Risk Assessment - Signalling

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Version No: 1
Assessment Approver: Kevin Jarvis

Encompasses risks to signalmen whilst undertaking their duties both inside and outside of the signal box. S&T activities and safety of trains are excluded from this assessment.

Department: Signalling
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Routine Operations

Type	Hazard Cause	Persons Affected	Control Measures	L S T Overall	Additional Control Measures	L S T Overall	Owner/Action
Health and Safety	Slips, trips and falls Tripping over objects within and outside of the signal box	Volunteers & Staff	1) CRITICAL - Engineering: Cupboards and shelving together with designated storage locations provided for all unsecured equipment within the signal box - Effective 2) CRITICAL - Engineering: Designated safe walking routes for access to and from the signal box and for token exchange with engineered level crossings at locations where it is necessary to cross over rails - Effective 3) CRITICAL - Administrative: All signalmen must have successfully completed PTS training - Effective 4) CRITICAL - Administrative: Main operating floor of signal box kept clear of trip hazards - Effective	3 x 1 = 3 Low - Risk to be monitored to ensure it remains adequately controlled to an acceptable level.	None	3 x 1 = 3 Low - Risk to be monitored to ensure it remains adequately controlled to an acceptable level.	n/a
Health and Safety	Operation of lever frame Inappropriate operation / broken signal cabling	Volunteers & Staff	1) CRITICAL - Engineering: Routine periodic inspection of signal cables should identify any significant degradation before cable breaks - Effective 2) CRITICAL - Engineering: Routine periodic greasing of signal mechanisms will minimise the force required to pull levers - Effective 3) CRITICAL - Administrative: Written instructions on the correct techniques for the operation of levers are included in the training booklet and are displayed in every signal box. Instructions include advice on how to minimise risk of injury in the event of a signal cable breaking. - Effective 4) CRITICAL - Administrative: Trainee signalmen must have an instructor present at all times until an inspector judges that they are competent to operate the box unsupervised. Re-certification is required every 2 years, - Effective 5) CRITICAL - Administrative: When signing on to the GWSR Portal volunteers are required to confirm that they are fit for duty - Effective 6) CRITICAL - Administrative: A reasonable level of health and fitness is required in order to be physically capable of operating the lever frame - Effective	2 x 2 = 4 Low - Risk to be monitored to ensure it remains adequately controlled to an acceptable level.	None	2 x 2 = 4 Low - Risk to be monitored to ensure it remains adequately controlled to an acceptable level.	n/a
Health and Safety	Token and staff exchange Poor technique exchanging tokens or staffs with a moving train could result in injury	Volunteers & Staff	1) CRITICAL - Engineering: Speed limit is 10 mph within station limits. - Effective 2) CRITICAL - Engineering: Safe walking routes are provided - Effective 3) CRITICAL - Engineering: Horizontal metal bars are installed around shoulder height across all opening windows to prevent over-reaching and consequential toppling through an open window - Effective 4) CRITICAL - Engineering: A pouch is provided to reduce reach required for DMU token exchange - Effective 5) CRITICAL - Administrative: Trainee signalmen must have an instructor present until an inspector judges that they are competent to operate the box unsupervised. Re-certification is required every 2 years - Effective 6) CRITICAL - Administrative: Signalmen instructed not to exchange token if for any reason they believe it to be unsafe (e.g. due to excessive speed or need to over-reach for DMU token exchange) - Effective	2 x 2 = 4 Low - Risk to be monitored to ensure it remains adequately controlled to an acceptable level.	1) Administrative: DMU drivers could be instructed to temporarily stop at an exchange point close to the signal box crossing at locations where token exchange is undertaken through the box window - Effective	2 x 2 = 4 Low - Risk to be monitored to ensure it remains adequately controlled to an acceptable level.	n/a

Gloucestershire Warwickshire Steam Railway Plc
Risk Assessment for Signalling - Signalling

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Health and Safety	Faulty or unsuitable equipment within the signal box Damaged or unsuitable equipment could cause a hazard	Volunteers & Staff	1) CRITICAL - Engineering: All electrical equipment is subject to periodic PAT testing - Effective 2) CRITICAL - Engineering: Electrical distributions boards and fixed cabling are periodically inspected to confirm their safety - Effective 3) CRITICAL - Administrative: Ensure all new equipment meets current legislative standards - Effective 4) CRITICAL - Administrative: Signalmen are encouraged to report all items of faulty equipment - Effective 5) CRITICAL - Administrative: Each signal box has a custodian who will make periodic inspections and ensure that the box is clean and tidy - Effective	1 x 3 = 3 Low - Risk to be monitored to ensure it remains adequately controlled to an acceptable level.	None	1 x 3 = 3 Low - Risk to be monitored to ensure it remains adequately controlled to an acceptable level.	n/a
Health and Safety	Chemical Hazards	Volunteers & Staff	1) CRITICAL - Administrative: Only hazardous substances stored in signal boxes are cleaning and polishing agents, paint and fly spray - Effective 2) CRITICAL - Administrative: Only chemicals with a COSHH assessment are permitted to be stored in signal boxes - Effective	2 x 2 = 4 Low - Risk to be monitored to ensure it remains adequately controlled to an acceptable level.	1) Administrative: Box custodians to be periodically reminded that they need to ensure COSHH certificates are available before bringing any new substances into a box and to consider if long-term storage within the box is essential - Effective	2 x 2 = 4 Low - Risk to be monitored to ensure it remains adequately controlled to an acceptable level.	n/a
Health and Safety	Electric Shock Faulty, damaged or overloaded equipment	Volunteers & Staff	1) CRITICAL - Engineering: All S&T equipment within the box operates at 12 volt - Effective 2) CRITICAL - Engineering: All portable mains voltage appliances are subject to routine periodic PAT testing - Effective 3) CRITICAL - Engineering: Electrical distributions boards and fixed cabling are periodically inspected to confirm their safety - Effective 4) CRITICAL - Administrative: Electrical equipment must be used in accordance with manufacturers instructions - Effective 5) CRITICAL - Administrative: All defects to be reported and equipment taken out of use - Effective	1 x 5 = 5 Low - Risk to be monitored to ensure it remains adequately controlled to an acceptable level.	None	1 x 5 = 5 Low - Risk to be monitored to ensure it remains adequately controlled to an acceptable level.	n/a
Health and Safety	Fire Potential causes are electrical faults or stoves	Volunteers & Staff	1) CRITICAL - Engineering: Appropriate range of fire extinguishers in all boxes - Effective 2) CRITICAL - Engineering: Sealed container provided for storage of wood and paper required for lighting stoves - Effective 3) CRITICAL - Engineering: Signalboxes comprise a single small room with an easily accessible - Effective 4) CRITICAL - Administrative: Minimise amount of non-essential combustible material in signal boxes - Effective 5) CRITICAL - Administrative: Matches for lighting stoves separately stored in signal box desk. - Effective 6) CRITICAL - Administrative: All signalmen are required to successfully complete fire safety training - Effective	1 x 5 = 5 Low - Risk to be monitored to ensure it remains adequately controlled to an acceptable level.	1) Engineering: Ensure all upholstered seating in signal boxes have fire safety labels attached - Effective 2) Engineering: Institute routine periodic cleaning of stove flues to minimise risk of blockage - Effective	1 x 5 = 5 Low - Risk to be monitored to ensure it remains adequately controlled to an acceptable level.	n/a

Type	Hazard Cause	Persons Affected	Control Measures	L S T Overall	Additional Control Measures	L S T Overall	Owner/Action
Health and Safety	Lone Working Injury could occur leaving worker too incapacitated to summon help	Volunteers & Staff	1) CRITICAL - Engineering: Signal boxes are provided with three independent telephone systems - Effective 2) CRITICAL - Administrative: Failure to open and close the box or to respond to bell codes would alert the adjacent signalmen to request the DOO to investigate - Effective 3) CRITICAL - Administrative: Majority of signalmen will carry a mobile phone - Effective 4) CRITICAL - Administrative: All signalmen are required to undertake a doctor medical at regular intervals - Effective 5) CRITICAL - Administrative: Failure to exchange tokens with passing trains would alert the train crews to investigate - Effective	2 x 2 = 4 Low - Risk to be monitored to ensure it remains adequately controlled to an acceptable level.	None	2 x 2 = 4 Low - Risk to be monitored to ensure it remains adequately controlled to an acceptable level.	n/a
Health and Safety	Burns / scolds Injuries caused by contacting hot surfaces or boiling water	Volunteers & Staff	1) CRITICAL - Engineering: Electric radiators are located away from operational areas and can be adjusted without touching the heated surface - Effective 2) CRITICAL - Engineering: Electric kettles are provided for safely heating water - Effective 3) CRITICAL - PPE: Gloves are provided for operating the stove - Effective	2 x 2 = 4 Low - Risk to be monitored to ensure it remains adequately controlled to an acceptable level.	None	2 x 2 = 4 Low - Risk to be monitored to ensure it remains adequately controlled to an acceptable level.	n/a

Abnormal Operations

Type	Hazard Cause	Persons Affected	Control Measures	L S T Overall	Additional Control Measures	L S T Overall	Owner/Action
Health and Safety	Slips,trips and falls When walking lineside to access points or other signalling components	Volunteers & Staff	1) CRITICAL - Administrative: All signalmen will have received PTS training and will be wearing orange high viz - Effective 2) CRITICAL - Administrative: Signalmen are advised to wear stout footwear with a good grip and to never step on sleepers or rails in order to minimise the likelihood of slips, trips or falls - Effective 3) CRITICAL - Administrative: Signalmen will be aware of the location of trains and can ensure that any necessary line blocks are in place - Effective	2 x 2 = 4 Low - Risk to be monitored to ensure it remains adequately controlled to an acceptable level.	None	2 x 2 = 4 Low - Risk to be monitored to ensure it remains adequately controlled to an acceptable level.	n/a
Health and Safety	Crushed fingers or toes Handwinding of motorised points, clipping and scotching of points	Volunteers & Staff	1) CRITICAL - Engineering: Insertion of motorised point winding handle disconnects the power supply ensuring that the motor cannot operate whilst the handle is inserted - Effective 2) Engineering: Long handled scrapers are provided for the removal of snow and ice between point blades - Effective 3) CRITICAL - Administrative: All signalmen are given practical training on the safe clipping and scotching of points and for the hand winding of motorised points - Effective 4) CRITICAL - Administrative: Signalmen are trained not to insert any part of the body within the traverse area of the point blades in case of unexpected movement - Effective	2 x 2 = 4 Low - Risk to be monitored to ensure it remains adequately controlled to an acceptable level.	1) Administrative: Written guidance could be provided within each signal box to remind signalmen of the procedure for hand winding, clipping and scotching of points - noting that these activities are very rarely required - Effective	2 x 2 = 4 Low - Risk to be monitored to ensure it remains adequately controlled to an acceptable level.	n/a

COSHH Assessments

There are no COSHH assessments associated with this risk assessment.

Ends