response after the trench has been evacuated.
7. Where the trench is deep enough or includes a connection to a live sewer or for any other reason could be defined as a confined space, Confined Space procedure and the additional Risk Assessment for these will apply. In all cases, machinery will be sited to prevent exhaust gases ending up in the trench.
8. Ground reports will be consulted to identify risks from contaminated land and the environmental scientists consulted if we have concerns about specific contaminants. In this case specific monitoring regimes will be designed and implemented.
9. All structures, temporary or permanent, within a distance from the trench edge equal to the depth of the trench should be considered to surcharge the trench side. If the trench side does not support this imposed load, then the trench will collapse and the structure may collapse unless otherwise restrained. The line of all trench runs will be examined at planning stage and again before work starts in case new structures have been erected. If the line of a trench cannot be altered to avoid risk, then support for structures must be introduced before excavation starts. This could involve piled supports for permanent structures to spurring up of scaffolds locally to standards. Shallow excavations are included: the depth must still be compared to the distance from a structure. Also included are short excavations and those only briefly open: time of exposure is a factor but the transfer of loads over time cannot be calculated exactly. Houlihan & Co. will not excavate under scaffolds or adjacent to them before scaffold adaptation by spurring or introduction of ladder beams has taken place. NOTE: Any scaffold adaptation will be by the scaffolding contractor.
10. Emergency evacuation will be prepared for:
 Down to 4.0m., the excavator driver will create a ramp at approximately 20° from the bottom of the trench up to ground level by pulling material away in the direction of drive. The ground to the sides of this ramp will be pulled back at 45° to prevent falling material during evacuation. If there are services behind the excavator, the driver will move to the end where the pipe has already been laid and backfilled and create a ramp from bottom of trench to ground level, cutting back the sides.
 From 4.0m. to 6.0m., a davit arm with winch will be deployed on the side of the trench box, with a rescue stretcher placed by the casualty for evacuation controlled by the paramedics.
 Below 6.0m. a combination of sheet piling and battering or benching will be used to a temporary works design. A davit arm will be set up as before on the top of the sheet piles, with a landing platform adjacent to where the excavator will have dug itself in. The excavator will pull a ramp from the top of the piles to ground level for the second stage of the evacuation.

Summary of risks:

The residual risk resides in planning and management issues. The technical solutions are available. Reaction to the unexpected, for example the unexpected presence of services that preclude the use of the planned trench box, is what we are concentrating on. The use by Principal Contractors of variations on Permit to Work systems is to be welcomed in this regard, and our co-operation is essential. If unsure as to how to proceed, work must be stopped and replanned: Houlihan & Co. will not expect any competent member of staff to rush work because of changing circumstances: CONTACT H&S MANAGER IF IN DOUBT.

Control measures required:	Completed	Date
Co-operation with Principal Contactor's permits to work. A checklist will be introduced to sign off the task as ready to excavate.	Ongoing Completed	

Health surveillance required: No

Company Procedures applicable:
Emergency evacuation procedure- trenches; temporary works procedure

Overall Resultant Risk: Low, with control measures in place

Next Review date: 19.04.2024



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Assessor: P Byrne		Date: 07.04.2026		Ref.: RA16	
Work activity assessed: USE OF LASER EQUIPMENT TO SET OUT					
Persons at risk: Operative using equipment, operatives nearby.			Persons especially at risk: Untrained personnel, young person		
Hazards identified: 1. Injury to eyes 2. Damage to skin			Problems identified: Risk not understood, underestimated. Flashing safety lights on site can interfere with levels, necessitating removal of machinery or turning off rotating orange lights while plant is in vicinity. Risk migrates to plant/ pedestrian interface: engineer/ site foreman must authorise lights off, arrange work to minimise time this is necessary and arrange banking vehicles if required.		
Specific legislative requirements applicable: Provision and Use of Work Equipment Regulations 1998, and ACOP Construction (Design and Management) Regulations 2015					
References: Construction Health and Safety Manual, Construction Confederation BS 7192: Specification for radiation safety for laser products BS EN 60825: 1994-: Radiation safety of laser products, equipment classification, requirements and users' guide.					
ASSESSMENT OF RISK Risk Rating Score					
Hazard	Numbers	Severity	Likelihood	Risk rating	
1,2	1	5	5	25	
Hierarchy of control measures followed: Hazard cannot reasonably be eliminated or substituted as technique is cost effective, increases accuracy of work and allows early backfilling of excavations. The risk can be minimised at source but in use a laser beam must be emitted over some distance. A safe system of work is in place, instruction and training has been given to operatives and they are competently supervised.					
Current control measures: Lowest powered equipment suitable for purpose has been selected: i.e. Class 2. Laser beams are not directed towards personnel or vehicles. Equipment is switched off when not in use. The beam is terminated by a target at the end of its path. All workers using laser levels and pipe levels have been trained in their use.					
Summary of risks: Some energy will be released, albeit directionally and terminated safely as soon as practicable, in every use of a laser level. A safe system of work must address the possibility of lack of training or awareness leading to deliberate exposure to the beam.					
Control measures required:			Completed	Date	
Supervision of use of lasers required			Ongoing	Ongoing	
Training and instruction of new entrants			Ongoing		
Health surveillance required: No					
Company Procedures applicable:					
Overall Resultant Risk: Low, with control measures in place					
Review date: NA					



RISK ASSESSMENT

<p>Assessor: P Byrne</p>	<p>Date: 07.04.2026</p>	<p>Ref.: RA26</p>
<p>Work activity assessed: Work near underground services</p>		
<p>Persons at risk: Public, plant operatives, engineers, operatives’ hand-digging, operatives nearby</p>	<p>Persons especially at risk: Public, inexperienced operatives</p>	
<p>Hazards identified:</p> <ol style="list-style-type: none"> 1. Striking electric cable: Contact with live conductor-electrocution Burns from electricity arcing Explosion Service interruption in safety critical situation 2. Striking gas pipeline: Release of gas leading to asphyxiation, explosion, fire 3. Striking water main; Flooding excavation, possible trench collapse, drowning 4. Breaking sewer: Contact with sewage, and as water if flow strong enough 5. Striking telecommunications cable: Communications between third parties interrupted in safety critical situation 6. Striking district heating system: Contact with superheated, pressurised steam Contact with asbestos in insulation and joints 7. Striking pipelines, government or private: Release of fuel oil or gas under pressure leading to fire, 	<p>Problems identified:</p> <p>Lack of information as to line and depth of services No knowledge of service present at all Service installed at “wrong” (unexpected) depth Cover to services reduced Private service records may not be exact or be recoverable District heating was not recorded as it was installed No record kept of insulation/ jointing/ backfill material used Utility companies record “mains” not “services” Disconnection points not recorded: disconnected services can rise live Disconnected service not pulled out: cables uncovered subsequently cannot be identified as those disconnected Cable not required looped on site and live: position/ configuration not recorded Temporary services not recorded and marked New services not recorded as built, not marked out, made live unnecessarily early Service diversions are not diverted outside the working area The caveats on service company drawings have when challenged been deemed to stretch to an accuracy of +/- 4.0m. Line of service run not straight or perpendicular Services in common trenches cannot be co-ordinated for deepest first including service</p>	



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<p>explosion, environmental damage</p> <ol style="list-style-type: none"> 8. Work while wearing flame resistant clothing must be carefully supervised to ensure heat stress is avoided 9. Degraded PPE is intrinsically harmful due to chemicals used to impregnate and worse than useless in the event of arcing or explosion. 10. Insulated tools are only to be used around low voltage cables and only for clearing material away from excavation by air pick as they will be ineffective for high voltages 	<p>tapings, requiring re-visit, digging on or near live services as made live too early. Hand digging for extended lengths is not costed or designed out in the build sequence. Hand digging not intrinsically safe unless air pick is used. Insulated tools have a limited role to play: they are only effective if contact is made with low voltage conductors-i.e. up to 1,000v. Flame retardant clothing has a use but some risk migrates: the clothing can contribute to heat stress, and to heat stroke/ exhaustion; it is impregnated with chemicals which should not be in contact with the skin and so must be continuously checked for degrading. Fire resistant clothing like Nomex is preferred. The first requirement before deploying PPE is to obtain an arc flash risk assessment from the DNO in order to match the level of protection to the calorific value of the arc. The coveralls must be cleaned according to the manufacturer's instructions and checked after washing. Neither tools nor PPE is a panacea: avoidance of contact and prevention of arcing are the first essentials. Material used in gas pipework is not traceable Trenchless technology results in service laid without warning tape, or protection, or even change in backfill material</p>
<p>Specific legislative requirements applicable: Electricity at Work Regulations New Roads and Street Works Act 1991 Construction (Design and Management) Regulations 2015</p>	
<p>References: HSG 47 Avoiding danger from underground services HSE CAT and Genny user training programme video Radio detection Ltd. CAT and transmitter DVD from Ezicat PAS 128 Ref - REPORT 611252</p>	
<p>ASSESSMENT OF RISK</p> <p>Risk Rating Score</p>	



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Hazard	Numbers	Severity	Likelihood	Risk rating
1-7	2	10	5	100
<p>Hierarchy of control measures followed: Avoidance of work near live services by design, diverting or decommissioning services. The hierarchy set out in the Electricity at Work Regulations must be applied when work on or near live services is considered. Trenchless technology may allow connections to be made at a depth below all services but sewers. Training will be very specific and must point out the limitations of PPE and “safe” digging</p>				
<p>Current control measures:</p> <p>Pre-tender and Construction Phase Health and Safety Plans will be used and considered in light of additional information from utilities' plan drawings, section drawings from utility companies recording depth of services and commissioned ground probing radar surveys as necessary. Drawings used should be original to ensure colour coding matches legends and scale is not lost i.e. no photocopies. All services will be presumed to be live until proven otherwise. Consultation will take place with service providers with a site meeting where possible. Their advice/ conditions will be taken as to safe working distances. A cable avoidance tool will be used by a competent person, prior to the commencement and during any work, to identify all services and ducts. The intention will be to bring up to date records of existing services and to supplement these records where they are deficient. Services found will be clearly identified to avoid the risk of damage and where necessary, we will hand dig to expose them prior to full excavation. Services will be marked out and the marking maintained if necessary by use of offsets. This will include temporary services. Record drawings will be red-lined to show the most up to date information, held available on site for consultation and details communicated at inductions, tool box talks and in careful briefing on site prior to excavation. Great care will be taken to establish what is meant by “terminations” or “diversions” and any assertion that there are “no” services will be treated with caution. Techniques using ground penetrating radar will be considered where information is clearly deficient and services are congested. We will comply with any site Permit to Dig system and use the permit conditions as a checklist: it is NOT a formality. NOTE: HSE state if working live, a PTW is NOT appropriate and a full method statement is required. Services crossing excavations must be supported. Services in concrete must be isolated before breaking operations begin. Operatives will be trained in use of Cable Avoidance Tools, safe digging techniques and interpretation of service company drawings. An air pick will be the tool of first choice when the hard surface is broken through.</p>				



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To supplement the airpick, insulated spades or shovels will be used to pull away large sections of material which cannot be burst with the air pick.
 Flame retardant clothing will be worn by any operative within the potential arc from the conductor.
 Backfill will be with sand or suitable granular material rather than selected as dug, up to the depth where compaction is required..
 Work will be supervised at all times.
 In the event of a service strike, this will be reported immediately to the relevant service company’s emergency line. This number will be on the Houlihan & Co. emergency procedure poster. N.B. Electricity supply after a strike will be resumed after 20 minutes if no report of a strike is made, as part of their fault finding process. Electricity supply from an overhead line passing underground will continually try to re-energise over the gap caused by the strike, until there is too big a gap for the electricity to arc across.

Summary of risks:
 Uncertainty will always exist as to records of service positions until HAUC codes of practice are in place and historical records updated. Depth of cover is not certain over time however deep the installation originally. The danger is of death in most cases. Connections to mains services cannot be easily avoided.
 No PPE or insulated tool solution makes work “on or near” safe: their use must not lead to careless planning or acceptance of live working as normal.

Control measures required:	Completed	Date
Training in safe digging and use of CAT is essential and supervision must ensure competence. Use of transmitter mode is absolutely essential. Emergency procedures must be understood Designers must be aware of risks in common trenches Principal Contractors must ensure build sequence does not dictate necessity of live working Principal Contractors must commission removal of redundant services, and always consider the hierarchy in the Electricity at Work Regulations before deciding to work on or near live services Specialised teams for work on or near live services: training in required procedures; continuing consultation	Ongoing Ongoing	



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Going forward, recommendations for PAS 128 will be followed in recording geospatial locations, and records acquired must be within 90 days		
Health surveillance required: Not unless exposure to gas, sewage, fuel oil takes place		
Company Procedures applicable: Use of excavators Use of Cable Avoidance Tools Use of insulated spades Use of air pick Wearing fire resistant clothing		
Overall Resultant Risk: Low, if control measures are in place.		
Review date: 07.04.2027		

6.0 PERMITS TO WORK	
6.1	PERMIT TYPE: Permit to work to be filled out at the start of shift. Hot works permits. Permit to Dig.
6.2	<p>All plant operators to carry CPCS/NPORS qualification.</p> <ul style="list-style-type: none"> Operatives involved in the excavation around live services have been issued protective clothing, air picks and insulated equipment. Operatives have been briefed in safe digging techniques. Sufficient time and resources will be made available to undertake the work involved. The works described will be undertaken by 1 gang of 3 - 4 operatives under the supervision of a competent Supervisor and Site Engineer. The Contracts Manager will visit the site as often as required. The Contracts Manager will report to our Managing Director, who in turn will visit site on a weekly basis. The Health and Safety Manager will visit at least monthly to monitor compliance with the Method Statement, Risk assessments. He will also carry out inductions and a regular programme of tool box talks, and investigates all site accidents and near misses. All our operatives have undertaken safety training within the last 2 years. Our Managers and Directors have also attended Safety Courses. All personnel have a schedule of health and safety training to undertake over the next 2 years in order to maintain our high standards. <p>SPECIAL TRAINING: Outline clearly activities requiring training that are going to take place on site. If a certain standard of training is required, then ensure it is detailed here. Operative must be trained and competent in the use of abrasive wheels and cartridge operated tools etc. (all training requirements must be fulfilled prior to operatives being set to work) and will require copies of certification.</p>



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		<ul style="list-style-type: none"> Machine operators are all certificated to CITB standards and copies of certification readily available from Head Office. <p>All our workforce is have or are presently undergoing on-site assessment via the CITB experienced worker route. This leads to National Vocational Qualifications in Construction Operations (5 NVQs: General, Large diameter drainage, Structural concreting, Kerbs and channels and Slabs with modular paving) and Plant Operations for all relevant categories of plant. Our whole workforce will then be accredited under the Construction Skills Certification Scheme.</p>
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7.0	PERSONAL PROTECTIVE EQUIPMENT	
7.1	MANDATORY SITE PPE: PPE is the last line of defence, it only protects the wearer and not other workers who may not be wearing PPE, you should ensure all other reasonably practicable control measures have been put in place first.	<ul style="list-style-type: none"> Safety helmets EN 397 High visibility vest / jacket EN 471 Class 2 Safety Gloves EN 388 Hearing protection EN 352-2. Safety boots to EN 345: S1-P
7.2	TASK SPECIFIC PPE: Identified as per Risk Assessment	<ul style="list-style-type: none"> Arc flash protective clothing EN 1149-5:2008 Arc flash protective face shield EN 166 Arc flash protective gauntlets EN 407: 2004 – 4x3xxx. EN 388: 2003 – 1111. This glove does not provide protection from electric shock.

8.0	EMERGENCY ARRANGEMENTS
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8.1	<p>RESCUE: This should include address, phone number and details of the nearest accident and emergency hospital. It may also show routes or directions on how to reach it. Also show on-site arrangements for first aid including names and locations of first aid personnel.</p>	<p>As for the PC's emergency response plan as given in the induction. In the event of a fire, on hearing the fire alarm, all personnel will go to the muster point. Leave by the nearest exit and make yourself known to the site supervisor. Remain at the muster point until instructed The nearest hospital is: Tunbridge Wells Hospital, Pembury, Tunbridge Wells, Kent, TN2 4Qj</p> <p>01892 823535 Direction located in site office</p>
8.2	FIRST AID (QUALIFIED PERSON):	Pat Houlihan – Matt McEvoy

9.0	SITE WORK REQUIREMENTS	
9.1	<p>PEDESTRAIN / TRAFFIC REROUTING ARRANGEMENTS: Will your works interfere with current pedestrian / traffic arrangements?</p>	<p>PC traffic management plan in place. All excavations to be fenced off with Heras fencing, Double clipped.</p>
9.2	DETAILS OF PEDESTRIAN / TRAFFIC / REROUTING ARRANGEMENTS.	Any rerouting arrangements will be posted, and all sub-contractors will be notified in morning safety briefing.
9.3	SPECIFIC FIRE SAFETY ARRANGEMENTS:	<p>As for the PC's fire arrangements. In the event of a fire, on hearing the fire alarm, all personnel will go to the muster point. Leave by the nearest exit and make yourself known to the site supervisor. Remain at the muster point until instructed</p>
9.4	<p>RESPONSIBILITY FOR TASK LIGHTING: Consideration should be given to site hours; this may immediately highlight the need to artificial</p>	N/A



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	lighting if work starts before first light or continues after dusk. Additionally, the requirement for general site lighting and specific task.	
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10.0 MONITORING & REVIEWING				
10.1	PERSON RESPONSIBLE FOR MONITORING SAFE SYSTEM OF WORK AND ENSURING COMPLIANCE: Show here who the Contracts Manager, Site Manager, Foreman/Supervisor is, what each will be responsible for, and their contract numbers.	NAME	JOB TITLE	TYPE
		Conar Gough	Contract Manager	Oversee safety
		Matt McEvoy	Supervisor	Weekly checks
		TBN	Plant operators	Daily checks on equipment
		P Byrne	H&S Adviser	Overall safety
10.2	REVIEW DATE / SCHEDULE:	This document is to be reviewed as work progresses but especially before starting. Any changes required or production of new Method Statements, contact Alban Shehu (07584 809 221), alban.shehu@houlihans.co.uk		
10.3	AMENDMENTS AUTHORISED BY:	Matt McEvoy– Patrick Byrne – Conar Gough		
10.4	AMENDMENTS COMMUNICATED TO:	Houlihan's Supervisor, Operatives and PC's Site Management Team		

11.0 COMMUNICATIONS		
11.1	TO WHOM THE INFORMATION / WILL BE COMMUNICATED AND HOW? (TO INCLUDE NON ENGLISH SPEAKING OPERATIVES):	All persons involved in the operation. Communicated by MS briefing prior to works commencing.
11.2	CONFIRMATION OF OPERATIVES BRIEFING: MS for Working around live services MS-SCC-1002 Rev 1	
I have been briefed on the requirements of, and the risks involved with, the operation detailed above and fully understand the contents and implications. I was given the opportunity to discuss any points which I did not understand or that I felt were important in the interests of the health, safety or welfare of myself or others.		
NAME:	SIGNATURE:	DATE:




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	Tex 150PE Breaker	4.5m/s ²	2hr 28mins	9hr 53mins	90dB(A)	10 / 41
	Atlas Copco LT5005	6.4m/s	1hr 13mins	4hr 53mins	106dB(A)	20 / 82
	Sullair SK 110	3.9m/s ²	3hr.17mins	13.09 mins	95Db(A)	8/30
	Vibrating Poker	4m/s ²	3hr 08mins	12hr 30mins	85dB(A)	8 / 32
	Wacker Plate Belle 320-574mmx320mm	2.42m/s	8hr 32 mins	>24hr	101dB(A)	3 / 12
	Wacker Plate13/40Belle 720mmx400mm	3.20m/s	4hr 53 mins	19hr 32 mins	105dB(a)	5 / 20
	Wacker Plate Belle 320-720mmx320mm	4.43m/s	2hr 33 mins	10hr 11 mins	105dB(A)	10 / 39
	MBW Plate Compactor GBX Series 3550	4.5m/s	2hr 28mins	9hr 53mins		
	Plate compactor	5.18m/s ²	1hr 52mins	7hr 27mins	93dB(A)	13.4/54
	LF75 Vibration Plate	6m/s ²	1hr 23mins	5hr 33mins		18/72
	Wacker Plate Bomag/1845	7.3m/s	0hr 56min	3hr 45mins	89dB(A)	27 / 107
	Skill saw 5903R	3.0m/s ²	5hr 33mins	22hr 13mins	95dB(A)	4.5/18
	Airsaw Toku 9"	3.6m/s	3hr 51min	15hr 26 min	82Db(A)	35
	Petrol Saw Stihl/TS410	3.9m/s	3hr 17 mins	13hr 9 mins	98dB(A)	8 / 30
	Petrol Saw Stihl/TS420	3.9m/s	3hr 17 mins	13hr 9mins	98Db(A)	8 / 30
	Petrol Saw Stihl/TS800	Left/6.5 Right3.9m/s			116dB(A)	
	Cut-off Saw Stihls	3.90m/s ²	3hr 17mins	13hr 09mins	98dB(A)	7.5/30
	Bosch Angle Grinder GWS 7-115	6.5m/s	1hr 11 mins	4hr 44 mins	91dB(A)	
	Hilti DD130	2.2m/s ²	10hr 20mins	24hr mins	80dB(A)	2.2/10



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	Hilti TE 800 AVR	9m/s ²	3hr 0mins	12hr 0mins	87dB(A)	8/32
	Stirrer Drill / Paddle Mixer	3.5m/s ²	4hr 5mins	16hr 20min	87dB(A)	6 / 25
	Ausa 3t Dumper	m/s ²	hr mins	hr mins	101dB(A)	
	Thwaites 9t FTD	m/s ²	hr mins	hr mins	103dB(A)	
	Takeuchi 1.5t	m/s ²	hr mins	hr mins	93dB(A)	
	JCB 4.5t	m/s ²	hr mins	hr mins	94dB(A)	70(dBA) cab
	JCB 13t	m/s ²	hr mins	hr mins	101dB(A)	70(dBA) cab
	Doosan 14t	m/s ²	hr mins	hr mins	101dB(A)	70(dBA) cab
	Doosan 22.5t	m/s ²	hr mins	hr mins	105dB(A)	70(dBA) cab
	JCB 22t	m/s ²	hr mins	hr mins	105dB(A)	70(dBA) cab
	Bomag 135 AD	2.5m/s	8hr	>24hr	106dB(A)	
	Rammax	Remote control	hr mins	hr mins	109dB(A)	
	Bosch Angle Grinder GWS 7-115	6.5m/s	1hr 11 mins	4hr 44 mins	91dB(A)	
	Pramac 10KVA	m/s ²	hr mins	hr mins	70dB(A)	@ 7 mts
	Soil-Mech 4 piling rig	m/s ²	hr mins	hr mins	103dB(A)	
	SP11 screed pump	m/s ²	hr mins	hr mins	79dB(A)	



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13.0	Relevant Acts, Regulations, Codes of Practice and British Standards
13.1	<p>All work will be carried out under the following Acts, Regulations, Codes of Practice and British Standards:</p> <p><u>Legislation</u> Health & Safety at Work Act etc. 1974 Management of Health and Safety at Work Regulations 1999 Construction (Design & Management) Regulations 2015 Electricity at Work Regulations 1989 Provision and Use of Work Equipment Regulations 1998 (PUWER) Lifting Operations and Lifting Equipment Regulations 1998 (LOLER) Control of Substances Hazardous to Health Regulations 1996. The Work at Height Regulations 2005 Personal Protective Equipment at Work Regulations 1992 Control of pollution Act 1974 Environmental Protection Act 1990 Manual Handling Regulations 2002 The Control of Noise at Work regulations 2005</p> <p><u>HSE Guidance</u> HSG 47 Avoiding danger from underground services. HSG 66 The Protection of Workers and the General Public during the Development of Contaminated Land HSG 151 Protecting the public HSG 185 Health and Safety in Excavations HSG 245 Investigating Accidents INDG163 5 steps to Risk Assessment INDG84 Leptospirosis</p> <p><u>Other Sources</u> BS 5228 Code of Practice for Noise Control BS 7121-1:2016 Code of practice for safe use of cranes. General R132 CIRIA " A guide for Safe Working on Contaminated Sites" PAS 256 Buried assets, Capturing, recording, maintaining and sharing location data.</p>