Safety Management System

Stafford & District Model Engineering Society Limited

This document is the basis of the safe working procedures relating to all activities at the SDMES site at Stafford Showground.

It has been designed so that there is a common section for all members to read, and then individuals can read and act upon the relevant sections relating to their specific involvement and activities.

Everything carries risk, even hobbies, and the Company has an Insurance Policy in place.

It is important that all members are aware of their need to comply with this safety management system, whatever they are doing, to ensure the insurance requirements are being fulfilled.

This applies to all activities.

Section Index (and Revision Record)

1 Introduction & General Safety on the Site

1.1 The Operating Procedures in this Safety Management System (SMS) are based on the Stafford and District Model Engineering Society Limited Risk Assessments.

1.2 The SMS is designed to provide the basis of safe operating procedures for all activities associated with the Society, both at the Stafford Showground Track site and with any portable track system.

1.3 All of our activities are for the benefit and enjoyment of society members and therefore, to ensure safety and respect for all involved, Society Policy is to work in accordance with the Safety Management System at all times

1.4 Some of the procedures are based on common sense and experience whilst others are from the limitations imposed on members by the Society Public Liability Insurance policy.

1.5 There have recently been a number of incidents at Societies similar to our own where injuries have occurred. The Health and Safety Executive have become involved, and Insurance issues and liability have had to be dealt with. This Safety Management System will help all members be safer by good practice, and will help identify potential risks before they become an incident and somebody gets hurt!

1.6 The Safety Management System provides the basis for safe operation and should such an event sadly befall our Society, awareness and compliance of this document will assist with resolution.

1.7 This document is made of different sections so that each member can readily see what areas they are involved in and the relevant rules and requirements for them.

1.8 Safety and Liability Notices will be displayed in the station area notifying exclusions of liability, so far as the law allows.

1.9 Children are the responsibility of their parents, or other responsible accompanying adult, whilst on SDMES curtilage.

1.10 There are many trip hazards around the site once you leave the main walkways and so attention to terrain and avoiding distractions whilst walking will minimise trips, slips and falls.

1.11 Where the Public are allowed access the possibility of trips, slips and falls will be minimised by restricting access to limited viewing areas.

1.12 **Contractors -** any Contractors working on site will, before commencing works, supply SDMES Ltd with a written Risk Assessment and a Method Statement for the Works, together with written confirmation of their adequate Insurance liability cover for such works and for any machinery they are providing. These documents will be reviewed and approved by a representative of SDMES Ltd before authority is given for work to commence.

1.13 **Governance** - any proposals to make changes to infrastructure, vehicles, site infrastructure, electrical wiring, lighting, electrical circuit protection and control equipment will all be subject to an approval process before any work or changes are undertaken.

Any proposed changes must be documented, as a minimum as an email to the Board, who will subsequently discuss the safety implications of such a change, and if approved:-

- Appoint a competent and responsible person to supervise the works including any design required and record activity in the site log – Day Book.
- Appoint a second competent and responsible person for the purposes of signing off the work once completed.

1.14 **Day Book** - a Day Book will be provided in the Meeting room which will be updated for any infrastructure or other significant changes or modifications made. The person making the changes will update this book with the date so that information is passed on to subsequent users of the track and facilities.

1.15 **Members Attendance Book –** all members and visitors to the Tracksite are required to sign-in and out in the attendance book kept in the Meeting room.

1.16 **Members Running Log Book** – Members using locomotives on any of the tracks, or sailing model boats, must ensure that they fully complete the Running Log Book in situations where there is no Track Superintendent to do so.

1.17 **Model Road Vehicles** - particular insurance requirements apply to the use of model road vehicles (whether steam powered of otherwise), the SDMES Public Liability Insurance does not cover such use. Specific agreement on the use of such vehicles and the insurance required to be in place must be obtained from the SDMES Board before a model road vehicle is used.

1.18 **Dogs**- dogs are not allowed on the Tracksite under any circumstances.

2 Operating Procedures Ground Level Track

2.1 Appointment of person of Responsibility/Track Superintendent

For each running session there will be appointed a Track Superintendent who will take responsibility for;

- Ensuring safe operating
- Allocating running periods
- Supervising any actions such as opposite road running for engine failure
- Ensuring these Operating Procedures are complied with
- Ensuring that all necessary checks in Section 2.10 are completed and recorded.
- Completing the Visitors Book, including, where appropriate inspection of boiler certificates and public liability insurance certificates
- Completing the Running Log on a daily basis
- If necessary, completing the Incident Book

2.2 The Superintendent's decision is final in all matters of:

- Acceptability of boiler certificates or public liability insurance certificates
- Safety, including the fitness of locomotives and rolling stock to run
- Discipline and behaviour of children under 16 (including Junior Members of SDMESL) attending the event

2.3 If the Superintendent has to leave the station area for any reason, they may transfer their responsibilities to a deputy superintendent for the required period of time. Where operations could be of long duration (e.g. operation at the County Show) different Track Superintendents can be agreed for different periods throughout the event – the key point is to have an agreed Superintendent at all times.

2.4 Field & Bridlepath Gates

In normal circumstances the field and bridlepath gates that give access to the inside of the site must be kept locked. On running days where trains will run round the loop only, the bridlepath gates must locked in the closed position. When running using the extension the bridlepath gates must locked in the open position.

2.5 Platform Staff Operations and responsibilities

- A minimum number of 2 platform staff must be on duty and their primary responsibility is to conduct the passengers to and from the train ensuring that they mount or dismount safely and that they are correctly seated.
- One platform staff member is to control the entrance gate, taking tickets when required and indicate to the signal box when the train is ready to depart.
- The other platform staff member controls the exit gate and ensures that passengers exit the platform area safely and do not interfere with signal box or loco operating personnel.
- Ensure the platform is clear of obstructions or other hazards and platform seating is clean.
- The club entry gate, adjacent to the footbridge end of the platform, is closed.

- If the footbridge is in use, the fencing between track and footpath is correctly placed.
- Ensure pushchairs and wheelchairs on platform secured and well back from track

2.6 Loading

The entry gate controller should, make the passengers feel welcome and where used, take the passengers' ticket, and control the number of passengers on the platform.

Together with the guard, they should ensure that all passengers are properly seated and where required have been warned To sit still And To keep their feet inside the foot-wells.

2.7 Offloading.

At the end of the desired run, all passengers should be off the platform before re-loading commences. Both gate controllers & the Guard may be required to clear the platform promptly.

2.8 Platform Discipline - Ground level track passengers must be allowed onto the platform area only for loading and unloading of trains. Passengers should not be allowed (if practicable) to wait on the platform whilst trains are in motion, but should be kept in the "waiting" fenced approach, except in special circumstances i.e. train capacity full and passengers allowed to wait on the platform for the next loading event, or placing disabled passenger's wheelchairs etc. ready for loading at the next event.

2.9 Level Crossing - The level crossing operators, if the crossing is in use, must ensure safe passage for pedestrians. The platform despatch operators shall use the signal bell to instruct the crossing gates to be closed to pedestrians.

2.10 Inspection of equipment.

- All train equipment must be inspected for safety prior to running and the results recorded on the relevant document.
- Braking - Train brakes must be operated for public running and the results recorded on the relevant document.
- Inspection of track - The track should be "walked" prior to running to both inspect and clear obstructions as required. The operation of all points, sidings, turntable and signalling in use should also be checked and the results recorded on the relevant document.

There are a set of documents available to record inspection results and further copies can be made from the forms in Section 12 of this SMS

2.11 There is a comprehensive automatic signalling system in use on the ground level track. Section 15 of this document details the system, and Superintendents, Signallers, Drivers and Guards should all make themselves fully acquainted with its operation.

2.12 All Signalling systems must be obeyed - Signals, both coloured light and flags, shall be obeyed by the Driver and train operating crew.

3 Operating Procedures Raised Track

3.1 Where the raised track or a portable track are in use appropriate arrangements should be made to marshal waiting passengers and handle the loading and unloading of trains so that passengers do not wait in the operation's boarding and alighting areas and are kept at a safe distance from the locomotive in use.

3.2 Public passenger carrying will not take place on the raised level track at any time.

3.3 When operating a Superintendent shall be appointed who will make the necessary pre- running inspections and check all vehicles and locos

3.4 The superintendent will be responsible for ensuring one engine at a time on the mainline, controlled from the loading point adjacent to the footbridge

3.5 Signalling will be manual from this location

3.6 No guarding will be required

4 Drivers – Steam and Diesel

4.1 Any Driver for public passenger running must:

- Be a current fully paid up member of SDMES
- Be aged 16 years or over
- Have been assessed to be competent for public passenger hauling,
- Be familiar with the operation of the locomotive in use.
- Be familiar with the signalling system
- Have their names must be recorded in the Company register before driving – Form at
- section 12.10 and 12.11 of this SMS
- Not receive any remuneration in money or kind except for reasonable out of pocket expenses or supply of fuel.

4.2 Drivers of other trains must:

- Be a current fully paid up member of SDMES
- Must understand and obey the operating rules and the signalling system operating at the time.
- If under the age of 16 only carry as passengers members of their own family or fellow members of SDMES or another model engineering society visiting the railway . They must be supervised by a responsible and competent driver aged 16 or over and all reasonable precautions must be taken.

4.3 Visiting Drivers – Visitors to SDMES are not permitted to haul members of the public and in any event and may only drive after producing :-

- A valid boiler test certificate (if relevant)
- Proof of current Public Liability Insurance providing cover for third party claims including (if applicable to the locomotive they have brought) claims for injury or damage caused by sparks and ashes and boiler explosion. These details must be recorded as set out in Section 7.

4.4 The Driver's competency will be assessed based on them being fully conversant with preparation, lubrication, firing, water management, braking, safe driving and end of day disposal.

4.5 All Drivers should be fully conversant with the signalling system – the details of which are in section 15 of this SMS.

4.6 Drivers must drive with due care and attention, taking note of any conditions or particular passenger requirements which will necessitate a "slower" trip

4.7 Locomotive Positioning – The Driver should end up stationery at the platform with the locomotive clear of the platform to minimise the risk of the public being exposed to any dangers.

4.8 The locomotive Driver shall take instructions from the Guard, or if a Guard is not available, the Superintendent.

4.9 The Driver is responsible for the safe operation of the locomotive and will at all times be aware of the passengers and any potential issues due to non-observance of the issued instructions before departure.

4.10 If at any time the Driver considers the locomotive or carriages unsafe for any reason, they must stop the train and ensure passenger safety and evacuation. If the locomotive is the issue it should be removed from the public area.

4.11 Mishaps to Passenger Trains:- In the event of a mishap to a passenger train the Driver will remain with the loco and the Guard escort the passengers to a place of safety. Great care should be taken to avoid tripping or similar hazards on the railway infrastructure. Platform Staff should be used to facilitate this.

4.12 If the train has lost air pressure, then the passengers must be disembarked and then the train rescued as an unbraked train.

5 Guards

5.1 Overall Responsibilities

The Guard is responsible for the safety of the train at all times.

- They must have their names recorded in the Company register - Form at section 12.12 of this SMS.
- They are responsible for the safe handling of passengers at stations, for ensuring that their train is in a safe operable condition, and that their passengers are carried on the train in the safest possible manner.
- The Driver must work to the instructions of the guard.
- The Guard is ultimately in charge of the train.

5.2 The Guard shall ensure that he is equipped with red and green flags and a whistle on a suitable lanyard.

5.3 Whilst the passenger train is in operation, the Guard is also responsible for:-

- Ensuring the carriages do not move when the locomotive is detached;
- Ensuring the safety of passengers including any safety issues resulting from misbehaviour by passengers. Specifically, passengers must be warned not to lean out and to keep feet within the foot wells of the carriages and to remain seated until the train comes to a stop.
- If the train is hauled by a steam locomotive, the Guard must warn passengers that there may be sparks and hot embers ejected from the locomotive;
- To be vigilant for problems with the train at all times; and
- If necessary to act as Shunter when locomotives are changed or run round

5.4 In the event that it is necessary to bring the train to a stand the Guard shall

- Apply the emergency air brake if fitted
- Blow a whistle three times and exhibit a red flag to the driver

5.5 When ready to depart with all checks completed, the Guard shall blow a whistle and exhibit a green flag to the Driver. The Driver shall acknowledge the flag by locomotive whistle or horn or other signal agreed between the Guard and Driver.

5.6 Mishaps to Passenger Trains:- In the event of a mishap to a passenger train the Driver will remain with the loco and the Guard escort the passengers to a place of safety. Great care should be taken to avoid tripping or similar hazards on the railway infrastructure. Platform Staff should be used to facilitate this.

5.7 If the train has lost air pressure, then the passengers must be disembarked and then the train rescued as an unbraked train.

6 Boiler Operation & Safety

6.1 Application - this Section applies to **all** boilers operated:-

- at the County Showground;
- at an event under SDMES auspices at any other location (e.g. portable track events or visits to other model engineering societies);
- by a SDMES member at some other location where that member is utilising the SDMES Public Liability Insurance to provide the public liability insurance cover necessary to operate.
- by visitors to SDMES premises or events

This Section applies irrespective of size of the boiler, the method of firing, i.e. solid fuel, liquid fuel or gas and the use to which the boiler is put e.g. steam locomotive, boat or stationary engine.

Note that there are different insurance requirements for mechanically propelled vehicles, which may include road steam vehicles e.g. model traction engines. Such vehicles will **not** be covered by the SDMES Public Liability insurance and must **not** be operated without proof of appropriate insurance cover and boiler certification.

6.2 Boiler Test Certificate - Boilers 3 to 1100 bar-litres capacity

All such boilers operated whether by SDMES members or visitors must have a valid test certificate, that is:-

(a) a valid examination certificate issued against a suitable Written Scheme of Examination under the Pressure Systems Safety Regulations 2000;

(b) a valid examination certificate issued by a person or body appearing on The National Traction Engine Trust register of Boiler Inspectors; or

(c) a valid hydraulic test certificate and a valid steam test certificate both issued following examinations conforming with the Examination and Testing of Miniature Steam Boilers (New Edition 2006) or any subsequent revision (only applicable to boilers under 1100 bar litres). *(Note that the latest revision of this document is the "Orange" version effective from 1st May 2018).*

A boiler may also be operated if it is undergoing a test by a formally appointed boiler inspector.

(Note that most SDMES members will have their boilers tested by a SDMES boiler inspector under the test code noted at (c).)

6.3 Boiler Test Certificate - Boilers under 3 bar-litres capacity

6.3.1 Commercially made boilers below 3 bar-litres capacity shall be either:-

- Tested and recorded in accordance with the guidelines of the Association of 16mm Narrow Gauge Modellers, or

- Tested and recorded under Volume 2 (Boilers under 3 bar-litres) of Examination and Testing of Miniature Steam Boilers (2018 or any later revision).

6.3.2 Non-commercially built boilers under 3 bar-litres shall be Tested and recorded under Volume 2 (Boilers under 3 bar-litres) of Examination and Testing of Miniature Steam Boilers (2018 or any later revision).

6.3.3 The records of tests of any boiler under 3 bar-litres (both hydraulic test and steam tests) shall be made available to a Boiler Inspector or Track Superintendent appointed by SDMESL on request.

6.4 Boiler Inspection, Testing and Records

6.4.1 Boiler Inspectors operating under the Examination and Testing of Miniature Steam Boilers test code will be appointed by the Board of SDMES and a record will be kept of their appointment (see Section 3.9 of the test code).

6.4.2 For ease of reference a log of all current boiler test certificates with expiry dates issued to SDMES members is kept at the tracksite.

6.4.3 Boiler tests shall be undertaken in a location where the boiler can be easily handled and inspected and where there is sufficient natural light for the effective conduct of testing operations and inspection or the exterior of the boiler, but out of direct sunlight.

6.4.4 Other activities during the period of boiler testing may be restricted to ensure that the quiet environment in the boiler test location desirable for the duration of all testing activities (to allow the detection of audible indications of boiler distress) is maintained.

6.4.5 Persons present during boiler testing - both to ensure safety in the event of a failure whilst under test, and to provide an appropriate environment for boiler testing, the boiler inspector/s shall at his/their discretion decide who shall remain in the vicinity of the boiler undergoing test, in addition to a witness and the person submitting the boiler for testing.

6.5 Visitors Boilers - Visitors to SDMES intending to operate a boiler must produce details of a valid test certificate and related Public Liability insurance. (This applies to all boilers, including those of less than 3 bar-litres capacity). These details must be fully recorded in the Visitors Book before the boiler is put into steam (see Section 7).

7 Visitors - Required Documents & Insurance

7.1 Visitors intent on using SDMSL facilities must provide a current Certificate of Public Liability Insurance (PLI).

(NB – Simply producing a membership card for another society with the assurance that Public Liability cover is held through that society is not sufficient unless invited as part of a group visit from another Society and evidence of that Society's PLI has been seen).

7.2 If the visitor intends to operate a steam locomotive, valid boiler certificates appropriate to the PLI provided by the visitor must be presented.

7.3 The track event Superintendent must ensure that the Certificate of Insurance and, if required, Boiler Certification have been produced and inspected before any locomotive is allowed to be prepared for running.

7.4 The track event Superintendent must record the details of:

- the visitors name
- the visitors Model Engineering Society, or if none contact telephone number
- the locomotive(s) to be operated
- the Certificate of Public Liability insurance
- Boiler Certificate(s)

in the SDMESL visitors book, before the locomotive is prepared for running.

7.5 It is important that records are kept of activities that the Society carries out and, where necessary, particular attention is given to the insurance cover held by visitors.

7.6 The Superintendent **must** ensure that the records are properly filled in.

8 Operating Procedures - Garden Railway Tracks

8.1 The Garden Railways, although operating at low voltage, does have inherent risks from steam boilers, power tools, gas bottles and the charging and discharging of high energy density batteries.

8.2 Steam Boilers

Boiler testing can either be done by SDMES approved testers or owners can follow the recommendations of the Association of 16mm Narrow Gauge Modellers process and keep their own documentation.

Note that the initial test must be carried out for all boilers, as per the A16mmNGM document, and the test certificate must be available for inspection by SDMES Board in compliance of our insurance requirements.

8.3 Batteries have high energy densities and under fault conditions can get hot and explode. This is particularly the case with Li Ion cells. Care should be taken to note excessive temperature build up and cease operations with a hot battery or when charging.

8.4 Gas canisters should be kept away from naked flames and care taken when surplus gas escapes to avoid injury by ignition to the operator or those nearby.

8.5 All vessels brought to the garden railway site containing gas or combustible substances such as methylated spirits, must be clearly labelled.

8.5 Power tools used on the infrastructure should be used under the rules covered in Section 10 of this SMS.

9 Workshop & Other Activities

9.1 Only fully paid up members of SDMESL of any category (including Associate Members) shall undertake workshop or other activities (including use of the kitchen). Public Liability insurance cover only extends to such members.

9.2 No SDMESL member shall use or operate any tools or machinery unless they are competent to do so, including having undertaken any necessary training.

9.3 No SDMESL member shall use or operate any tools or machinery under the influence of drink or drugs. The Superintendent has final say on permissions.

9.4 Personal protective equipment should be used as follows:

- Eye protection whenever grinding, drilling or cutting
- Face mask protection whenever there is the possibility of the production of dust.

9.5 Work should always be adequately clamped to prevent injury from loose or rotating materials.

9.6 Any tools should be checked before use to ensure in safe condition, if not identify and record in the Day Book.

9.7 Any damaged tools to be clearly marked for attention and removed from working area, labelled and kept safe from use until taken for repair.

9.8 Ensure lighting levels are adequate for safe operations.

9.9 Use only 110 volt portable or battery powered tools whenever there is the possibility of damp, rain or standing water being in the operating vicinity.

9.10 Welding

- Ensure appropriate welding mask, clothing and gloves are worn at all times.
- Ensure that there is sufficient ventilation to avoid the inhalation of welding fumes.
- Ensure onlookers, both on the Society site and in surrounding grounds, are not subjected to exposure to welding flash.

9.12 Testing and use of Electrical/Electronic Equipment - this activity should only be carried out by those qualified to do so as testing can both produce dangerous voltages, and if equipment is not correctly tested, could be left in a dangerous condition.

9.13. Electrical/Electronic Test Equipment -Test equipment should be only from companies who are able to maintain and keep such test equipment safe and calibrated.

9.14 Manual Handling and Physical Work - to avoid injury to both the operator and anyone in close proximity, the lifting and movement of heavy objects should be carried out in the recognised safe manner.

9.15 Only those who consider themselves fit to do so should undertake arduous activities.

9.16 Working at Height –

- Only those who are confident to work up ladders should undertake such operations.
- The ladder used must be inspected before use and condemned if any rungs are unsafe or the is structure unsteady.
- The ladder should be set to the correct angle.
- A helper should “foot” the ladder to aid in security.

9.20 Catering

- Because of the dangerous nature of cooking and water boiling appliances, the Catering area of the Society building will be “out of bounds” to children unless under adult supervision. MEMBERS TO NOTE OR NOTICES TO BE POSTED.

9.21 Mowing and Gardening Activities

- All such activities should be carried out with safety in mind.
- The minimum age for the operation of powered mowing and garden machinery is 16.

10 Insurance Specifics

10.1 SDMES holds Public Liability Insurance that covers the company and, in certain situations, individual members, against claims for injury to persons or damage to third party property arising from model engineering activities, including the garden railways, the raised & ground level tracks, the portable track and the model boating lake. Note that there are special considerations for model road vehicles – see Section 10. 7 below.

It is essential that the insurance policy conditions are observed to ensure that cover will apply for both SDMES **and** an individual member in the event of an incident. The procedures in this SMS are written with the object of preventing incidents but also ensuring the insurance terms are observed.

10.2 Steam Boilers - it is a requirement for cover to apply that a boiler has a valid boiler test certificate (or is undergoing test by a formally appointed boiler inspector). Although this is not an insurance policy requirement of boilers of a capacity below 3 bar-litres it is SDMES policy that all boilers shall have boiler test certificates. See Section 6 of this SMS.

10.3 Limitations on model locomotive Drivers - there are limitations on drivers regarding public passenger hauling and passengers for drivers under 16. All drivers must be fully paid up members of SDMES - persons not members of SDMES (e.g. casual visitors or young family members) have no insurance cover, nor will SDMES have any cover for an incident involving them.

10.4 Public Passenger Hauling – may only be undertaken by fully paid-up members of SDMES who are aged 16 or over. The driver must receive no remuneration either monetary or in kind other than reasonable out of pocket expenses or supply of fuel. Section 4 of this SMS applies.

10.5 Drivers under 16 years of age - must be fully paid-up members of SDMES, they may not carry the public as passengers. They may carry as passengers: (i) fellow members or members of another model engineering club or society; or (ii) members of their own family; provided that the driver under the age 16 is supervised by a responsible and competent driver age 16 or over, and all reasonable precautions are taken. This means SDMES must be especially careful about who is allowed to ride as a passenger with under 16's – they cannot carry anyone they choose, e.g. friends who are not family members or are not themselves members of SDMES or another model engineering society. Section 4 of this SMS also applies.

10.6 Visitors – the insurance does not cover visitors bringing e.g. locomotives, to the track site. SDMES may have a legal liability if an incident occurs involving a visitor. That liability might be covered by the SDMES insurance provided the visitor has his/her own public liability insurance in place including, if applicable injury or damage caused by sparks and ashes and (if relevant) they produce a current boiler test certificate (see Section 7).

10.7 Model /Miniature Road Vehicles - It is a legal requirement that any model road vehicle operated at a place where the public is present should have the minimum insurance cover required by the Road Traffic Act. The SDMESL Public Liability Insurance does **not** provide this. Model road vehicles must **not** be operated without proof of appropriate insurance cover and boiler certification being provided to the SDMES Board.

11 Air Brake Line Operating Procedures

11.1 These procedures must be followed to eliminate the risk of exhausting the braking air-supply reservoir to atmosphere, which will render the brakes inoperative on the next journey ! The Procedures also ensure that the Train brakes remain ON when stationary in the absence of the Locomotive.

11.2 There are two different procedures to be used, depending upon the Braking Configuration of the Locomotive.

Configuration 1. The air supply is provided by the Locomotive. Only **ONE** (RED) connecting airline is used between the Loco and the Train. This line delivers air to the Train brakes, under the control of the Driver's Brake Valve.

Configuration 2. The air supply is provided by the Train (**TWO** connecting airlines are used). The YELLOW airline connects the Train-supplied air to the Driver's Brake Valve. The RED airline delivers air to the Train brakes, as above. Typically, such a train will include Coach 1C, which is fitted with a chain-driven compressor.

Thus, **ALL** trains will have a **RED** connecting air line between the Loco and the Train; some trains may have an additional **YELLOW** connecting airline.

11.3 Important Notes

11.3.1 During busy times at Queensville Station, it is possible that a departing train will be hauled by a different locomotive to that when it arrived, and the departing locomotive may have a different braking configuration. A supply of spare YELLOW connecting airlines should be available at Queensville to accommodate this.

11.3.2 Following these procedures will result in the Train brakes remaining ON, even when the Loco is removed. Should it be necessary to move the Train manually, perhaps in an emergency situation, the Train brakes can be released by inserting a connecting airline into the RED connector on the Train. This will exhaust the train-pipe to atmosphere, thus releasing the brakes.

11.4 Disconnecting and Connecting Locomotives & Trains

Configuration 1 – Disconnect Locomotive from Train.

Step 1: Check with the Driver that the Driver's Brake valve is in the HOLD position.
Step 2: Disconnect the air line from the TRAIN.
Step 3: Disconnect the other end of the air line from the LOCO.

Place the removed hose into/on the Locomotive's Tender/Driving truck for use when re-connecting.

Configuration 1 – Connect Locomotive and Train.

Step 1: Check with the Driver that the Driver's Brake valve is in the HOLD position.
Step 2: Connect the air line to the LOCO.
Step 3: Connect the other end of the air line to the TRAIN.

Configuration 2 – Disconnect Locomotive from Train.

Step 1: Check with the Driver that the Driver's Brake valve is in the HOLD position.
Step 2: Disconnect the RED air line from the TRAIN.
Step 3: Disconnect the other end of the RED line from the LOCO.
Step 4. Disconnect the YELLOW air line from the TRAIN
Step 5. Disconnect the other end of the YELLOW air line from the LOCO.

Place the removed hose into/on the Locomotive's Tender/Driving truck for use when re-connecting.

Configuration 2 – Connect Locomotive and Train.

Step 1: Check with the Driver that the Driver's Brake valve is in the HOLD position.
Step 2: Connect the YELLOW airline to the LOCO.
Step 3: Connect the other end of the YELLOW line to the TRAIN.
Step 4. Connect the RED airline to the LOCO.
Step 5. Connect the other end of the RED airline to the TRAIN.

11.5 Guard's Portable Emergency Brake

A box containing a push-button operated valve (green button) may be attached to the air brake connections on the rear of the train. The box is secured to the footwell of the coach by magnets. In an emergency the Guard can apply the train brakes by pushing the button. After operating the emergency brake the brakes can only be released by operation of the Drivers brake valve. **Note** that the brakes are fully applied by operation of the emergency button, giving rapid braking without any graduated application.

12 Printable Forms

12.1 Coaches Physical Checks

12.2 Formed Trains Checks

12.3 Checklist for Public Operation Loop

12.4 Checklist for Public Operation Queensville

12.5 Checklist for Public Operation Train Set Up

12.6 Checklist for Public Operation Locos

12.7 Visitor Log Book Record

12.8 Steam Drivers Competency Record

12.9 Diesel Drivers Competency Record

12.10 Guard Competency Record

12.11 Workshop Machine Tools Competency Record

12.1 SDMES Coach Physical Checks
ROLLING STOCK AND MAINTENANCE LOG BOOK

Date of Inspection:-

Inspection Undertaken By:-

Work Schedule	Coach 1C	Coach 2	Coach 3	Coach 4	Disabled Coach	Coach H1	Coach H2
Remove seats, fit auxiliary airline. System checked for integrity							
Apply brakes, check pistons and cylinders for security and presence							
Brake blocks checked for presence, security and wear							
Check all equipment in good order including side bearers							
Check bogie pivots - presence and security							
Check security of couplings							
Check condition and security of bodywork & seats							
Compressor							
Check compressor functioning correctly, check filter.							
Check and lubricate chain drive							
Check for air tightness with brake test rig on red and yellow lines							
Disabled Coach							
Check system, examine bogies in situ							
Test guard emergency brake							
Check reservoir for security and pressurisation							
Check for air tightness with brake test rig on red and yellow lines							
Comments & Notes of Remedial Work required or Undertaken							

12.2 SDMES Formed Train Checks
ROLLING STOCK AND MAINTENANCE LOG BOOK

Date	Formed train	Work schedule	Checked by
	Train 1	Couple rolling stock in train formation to verify and check braking systems including emergency brake	
		Check either coaches or locomotive is fitted with signalling magnet if signals are to be used.	
	Comments		

Date	Formed train	Work schedule	Checked by
	Train 2	Couple rolling stock in train formation to verify and check braking systems including emergency brake	
		Check either coaches or locomotive is fitted with signalling magnet if signals are to be used.	
	Comments		

12.3 SDMES Checklist for Public Operation - Loop

Event: **Date of Running:**

Track walk prior to public running – Loop

This includes all lines and facilities within the SDMES site

	Time	Initials
Before running check both compressors turned on and correct air pressure showing. Target - 75 psi. Reading: psi		
Loop and sidings clear of debris		
Points: blades free of debris. Point to new container set to main line.		
Two points near signal box checked twice to work correctly and set to mainline operation.		
Cross over points at back of loop checked twice to work correctly		
Subsequent to point checks, box operating points near signal box to be closed and locked, key to be removed from box operating crossover point. Keys to be placed in signal box.		
Signals installed and operating correctly		
Main level crossing (i.e. coracle pond) gates working and interlocked with signals		
All Bridleway level crossing gates closed and locked (i.e. in such a position as to prevent trains running across the level crossings.)		
All required barriers and warning signs in place at Bagnall End.		

Track test prior to public running - Loop

Train without fare paying passenger run to initialise signals and to identify and rectify any operational problems		

TO BE KEPT IN SIGNAL BOX ON THE DAY

12.4 SDMES Checklist for Public Operation - Queensville

Event: **Date of Running:**

Track walk prior to public running – Queensville Extension

This includes all lines and facilities external to the SDMESL (i.e. beyond the locked track gates on the East side of the SDMESL site).

	Time	Initials
All lines clear of debris		
Points blades free of debris		
Check operation of ground signal guarding bridleway level crossing nearest to the A518		
Point lever on main track set to float position		
Point lever on passing loop at Queensville set to float position		
Latch on turntable operating correctly and tracks aligned for all 6 positions		
Turntable placed in position to accept and engine from the main line. (Note: Turntable to be set to this position each time after use)		
All required barriers and warning signs in place at Queensville.		
All required warning signs guarding the bridleway gates in place, including those for users of the bridleway and trackside signs.		

Track test prior to public running - Queensville Extension

Train without fare paying passenger run to check signals and place token on correct signal, and to identify and rectify any operational problems		

TO BE KEPT IN SIGNAL BOX ON THE DAY

12.5 SDMES Checklist for Public Operation - Train Setup

Event: Date of Running:

Train check (train description – if more than one train running):

These checks are repeated at every change of locomotive or train configuration.

	Time	Initials
Prior to moving train on to main line all couplings		
Locomotive:		
Train configuration:		
All couplings, pins, links, 'R' clips, and pipes are correctly fitted all vehicles		
Brake pipe continuity and brake test, proving the operation of the brakes and air system		
Red and green flags carried on train		
Locomotive:		
Train configuration:		
All couplings, pins, links, 'R' clips, and pipes are correctly fitted all vehicles		
Brake pipe continuity and brake test, proving the operation of the brakes and air system		
Red and green flags carried on train		
Locomotive:		
Train configuration:		
All couplings, pins, links, 'R' clips, and pipes are correctly fitted all vehicles		
Brake pipe continuity and brake test, proving the operation of the brakes and air system		
Red and green flags carried on train		
Locomotive:		
Train configuration:		
All couplings, pins, links, 'R' clips, and pipes are correctly fitted all vehicles		
Brake pipe continuity and brake test, proving the operation of the brakes and air system		
Red and green flags carried on train		

Notes:

1. It is assumed that trains well be already ‘made up’ in the container prior to the event.
2. Examples of train configuration are number and identity numbers of coaches, use of disabled coach. These configurations may be changed to accommodate (for example) passenger numbers, the requirement to replace a standard coach with the disabled coach, track problems resulting in the need to shorten a train.
3. Red and yellow brake pipes should be connected, in accordance with locomotive in use.

TO BE KEPT IN SIGNAL BOX ON THE DAY (for trains using the loop only).
TO BE KEPT IN QUEENSWILLE SHELTER (for trains using Queensville Extension)

12.6 SDMES – Checklist for Public Operation - Locomotivess

Event: **Date of Running:**

Locomotive check:

	Time	Initials
Locomotive: Diesel		
Inspection for safety		
Brake system functioning		
Steam Locomotive:		
Inspection for safety		
Valid boiler test certificate available, Date of certificate:		
Where the locomotive has a battery driven compressor for the train brakes the driver must confirm that the battery is fully charged		
Inspection for leaks		
Brake system functioning		
Steam Locomotive:		
Valid boiler test certificate available, Date of certificate:		
Where the locomotive has a battery driven compressor for the train brakes the driver must confirm that the battery is fully charged		
Inspection for safety		
Inspection for leaks		
Brake system functioning		
Steam Locomotive:		
Valid boiler test certificate available, Date of certificate:		
Where the locomotive has a battery driven compressor for the train brakes the driver must confirm that the battery is fully charged		
Inspection for safety		
Inspection for leaks		
Brake system functioning		

Carriage check:		Date	Initials
Carriage Number;	Service, brake check, fitness to run check		
Carriage Number;	Service, brake check, fitness to run check		
Carriage Number;	Service, brake check, fitness to run check		
Carriage Number;	Service, brake check, fitness to run check		
Carriage Number;	Service, brake check, fitness to run check		
Carriage Number;	Service, brake check, fitness to run check		

TO BE KEPT IN ENGINE SHED ON THE DAY

All sheets to be collected and filed at the end of public running on the day

12.7 SDMES Visitor Record

Visitor LOG BOOK

Date	
Name of visitor including any friends/family members attending with the visitor	
Visitors Society (if any, if none, visitors telephone number)	
Model(s) to be run	
Public Liability Insurance Certificate details	
Issued by (insurance company)	
Policy No.	
Valid to	
Boiler Certificate Details (if relevant)	
Issued by	
Inspection Scheme (eg Name or Southern Federation	
Certificate no.	
Valid until	
Road Traffic Act Insurance Details (if relevant)	
Issued by (insurance company	
Policy No.	
Valid from and to	

All sheets to be collected and filed at the end of public running on the day in then Visitor Log File

12.8 SDMES - Steam Driver – Competency Record

Name	Date	Approved by	Driver Initials

12.9 SDMES – Diesel Driver – Competency Record

Name	Date	Approved by	Driver Initials

12.10 SDMES Document Reference – Guard – Competency Record

Name	Date	Approved by	Guard Initials

12.11 SDMES – Workshop Machine Tools Competency Record

Name	Date	Approved by	Driver Initials

13 Boating Lake

13.1 The boating lake will not be available when public running is taking place

13.2 Those using the boating lake will adopt the same practices as the garden railway as regards boiler testing and management of inflammable fuels.

13.3 All users will be made aware from signage of the risks of Weills disease and other infections which could be contracted from contact with the water.

13.4 A suitable flotation device will be made available at all times in the close vicinity of the lake.

13.5 When small children accompany members in this activity, it will be under the member's supervision. Running is not permitted adjacent to the lake due to the risk of tripping oneself or others.

13.6 Retrieval of boats – second person – long enough rope available.

14 Definitions

No definitions presently used.

15 Signalling

This section of the SMS is intended to give locomotive drivers information about the signals located on SDMES Tracks.

The diagram below is taken from the animated track display in the Signal Box, and represents a birds-eye view of the track layout. The signal box location is shown at the bottom middle, and the Station Platform to its left. The main part of the track is the ‘Loop’, which can be clearly identified. Running direction around the Loop is Anti-Clockwise.

There are 8 running signals - 6 x 3-aspect Colour light Signals, 1 Lower-quadrant Semaphore Signal, and 1 Ground level 2-aspect colour light signal. There is one ground-level shunt signal which controls access from the Steaming-bay area to the main line.

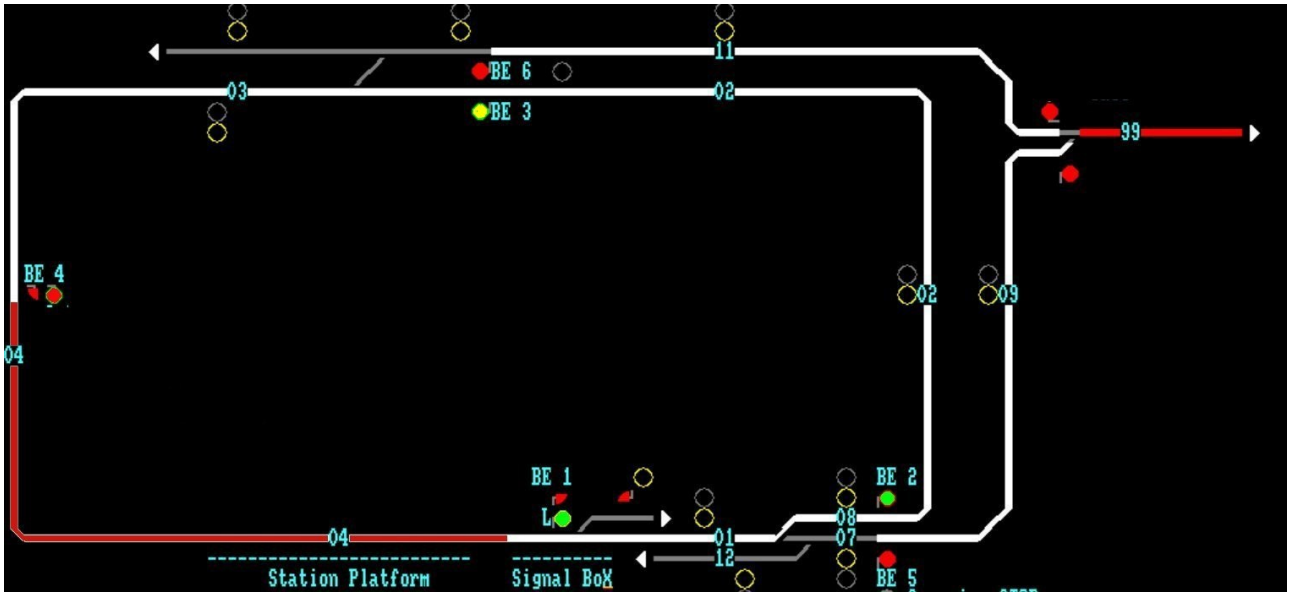
The basic rules are simple –

- If a colour-light signal is showing Red, you must STOP on reaching it.
- If showing Yellow, you may pass, but be prepared to stop at the NEXT Signal, which is currently Red
- If showing Green, you may pass. The next Signal is NOT Red, but showing Yellow or Green
- If a semaphore signal arm is horizontal, you must STOP.

Two of the 3-aspect signals (BE 1 and BE 4) are fitted with an auxiliary display - these displays modify the rule above, permitting a signal showing Red to be passed - more of this later.

There are 3 sets of points. Points have 2 positions - Straight ahead, or Divert, known as ‘Normal’ and ‘Reversed’ respectively. The points next to the signal box, when Reversed, allow access to the Steaming bays. The next set give access to the Loop when Reversed, or the Extension when Normal.

Finally, there is a crossover on the far side of the track. A crossover consists of two sets of points which work together. When Normal, trains complete the loop circuit by passing signal BE 3. When Reversed, trains returning from the Extension can re-join the Loop by passing signal BE 6. The signals BE 3 and BE 6 are interlocked with the crossover; only one of these signals can show a proceed aspect at any time, according to the state of the crossover. All colour light signals except BE 1 are ‘Automatic’, meaning that that they will show the appropriate aspect depending upon track conditions. BE 1 is ‘semi-automatic’, meaning that the signaller can manually over-ride it to show a Red Aspect.

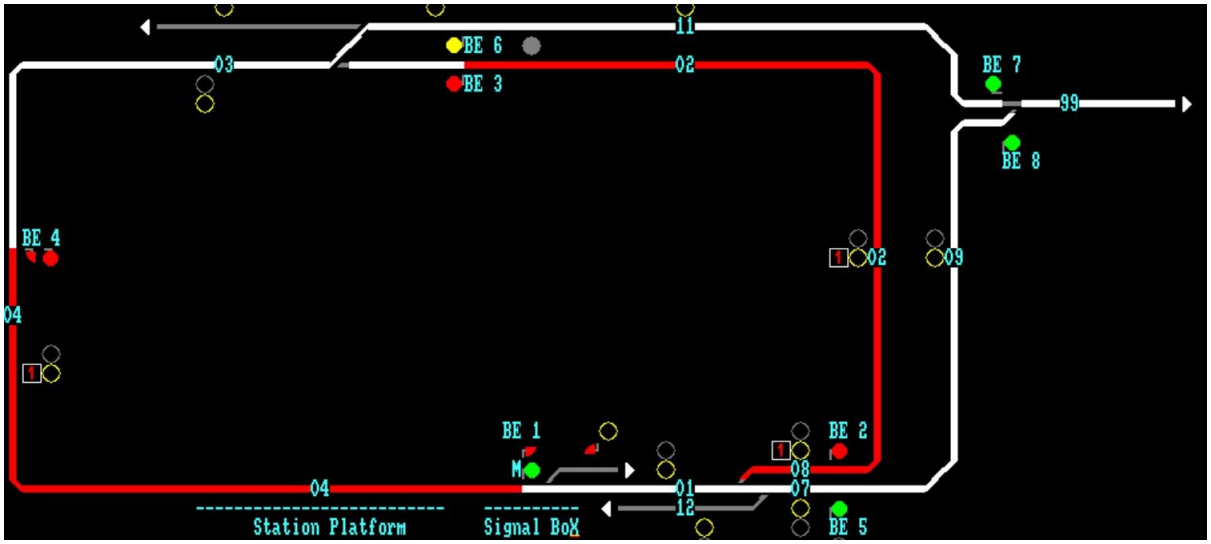


In the examples that follow, for clarity, it is assumed that you are the only train on the system, when you should never encounter a Red running signal, except in an Emergency situation, or at signal BE 1 if the signaller has set it to Red.

Let's consider a journey around the Loop; your train is standing in the station, facing signal BE1. BE 4 is Red, protecting your train. Signal BE 3 is Yellow, warning the driver of any approaching train that the next signal (BE 4) is Red, so he may pass BE 3, but should prepare to stop at BE 4. As mentioned earlier, BE 4 is fitted with an auxiliary display, a 'calling-on' signal. If the signaller has enabled it, as a train approaches BE 4 at Red, a letter 'C' will illuminate in the auxiliary display, but the main aspect will remain at Red. In this case, BE 4 may be passed at Red, at low speed; the driver should expect to find a train ahead.

BE 1 has a Theatre Route indicator, which shows a Letter telling the driver which one of the 3 possible routes is set - L means Loop, M means Extension and S means Sidings (Steaming Bay area). The Route Indicator on BE 1 is displaying the letter 'L', informing you that the second set of points are Reversed, the route is set to run round the Loop. You must observe the speed limit in force, as you will be diverting from the straight. BE 1 is showing Green, meaning your next signal is not showing Red. Pass signal BE 1. Pass signal BE 2. As you approach signal BE 3, since your train is no longer in the Station, it will be showing Green, as BE 4 will no longer be Red. Pass BE 4, and continue into the station.

Let's now consider a trip down the Extension. As before, your train is standing in the station. The second set of points are Normal, meaning that on leaving the station, you will pass straight over the points, and continue on to signal BE 5. The route indicator on BE 1 confirms this by showing the letter 'M'.



Pass signal BE 5, and continue on to the extension. The next signal (BE 8) is a Lower Quadrant Semaphore signal, with the arm lowered (signal BE 5 showing Green has indicated this). Signal BE 8 has a Track Possession Token hanging on a bracket. Stop at the signal, and remove the Token. This will cause BE 8 to return to the horizontal position, but since you are now in possession of the Token, you may pass the signal and proceed to Queensville Station, the terminus. On arrival, the station staff will assist you to uncouple your locomotive. Proceed on to the Turntable, turn the locomotive, then use the run-round loop to get to the other end of the train, where you can re-couple the locomotive.

On departure, proceed back down the extension. As you pass signal BE 8, stop and replace the token on the bracket. Continue your journey, and approach signal BE 7, which is a ground level 2-aspect colour signal on your right. If it's showing Green, pass into the main track area. The next signal is BE 6. Since the cross-over has been set to allow you to return to the Loop, it will be showing Yellow or Green. BE 6 has left-hand route divergence indicator (known as Feathers) - an arm set at 45 degrees to the left, containing 5 white lights. These will be illuminated when the crossover is reversed, indicating that you should reduce speed. Pass BE 6, and return on to the Loop. Pass BE 4 , and return to the station.

Finally, when you wish to return to the Steaming bay area, from the station, un-couple your locomotive from the train. The signaller will reverse the first set of points. The Theatre Route indicator BE 1 will show a letter 'S', but the main aspect will be Red. Because of the 'S' showing in the route indicator, the permits you to pass the signal, and proceed into the Steaming bay.