

# York City & District Society of Model Engineers - Risk Register

The following hazards and control measures shall be reviewed as club circumstances change, or as a result accidents/incidents, and at least annually. The maintenance of this register and the implementation and effectiveness of the control measures shall be monitored, and reviewed at committee meetings. The risk rating is used to prioritize the effort starting with the highest risk ratings

Severity	Very High	5	10	15	20	25
	High	4	8	12	16	20
	Medium	3	6	9	12	15
	Low	2	4	6	8	10
	Very Low	1	2	3	4	5
Use this matrix to determine the risk ratings below		Very Low	Low	Medium	High	Very High
<b>Likelihood</b>						

**Please Note** - All Members are responsible and may have multiple responsibilities for applying the control measures depending on their role. (E.g. the 'Owner of a loco, may also be the 'Driver, the 'Guard and the 'Person In Charge of any passengers)

No	Category	Item	Hazard	Consequence	Likelihood	x	Severity	=	Risk Rating	Control Measures	Responsibility
1	Management System	Documents & Records	Deficiencies in the review, publication and maintenance of club policies, procedures and records. (e.g. risk assessments, Track Marshall checks, etc.)	Management controls are poorly defined or not effectively communicated and implemented by members resulting in an accident or incident.	5	x	4	=	20	Management policies & procedures to be reviewed at least annually and updated accordingly.  Audit records to confirm the system is being implemented and is effective.	Committee Members
2	Management System	Communication	Poor communication (e.g. club members not being made fully aware of information, risks or controls that they must implement to ensure the safety of people).	Potential accident or incident	5	x	4	=	20	1. Primary communication method shall be agreed with existing and new members who should acknowledge their receipt and understanding of critical information.  2. Critical information also to be published on the club members web page.	Committee Members
3	Site	Access & Egress	New members are unaware of information critical to safety, and operation of the club policies, processes, etc.	injury	4	x	3	=	12	New members to be given a safety briefing and a tour of the site on their first day as a member at the site.	Person in Charge
4	Site	Access & Egress	The general public and persons visiting the site are unaware of information that is important to their own safety.	injury	4	x	3	=	12	1. General public and visitors to the site for the first time are to be directed to the club house on arrival and handed a Safety Information Leaflet.  2. Persons under the age of 18 must be accompanied and supervised by an adult at all times.	Person in Charge
5	Site	Access & Egress	Trips, slips or falls	Sprains, cuts, bruises	4	x	3	=	12	1. All members to avoid creating avoidable tripping hazards in general walking areas in the first place.  2. Clear potential club responsible trip or slip hazards from public areas in advance of family running and portable track running.  3. All incidents or near misses to be reported in the incident book.	Members
6	Site	Access & Egress	Vehicles hit pedestrians when reversing long distance to the raised track unloading area	Trapping, crushed limbs	3	x	5	=	15	1. Pedestrian and vehicle areas to be segregated or otherwise marked up where possible.  2. Use a Banks man to ensure area is clear of pedestrians when reversing.	Person in Charge

No	Category	Item	Hazard	Consequence	Likelihood	x	Severity	=	Risk Rating	Control Measures	Responsibility
7	Site	Access & Egress	Vehicles come into contact with trains at the level crossing.	Derailment	3	x	5	=	15	Drivers and pedestrians to obey the signals and notices at the level crossing.	Members
8	Site	Access & Egress	People straying onto the line in front of a train (e.g. at stations, level crossing, garden railway pedestrian crossing, etc.)	Hit or trapped, tripping, by the train	3	x	3	=	9	Running areas to be adequately fenced where possible to prevent inadvertent straying onto the line, or otherwise clearly visible notices to be provided.	Person in Charge
9	Site	Access & Egress	Visiting drivers without boiler certificate or unfamiliar with hazards, safety information and rules of the site or track on the day of running	Safety Incident	3	x	5	=	15	1. Visitor boiler certificates to be checked before they are allowed to run. 2. Visiting drivers shall read and acknowledge that they understand the rules of the site and track. Verification records shall be maintained.	Person in Charge
10	Engineering	Design	Novel or unproven type of design (e.g. suspension, brakes, etc.)	import of hazard to the club with accident or incident (e.g. explosion, derailment, etc.)	1	x	5	=	5	Designer shall discuss the design with competent persons followed by inspection and testing of the design to ensure it is fit for purpose.	Designers
11	Activity	Lifting	Unloading & loading a heavy engine from a vehicle or trailer	Back or manual handling injuries	3	x	3	=	9	Mechanical lifting equipment to be used in preference to manual handling.	Members
12	Miniature Railway (All)	Steam Engines	Failure of boiler, pressure vessel or safety components (e.g. , valve, pipe or fitting failure, etc.)	Sudden uncontrolled release of steam, severe scalding, burns or potential impact injuries	3	x	5	=	15	Boilers, pressure vessels and safety components shall be inspected and tested annually by a competent person before use.	Owner
13	Miniature Railway (All)	Steam Engines	Scalds or burns to people from controlled release of steam, fire or hot ash (e.g. blowing down, dropping fire after steaming, etc)	Severe scalding, burns,	3	x	5	=	15	1. Person in charge of the steam engine is responsible release of steam, fire, ash, etc., safely and in the designated steaming areas. 2. General public shall be segregated from the designated steaming areas by physical barriers.	Person in Charge
14	Miniature Railway (All)	Steam Engines	People touching hot parts of a steam engine (e.g. children, general public, etc.)	Blisters and irritation	2	x	3	=	6	1. Person in charge of the steam engine is responsible for prevention. 2. Engines in steam shall be proactively supervised at all times and never left unattended.	Person in Charge

No	Category	Item	Hazard	Consequence	Likelihood	x	Severity	=	Risk Rating	Control Measures	Responsibility
15	Miniature Railway (All)	Steam Engines	Hot particles being emitted from the engine exhaust funnel	eye injury	2	x	3	=	6	1. Eye protection to be provided. 2. Eyewash bottles to be provided in first aid kits, including the first aid kit to accompany the portable track.	Person in Charge
16	Miniature Railway (All)	Steam Engines	Runaway locomotive	Derailment or collision with other train	2	x	3	=	6	All engines under steam shall not be left unattended. Person in charge of the engine may hand over to another competent person if required.	Person in Charge
17	Miniature Railway (All)	Riding	Insufficient containment of passengers when train is in motion with potential for tipping or impact with objects at the side of the track.	Trapping or derailment	2	x	4	=	8	1. Riding cars used by members of the public to be fitted with anti tip devices where possible. 2. Passengers to be advised of the correct riding position when in motion - "Please do not lean out, and keep arms and legs in" 3. Structures and equipment shall be positioned a safe distance from the running rail, and in accordance with miniature railway standard clearances.	Person in Charge
18	Miniature Railway (All)	Riding	Tipping of riding cars when boarding or alighting.	Trapping or derailment	2	x	3	=	6	Passengers are to be advised of correct position when boarding and alighting - "Please step right over"	Person in Charge
19	Miniature Railway (All)	Riding	Trapping over riding car ends or under the running boards.	crushed hands, feet, fingers, toes	2	x	3	=	6	Passengers to be advised of correct riding position when boarding - "Hands on leading partition and feet on running boards"	Person in Charge
20	Miniature Railway (Portable Track)	Riding	Failing to stop at the end of the track.	Rapid deceleration and /or derailment	2	x	4	=	8	1. All drivers carrying members of the public shall be trained and certified by a competent person. 2. Brake Car if required to be operated by a Guard. 3. Ends of track shall be provided with additional arresting equipment to reduce effect of a potential impact.	Person in Charge
21	Miniature Railway (All)	Riding	Collision with other trains.	Rapid deceleration and /or derailment	2	x	4	=	8	1. Drivers shall obey the signaling system and rules governing failures. 2. Drivers shall stay within the speed limit notices. 3. Drivers shall approach trains at slow speed to stop within the distance of clear track they can see ahead.	Driver

No	Category	Item	Hazard	Consequence	Likelihood	x	Severity	=	Risk Rating	Control Measures	Responsibility
22	Miniature Railway (Portable Track)	Riding	Drivers getting over tired.	Accident or incident	4	x	3	=	12	1. Driver to take 10 minute break every hour or stop if tired. 2. Alternative competent driver to be identified at the event planning stage to enable driver rest periods during the event.	Driver
23	Miniature Railway (Portable Track)	Riding	Public behaving badly causing potential hazardous situation.	Derailment, falling off	3	x	3	=	9	1. Klaxon or continuous short sharp blasts of Whistle to be sounded by any portable track team member. 2. Portable track team members to be reminded by the Person in Charge prior to start of the event to ensure awareness.	Person in Charge
24	Miniature Railway (All)	Riding	Breakaway vehicle.	Derailment or collision with other train	2	x	3	=	6	Couplings to be visually checked and tested during proving run	Driver
25	Miniature Railway (All)	Riding	Ineffective brakes.	Derailment or collision with other train	2	x	3	=	6	Brakes to be tested during proving run	Driver
26	Miniature Railway (Portable Track)	Riding	Reverse running and difficulty seeing the end of the track.	Collision with buffer stop	2	x	3	=	6	1. Marker board to be positioned to indicate to the driver the stopping position. 2. Guard at rear of train to act as secondary lookout and brakeman for the driver	Driver
27	Miniature Railway (All)	Riding	Damage, expansion or deterioration of track, points and their component parts.	Derailment	3	x	5	=	15	Periodic Inspection of P way, including points, to be carried out (e.g. on working days). Verification record shall be maintained.  Volunteer Track Marshall to be confirmed in the planning of running days.  Track Marshall shall carry out the required checks prior to running.	Track Marshall

No	Category	Item	Hazard	Consequence	Likelihood	x	Severity	=	Risk Rating	Control Measures	Responsibility
28	Machines/ Equipment	Extension Cables	Mains cable run over the track to operate equipment when trains are potentially running.  (e.g. power tool leads across rails when vehicles are moving on a working day, etc.)	Electrocution	3	x	5	=	15	Mains extension cables shall not be run over running rails.	Members
29	Garden Railway	Flammable Substances	Sudden uncontrolled release of flammable vapor and ignition (e.g. butane or propane canisters, rupture, mentholated spirits, spillage, etc.)	Severe burns,	2	x	4	=	8	1. Containers of flammable substances to be clearly marked and controlled in accordance with the products safety information. Their storage and use is restricted to the designated steaming areas and refilling of canisters is not permitted.  2. Smoking is not permitted and naked flames (e.g. lit burners of other locos, etc ) to be kept well away from area where flammable substances may be released.	Owner
30	Garden Railway	Access & Egress	Trains coming into contact with people  (e.g. by derailment or falling from the raised track bed )		2	x	2	=	4	1. Operators are responsible for the safe operation of trains and must not run at excessive speeds or in windy conditions.	Operator
31	Machines/ Equipment	Plant	Plant is brought onto the premises without full awareness of the potential risks (e.g. diggers, compaction rollers, etc.)	Plant causes injury to the user or other people	5	x	4	=	20	1. The person proposing plant use is to determine what practical experience the proposed operators have and their competency records.  2. Plant shall not be used without committee review and approval of the plant and its named operators.	Members
33	Machines/ Equipment	Plant	Plant is operated by an unauthorized person	Potential accident or incident	1	x	4	=	4	Ignition keys to be held only by the authorized plant operator or otherwise locked in the Site Managers cupboard	Operator
34	Machines/ Equipment	Plant	Plant is not properly prepared for the intended task.	Sudden detachment of accessories or parts thereof	2	x	4	=	8	1. The operator shall prepare and check the plant to confirm mechanical soundness and safe attachment of accessories before starting each working session.	Operator
35	Machines/ Equipment	Plant	Spillage of fuel	Surfaces made slippery, risk of fire if in contact with ignition source	2	x	3	=	6	Refueling shall only be undertaken by the operator. Smoking or naked flames are not allowed in the vicinity.	Operator
36	Machines/ Equipment	Plant	Ground surface is uneven, unstable or too steep to support the plant and its accessories	Plant loses grip and falls over causing injury to the driver or other people	2	x	4	=	8	1. The operator shall check the intended route and work site to avoid surfaces which are too uneven, unstable or steep.  2. Banks man to be used to guide the operator where required.	Operator

No	Category	Item	Hazard	Consequence	Likelihood	x	Severity	=	Risk Rating	Control Measures	Responsibility
37	Machines/ Equipment	Plant	Plant comes into contact with people	Trapping, bruising, crushed limbs or concussion	2	x	4	=	8	<p>1. Work areas to be fenced off (or marker taped) as appropriate.</p> <p>2. Operator(s) and workers to remain alert to the plant operations, other hazards and advise people of risks, staying clear, or otherwise stopping the work.</p> <p>3. Operator(s) and workers shall wear appropriate personal protective equipment for the work undertaken</p>	Members
38	Activity	Excavation	Contact with underground services when digging (e.g. live electricity cables)	Damaged cables, electrocution	2	x	4	=	8	<p>Before digging, a check should be made with the Site Manager, and of the site records to determine the whereabouts of buried services.</p>	Members
39	Machines/ Equipment	Work Equipment and Tools	Equipment or tools are not fit for purpose, or potential user is unfamiliar with safe use and potential risks	Injury or electrocution	2	x	4	=	8	<p>1. Members shall not use machinery, equipment or tools unless they are familiar with their safe use and the risks involved.</p> <p>2. Members have a responsibility to control their own safety, and the safety of others when using machinery, equipment or tools.</p> <p>3. Machinery, equipment and tools shall be securely stored to prevent theft and unauthorized use. Non-members are not permitted to use the clubs machinery, equipment or tools.</p> <p>4. Machinery, equipment or tools which may require periodic maintenance checks to be carried out to ensure safety and fitness for purpose, shall be registered and the required checks undertaken at the defined frequency. (e.g. Pa Tests, plant maintenance, test equipment calibration, and so on).</p> <p>5. Members shall notify the appropriate person of any defects in order to instigate the appropriate action to fix them. Where practical, the defective item shall be labeled or segregated to prevent inadvertent use.</p>	Members
40	Miniature Railway (All)	Riding	long scarfs, shawls or other trailing garments caught under moving vehicles.	injury, strangulation or derailment	2	x	3	=	6	<p>Passengers to be checked by the Guard on every loaded journey and to advise passengers accordingly to ensure safe before departure.</p>	Guard

No	Category	Item	Hazard	Consequence	Likelihood	x	Severity	=	Risk Rating	Control Measures	Responsibility
41	Activity	Supplying Food	Food may become contaminated due to inappropriate handling, or may contain allergens that the club seller and general public are not aware of, or may otherwise be hazardous to health.	Member of public may become ill, or potentially fatal to vulnerable groups such as young children, elderly persons and allergen sufferers.	3	x	5	=	15	Any food supplied to the public must be low risk and limited to that which:- 1. is fully packaged to avoid contamination, 2. is fully labeled so the club seller is aware of the requirements for safe storage, maintenance and use of the product and its expiry date. 3. is labeled with the ingredients so the general public can make an informed decision regarding allergens before purchase; 4. is safe to keep at room temperature to avoid the need for complex safety controls such as refrigeration, periodic temperature checks, etc.	Person in Charge