|  | **STEPS** | **HAZARDS** | **Unmitigated** | | | **CONTROL MEASURES** | | **Mitigated** | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **C** | **L** | **R** | **C** | **L** | **R** |
|  | Planning | **Planning / Communication**  Lack of knowledge/unfamiliar of the site | B | 3 | 8 | * Compliance with HSS 01 105 Putting People to Work * Staff trained and competent for the site * Pre-site surveys carried out. * Pre-construction information pack provided from client. * Review other historical documents where available * Briefing at least 24hrs prior to works where applicable * Engage with Client personnel for further information on local knowledge | | B | 1 | 2 |
| Access / Egress to and from site | **Ground Conditions/Instability**  Slips, trips, falls | C | 3 | 17 | * Use designated walkways where available. * Use of client authorised access and egress points. * Be aware of changing weather conditions. * Mandatory UKPN Services approved safety footwear (provides support to the ankle, includes mid-sole protection, and has a protective toecap.). * Site Briefing for all attending. * Identify known hazards i.e. ballast, uneven ground. * Good housekeeping / keep walkways clear | | C | 1 | 4 |
| **Trespass / Unauthorised Entry**  Security | E | 4 | 23 | * Ensure work area is secure. * Access / Egress gates to be always locked. * Adequate security measures in place e.g. CCTV or Site security * Daily Site Security Check to be completed by Site Supervisor and where required paperwork completed | | E | 1 | 10 |
| Working on or near electricity | **Electricity**  HV Live Cables in adjacent troughs | E | 4 | 23 | * Where applicable HV Assessor to complete HV Risk Assessment and brief to all in attendance * Competent Person to be on site in accordance with Client specific requirements e.g. NR/L3/ELP/22001 - Procedure And Competence Requirements For Persons Undertaking Works In The Vicinity of High Voltage Cables * Switch out HV Feeders where required * Brief all staff on limits of protection * Erect safety fence to demarcate site where there is requirement to do so * Mechanical protection where required | | E | 1 | 10 |
| **Electricity**  Live Equipment | E | 4 | 23 | * Competent Person to be on site in accordance with Client requirements e.g. NR/L2/CTM/018 - Competence and Training in Traction Power Distribution * Suitably competent person to access & supervise works within substations and compounds * Brief all staff on limits of protection, tools and equipment e.g. the carrying of long objects * Erect safety fence to demarcate the site * Use authorised walking routes always | | E | 1 | 10 |
| **Electricity**  Disconnecting / connecting LV power supplies to equipment | E | 4 | 23 | * Only electrically qualified and competent personnel to carry out these activities * Use of LV gloves where applicable. * Isolate supplies in accordance with clients / UKPN Services requirements * Isolation checks to be carried out prior to work commencing * Staff to be briefed on the work and potential hazards prior to starting * Only approved insulated hand tools to be used | | E | 1 | 10 |
| **Electricity**  Working adjacent to live equipment | E | 4 | 23 | * Competent Person to be on site in accordance with Client requirements e.g. NR/L2/CTM/018 - Competence and Training in Traction Power Distribution * For Network Rail Projects - Level C/D Minimum to access & supervise works within substations and compounds * Barriers and danger signs erected to maintain safety clearances. * No working at height adjacent to live equipment * Switch outs where required | | E | 1 | 10 |
| **Electricity**  Working on High Voltage equipment. | E | 4 | 23 | * Competent Person to be on site in accordance with Client requirements e.g. NR/L2/CTM/018 - Competence and Training in Traction Power Distribution * Suitably competent person to access & supervise works within substations and compounds * HV equipment to be isolated and earthed in accordance withthe approved Switching Schedule * Screen and place Danger Notices on adjacent Live equipment * In line with Client requirements e.g. NR/L3/ELP/21067 – Marking Out, Issuing and Cancelling High Voltage Permits to Work, Sanctions for Test and Circuit State Certificates * Competent Person to brief points of isolation, clearly identifying equipment to be worked on and highlight exclusion zones from adjacent live equipment, prior to issuing Permit to Work * Competent person to be in receipt of a Permit to Work * Isolation checks to be carried out prior to work commencing | | E | 1 | 10 |
| **Electricity**  Testing/  Commissioning Activity | E | 4 | 23 | * Competent Person to be on site in accordance with Client requirements e.g. NR/L2/CTM/018 - Competence and Training in Traction Power Distribution * Competent person to access & supervise testing within substations and compounds * Only trained competent persons to carry out testing and commissioning * Personnel to be briefed on protection limits prior to any testing being carried out * Isolation & Earth and a Sanction for Test to be issued for testing operational HV primary equipment * Isolation and DC Certificate of Isolation to be issued when testing operational DC primary equipment * Isolation checks to be carried out prior to work commencing * Only calibrated and in date test equipment to be used | | E | 1 | 10 |
| **Electricity**  Jointing works  Electrocution disruption to services. HV cables only | E | 4 | 23 | * The cable shall be isolated & earthed by a competent person and a Permit to Work Issued prior to work commencing * Positive identification of cables by an Approved means must be completed. * Only fully qualified and competent personnel to carry out jointing. * PPE to be worn as stated within the RAMS – minimum client standards and Safe 6 as stated in the Daily POWA. * Jointing in compliance with Jointing GTRAs (JLV/JHV) | | E | 1 | 10 |
| **Electricity**  Jointing works  Electrocution disruption to services. DC Cables Only | E | 4 | 23 | * The cable shall be isolated by a competent person prior to work commencing and DC Certificate of Isolation issued prior to work commencing * Positive identification of cables by an Approved means must be completed. * Only fully qualified persons to carry out jointing. * PPE to be worn as stated within the RAMS – minimum client standards and Safe 6 as stated in the Daily POWA. * Jointing in compliance with Jointing GTRAs (JLV/JHV) | | E | 1 | 10 |
| **Electricity**  Negative DC Termination works | E | 4 | 23 | * All staff briefed on possible potential differences between Negative busbar/cables and Earth * Mandatory use of Insulated tools/gloves. * Manual handling training * Transfer one negative cable at a time always leaving one cable connected. * Isolate DC Circuit Breakers to reduce the risk of return current | | E | 1 | 10 |
| **Electricity**  Working adjacent to live equipment | E | 4 | 23 | * Barriers and danger signs to be erected. * No working at height adjacent to live equipment. * Switch outs and isolations. | | E | 1 | 10 |
| **Electricity**  Interfacing with operational live equipment. Connecting cables (Anodes, Main DC Positives & Positive Track Feeders) | E | 4 | 23 | * Competent Person to be on site in accordance with Client requirements e.g. NR/L2/CTM/018 - Competence and Training in Traction Power Distribution * Competent person to access & supervise testing within substations and compounds * DC equipment to be isolated in accordance with the approved Switching Schedule or Rack Out Form * Screen and place Danger Notices on Live adjacent equipment * Full compliance with Client requirements e.g. NR/SP/ELP/21060 – Work on or near 650/750 V DC Traction Power Distribution Equipment (Including the Issue of Safety Documentation) * Competent person to brief points of isolation, clearly identifying equipment to be worked on and highlight exclusion zones from adjacent live equipment, prior to issuing DC Certificate of Isolation * Competent person to be in receipt of Certificate of Isolation * Brief all staff on hazards and limits of work. * Control access to modules / buildings containing live, operational equipment * Only trained, experienced & competent personnel to carry out work | | E | 1 | 10 |
| Working on or near rail infrastructure in the vicinity of track | **Struck by Object**  Movement of traffic | E | 4 | 23 | * Operatives trained and competent to work on or near rail infrastructure, * Use authorised access points * Compliance with rail operator site access requirements * Brief all staff on limits of protection * Brief the places of safety * All work to be carried out according to client Standards * Safe System of Work Hierarchy * Safe Work Pack in place for all access/works on or near the line * Controller of Site Safety /Site Warden in place for works on or near the line if required * Fencing and barriers erected * High visibility PPE worn correctly in accordance with clients standards and as stated in the daily briefing | | E | 1 | 10 |
| **Struck by Object**  Walking or working near to trackside | E | 4 | 23 | * Brief all staff on limits of access. * Erect safety fence to mark limits of site. | | E | 1 | 10 |
| **Struck by object**  Lifting operations impact the rail infrastructure/workforce | E | 3 | 21 | * All lifting operations planned and lift(s) classified in compliance with client requirements (e.g. ALO) and HSS 01 080 Planning and Competency Requirements for Lifting Operations * Any Line Open (ALO) Plan if required (NR) * Operator competence to be checked prior to lift * Equipment certification to be checked prior to lift * Check buried service drawings and undertake a CAT survey prior to rigging the lifting plant * Lift Plan in place * Permit to Lift issued * Exclusion zone set up and monitored for all lifting plant operations * Hard hats mandatory. * Staff to stand clear whilst lifting operations in progress * No lifting in strong winds | | E | 1 | 10 |
| **Trespass / Unauthorised Entry**  Trespass / vandalism | E | 4 | 23 | * Brief all staff on security requirements * If required erect Heras fencing around materials. * Ensure plant/materials are secured and made inoperable * Ensure work area is secure * Access / Egress gates to be always locked * Adequate security measures in place * Daily Site Security Check Sheet to be completed by Site Supervisor * CCTV and/or on-site security to be utilised where required | | E | 1 | 10 |
| **Micro-organisms**  Discarded drug needles / sharps | D | 3 | 18 | * Staff briefed on hazard and the need to be vigilant (POWA) * Create an exclusion zone around discarded needles and sharps * Report to client for clean-up and report to AIRLine/clientreporting system * GRL 44 Sharps Collection and Disposal | | D | 1 | 9 |
| Working environment | **Noise** | C | 3 | 17 | * Work to be undertaken during normal weekday working hours unless specified by the client / UKPN Services * Where required following an environmental survey a Section 61 application may need to be submitted * Vehicles and plant to be switched off when not in use where practicable * PPE - Ear protection to be worn as and when applicable | | C | 1 | 4 |
| **Dusts, particles, mists** | D | 3 | 18 | * Potential for contact covered by project Safe System of Work * Exposure to dust addressed in POWA * Compliance with HSS 01 164 Respiratory Protective Equipment (RPE) Instruction, Use, Training and ‘Face Fit Testing’ to be carried out * Equipment to be protected using appropriate dust sheeting * Dust suppression (e.g. water) | | D | 1 | 9 |
| **Chemicals**  Items containing insulating oil | C | 4 | 19 | * Spill kits available on site * Copy of the environmental plan, register, COSHH information and emergency procedures to be on site * Suitable bunds used on site. | | C | 1 | 4 |
| **Work Equipment**  Vegetation clearance | B | 5 | 16 | * Refer to ISA 06 Vegetation Clearance and Control on Private Networks. * Clearly identify buried services. * Appropriate ear defenders/plugs to be worn. * Safety harness to be worn if necessary. * All plant and equipment to be fit for purpose and be tagged and tested. * Use hand saw only (not chainsaw). * Fence/barrier area, post signage. * Supervise the immediate area. * Additional PPE – UKPN Services approved Full face visor, hearing protection | | B | 2 | 5 |
| **Environmental**  De-commissioning and commissioning equipment containing insulating oil | C | 4 | 19 | * Compliance with GRL 26 Managing Waste Materials * A suitable number of spill kits available on site * Copy of the environmental plan, register, COSHH information and emergency procedures to be on site * PCB Test * Waste Transfer Notes * Disposal by an approved supplier | | C | 1 | 4 |
| **Working on or near Water** | E | 3 | 21 | * Refer to GRL 09 Work On or Near Water. | | E | 1 | 10 |
| Chemicals – Use and storage and contact with | **Chemicals**  Fire  Environmental spillage | C | 4 | 19 | * COSHH materials lockable storage facility. * Copy of the environmental plan, register and emergency procedures to be on site. * COSHH assessments and data sheet must be available for any products used * Refer to UKPN COSHH library - <https://cms.sypol.com/Loader/Loader.aspx> * Segregated storage of flammable materials as per site specific fire risk assessment. * Only client and UKPN Services approved substances to be used * Fire Plan * Fire extinguishers at the storage location and at prominent positions around site | | C | 1 | 4 |
| **Chemicals**  Personnel contamination from contact with Oil | C | 4 | 19 | * All personnel in contact with oil to wear disposable overalls. * UKPN Services approved disposable gloves to be worn. * Eye protection mandatory; type dictated by COSHH requirements. (Minimum of UKPN Services approved safety glasses). * COSHH Data Sheet * Eye wash station | | C | 2 | 7 |
| **Chemicals**  PCB Contaminated oil | C | 4 | 19 | * Compliance with client standards and HSS 01 015 Management of Oil Filled Equipment Containing PCB. * Details of assets containing PCB to be recorded and made available by asset owner. * COSHH Data Sheet * Oil filled equipment identified to be PCB contaminated shall be recovered and disposed of by specialist contractor/client appointed specialist. * Presence of PCB reported via AIRLine. | | C | 2 | 7 |
| **Spillage (Environmental)**  Oil spill from removal / storage of waste oil | C | 4 | 19 | * Stored in bunded area, removed from site by competent contractor with consignment note. * Copy of the environmental plan, register, COSHH information and emergency procedures to be on site * Oil spill kits on site. | | C | 2 | 7 |
| Deliveries to site | **Struck by object**  Delivery of plant and material to and from site | D | 4 | 22 | * Delivery covered by project Safe System of Work / Project specific requirements. * Contracted suppliers to meet Fleet Operator Recognition Scheme (FORS) requirements. * Exclusion zone in place * Banksman if required | | D | 1 | 9 |
| **Struck by object**  Movement of lorry | D | 4 | 22 | * Only trained & competent persons to use equipment. * Mandatory use of Hi-Visibility clothing. * Banksman in attendance during lorry movements. * Setting up an exclusion zone. | | D | 1 | 9 |
| Use of plant on site | **Work Equipment**  Working within proximity of crane lorry | D | 4 | 22 | * Only essential personnel near crane and all personnel to be aware of their responsibilities prior to commencement of work. * Lift Plan and Permit to Lift in place * Hard hats mandatory for all lifting operations. * Only trained & competent persons to use equipment. * Mandatory use of Hi-Visibility clothing. * Banksman in attendance during crane lorry movements. * Setting up an exclusion zone. | | D | 1 | 9 |
| **Work Equipment**  Movement of plant on site | D | 4 | 22 | * All plant operators to be competent and fully trained. * Signaller / banksman in attendance during plant movements. * Barriers to be set up and signage to indicate the hazards of the working area. * Hazards briefed to staff. * ALO Assessment completed for Network Rail projects. | | D | 1 | 9 |
| **Work Equipment**  Use of mobile crane – communication failure | D | 4 | 22 | * 2-way radios to be used to communicate between crane operator – signaller / banksman. * DET2 Radios to be used on NR Projects * In the event of failure phones to be used to control lift | | D | 1 | 9 |
| **Work Equipment**  Inclement weather / high winds | D | 4 | 22 | * Refer to GRL 25 Working Outdoors. * Weather conditions be monitored leading up to the works and assessed prior to the commencement of the shift. * Cease work during inclement weather if practicable. | | D | 1 | 9 |
| **Ground Conditions / Instability**  Crane lifting – rigging out incorrect. Possible collapse | D | 4 | 22 | * Only fully qualified personnel to set up crane for lifting / positioning of equipment. * Ground surveys, where required * Lift Plan in place. * Correct size mats and pads are used for outrigging. * Survey site with charts for buried utilities and drainage. | | D | 1 | 9 |
| **Manual Handling**  Moving heavy equipment. | D | 4 | 22 | * Reference to be made to the relevant Manual Handling Risk Assessment. * Manual handling awareness training * Plan lift and walking route * Use of mechanical lifting aids/team lifts | | D | 1 | 9 |
| Use of small tools on site | **Work Equipment**  Using impact drill to bolt/unbolt redundant equipment | C | 3 | 17 | * Plant and equipment vibration assessed * Total time spent using vibrating equipment (HAV) is kept to a minimum. * Maximum working time on HAV plant will not be exceeded * Supervisor to brief operatives on equipment usage, shared usage to minimise exposure * Appropriate eye and ear protection glasses/goggles & defenders/plugs to be worn | | C | 1 | 4 |
| **Work Equipment**  Use of hand & small Power tools. | C | 3 | 17 | * Refer to GRL 22 Use of Hand Tools (Power or Non-Powered) * Use of correct tools for the job. * Only trained & competent persons to use equipment. * Total time spent using HAV equipment is kept to a minimum. * Maximum working time on HAV plant will not be exceeded * Supervisor to brief operatives * Appropriate UKPN Services approved eye & ear glasses/goggles/visor & defenders/plugs to be worn | | C | 1 | 4 |
| **Work Equipment**  Use of chainsaws, hand saw and strimmers | D | 3 | 18 | * Refer to GRL 18 Arboriculture Work and Vegetation Clearance, including Felling of Utility Poles (Inc. mandatory PPE requirements) * Exclusion zones in place * All equipment to well maintained and fit for purpose * Only trained & competent persons to use equipment. * Refer to HSS 01 152 Competency Requirements for Arboriculture Work and Felling Utility Poles using Mechanically Driven Cutting Equipment | | D | 1 | 9 |
| **Work Equipment**  Using Battery powered hydraulic crimper | D | 3 | 18 | * Staff training * Tool properly maintained, tested, calibrated and certified * Workload shared between suitably trained staff * Daily inspection of equipment to be documented before use * Pump positioned away from work area. * Appropriate PPE to be worn always | | D | 1 | 9 |
| **Work Equipment**  Cuts / injury from the use of hand and small tools | C | 3 | 17 | * Refer to GRL 22 Use of Hand Tools (Power and Non-Powered). * Visual inspection prior to all usage * If damage is seen the item MUST be quarantined and tagged to reflect this | | C | 2 | 7 |
| Site task | **Buried Services**  Hand Digging | D | 3 | 18 | * Refer to GRL 12 Excavation and Reinstatement * Staff training * Cable locating tool (i.e RD400) (Cable Avoidance Tool Survey) * Permit to Dig. * Buried services records to be confirmed on site. * Competent person to complete HV Risk Assessment (HVRA) * Where required switch out HV Feeder Cables * Competent Person to Supervise works * Refer to DSR 01 014 Excavating Near Electricity Cables - Digging | | D | 1 | 9 |
| **Work Equipment**  Cutting using a concrete saw | D | 3 | 18 | * Water used to suppress dust * Eye protection to be worn * FFP3 respiratory protection to be used * Ear defenders to be worn * Exclusion zones in place * Copy of the environmental plan and emergency procedures to be briefed and on site | | D | 1 | 9 |
| **Manual Handling**  Moving heavy equipment incorrectly/or with an inappropriate number of personnel. | D | 3 | 18 | * Manual handling awareness training * Plan lift and route * Use of mechanical lifting aids/team lifts * Toolbox Talks | | D | 1 | 9 |
| **Work Equipment**  Drilling/cutting. Flying swarf. Brick dust. Noise | D | 4 | 22 | * Refer to GRL 22 Use of Hand Tools (Power and Non-Powered). | | D | 1 | 9 |
| **Work Equipment**  Dismantling equipment  Removing redundant cable terminations | D | 4 | 22 | * Refer to JLV 01 Installation of New and Removal of Old Electrical Equipment. | | D | 1 | 9 |
| **Fire**  Brazing/Tinning | E | 4 | 23 | * Compliance with client hot works standards and HSS 01 087 Hot Works Procedure * Hot Works Permit * Fire extinguisher at point of work * Erect safety barrier around area of work. * Brief all staff on hazards and limits of work. * Fire watch to be appointed while work in progress * Control of work in accordance to approved method statement * COSHH data sheets to be kept on site | | E | 1 | 10 |
| **Manual Handling**  Cable pulling | D | 4 | 22 | * Manual handling training. * Use of cable pulling equipment – socks, rollers * Ensure size of cable pulling team is appropriate for the size of cable. * Correct handling technique. * Cable route assessed prior to pull – ground/weather conditions and the suitability of existing ducting routes. | | D | 1 | 9 |
| Work at height (WAH) | **Working at Height**  Persons falling | D | 4 | 22 | * Comply with HSS 01 067 Working at Height * WAH Hierarchy and Risk Assessment * Only trained and competent persons to work at height * Whilst working at height a safety harness may be required to be worn and attached using an inertia reel lanyard in accordance with WAH hierarchy and risk assessment * Fall arrest equipment to be suitable for the weight and stature of the wearer | | D | 1 | 9 |
| **Working at Height**  Using Steps/mobile scaffold | D | 4 | 22 | * Refer to work at height task risk assessments:   + FTR 14 Use of Scaffold Erected by Third Parties   + GRL 03 Work at Height – Use of Prefabricated Scaffold-Platform including Low Level Access Platforms   + GRL 04 Work at Height - Use of Step Ladders and Ladders Including Fixed Ladders * Comply with HSS 01 067 Working at Height * Compliance with client requirements, i.e. GRP equipment | | D | 1 | 9 |
|  | **Additional Risks at a work sites / offices during and Epidemic/Pandemic** | **Micro-organisms**  **(Viruses, Bacteria etc.)** | E | 4 | 21 | * Comply with UK Power Networks alerts, bulletins and any Client requirements. * Comply with HSS 01 165 Works in Potential Pandemic and Infectious Disease Exposure Areas | | E | 1 | 10 |
| Produced by:  UKPN Services TRMT | | Signature:  Lisa Sandle | Date: 11/02/2025 | | | Approved by:  Chris Shackell | Signature: | Date:  11/02/2025 | | |
| C – Consequence L – Likelihood R – Risk | | | | | | | | | | |
| **Specific PPE/Fit for Work requirements stated in the Control Measures are mandatory.**  **An On-site (Point of Work) Assessment or Dynamic Assessment must be undertaken for all tasks to confirm which items of Safe 6 to be used and any additional PPE/Equipment required as a result of the site conditions.** | | | | | | | | | | |

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| **TRMT/SAT Attendees** | **Reason for Review** | **Actions Required** | **Details of changes** |
| Lisa Sandle  Kath Rainbow | Periodic review  (to remain annual) | Brief to all rail staff | * Added reference to HSS 01 105 Putting People to Work and COSHH library (Sypol). |