

QUALITATIVE RISK ASSESSMENT (QRA) FORM

Running of Track RL or GL (No public)

QRA Title (e.g. Work, Activity, MOC, etc.)

NDSME Site

Location(s)

Document Number:

NDSME-RA-005



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Qualitative Risk Assessment Team (Minimum 2 people)

18/06/2025

Date

TASK, PROCESS STEP, or PROPOSED CHANGE	THREATS / HAZARDS / ASPECTS <i>How can the TASK, STEP, or CHANGE go wrong? What are the potential Consequences? What are the Gaps?</i>	CURRENT CONTROLS / BARRIERS including OPERATIONAL PROCEDURES <i>What are the existing CONTROLS / BARRIERS, if any, to Control, Mitigate, Eliminate, or Prevent the identified THREAT / HAZARD / ASPECT?</i> NOTE: For a RISK SCORE of 9 or greater (RISK LEVEL > 2), additional CONTROLS / BARRIERS must be proposed.	RISK SCORE		Risk Level	
			C	F		
Personnel access to NDSME area when members are present.	Tripping, falling, and bumping into objects.	Members are familiar with the railway paraphernalia of an active miniature railway. Signed in guests are discouraged from wandering on the track and access to the workshop. Vehicle access is gated to prevent inadvertent entry by the public.	2	2	4	1
Locomotive handling.	Injury when moving and handling heavy loads from road vehicles and or trailers to the steaming bays and onto the tracks.	The hydraulic lifting table at the loading bay enables heavy loads to be rolled and not manually lifted when transferring from vehicle road transport to the tracks. A traverser is used to transfer locomotives, from the RL steaming bay rails onto the main track circuit. A crane is provided to lift the RL passenger cars from the storage bay onto the main track circuit.	2	2	4	1
Lifting and Overloading.	Bodily strains.	The usual heavy lifts are the locomotives and driving trucks etc due to lifting equipment provided this is normally limited to 5" locos. A portable hydraulic scissor lift is available and it is recommended that members transport there locos in a way that this can be utilized to unload them to avoid lifting heavy items.	3	2	6	2
Members and others working on or near the track for maintenance or repair when the track is operational.	Possible impact by a moving train or locomotive.	Hi-Vis jackets are mandatory for anyone work on or near the track circuits. Locos have audible warning means.	2	2	4	1
Train-train collision including tail gate collisions.	Personal injury. Derailment consequences.	it is not possible for two locomotives to be on the same track circuit forward facing moving normally in opposite directions so avoiding a high speed collision. Shunting and manoeuvring is carried out at very low crawling speeds. Driver must not leave the station till the previous engine has exited the tunnel. Driver is expected to visual ensure track ahead is clear and drive at a speeds that they can stop if an obstruction is observed	2	2	4	1
Derailment.	Personal injury. Derailment consequences	Due to the low travelling speed permitted together with low centre of gravity of loaded trucks and locomotives Plus anti tip rails on the raised track the derailments experienced have only ever caused the wheels to run onto the sleepers. There have been to date no derailments that did not leave the train in an upright position. There have been no personal injuries. There has been to date no damage to locomotives or any secondary events such as unplanned releases of steam or spillage of fuel. The situation is continually observed/monitored.	2	3	6	2
Volatlie Fuels.	Fire/explosion when refuelling petrol, diesel or gas fuelled locomotives	Refuelling is only permitted in the open area rear of the Clubhouse building where there are normally no naked flames of other hot surfaces. Fuels are not stored in quantity. The fuel bunker is a separate store remote from occupied buildings and public spaces. The outside of the bunker is not labelled as such due to the possibility of vandalism if the contents are advertised.	4	1	4	1
Running Steam Trains	Fire (due to dry grass)	Absolutely no refuelling in the station or near steam locomotives! Dynamic risk assessment to be made and if grass becomes dry in summer a ban of Steam engines maybe implemented due to the risk of fire.	3	2	6	2

Low Volatile Fuels	Burns and uncontrolled fire in Steaming Bays.	Fuels permitted in this area are lumped coal, wood and small quantities of paraffin. There are no open fires in the steaming bay and hot ash is collected in purpose built tray.	2	1	2	1
Steam Generation.	Scalds and Burns including face	Boiler steam emission is a controlled event issuing mainly from relief valves and such jets are directed upwards away from persons local to the event. Steam from relief valves condenses in the air close to the point of release and burns are not experienced. Burns from hot surfaces are usually limited to finger ends as the extent of hot surfaces is limited by locomotive size, however members/guests steaming their locomotives are expected to be familiar with their locomotives and so avoid such minor contact burns. Public are not permitted in the steaming bays. When filling tanks with water avoid placing head near safety valve that may blow off at any time. These are related to battery operation and charging systems. The operators of battery powered locomotives are reasonably expected to be familiar with their equipment and only use the Society facilities for topping up during a running day and this action takes place in the open air. Systems are designed and installed in accordance with regulatory requirements and PAT procedures are followed accordingly. Any item brought in by members is expected to meet current regulation and to only be used by them at their own risk.	2	1	2	1
12 or 24 Volt DC Systems	Electric shock		2	1	2	1
240 Volt AC systems.	Electric shock		2	2	4	1
Private member running GL when no public passenger carrying is taking place.	Collision between a train and pedestrian.	Locomotive drivers must give priority to pedestrians when crossing the public area of the park. Speed is limited to 3 mph and whistle must be used. Warning signs must be installed at Park Public crossings. Stop sign must be deployed at field exit.	2	2	4	1
Private member running RL when no public passenger carrying is taking place.	Derailment due to swing bridge being left open	Before running commences, supervisor to ensure all bridges are closed. Install battery operated signal that operates if a arriving member opens the swing bridge to gain vehicular access. No other bridge to be opened (e.g. to move GL equipment) without obtaining permission of the RL supervisor first. On RL days these members have priority and the GL tunnel will be out of use.	3	1	3	1
If Visiting Locomotives						
Unfamiliarity with methodology for handling heavy loads or using loco lift	Strain injury. Dropped objects.	The NDSME Member supervising operates the hydraulic lift and the traverser and the Visitor is responsible for the means of bridging the gap between the trailer or vehicle and the hydraulic lift as only he is familiar with the weight and manoeuvrability of his locomotive.	3	1	3	1
Visitor credentials with regard to pressure integrity of the locomotive and validity of insurance cover.	Impaired indemnity. Boiler accident.	Access to the steaming bay is not permitted without prior submission to NDSME of the following proof. • NAME or SFed insurance cover for the day of operation of the locomotive. • NAME or SFed current boiler hydraulic test and steam test certification.	4	1	4	1
Unfamiliarity with the Eaton Park track.	Collision. Derailment.	Visiting drivers and attendants are briefed on the track operations and etiquette including at least the permitted directions of travel, restrictions on reverse travel, signal location and procedures, track speed limits and level crossing operations. The member that sponsors the visitor is responsible for ensuring the visitor is aware of all rules and follows them.	3	1	3	1
It is the responsibility of every member to Stop Work when unsafe conditions are recognized.						
Qualitative Risk Assessment Team Completed by:		M. Rhodes (Printed)				18/06/2025 Date
Qualitative Risk Assessment Approved by:		A. Mann (Printed)				18/06/2025 Date

NOTE: C denotes the CONSEQUENCE SEVERITY if the identified IMPACT, THREAT, or HAZARD occurs or is encountered.
F denotes the FREQUENCY or LIKELIHOOD of the identified IMPACT, THREAT, or HAZARD occurring or being encountered.
CxF denotes Risk Priority Number (RPN) also known as the Hazard & Qualitative Risk Assessment score.