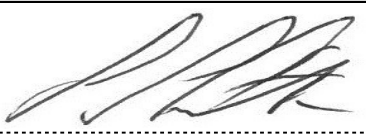


Client:	Electricity North West Ltd		
Project:	Eastlands Primary Substation, off Rowsley Street, Beswick, Manchester, M11 3JJ – 33kV Substation Expansion Civil Work		
Document Ref:	13112/RAMS/2	Revision:	
	Name:	Signature:	Date:
Prepared By:	Stephen Smith		19 th October 2023
Works Outline:	Excavation Works to Formation Level & Aggregate Placement Works		
Construction Drawings References:	100138-00158-001, 100138-00159-003,		
	Scheduled Start:	Scheduled Finish:	
Programme:			
Supervisory Contacts	Name:	Mobile Number:	
Site Overall:	John Patrick Bleasdale	07903 024 080	
Project Level:	Stephen Smith	07977 415 886	
Method and Sequence of Work Requirements Including Control Measures:			
Planning & Preparation - All civil works will be supervised by an Kaberry Authorised Person who will provide “immediate supervision” to Kaberry works party in the interest of their Health & Safety - No works will be permitted until the necessary access restrictions are in place and H&S paperwork is in place i.e., Issue of Limitation of Access to Kaberry supervisor (if applicable), site induction and signing on to the Risk Assessment / Method Statement (RAMS) documents. - The works and details therein to be carried out will be communicated by the Kaberry project manager to the site supervisor (and operatives as required) in advance of starting to assist in forming safe systems of work. Competence - Only competent operatives with relevant accreditations will undertake the works (a separate log of individual qualifications to be provided as further evidence of relevant skills, knowledge, training and experience on request) Induction - All site personnel will be given a site induction by Electricity North West representative before the commencement of any work activities. Any new personnel brought to site after day one will also need inducted by either Electricity North West representative or Kaberry site supervisor. - At the site induction all operatives will be given appropriate information and site-specific rules whilst working on this construction site. Induction will include site access/egress, traffic routes, speed limits, working areas and other general hazards and controls, PPE requirements, first aid details, emergency procedures and welfare facilities will also be discussed during the site induction. - All operatives will confirm that they will adhere to Electricity North West site rules and are to be aware of their individual responsibilities whilst working on this construction site.			

Deliveries/Collections & Supervision of Drivers

- Site access and egress will be via the shared entrance gates off Rowsley Street
- All delivery & collection drivers will be met at the entrance gates by a Kaberry traffic co-ordinator and will be given specific instructions in relation to drop-off/collection points / storage zones. Drivers will be shown the CDM Boundary drawings on arrival to site to identify the site zones they are permitted to access whilst on site. Drivers will be given personal supervision by the Kaberry traffic co-ordinator during entry /exit from site and during unloading/loading of goods.
- Any other plant and materials will be brought to site as required by Kaberry operatives and stored either in a Kaberry works vehicle, site storage container or agreed laydown areas.
- Current plant inspection records will be obtained by the relevant hire companies and copies shall be retained within the site held construction health & safety plan.
- Current LOLER certificates of examination for all lifting equipment will be obtained by the relevant suppliers/hire company and copies shall be retained within the site held construction health & safety plan.

Excavation Works to Formation Level & Aggregate Placement Works

- Current Service Records will be provided and communicated to Kaberry workforce by either Electricity North West Engineers or Kaberry Site Supervisor which are to be used for guidance only of all known above/underground services in works vicinity. **(Please note these are a general guide only and should not be used to scale off measurements to plot service locations!)**
- Any other founded knowledge of the site should be made available by ENWL which may be beneficial to the works package.
- A CAT survey of the works area must be carried out by a trained operative who holds a valid certificate in avoidance of underground apparatus and all LIVE services found to impede within footprint of all excavations will be marked out by an identifiable means e.g., line marker spray etc.
- Excavation of trial pits /slit trenches to all areas where known underground services have been located will be executed by hand digging techniques only.
- Slit trenches will be hand dug at 90 degrees to each underground service run to carefully expose and plot the exact locations/depths of these services.
- All excavation works of sub-base materials to slit trenches must only be hand excavated every 2m – 4m along the length of any underground utility services requiring identification down to a level that will either prove the presence or eliminate the presence of any live utility services in the immediate area.
- All hand digging will be in accordance with HSG47 Avoiding Danger from Underground Services
- All hand digging will be carried out with use of non-conductive shovels/grafts, no picks or bars are permitted.
- Once any impeding underground services have been exposed to the satisfaction of ENWL Construction Engineer the excavation works can continue with the aid of a suitable sized 360-degree mechanical excavator complete with ditching/digging buckets with "NO TEETH". This will be operated by a CPCS certified plant operator who is fully experienced in such excavation operations. (Copy of operator's license upon request)
- During all machine excavation operations, a Kaberry banksman will be employed to aid the plant operator and pre-warn him of any unforeseen occurrences. The banksman must be in view of the machine operator at all times and maintain a safe distance from the excavator. No other operatives are to be within working distance of the mechanical excavator during these works.

- Where necessary a pecker attachment may be periodically fixed onto the excavator to break through any extensive areas of either reinforced/non-reinforced concrete/brickwork/quarried stone or large obstructions etc.
- Where required any existing large obstructive materials shall be cut in a controlled manner using a suitably sized petrol driven cut off saw complete with dust suppression kit?
- All excavation material will be loaded either directly into licensed tipper wagons for removal off site or suitable sized wheeled site dumper to be transferred from excavation area along the designated access/egress routes and tipped in an agreed waste transfer area within works area in preparation for re-use as backfill (where deemed suitable) or removal from site by a licensed carrier. Dumper drivers will be CPCS certified plant operators who are fully experienced in such site driving operations. (Copy of operator's license upon request)
- Any contaminated material is to be separated from inert material in accordance with soil chemical testing reports and shall be disposed separately off site at a suitable licensed tip.
- Any such movement of waste off this project is to be recorded in the Site Waste Management Plan (where mandatory)
- All excavations deep or shallow, are to be suitably battered back/stepped to ensure a safe working environment during the works and thus eliminate the need for any trenching/shoring equipment. Should the excavation prove to require extensive trenching/shoring equipment then a method statement amendment complete with a temporary works plan will be produced and re-issued for review. These trenching/shoring systems will be recorded and identified within the site held temporary works register complete with necessary H&S controls to manage the risks accordingly.
- Safety signage/Herras Fencing/Chapter 8 barriers must be erected around all open excavations to pre-warn all site staff/visitors of the excavation works.
- Any persons entering the excavations must do so only via either a suitable tied ladder or pre-formed ramp or steps.
- A submersible pump must be on site during all excavation works to be at hand to immediately remove any groundwater from the excavations and is to be pumped into either an agreed drain/collection vessel/soakaway (subject to chemical assessment from ground investigation report)
- Excavation works area will be tidied on a regular basis to minimise risk of slips, trips, and falls.
- When the reduced level excavation works have been complete to the designed levels required the ENWL clerk of works will inspect and assess the excavated level for suitability to place and compact the necessary required 150mm thick MOT Type 1 hardcore layer
- Once approved and deemed suitable, the quarried MOT 1 aggregate material will be delivered onto site and tipped in an agreed location direct from the contractor's preferred quarry.
- The aggregate material will then be transferred into the excavation zone using the excavator.
- The aggregate material will then be placed and levelled within the excavation zone in maximum 150mm layers.
- It is then to be suitably compacted using a petrol driven vibrating plate in readiness for receiving a 50-100mm thick concrete blinding layer.

Personal Protective Equipment (PPE)

- Prior to attendance on site a check will be made to ensure appropriate PPE is available for all operatives – hard hat, hi-visibility vest or jacket, safety footwear (with protective midsoles and toecaps), safety glasses and gloves as mandatory.
- Arc Resistant / Flame Retardant coveralls within the live operational areas of the electrical substation as per mandatory safety rules / codes of practise
- Operatives are to wear additional PPE in accordance with Risk/COSHH Assessments
- Operatives are to wear FFP3 face masks when using tools with abrasive wheels i.e., cut off saw / angle grinders.

Plant & Equipment

- Non-conductive hand digging tools only.
- Hand and powered tools and equipment, (110V only), complete with certification, shall be utilised as required.
- A suitably sized 360degree excavator complete with ditching & digging buckets "NO TEETH", Breaker attachment.
- Suitably sized wheeled site dumpers
- Certificates of conformity for mechanical plant to be obtained from hire companies.

Housekeeping & Security

- The supervisor will carry out an inspection of the working area(s) at the start and end of shifts to ensure there are no additional hazards other than those identified in the initial risk assessments.
- Where site hazards significantly change a supplementary risk assessment will be carried out and suitable control measures put in place
- The working areas will be kept tidy on a daily basis.
- Plant will be secured and immobilised whenever they are left unsupervised.
- At night a drip tray will be left beneath items of engine plant

Welfare	Toilet and welfare facilities will be available once the welfare has been fully established. Non-alcoholic wet wipes and dry hand washing creams in Kaberry works vehicles in addition. Kaberry works vehicle available as rest facility also.
Third Party Safety	The work areas will be physically segregated from the non-operational / delivery area to prevent unauthorised entry as necessary and warning signage shall be provided as agreed with the client's representative.
First Aid	All Kaberry operatives on site will be First Aid qualified. Nominated site First Aider details will be displayed in site welfare adjacent to First Aid Box
Emergency Procedures	Prior to the commencement of the work staff will be informed of the arrangements for emergency procedures / muster point Smoking will be prohibited in the work area and in the welfare facilities. Smoking will be restricted to designated area.

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Risk Assessment:			
	Hazards:	Risks:	Control Measures as Required:
Protection of Third Parties.	Persons entering work area.	Personal injury to the general public, children and visitors to site.	- Work areas will be demarcated with adequate barriers/fencing/tape and safety warning signage will be displayed at the work boundary. - Work area restricted to essential personnel only.
Access & Egress /Deliveries	- Site congestion. - Obstruction of areas dedicated to the public. - Collision of vehicles. - Obstruction of emergency exits. - Variations to established access and egress points	- Impact to vehicles or structures. - Injuries to persons, possibility fatal.	- A traffic coordinator will assist drivers when large vehicles are reversing, or vision is restricted. - Drivers will be informed of the delivery entrance and the required procedure specific to site. - Speed restrictions will be adhered to. - Entrances will be kept clear at all times. - Physical barriers will be erected (fencing or gates). - Signage will be displayed (mandatory, hazard or prohibition). - All operators working in the vicinity of machinery will wear hi-visibility clothing.
Slips/Trips	Falling or tripping stored/redundant materials.	Broken bones, cuts, bruises.	- All areas will be kept clear at all times. - The SM will monitor the areas throughout the works.
Manual Handling	Repetitive handling of materials, equipment and cement bags.	Damage to muscles, nerves, discs and ligaments of the low back, sprains, strains, tendon inflammation, carpal tunnel syndrome	- Manual Handling Training has been completed by operatives. - Operatives will be alternated to carry out different tasks to enable substantial breaks from the work activity. - Materials to be placed as close to the works as possible. - Mechanical means of moving materials around site will be employed.
Use of Hand Tools	- Electric shock - Flying debris - Cuts.	Fatal injury / personal injury to operatives, visitors to site.	- Only competent, trained persons will use electrically powered hand tools. - Tools have been visually inspected for signs of damage. - All electrically operated hand tools are subject to a planned maintenance/inspection programme.

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			• Damaged or faulty tools inc. any power cable as part of the equipment where applicable, will be returned for repair and will not be used. • Work area restricted to essential personnel only. • Work areas will be demarcated with adequate barriers/fencing/tape and safety warning signage will be displayed at the work boundary. • Tools will be returned to the toolbox or removed from the work area when not in use. • Where practicable battery-operated equipment will be used. • Where battery operated equipment is not suitable, 110v equipment will be used. • Where 110v equipment is either not suitable or not available, 240v equipment will be used and an RCD fitted to each tool. Proposed 240v equipment is listed on the reverse of this assessment. • Steel toe-capped safety footwear will be worn. • Protective gloves will be worn. • Eye protection will be worn.
Use of Cutter / Abrasive Wheel	• Contact with the wheel or disc. • Bursting of wheel or disc • Flying debris • Fire • Entanglement of clothing •	• Personal / fatal injury to operative and / or third parties.	• Only competent personnel will use abrasive wheels and operators' proof of competency has been checked. • Work area restricted to essential personnel only. • Work areas will be demarcated with adequate barriers/fencing/tape and safety warning signage will be displayed at the work boundary. • Work completed where the least number of people will be affected. • Only trained personnel will mount abrasive wheels and ensure that the correct speed and type of wheel is fitted. • Eye protection will be worn. • FFP3 face masks will be worn.

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			- Exposure time is reduced by the rotating of operatives onto different tasks and/or by providing regular rest breaks. - Equipment has been visually inspected for signs of damage and is fit for use. - A Hot Works Permit may be issued for this work activity subject to material being cut. - Operators have been checked for loose fitting clothing. - Flammable materials likely to catch fire have been removed from the work area. - Where possible these works will be completed outside.
Noise	Excessive noise from tools.	Noise induced hearing loss, tinnitus.	Ear plugs/defenders will be made available/worn.
Vibration	Excessive vibration from tools / equipment	Carpel Tunnel Syndrome, white finger.	- The equipment is fitted with anti-vibration components. - Exposure time is reduced by rotating operatives onto different tasks. - Alternative equipment has been considered to eliminate reduce vibration has been considered. - The most suitable equipment with the lowest vibration measures has been selected. - Exposure is monitored, breaks and rotation have been considered. - Operatives are trained in the use of equipment.
HAVS	Roller/Whacker plate and/or other vibration compacting equipment	Vibration White Finger	Usage times in line with HSE recommendations
Excavating	- Striking live services - Collapse - Contaminated soil - Hazardous atmospheres - Flooding	Fatality / personal injury to operatives and / or third parties.	- All services to be treated as live, unless otherwise notified. All digging near to live services will be subject to site rules and the rules as set out in HSE document HSG47, 'Avoiding Danger from Underground Services' - Only trained, competent operatives will complete excavation works. - Drawings are available and have been consulted which indicate the location or otherwise of services.

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			• Excavation works will be under the control of a trained, competent supervisor. • Hand digging will be undertaken when within 1 metre of known services. • CAT detector will be used to identify the location of buried services. • Side of excavations will be battered back/stepped to a safe angle of repose. • Shoring system will be provided to the sides of the excavations where safe angle of repose is unachievable, or site conditions/environment dictate otherwise. • Work area restricted to essential personnel only. • Work areas will be demarcated with adequate barriers/fencing/tape and safety warning signage will be displayed at the work boundary. • Where possible no open excavations will remain at the end of each shift. • Open excavations left at the end of a shift will be cordoned off with pedestrian barriers/safety signage. • It is very unlikely that any soil contamination is present, or soil tests indicate that the ground is free from contaminants. • If required, all operatives entering the ground will wear items of PPE as indicated by the COSHH assessment for the type of contaminant present. • No smoking allowed within any excavation. • Excavations will be regularly monitored for the presence of hazardous atmospheres. • Water diversion techniques and/or pumps will be used to prevent excavations from flooding. • Spoil heaps will be placed to prevent other site traffic from trafficking close to any excavation. • A safety method statement will be provided for excavation works.
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			- Barriers, stop-blocks or similar will be positioned as necessary around excavation. - Excavations will be inspected and recorded at the start of each shift and where weather conditions deem it necessary. - Safe access/egress has been provided.
Use of Excavators	- Striking site personnel - Excavator overturning/falling into excavation. - Striking other site plant - Striking overhead cables - Striking underground services - Fire	Fatal Injury / personal injury to operatives, visitors to site.	- Only competent personnel to operate excavators. Operators' proof of competence checked. - The most suitable equipment is being used for the work required with regard to ground conditions and local operational requirements. - Weekly inspections will be completed and recorded in the site documentation. - Thorough Examination Certificate and Inspection Register is up to date and with the machine. - Manufacturers bucket size will not be exceeded. - No persons will be allowed to stand or work within operating radius without the operator's permission. - Travel and operations on a gradient will be controlled to ensure machine stability. A banksman will be used where the driver's vision is restricted or when working in close proximity to other plant/ personnel. - Excavation work will be supervised to ensure the stability of the machine and excavation. - All excavators will be checked by the operators before use and secured at the end of each shift. - Speed restrictions are applicable to this site. The maximum speed is 10mph and will not be exceeded. - Overhangs will not to be created on high work faces. - Machines will not be refuelled whilst engine is running. - No smoking whilst re-fuelling. - Hi-vis clothing will be worn by site personnel working near to excavators.

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			• Work areas will be demarcated with adequate barriers/fencing/tape and safety warning signage will be displayed at the work boundary. • Separate pedestrian and vehicle routes have been established. • All machines are fitted with amber flashing lights. • Overhead services have been isolated or made safe. • The operator has been made aware of the location of the site. overhead services and 'goal posts', which clearly define the location of the cables, are in place. • Underground services are known to be present and a separate risk assessment for this has been completed. • Seat belts will be worn where fitted. • Noise levels will be monitored and assessed especially if equipment is being operated in an area close to buildings etc.
Use of Dumpers	• Striking site personnel / visitors. • Striking other site plant. • Striking structures. • Dumper overturning. • Fire	• Personal injury, possibly fatal from impact from vehicle. • Personal injury, possibly fatal to persons on site and visitors from impact from falling structures. • Personal injury, possibly fatal from lack of maintenance to vehicles. • Personal injury/crushing to driver.	• Only competent personnel to operate dumpers. Operator's proof of competence checked. • The most suitable equipment is being used for the work required with regard to ground conditions and local operational requirements. • Weekly inspections will be completed and recorded in the site documentation. • Thorough Examination Certificate and Inspection Register are current, up to date and with the machine. • Passengers will not be carried unless additional seating is fitted. • Travel and operations on a gradient will be controlled to ensure machine stability. • A banks person will be used where the driver's vision is. restricted or when operating in close proximity to other plant/ personnel.

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			• All dumpers will be checked by drivers before use and secured at the end of each shift. • Speed restrictions are applicable to this site. The maximum speed is 10 mph and will not be exceeded. • Noise levels will be monitored and assessed, especially if equipment is being operated in an area close to buildings etc. • Dumpers fitted with Roll Over Protection System (ROPS). • Separate plant/vehicle and pedestrian routes are established. • Stop boards/spoil heaps etc. have been provided to prevent dumpers running into excavations. • Persons working in close proximity to dumpers will wear Hi-visibility clothing. • Work areas will be demarcated with adequate barriers/fencing/tape and safety warning signage will be displayed at the work boundary. • All machines are fitted with amber flashing lights. • Machines will not be refueled whilst the engine is running. • No smoking whilst refueling.
Fire	• Refueling of dumper / excavator.	• Burns / fire / explosion from refuelling.	• Machines will not be refueled whilst the engine is running. • No smoking whilst refueling. • A COSHH assessment has been completed for hazardous substances.
Working Adjacent to Traffic Routes	• People being hit by vehicles. • Objects falling from vehicles. • Dust • Noise	• Fatal / personal injury to operatives.	• Only competent people will undertake this work activity. • The work area will be surveyed to gain information about the local working environment. • Work areas will be demarcated with adequate barriers/fencing/tape and safety warning signage will be displayed at the work boundary. • The work area will be well lit if night working is required. • A separate COSHH assessment will be undertaken for this work activity. • All operatives will work within the safety zones at all times.

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