Risk Assessment - Case 988 RRV - Operations

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RRV operations at worksites

Type	Hazard Cause	Persons Affected	Control Measures	L S T Overall	Additional Control Measures	L S T Overall	Owner/Action
Health and Safety	RRV derailment or collision with other plant / infrastructure Mal-operation of the machine or plant equipment failure.	Volunteers, Staff & Contractors	1) CRITICAL - Elimination: All staff operating the RRV machine to hold competency to operate the machine and their competence to be recorded in the CMS. - Effective 2) CRITICAL - Elimination: All contractors brought in to operate the machine to have qualifications recorded and inspected by the PIC/and PWAY Manager - Effective 3) CRITICAL - Elimination: Plant to be serviced and have valid LOLER examination. - Effective 4) CRITICAL - Elimination: Operations to be suspended if equipment failure or issues arise. - Effective 5) CRITICAL - Elimination: Clearances with infrastructure to be reviewed as part of job planning and hazard assessment. - Effective	2 x 4 = 8 Medium - Risk to be minimised and controlled so far as is reasonably practical.	None	n n n	n/a
Health and Safety	Equipment failure during lifting operations Mal-operation or plant equipment failure	Volunteers, Staff & Contractors	1) CRITICAL - Elimination: Plant and lifting equipment to be certified to LOLER requirements and visually inspected for damage on each use. - Effective 2) CRITICAL - Elimination: Servicing of the machine to be carried out at specified intervals. - Effective 3) CRITICAL - Elimination: Daily checks of RRV to be completed by the operators and recorded in the log book held in the machine. Any defects corrected before lifting operations are performed. - Effective 4) CRITICAL - Elimination: Lift plans to be created for each operation to cover the elements of lifting and environmental conditions - Effective 5) CRITICAL - Elimination: Correct slinging equipment and method of lifting used by competent personnel. - Effective	2 x 4 = 8 Medium - Risk to be minimised and controlled so far as is reasonably practical.	None	n n n	n/a
Health and Safety	Worker / banksman impacted by RRV boom or running gear Movement or position of worker not seen by RRV operator	Volunteers, Staff & Contractors	1) CRITICAL - Elimination: RRV operators are trained and competent in vehicle use. - Effective 2) CRITICAL - Elimination: RRV movements are signaled on warning horn by operator - Effective 3) CRITICAL - PPE: Personnel working in vicinity to wear hiviz clothing, protective boots, hard hats and gloves. - Effective	2 x 3 = 6 Medium - Risk to be minimised and controlled so far as is reasonably practical.	None	n n n	n/a
Health and Safety	Impact with underground or overhead services Unknown location of services or unsighted by RRV operator	Volunteers, Staff & Contractors	1) CRITICAL - Elimination: Services are identified and recorded on operations workpack during planning. - Effective 2) CRITICAL - Elimination: Services are marked on site with hazard warning materials and reviewed with RRV operations team. - Effective	2 x 2 = 4 Low - Risk to be monitored to ensure it remains adequately controlled to an acceptable level.	None	n n n	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	Runaway trailer impacting personnel on track or other vehicle. Poor brakes, failed coupling.	Volunteers, Staff & Contractors	1) CRITICAL - Elimination: Trailer has an automatic parking brake - Effective 2) CRITICAL - Elimination: Coupling inspected and correctly fitted by competent personnel - Effective 3) CRITICAL - Elimination: Wheel chocks used if trailer is left on gradient. - Effective	1 x 4 = 4 Low - Risk to be monitored to ensure it remains adequately controlled to an acceptable level.	None	n n n	n/a

RRV On/Off Tracking

Type	Hazard Cause	Persons Affected	Control Measures	L S T Overall	Additional Control Measures	L S T Overall	Owner/Action
Health and Safety	RRV unexpected movement whilst on/off-tracking Steep gradient and/or slippery rail surface, poor uneven site, poor track condition, poor RRV condition	Volunteers & Staff	1) CRITICAL - Elimination: RRV has been upgraded with braking on all road and rail wheels - Effective 2) Elimination: RRV on/off-track procedure practiced by competent operators - Effective 3) Elimination: RRV on/off-track only at permanent sites - Effective 4) Elimination: RRV maintained in good condition and fully certified - Effective	3 x 3 = 9 Medium - Risk to be minimised and controlled so far as is reasonably practical.	None	n n n	n/a
Operations	RRV damage to track during on-off tracking Incorrect alignment of rail wheels, impact by bucket/hitch, dropped trailer	Volunteers, Staff & Contractors	1) CRITICAL - Elimination: Personnel are trained in RRV operation and are competent to perform on-off tracking activity. - Effective 2) CRITICAL - Elimination: Standard on-off tracking locations are defined in RRV Operations Guide and are verified as fit for purpose. - Effective 3) CRITICAL - Elimination: Temporary on-off tracking facilities are only constructed to a configuration defined in the RRV Operations Guide and are checked as fit for purpose by RRV operators before use. - Effective 4) CRITICAL - Elimination: Lifting equipment is appropriately maintained and certified for use. - Effective 5) CRITICAL - Elimination: RRV plant is checked daily and confirmed as fit for use by RRV operator prior to use. - Effective 6) Elimination: Designated controller/banksman working with the RRV to assist with alignment, sighting issues that may arise, and stopping operations if needed. - Effective	3 x 2 = 6 Medium - Risk to be minimised and controlled so far as is reasonably practical.	None	n n n	n/a

Score and Control Measure Notes.
Risk based on small damage incurred that can be reasonably repaired without impacting operations e.g. during major winter project work.
Risk based on damage likely to be incurred during winter working operations that allows time to complete repairs without impacting operations.

RRV track movements

Type	Hazard Cause	Persons Affected	Control Measures	L S T Overall	Additional Control Measures	L S T Overall	Owner/Action
Operations	RRV derailment on running line preventing train movements Track twist, poor S&C condition, object on track, broken rail / fishplate	Volunteers, Staff & Contractors	1) CRITICAL - Elimination: Track inspections of running lines to detect failures, twist, issues. - Effective 2) Elimination: RRV movement speed to be controlled and defined in ops manual. - Effective 3) CRITICAL - Elimination: RRV maintained and inspected to required standards. - Effective 4) CRITICAL - Elimination: RRV operators are trained and competent in vehicle use. - Effective 5) Elimination: Designated controller/banksman working with the plant and help sight rail debris and minimize derailment risk. - Effective	2 x 4 = 8 Medium - Risk to be minimised and controlled so far as is reasonably practical.	1) Elimination: RRV operations not to be performed in poor light conditions to maximize visibility of track issues. - Effective	2 x 4 = 8 Medium - Risk to be minimised and controlled so far as is reasonably practical.	n/a

Type	Hazard Cause	Persons Affected	Control Measures	L S T Overall	Additional Control Measures	L S T Overall	Owner/Action
Operations	RRV or trailer collision with infrastructure Equipment / loads carried are outside of loading gauge, equipment slipping from trailer, boom moved inadvertently	Volunteers, Staff & Contractors	1) CRITICAL - Elimination: RRV operators are trained and competent in vehicle use. - Effective 2) CRITICAL - Elimination: RRV maintained in good condition and fully certified - Effective 3) CRITICAL - Elimination: RRV plant is checked daily and confirmed as fit for use by RRV operator prior to use. - Effective 4) Elimination: RRV operations to be performed in daylight conditions to maximize visibility of track issues. - Effective 5) Elimination: All trailer loads are secured to prevent movement and slipping. - Effective	2 x 3 = 6 Medium - Risk to be minimised and controlled so far as is reasonably practical.	None	n n n	n/a
Health and Safety	RRV or trailer impact with personnel working on the line Brake and/or coupling failure	Volunteers, Staff & Contractors	1) CRITICAL - Elimination: RRV operators are trained and competent in vehicle use. - Effective 2) CRITICAL - Elimination: RRV maintained in good condition and fully certified - Effective 3) CRITICAL - Elimination: RRV plant is checked daily and confirmed as fit for use by RRV operator prior to use. - Effective 4) CRITICAL - Elimination: RRV operator adheres to line speed restrictions and 'sound whistle' requirements. - Effective 5) Elimination: Non-standard working (dark, tunnel, storm, freezing, low visibility) is subject to additional risk assessment. - Effective 6) CRITICAL - PPE: Lineside personnel wear hi-viz clothing - Effective	2 x 4 = 8 Medium - Risk to be minimised and controlled so far as is reasonably practical.	None	n n n	n/a
Operations	RRV failed on the running line preventing rail traffic movements RRV vehicle/trailer/operator issue	Everyone	1) CRITICAL - Elimination: RRV maintained in good condition and fully certified - Effective 2) CRITICAL - Elimination: RRV operators are trained and competent in vehicle use. - Effective 3) CRITICAL - Elimination: RRV plant is checked daily and confirmed as fit for use by RRV operator prior to use. - Effective 4) Elimination: RRV has an emergency tow bar stowed on the lower frame to connect to a rescuing rail vehicle. - Effective 5) Elimination: RRV towing instructions are kept in the RRV cab folder. - Effective	3 x 3 = 9 Medium - Risk to be minimised and controlled so far as is reasonably practical.	1) Elimination: A joint training session to simulate a RRV towing situation would reduce the risks during towing operation. - Effective	2 x 3 = 6 Medium - Risk to be minimised and controlled so far as is reasonably practical.	n/a

COSHH Assessments

There are no COSHH assessments associated with this risk assessment.

Reference Documents

• HGR-A0062-05 Safe Use of On-Track-Plant - Nov 2020 - This is the Heritage Railway Association guidance note for OTP operations including RRVs.
• GWSR RRV Operators Operations Guide -

Ends