

Middleton Railway Trust Ltd.
Safety Management System – Master Document
Part 1 – Background and Introduction

Revision History

This is version 4.0 of this document, dated October 2017.

Version 3.0 was dated March 2015.

Version 2 was dated May 2012.

Version 1 was dated March 2007.

Section 1: Introduction

1.1 This master document provides the top level description of the Middleton Railway's Safety Management System (SMS). That is, it provides an overall description of the SMS, and it provides references to all of the other documents that between them comprise the whole of the SMS.

1.2 This first part of the document therefore provides a brief background to the Middleton Railway, and then the rest of this master document consists of two parts, as follows.

- Part 2 of the document describes the overall structure of the SMS, based on a structure diagram together with outline explanations of the components illustrated in this diagram, and of how the structure is intended to operate.
- Part 3 of the document defines the various components of the SMS in more detail, describing how each of the key aspects of the system operates and cross-referencing to the relevant documents that make up the system.

1.3 The historical background is that the Middleton Railway is a standard gauge railway, which was originally authorised by Act of Parliament in 1758, making it the oldest statutory railway in the world. It was built initially (to 4'1" gauge) to carry coal from the Middleton Colliery into Leeds, but was subsequently converted to standard gauge and then extended to serve other local collieries and other industrial sites, including a connection to what is now referred to as the national network.

1.4 As part of the run-down of the railway that led eventually to the closure of the Middleton Colliery, responsibility for the operation of the railway was assumed by the Middleton Railway Preservation Society (as it then was) in 1960. This society then became the Middleton Railway Trust, and was subsequently incorporated as the Middleton Railway Trust Limited in 1974.

1.5 Hence, legally the railway is operated by the Middleton Railway Trust Limited, which is a company limited by guarantee and not having a share capital. This company is also a registered charity, which has as its principal object the preservation and operation of the historic Middleton Colliery Railway. The directors of the company are known as its council, and they are also the trustees of the charity: they thus have ultimate responsibility for the operation of the railway.

1.6 For the first nine years of preservation the main focus of train operations was the movement of freight traffic between some of the connected factory sites and the national network. Passenger services commenced in 1969, between halts at the Moor Road site and Middleton Park Gates. Subsequently the Moor Road site has been developed considerably, and it has accommodated the Trust's workshops since 1983. It was then substantially re-modelled during 2005 with the construction of the Engine House building, which houses the Trust's commercial facilities and the museum display hall.

1.7 Hence, physically the railway now consists of approximately one mile of passenger line that runs from Moor Road Station to Park Halt, plus two freight branches, the Dartmouth Branch and the Balm Road Branch, that serve what used to be factory sites. The latter of these branches is still physically connected to the national network (unless Network Rail have removed part of the connection on their side of the boundary fence without notifying us), but there are no operational facilities for traffic to be exchanged with this network.

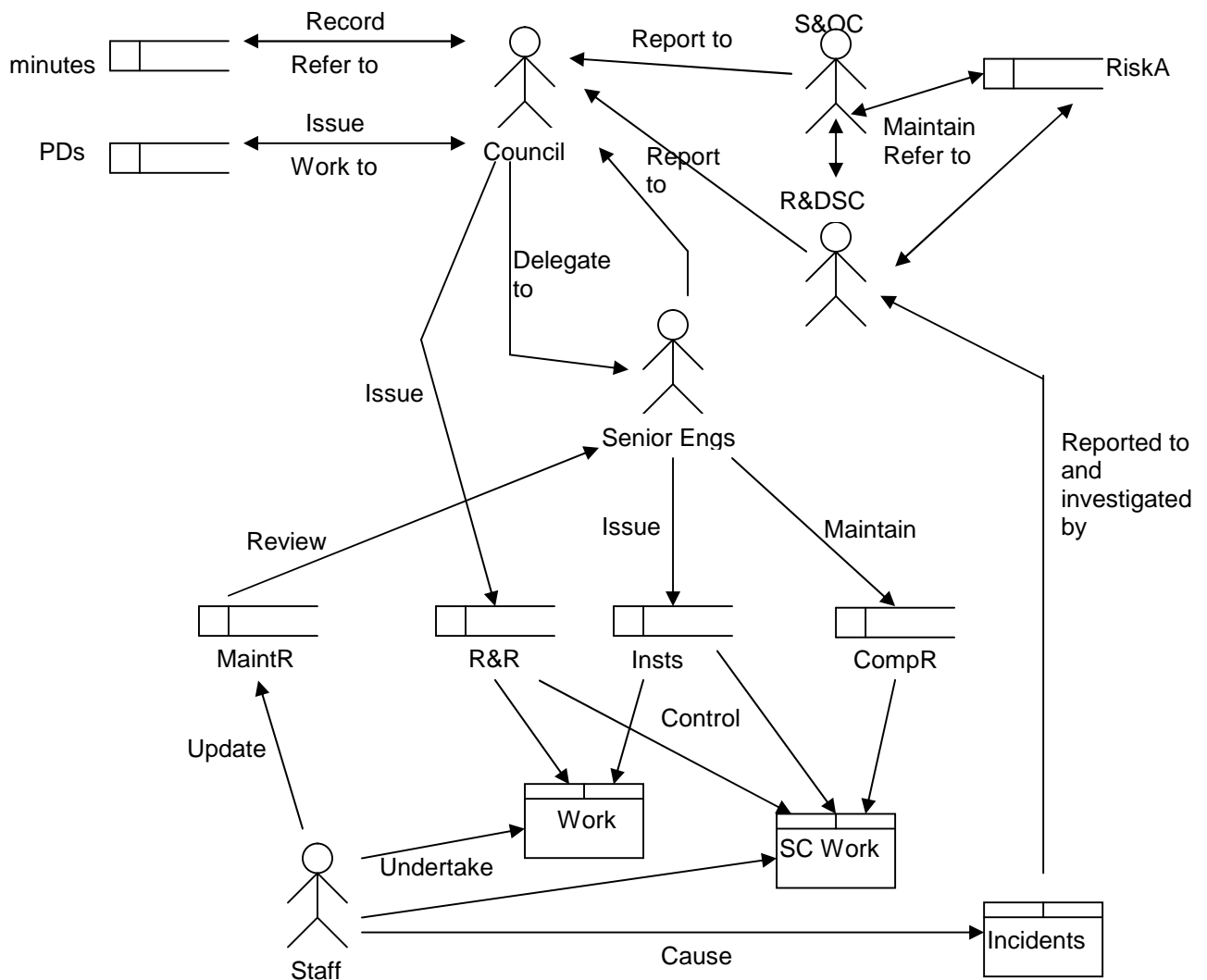
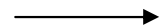
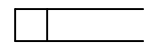
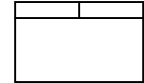
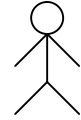
Part 2 – Overview of the Safety Management System

This part consists of two sections. Section 2 describes the overall structure of the SMS, by means of a structure diagram with outline explanations of the components illustrated in this diagram. Section 3 then describes the general operation of this structure, so as to show how safety is managed by it, and in particular it describes how the SMS is controlled, how staff are involved with it, and how continuous improvement of it is ensured.

Section 2: The Overall Structure of the SMS

2.1 The overall structure of the SMS can best be described by means of the diagram below. This illustrates the following elements of the SMS.

- The individual people and groups of people involved in it, each represented by this symbol:
These consist of the council; its Rules & Disciplinary SC (R&DSC); its Safety & Operations SC (S&OC); the senior engineers (Senior Eng), as detailed below; and the staff.
- Events or activities in which these people are involved, each represented by this symbol:
These form three categories: ordinary work activities, safety-critical work, and incidents (of any kind, including “near misses”) that may need to be acted upon.
- Documents that are generated and used by these people, each represented by this symbol:
These form three groups: those that are maintained by the council, viz minutes and policy directives (PDs); the one that is maintained by the R&DSC, viz the risk assessments (RiskA); and those that are maintained by the senior engineers, viz the rules and regulations (R&R), instructions (Insts), competence records (CompR) and maintenance records (MaintR).
- Flows of information between any of the above, each represented by this symbol:
The arrows are labelled to show the use that is being made of the information.



Section 3: The Overall Operation of the SMS

The Council

3.1 As described in 1.5, the council has the ultimate legal responsibility for the operation of the company and hence of the railway, and this includes ultimate legal responsibility for the management of health and safety.

Policy Directives

3.2 The minutes are the legal record of the council's decisions, but it is not practical to index the minutes in a way that would make them readily accessible for subsequent reference, and particularly not by those outside the council. Hence, where policies or procedures need to be defined that council members or other officers may need to refer to subsequently, they are created as policy directives (PDs). Some of these, but by no means all, form part of the SMS, as described subsequently. As described in section 4 below, they are all indexed and are kept in a file at the railway for ease of reference, and are posted on the intranet website which the railway maintains for the benefit of its working members.

The Rules & Disciplinary Sub-Committee (R&DSC)

3.3 The R&DSC has been in existence since the early days of the railway's history as a preserved railway, when the overall managing body was called "the Committee", which is why the R&DSC is still referred to as a sub-committee. Members of it all have wide experience of railway operation, and informally this is expected to include experience of operating at other railways.

3.4 As its name suggests, the R&DSC has always had two responsibilities delegated to it by the council. One responsibility is to produce and maintain the rules and regulations that govern the operation of the railway, and in particular the operations of trains and other activities that are directly connected with this. The other responsibility is investigate any incidents, and particularly ones where there may have been breaches of these rules or regulations, and where necessary recommend to the council that appropriate disciplinary action be taken. The procedures by which it does this are described in section 13 below.

The Safety & Operations Committee (S&OC)

3.5 The S&OC was created in May 2015, for two purposes. One was to assist the R&DSC in the management of train operations, and in particular to assist in the work of creating a revision of the rules and regulations. The other was to oversee more general aspects of safety beyond just those of train operation. In practice, it has evolved to have a relationship with the R&DSC which is somewhat similar to that between HM Railway Inspectorate (HMRI) and the Rail Accident Investigation Branch (RAIB), in that the R&DSC is responsible for any disciplinary aspects of incidents, whereas the S&OC is responsible for identifying any improvements in safety that may be indicated by incidents that have occurred. The procedures by which it does this are described in section 13 below.

The Rules and Regulations

3.6 The rules and regulations are issued by the council. The difference between rules and regulations is (as described in section 7 below) that the rules define those few aspects of general behaviour that need to apply to any member of the railway, whether connected with the operation of the railway or not. By contrast, the regulations deal with specific activities, and so only apply to those who will under take these activities. A major revision of these (the eighth) was brought into operation on 2nd September 2017, which was one of the main drivers for this revision of this SMS master document. A feature of this revision was the creation of a set of general regulations, to cover aspects such as the reporting of incidents, as well as the more specific train operating regulations.

The Senior Engineers

3.7 Originally the roles of senior engineers were defined in the rules to consist of the Civil Engineer (CivE), the Mechanical Engineer (MechE), the Traffic Manager (TM) and the Safety Officer (SO). More recently, as part of the revision of the Health and Safety Policy that is described in section 5, the role of Electrical Engineer (ElecE) was added to this set, whereas previously this role had been regarded as an assistant to the MechE. This change was made to reflect the increasing importance of electrical systems within the workshops and Engine House buildings. Also, the role of Commercial Manager was defined, although this role is not formally regarded as a senior engineer one.

3.8 The council has delegated to the senior engineers responsibilities for the management of the relevant aspects of the operation of the railway, including the management of health and safety within these areas. Similarly, the council has delegated to the commercial manager responsibilities for the management of the commercial aspects of the railway's activities, including the management of those health and safety aspects of these activities that can not be regarded as either engineering

or the operation of trains: for instance, catering and food hygiene. The council requires each of these officers to report to it from time to time on any issues relating to the activities for which they have responsibility.

Staff

3.9 The term staff is defined in the rules to cover all categories of those who might undertake work at the railway, whether volunteers, employees or contractors. Hence, a key aspect of the SMS is to ensure that staff are made aware of all information that they may need in order to undertake activities safely.

3.10 While in principle staff could be any of volunteers, employees or contractors, in practice the railway currently does not have and has never had any employees, and its use of contractors is limited to carrying out specialised work that is beyond the capabilities of its volunteer staff. Hence, in practice the SMS is mainly designed to ensure the health and safety of volunteers. The particular issues relating to managing contractors, or others who could be classified as casual staff, are dealt with in section 11 below.

Instructions

3.11 Instructions have similar status to regulations, but are issued as required by the senior engineers rather than having to be approved by the council. They have for a long time been issued in the form of either operating notices or traffic notices, and the regulations require staff to read all current notices at the beginning of any period of duty, to ensure that they are familiar with all relevant instructions. Hence, these instructions provide the basic mechanism by which short-term operational issues, or longer-term detailed procedures that need to be followed, can be brought to the attention of staff.

3.12 As part of the revision of the rules and regulations, the decision was taken to create a third category of instructions, known as Work Instructions. These cover the details of particular procedures which may be more liable to change than the rules or regulations, but are issued as though they are part of the train operating regulations.

Management of Work

3.13 In principle the distinction between safety-critical and other work is important, to ensure compliance with the regulatory requirements for safety-critical work. In practice, though, so much of the work at the railway has implications for health and safety that the basic approach taken in the SMS is to use very similar procedures for both, apart from relaxing some requirements for ordinary work relating to the need for formal documentation of competence and for formal recording of the precise tasks performed. These procedures are described further in sections 7, 9 and 10 below, and they are intended to ensure not only that the work is carried out safely, but also that what work is carried out is consistent with the railway's operational priorities.

3.14 A particular aspect of managing work is the rostering of train crews, and the railway has used web-based systems to assist with this since the late 1990s. When HOPS (the Heritage Rail Operations Processing System) became available it was investigated to see whether it would meet the railway's needs, but this identified some issues over whether its facilities for managing competence would fit the structures within the railway, and the developers of HOPS indicated that they did not expect to be able to make the changes that the railway would have needed. During 2012 the railway therefore ran a project to develop its own rostering system, and this has been in use since the start of 2013.

3.15 For safety-critical work, and for many other tasks, it is necessary to keep records of what work has been done. The nature of the railway's operation is such that the basic responsibility for updating such records has to rest with the staff who carry out the work, and so the basic requirements on staff for updating such records are specified in the regulations. The precise details of the required records are then specified in instructions that are stored with the records themselves. Some of these records are now maintained by the roster system.

Management of Competence

3.16 For safety-critical work, and for many other tasks, it is necessary to keep records of which staff are competent to undertake which tasks. The regulations specify those tasks where the competence of staff to undertake them must be formally assessed before they are permitted to undertake them. As indicated above, part of the motivation for developing the railway's roster system was to ensure that adequate checking of competence would be carried out automatically.

3.17 The basic responsibility for managing the procedures for assessing competence, and for maintaining the records of competence, is divided between the SO and TM as described in section 8 below: for some tasks these procedures also involve them in delegating specific responsibilities to others, and in particular to the MechE and ElecE. These procedures also include the mechanisms by which staff can check on whether individuals have been assessed as competent to undertake those tasks for which the regulations require such formal assessments to have been made.

Management and Reporting of Incidents

3.18 The general regulations place responsibility on all staff to report any incidents that may occur while work is being undertaken at the railway, and the regulations and instructions define the specific procedures by which certain kinds of incidents must be reported, as described in section 13 below. These regulations and instructions also place responsibilities on the senior engineers to ensure, as appropriate, that any such reports are followed up, including where necessary involving the R&DSC or S&OC (or both) to investigate the circumstances further.

Part 3 – The Safety Management System in Detail

This part consists of 10 sections, each covering a particular operational aspect of the SMS. In part these aspects correspond to particular components of the SMS, as described in part 2, but many of them also involve a number of these components interacting with each other. Hence, each of the sections describing these aspects defines the roles of the relevant procedures and related documents, and then cross-references to these. To facilitate maintenance, the texts of these relevant procedures and documents are, in general, deliberately not included in this master document.

The sections in this part are as follows.

- Section 4 describes the procedures for managing the versions of documentation, and hence how cross-references to other documents from within this one are managed.
- Section 5 describes the railway's overall health and safety policy.
- Section 6 describes the framework for risk assessments, and their role in the SMS.
- Section 7 describes the procedures for managing railway operations and train operations in particular, and including the scope and role of the company rules, the regulations and the instructions that are issued in accordance with them, since these provide the framework for much of the material in the following sections.
- Section 8 describes the procedures for assessing and maintaining competence, and particularly for competence at undertaking elements of safety critical work.
- Section 9 describes the specific procedures for managing maintenance work.
- Section 10 describes the specific procedures for managing changes to the infrastructure, operational equipment and rolling stock.
- Section 11 describes the specific procedures for managing relationships with other groups of people apart from the railway's staff, such as passengers or other visitors, owners of items of rolling stock, and contractors.
- Section 12 describes the specific procedures for handling emergencies.
- Section 13 describes the specific procedures for reporting and investigation of incidents.
- Section 14 describes the specific procedures for review or audit of the SMS.

Section 4: Management of Documentation

4.1 The procedures required to manage the rest of the documentation that forms part of the SMS must satisfy the following criteria.

- (i) They must allow for the fact that this documentation has to be kept up to date, so that individual documents may need to be revised at any time.
- (ii) They must enable staff to easily identify which version of any of these documents is the current one, and which ones are archive versions.
- (iii) They must be easy to manage, so that revision to one document must not require revisions to others unless they are directly affected. In particular, they must not require this master document to be amended every time a revision is made to one of the documents to which it cross-references.

The Documentation Index

4.2 The basic mechanism for achieving this is to maintain a separate index document for the SMS. This index document consists of a list of all the documents within the SMS, which for each one either shows its revision history directly, or (as in the case of PDs, for which there is already such an index in existence, as noted below) it identifies directly where that information may be found.

4.3 Within the SMS index document, for each document that it refers to the current version will be identified first, and then any archive versions listed.

4.4 For completeness, this SMS master document also needs to identify precisely which other documents do form part of the SMS. Hence, the rest of this section lists the various such documents, indicating for each the process by which versions of it are controlled. These various documents are listed here in roughly the order in which they are referred to throughout the rest of this master document.

Policy Directives

4.5 The PDs are all indexed and are kept in a file at the railway for ease of reference, where the index contains precise details of the revision status of each PD. They and their index are also posted on the railway's intranet site for its working members, as is the rest of the SMS documentation that needs to be readily accessible to staff.

Risk Assessments

4.6 The risk assessment procedure document is included in the SMS index, and the versions of it are identified by the date on which they are issued.

4.7 The main risk assessment itself is included in the SMS index, and the versions of it are identified by the date on which they are issued.

4.8 As explained in section 6, separate mechanisms are being put in place to maintain records of risk assessments for more specific risks, as these assessments are conducted.

Company Rules

4.9 In principle the company rule book is included in the SMS index, and the versions of it are identified by revision numbers and by the dates on which they are issued and come into operation. In practice, though, the most recent revision of it had the effect of removing from it any material that covered any operations at the railway, so that for the future it probably does not need to be treated as part of the SMS. Reflecting this, when it was recently revised, copies of it are distributed to all staff, but other members were notified of the revision by an article in the railways quarterly magazine "The Old Run", and invited to request a copy of they were interested, or in particular if they considered that they might decide at some time to volunteer for roles as staff at the railway.

Regulations

4.10 The books of regulations are included in the SMS index, and the versions of them are identified by revision numbers and by the dates on which they are issued and come into operation. When revised, copies of them are distributed to all staff who are recorded as competent to undertake any of the roles described in it, and these staff are each required to sign to confirm that they have received their copy. Also, appropriate briefing meetings are arranged.

Work Instructions

4.11 The sets of work instruction are included in the SMS index, and the versions of them are identified by revision numbers and by the dates on which they are issued and come into operation. When revised, copies of them are distributed to all staff who are recorded as competent to undertake any of the roles to which they refer, and these staff are each required to sign to confirm that they have received their copy.

Induction Procedure and Handbooks

4.12 The induction procedure is included in the SMS index, and future versions of it will be identified by the date on which they are issued. When revised, copies of the new version are put into the induction file in place of any copies of the previous version that may still be there.

4.13 The volunteers' handbook is included in the SMS index, and the versions of it are identified by the date on which they are issued. When revised, copies of the new version are put into the induction file in place of any copies of the previous version that may still be there.

4.14 The script for the induction course for new working members is included in the SMS index, and future versions of it will be identified by the date on which they are issued. When revised, copies of the new version are put into the induction file in place of any copies of the previous version that may still be there.

4.15 The induction record sheet for new working members is included in the SMS index, and future versions of it will be identified by the date on which they are issued. When revised, copies of the new version are put into the induction file in place of any copies of the previous version that may still be there.

4.16 The safety guide for casual staff is included in the SMS index, and future versions of it will be identified by the date on which they are issued. When revised, copies of the new version are put into the induction file in place of any copies of the previous version that may still be there.

4.17 Other handbooks are intended primarily as training aids, and so are not currently included in the SMS index, even though they obviously support the operation of the SMS. They are made available from the railway's intranet site for its working members, along with other supporting documents, such as syllabuses for the various activities for which competence assessment is required, and materials from the mutual improvement classes (which are described in section 8).

Emergency Plan

4.18 Both the emergency plan and the emergency procedure summary document are included in the SMS index, and the versions of them are identified both by version numbers and by the dates on which they are issued.

Section 5: Health and Safety Policy

5.1 The railway's original health and safety policy was approved by the council on 10th April 1975, and so predated by a long way the creation of the mechanism of PDs. Following the creation of this mechanism it was revised by the R&DSC and the revised version was approved by the council on 11th May 1993. It was issued as a PD under the reference 5/93/1. More recently it has been revised to reflect changes in the importance of the various roles that it defined, and in particular the designation of the role of ElecE as one of the senior engineers, and the definition of the role of commercial manager. This revised version was approved by the council on 17th February 2015, and was issued as a PD under the reference 2/15/1.

5.2 The policy has two parts. One defines the brief statement which is published as the summary health and safety policy that meets the requirements of the Health and Safety at Work etc Act 1973. The other part defines the overall implementation of this, by stating the council's commitment to promoting the health and safety of all staff at the railway, defining the role of the council in this, and defining the specific responsibilities that are placed on the various senior engineers and the commercial manager. The relevant details of these roles are described in the following sections.

Section 6: Risk Assessments

6.1 The railway's first risk assessment, as a formal document, was created in January 1994 to satisfy regulatory requirements at that time. Prior to that the rules and regulations had formed the central document within the railway's systems for managing safety, and in terms of controlling the activities of staff this is still the case. Hence, the role of the risk assessment was seen initially as being to justify that the control measures for risks that were defined in the rules and regulations were indeed adequate to control those risks.

6.2 As practice within the railway industry has developed for the use of risk assessments in the management of health and safety, so the role of the railway's risk assessment has changed too. While it still provides the ultimate basis for ensuring the adequacy of the control measures defined in the rules, regulations and instructions, it is also used as basis for managing change, to ensure that these control measures continue to be adequate.

6.3 When originally developed, the risk assessment formed part of a suite of three documents, as follows.

- (i) A document that described the structure of safety management and documentation, in order to show how the risk assessment fitted into the overall system for managing safety. Much of the information from that document has formed the basis for this SMS master document, which has effectively superseded it.
- (ii) A document that described the approach used to conducting the process of risk assessment, and the structure of the risk assessment document that resulted from this process.
- (iii) The risk assessment document itself.

6.4 The expectation in separating the document defining the assessment process from the one containing the results of it was that the former should need amending less frequently than the latter. In the early stages it turned out that the two were needing to be updated almost in tandem, but now that the process has settled down it has been the case that the risk assessment has been amended more frequently than the risk assessment procedure document. The version controls for them are defined in 4.6 and 4.7 respectively.

6.5 Both documents are maintained essentially by the Safety Officer, in consultation with the R&DSC. New versions of them are produced whenever changes in circumstances require additional risks to be included, or when any control measures need to be changed for any reason.

6.6 As the process of risk assessment has become more central to the management of health and safety, it has been recognised that the concept of a single document containing the assessments of all risks is no longer a realistic one. Therefore, in addition to this main assessment which covers normal operating activities, various specific risk assessments have been created for particular hazards. It is intended that the set of these specific risk assessments will be maintained in a area of the railway's intranet site for its working members.

Section 7: Managing Train Operations and Related Activities

7.1 As described in 3.4 and 3.10, there are three main layers of documentation that control the operation of the railway, and in particular the operation of trains and related activities. These three main layers are the rules, the regulations and the instructions.

Rules

7.2 The set of rules originally formed the most fundamental layer, and was issued by the council in the form of the Company Rule Book. As described in 4.9, this was previously distributed to all staff, and to any other member of the railway who wished to take any part in its operation.

7.3 As such, the rules had two roles. One was to define the framework of the other two layers, including aspects such as defining terms like “the railway”, “train”, “senior engineer”, etc. The other role had historically been to define general requirements for the railway operation, including ones such as adhering to the rules, regulations and instructions; only undertaking activities where formal assessment of competence is required if they had been assessed as competent; and so on.

7.4 In the most recent (eighth) revision of the rules, however, this second role is reduced to describing a few very general safety precautions, such as warning others who neglect the need to stay clear of the tracks. This is because (as the introduction to the rules explains) all those taking any part in the operation of the railway are now required to have undertaken an induction procedure. As part of this procedure they will have received the documentation for these general requirements, since this is now contained instead in the general regulations.

Regulations

7.5 The second layer of documentation is the regulations, which have similar status to the rules, but with the provision that they only need to be known by those who will be undertaking specific aspects of the railway operation, and who will therefore have been through the appropriate induction course or other training. The regulations are thus divided into sections which effectively define a hierarchical structure of two layers. As described in 4.10, these sections are distributed to all staff who wish to participate in any of the operations that they control.

7.6 The upper layer is represented by the general regulations, which in the eighth revision became a separate document, rather than simply being section A of what was previously the single set of regulations. These general regulations contain most of the general requirements for operating that were previously in the company rules, including those for supervision of work, assessment of competence, reporting of incidents, train control, and precautions to be taken in the vicinity of the tracks.

7.7 The lower layer is represented by two sets of regulations. One set is the Train Operating Regulations, which covers the material that was previously contained in the other sections of the previous single set of regulations. It is divided into sub-sections which each cover a particular aspect of train operation, such as crewing and rostering, train control, signalling, shunting, the duties of footplate crew, the operation of passenger train, the operation of goods trains, etc.

7.8 The other set is the Engineering Regulations, which are still under development.

Instructions

7.9 At the third level, instructions define more detailed (and possibly more temporary) requirements for various operations. They are issued by procedures defined in the regulations, such as being posted on officially designated notice boards or being specified as part of maintenance records, and include matters such as special traffic notices, instructions relating to particular items of machinery, emergency procedures, etc.

7.10 In the eighth revision of the regulations these instructions have been divided into two groups. One of these groups is the set of “work instructions”, which each document the specific procedures that should be followed when carrying out particular tasks. They therefore effectively supplement the regulations, and indeed most of them contain procedures that previously were documented in the regulations. An index of them is maintained and published on the main operating notice board, and so staff are required to check this, in case any amendments have been issued to any of them.

7.11 The other group of instructions consists of those that are intended to be temporary, because they cover operational issues that may only apply for a short time. These instructions are therefore not included in the SMS index: the ones currently in force at any given time are the ones that are issued by the procedures defined in the rules and regulations, and these specify that staff must read all the current instructions when starting duty.

Authorising the Operation of Trains

7.12 Many of the procedures in the regulations require various kinds of instructions to be issued, such as rosters for trains and crews or notices to authorise special trains, but the regulations do not specify the conditions under which the relevant individuals may issue such instructions, because it is not considered appropriate for the regulations to contain requirements that only apply to one or two specific individuals. Instead, there are two PDs that cover aspects of this.

7.13 The basic requirements for authorising passenger trains are defined in the PD that was approved by the council on 12th January 1989 and issued under the reference 1/89/2. Subsequently, to ensure compliance with the legal requirements for the management of safety-critical activities, the R&DSC drafted a second PD concerning the management of safety-critical work, and this was approved by the council on 21st October 2003 and issued under the reference 10/03/1.

7.14 This second PD (10/03/1) defines in more detail the procedures by which the operation of either normal or special trains is authorised. In particular these procedures ensure that passenger trains are only operated over lines other than the normal passenger line if the relevant precautions have been taken to ensure that they can be operated safely and in accordance with the applicable statutory limitations. Also, for the operation of special passenger trains the PD specifies the information that must be contained in the special traffic notice that authorises their operation.

7.15 As well as the procedures for authorising the operation of trains, this PD also specifies the requirements for inspection of the permanent way and for inspection of rolling stock, in order to ensure that they will be fit for the operation of trains.

Section 8: Managing the Assessment and Maintenance of Competence

Induction of New Staff

8.1 The first stage in assessing and maintaining competence of staff is to ensure that basic induction training is provided for new members of staff. For this purpose an induction procedure has been developed, which has four parts that are stored in the induction file, so that they can readily be accessed whenever it is required to run the course for a new working member of staff. The procedure is designed to be run as an induction course on a one-to-one basis, with the intention that it could be delivered by any suitably qualified member of staff (which does not necessarily have to be one of the senior engineers). The four parts of the procedure are as follows.

- (i) A set of instructions for the induction procedure, which defines how the induction course is to be run. The version control for this procedure is defined in 4.12.
- (ii) A volunteers' handbook, which provides basic guidance for new members (and others!). A copy of this is given to the new member at the start of the induction course. The version control for it is defined in 4.13.
- (iii) A standard script for the induction course, which is written to identify those areas of the railway's activities in which the new member is particularly interested, and then take them through the key points of the volunteers' handbook that apply to these areas. The version control for this script is defined in 4.14.
- (iv) A record sheet that is completed as the stages of the script are worked through, to record key information about the new member, such as which areas of the railway's activities have been covered. At the end of the course this record sheet is filed, to provide a record of which parts of the induction training the new member has completed satisfactorily. The version control for this form is defined in 4.15.

8.2 Work is in progress on improving the procedures for managing the recruitment of new volunteers, and as a first step in this a number of volunteer liaison officers (VLOs) have been appointed, and also safeguarding officers. The intention is that in future the VLOs will be primarily responsible for delivering induction training for new volunteers.

Requirements for Assessment

8.3 Beyond induction training, the basic framework for managing the assessment of competence is provided by the rules and regulations, as described in 7.4 to 7.6. These specify that for certain activities formal assessment of competence is required, and that staff may not undertake these activities unless they have been assessed as competent.

8.4 The activities concerned with train operation to which these requirements apply are specified in the regulations, as also are the relevant age limits. As well as these formal requirements, there is also an informal requirement for individuals to actually undertake these activities at least once in every two years in order to maintain competence.

8.5 It is intended that the engineering activities to which these requirements apply will be specified in instructions. Where necessary these instructions will also specify the frequency with which these activities must be undertaken in order to maintain competence.

Training and Assessment Procedures

8.6 The procedures by which competence is developed and assessed for the various activities concerned with train operation are defined in a PD, which was drafted by the R&DSC, approved by the council on 17th January 1990 and issued under the reference 1/90/1. This defines seven aspects of these procedures, as follows.

- (i) The requirement for the council to appoint individuals to act as examiners for the various aspects of the different activities for which assessment of competence is required.
- (ii) The requirement for the council to ensure that syllabuses are issued, in order to define for trainees what they need to know in order to be able to undertake each of the various activities.
- (iii) The normal process of practical training for these activities, and the limitations that must be placed on trainees while they are gaining experience of undertaking these activities.
- (iv) The basic process by which staff are assessed for competence to undertake train operating duties.
- (v) The process by which staff who have not undertaken activities within the previous two years must be re-assessed.
- (vi) The way in which the requirements for practical training will be modified for any staff who may come to the railway and be able to produce evidence that they have been assessed as competent to undertake similar activities at some other railway.
- (vii) The policy of limiting the number of staff who are permitted to train for certain activities that are carried out less frequently (such as driving cranes), so as to ensure that those who are assessed as competent at these activities will have adequate opportunity to carry them out sufficiently frequently to maintain their competence.

8.7 The basic process of practical training that is assumed by this PD is the long-established one of carrying out the relevant duties as a trainee under the one-to-one supervision of members of staff who are already qualified to carry out these duties. Since 2012 this has been supplemented by a programme of mutual improvement classes, each of which is typically based round the presentation of some technical topic, and discussion of the material presented. Some of these classes are then followed by practical training sessions. Where practical, material from these classes is made available to working members via the railway's intranet site.

8.8 A recent addition to these assessment requirements has been the introduction of an Initial Safety Assessment, which in future will need to be undertaken by all members of staff wishing to commence training for either operational or engineering duties. This covers basic material from the rules and regulations and the working members' handbook, and is intended to ensure that staff can conduct themselves safely around the railway's sites, including in the workshops and in the vicinity of the tracks.

8.9 To help make staff aware of the requirements and opportunities for training, a "progression tree" has been produced, which shows that various routes that can be taken through the stages of qualification for different operating grades. Like the syllabus documents, this is regarded as supporting the operation of the SMS, and so is not formally included in the SMS index.

Medical Fitness

8.10 For activities concerned with train operation there are also requirements for staff to be medically fit to undertake them, and these are defined by the regulations to operate largely on a self-certification basis. The detailed procedures for this were developed by the R&DSC, drafted as a PD, approved by the council on 20th November 2001 and issued under the reference 11/01/1.

8.11 Following the issue by the Heritage Railway Association in August 2007 of guidance on procedures for assessment of medical fitness the procedures defined in that PD were enhanced, but without amendment of the PD. Following the revision of this guidance in March 2011 more significant changes were made to the procedures, and to reflect this a new PD was issued to replace the original one, under the reference 8/12/1. Thus, the key elements in the current procedures are as follows.

- (i) The council has appointed a medical officer, and with their advice has issued a new version of the self-certification form that a member of staff must complete if they wish to be permitted to undertake the duties for which medical fitness must be assessed.
- (ii) When a member of staff submits a completed self-certification form it is checked initially by the medical officer, who decides on the basis of this whether the member of staff needs to undergo a medical examination (which is mandatory for some operating duties), or can be passed as fit on the basis of the information in the form.
- (iii) The medical officer attends the railway typically on two occasions per year to conduct medical examinations.
- (iv) The medical officer informs the SO of the outcomes of the medical assessments, in terms of which duties the member of staff being assessed is or is not deemed fit to undertake, and when their next assessment of medical fitness needs to be made.
- (v) The intervals between re-assessments of medical fitness are normally as recommended in the March 2011 version of the guidance issued by the Heritage Railway Association in March 2011, but the medical officer may require more frequent re-assessments if they consider that an individual case requires this.

8.12 During 2014 the medical officer advised the council that new licence requirements had been issued by the General Medical Council, which prohibited medical professionals from practicing outside their defined areas of specialism, and that the General Medical Council had eventually confirmed that the effect of these new requirements would be that she would no longer be permitted to undertake such medical examinations, although she could continue with the other elements of the role.

8.13 In response to this, the council took two actions, as follows.

(i) Following advice received from other heritage railways, it agreed that formal medical examinations would only be required as a normal step for drivers, or when recommended by the medical officer.

(ii) It appointed a second medical officer to conduct the medical examinations, who was qualified in the relevant aspects of occupational health.

The council is still considering what revisions are needed to PD 8/12/1 in order to cover these new arrangements.

Conduct and Recording of Assessments

8.14 The basic process by which staff are assessed for competence to undertake train operating duties (referred to in 8.6(iv)) has been developed in several ways.

(i) The single assessment that was assumed by PD 1/90/1 has been split into two parts, namely an oral examination on the relevant rules and regulations and a practical assessment of their ability to carry out the duties properly. Except for the role of shunter, these two parts of the assessment are normally carried out by different examiners.

(ii) Checklists have been created for each of the kinds of duty, one covering the key points which must be assessed during the oral examination on the relevant rules and regulations, and the other covering the key points in the practical assessment of the ability to carry out the duties properly. The syllabuses have also been similarly split, so that they and the checklists are consistent. In each case, the relevant checklist is used as a reference whenever an assessment is being carried out, and is then completed as a record of the performance in the assessment.

(iii) More recently, a programme of periodic re-assessments has been commenced, which when fully established will ensure that staff who are carrying out operating duties are maintaining competence.

8.15 Whenever staff have been assessed as competent to undertake any activity concerned with the operation of trains, the relevant completed checklists are filed, and the outcome of the assessment is added to the database of such competences that is maintained as part of the computer system for rostering train crews. This system has rules built into it ensure that staff can only be rostered for duties for which they have been recorded as competent. Also, the TM can use the database to run an annual check as to whether there are any individuals who have not undertaken duties during the previous two years, and who hence require re-assessment.

8.16 A member of staff may volunteer to undertake a particular train operating duty either by putting their name down for it on the paper version of the roster, or by using the similar function of the system on the railway's website, or by contacting the roster clerk, who has delegated authority from the TM to roster staff for such duties. The actual allocation of that member to that duty is only confirmed once either they or the roster clerk has added the information to the computer version of the roster, and this system has checked that they are recorded as competent to undertake that duty.

Section 9: Managing Maintenance Work

9.1 A primary aim in managing maintenance work is to ensure that those who undertake it do so safely, where in many cases such work may be undertaken by relatively inexperienced staff. Hence, much of the focus of the induction procedure (described in 8.1) and of the initial safety assessment (described in 8.8) is to ensure that even the most inexperienced staff will at least have sufficient knowledge to ensure this.

Work by Junior Staff

9.2 A special case here is that of junior staff, meaning those who are aged under 18 years. Additional procedures for managing them are defined in a PD which was developed by the railway in consultation with those officers of the Heritage Railway Association who were developing guidance on this issue for all heritage railways. This PD was approved by the council in two stages, where the second stage was completed on 15th April 2003, and it was issued under the reference 1/03/1. It defines the relevant age limits, the additional requirements for the induction process (which include the serving of a probationary period after initial induction), and the additional working practices to be adopted by all staff when working with junior staff.

9.3 The other primary aim in managing maintenance work is to ensure that it is carried out competently, and that appropriate quality checks are then applied to it, particularly (but not exclusively) where it involves safety-critical work. Here there are two aspects to competence, concerned with the tasks to be carried out and the equipment that may need to be used to carry them out.

General Work

9.4 The tasks to be carried out are managed by the regular issue of a job sheet, which typically covers a period of a week or two and lists those maintenance tasks that need to be carried out during that period. At any time when maintenance work is being undertaken at least one responsible engineer (either one of the senior engineers or an assistant engineer) will be available on site, since they are the main key holders for the site and particularly for the workshop. Thus, staff volunteering to undertake maintenance work will select a task from this sheet in consultation with a responsible engineer, and will work on it, conferring with the responsible engineer as appropriate if they have any queries about how the work should be carried out.

Safety-Critical and Other Specialised Work

9.5 Where some task needs to be carried out that requires special competence, then one of two approaches is adopted. One approach is for the instructions on the job sheet to specify what special competence is required, so that the responsible engineer can ensure that the person selecting that task has the required competence. The other approach is that the senior engineer drawing up the job sheet will omit that task from the sheet, and instead will either undertake it himself or will arrange directly with a specific assistant engineer for them to undertake it, and then report back to them when it has been carried out.

9.6 For safety-critical tasks, once the appropriate senior engineer has received a report that the task has been completed, they will then ensure that the work that has been done is inspected, in accordance with the requirements of the PD concerning the management of safety-critical work that was described in 7.13 and 7.15.

9.7 The basic mechanism for ensuring competence in the use of specific items of equipment is the set of engineering instructions, which define those items of equipment for which it is necessary that individual members of staff must be authorised before using that equipment. Authorisation for members of staff to use such items of equipment is issued by the mechanical engineer.

Mechanical Maintenance Records

9.8 The other important component in the management of maintenance work is the maintenance records, which can be divided into three main groups corresponding to the different branches of engineering: records of mechanical engineering work, records of civil engineering work and records of electrical engineering work. The records of mechanical engineering work can then be further divided into two groups: records relating to items of rolling stock, and records relating to other items of equipment.

9.9 The maintenance records for items of rolling stock consist of the following four sets.

- (i) A collection of plans, drawings, instruction manuals and similar documents, which is maintained by the mechanical engineer.
- (ii) Records of the use of locomotives, in the form of a set of repair cards for each one. Whenever a locomotive has been used, the driver is required by the instructions for these records to add an entry to the appropriate card to record the date, the distance run, any needs for possible maintenance work that were identified while it was being used, and the details of any running repairs that were carried out to it. Also, if the locomotive had developed an actual defect then the driver is required by the regulations to report this to the mechanical engineer so that he can deal with the defect, using the information in the repair card as a guide.
- (iii) For locomotives, records of the “fitness to run” inspections carried out when they are prepared for traffic, which are in the form of checklists that are kept in a file. The driver is required by the instructions for these records to complete one of these checklists during the process of preparing the locomotive for traffic and inspecting it. The checklist then records the date, which locomotive it was, and that each of the items that needs to be checked (such as brake gear, drawgear, motion pins, and for steam locomotives boiler plugs, mudhole doors, etc) was in satisfactory condition.
- (iv) Records of external inspections, such as of steam locomotive boilers, air receivers on diesel locomotives, etc. The mechanical engineer is responsible for maintaining these records, and (as required by the PD on the management of safety-critical work that was described in 7.8 and 7.10) for using them and the repair cards to ensure that activities that must be carried out to a schedule, such as boiler washouts or external inspections, are arranged as necessary.

9.10 The maintenance records for other items of equipment, such as for inspections of lifting equipment or ladders, are kept by the mechanical engineer, who is responsible for ensuring that these inspections are scheduled as required. The mechanical engineer is also responsible for maintaining a collection of plans, drawing, instruction manuals and similar documents relating to this other equipment.

Civil Engineering Records

9.11 The maintenance records for civil engineering work consist of the following four sets.

- (i) A collection of plans, drawings and similar documents, which is maintained by the civil engineer.
- (ii) Records of the checks that are made of the condition of the track at the start of each day on which passenger trains are to be operated. This check is made on each such day by running a light locomotive over the length of the passenger line, primarily to ensure that the track is clear of obstructions, but also as a general check on its overall condition. The instructions for these records require that the driver of the locomotive must complete the appropriate form after the line check has been carried out, to record that it was in a fit state for passenger trains to be operated over it. Also, if a defect is found in the track during the course of this check, then the driver is required by the regulations to report this to the civil engineer so that he can deal with the defect, using the information from the form as a guide.
- (iii) Records of the regular detailed inspections that are made of the track, as required by the PD on the management of safety-critical work that was described in 7.8 and 7.10. The instructions for these records require that the engineer carrying out such an inspection must complete the appropriate form to record the state of the track, and any need for any maintenance work that has been identified during the inspection. Also, if a defect is found in the track during the course of such an inspection, then the engineer carrying out the inspection is required by the regulations to report this to the civil engineer so that he can deal with the defect, using the information from the form as a guide.
- (iv) Records of any maintenance work carried out on the track or related infrastructure. When any such maintenance work has been completed, the engineer who has been supervising the work is required by the instructions for these records to complete the appropriate form to describe the work that has been carried out, and to confirm that the track and related infrastructure (such as associated walkways) has been inspected at the end of the work (as required by the PD on the management of safety-critical work that was described in 7.8 and 7.10) and left in a safe condition.

Electrical Engineering Records

9.12 The maintenance records for electrical engineering work consist of the following two sets.

- (i) A collection of plans, drawings and similar documents, which is maintained by the electrical engineer in his role as an assistant to the mechanical engineer.
- (ii) Records of the safety tests for portable electrical appliances that are conducted annually, as scheduled by the electrical engineer. These records are maintained by the person carrying out the tests, and for each portable electrical appliance that is tested they contain the results of the measurements that are made during the tests, as required by the recommended procedures for such testing that are issued by the Institution of Electrical Technology (IET).

Section 10: Managing Changes to the Infrastructure, Equipment and Rolling Stock

10.1 All changes to infrastructure, equipment or rolling stock are treated as projects, and as such originate in one of two ways.

- (i) The most common way in which such a project is originated is that a proposal for the project will be developed by the relevant senior engineer, and then brought to the council for approval, usually as part of that engineer's periodic report on the current portfolio of projects for which they are responsible.
- (ii) Less commonly, such a project may be proposed by some other member of the council directly to the council, which will either decide that the project is not worth considering further, or will ask the relevant senior engineer to develop detailed plans for it.

Most of the procedures to deal with these have developed as custom and practice over a long time, as part of the railway's well-established culture of putting safety first, rather than these procedures being formalised in policy directives

10.2 Where a senior engineer is developing plans for a project, one of their key responsibilities is to consider those aspects that may affect overall safety, and to ensure that any safety implications are reported to the council when the proposal for the project is being considered. In particular, these implications will include identifying whether the project would require independent safety verification. If a project is proposed directly to the council by some other member, then the council as a whole will ensure that any safety implications of the proposal are considered as part of the process of deciding whether plans for the project are worth progressing further. If necessary the council will refer the proposal to the R&DSC for detailed consideration of the safety implications of any project.

10.3 When deciding whether to approve a project, a fundamental principle that the council observes is that a project will only be approved if it does not have any adverse effect on safety. Beyond that, decisions about which possible projects to approve will involve consideration of a variety of factors, such as:

- (i) the resources of money or manpower required;
- (ii) any expected operational benefits, or benefits in terms of increased revenue;
- (iii) any contributions towards the railway's goals as a museum; etc.

The balancing of these various factors is therefore outside the scope of this SMS.

10.4 In addition to these general provisions, there are various specific provisions for each of the three kinds of changes that are covered in this section. The specific provisions for changes to the infrastructure of the railway are covered below in 10.5

to 10.11; the provisions for changes to items of rolling stock are covered in 10.12 to 10.15; and the provisions for changes to workshop equipment are covered in 10.16 to 10.18.

Changes to Infrastructure

10.5 Changes to the infrastructure of the railway are rare occurrences, and so any such change would be treated as a major project, that needed to be planned individually by the relevant senior engineers and then the plans brought to the council for review and approval before any work on the project could be started. Since such plans would be very specific to a particular project it is questionable whether they could really be described as being part of a system, but based on those projects that have taken place recently there are certain aspects that can be identified as sufficiently important to be documented as part of the SMS.

10.6 Any change made to the infrastructure must be planned to be consistent as far as possible with all relevant requirements of the Railway Safety Principles and Guidance, having particular regard to the provisions of section H for minor railways, since the Middleton Railway comes in this category.

10.7 All components used in the track should conform to the relevant British Standards, where the railway currently still uses bullhead rail and chairs rather than flat-bottomed rail and baseplates, and where the railway currently still uses imperial measurements for all components.

10.8 All work on the track should be carried out as far as possible in accordance with the procedures described in the handbook issued by the Permanent Way Institution.

10.9 Signalling is deliberately kept as simple as possible, using just stop boards and limit of shunt boards that are interpreted as fixed signals, and with turnouts operated from ground frames that are controlled by an Annett's Key.

10.10 Before any change to the infrastructure can be brought into use it must be inspected by the relevant senior engineers, to ensure that the work has been completed properly, and then as part of the inspection a light locomotive should be run at low speed over the infrastructure concerned, to ensure that all clearances are indeed satisfactory and that the infrastructure is capable of carrying the intended loads. Where the change has affected any of the track or its formation then temporary speed limits will be imposed until any settlement of the track or formation has taken place, and any work necessary to remedy the effects on the alignment of such settlement has been completed.

10.11 Before any change to the infrastructure can be brought into use that will affect any of the operating procedures, then as part of the planning for them the council would require the R&DSC to draw up appropriate instructions to put into effect these changes to the operating procedures, and to ensure that these instructions would be issued to all operating staff. If the council determines, with advice from either the R&DSC or the relevant senior engineers, that the changes should be classified as major ones, then the council would also issue require that appropriate training courses be devised and run for all operating staff, and that associated assessments of competence to carry out the new procedures should be made before operating staff would be permitted to undertake any duties that will require them to operate the changed procedures.

Changes to Rolling Stock

10.12 Changes to items of rolling stock can involve either the acquisition of new items, or changes to existing items resulting from major improvements or repairs.

10.13 When any item of rolling stock is acquired that is new to the railway, the mechanical engineer is responsible for checking that it conforms to the railway's standards for buffing and drawgear, and for checking in consultation with the civil engineer that it conforms to the railway's standard loading gauge. Until these checks have been completed satisfactorily the item will not be moved from the siding where it has been unloaded.

10.14 When any item of rolling stock is acquired that is new to the railway, the mechanical engineer is responsible for determining whether it is sufficiently similar to existing items that it can be operated according to the same procedures as those existing items, or whether special instructions need to be issued for its operation. Here the normal assumption would be that steam locomotives are usually sufficiently similar that crews who are competent to operate them could operate any new one; that diesel locomotives are usually sufficiently different that all crews will require special training for each one, and similarly for any cranes, whether steam or diesel powered; and that coaches or goods wagons are usually sufficiently similar that special instructions are unlikely to be required. If special instructions are required for any item of rolling stock then these would be issued as described in section 7, and if special training is required for any item of rolling stock then this and the associated assessments of competence would be managed as described in section 8.

10.15 Similarly, where any major improvement or repair to an item of rolling stock is carried out, including the restoration to working order of some item that has been out of use for some time, then again the mechanical engineer is responsible for

determining whether the work that has been done on it requires either special instructions to be issued for its operation, or special procedures or training to be put into effect for it, on the same basis as in 10.14.

Changes to Plant or Machinery

10.16 As with items of rolling stock, changes to workshop or other machinery can involve either the acquisition of new items, or changes to existing items resulting from major improvements or repairs.

10.17 Changes to workshop or other machinery must be authorised in advance by the mechanical engineer, and any major change would normally also be brought to the council for approval, to ensure that the change should be beneficial. When any item of machinery is acquired that is new to the railway, the mechanical engineer is responsible for checking that it is in safe working order before it is commissioned, and for determining whether special instructions need to be issued for its operation, or whether special training is required for individuals who are to use it. If special instructions are required for any item of machinery then these would be issued as described in section 7, and if special training is required for any item of machinery then this and the associated assessments of competence would be managed as described in section 8.

10.18 Similarly, where any major improvement or repair to an item of machinery is carried out, then again the mechanical engineer is responsible for determining whether the work that has been done on it requires either special instructions to be issued for its operation, or special procedures or training to be put into effect for it, on the same basis as in 10.14.

Section 11: Managing People Other Than Staff

11.1 There are two groups of people other than staff who need to be managed. One group consists of the visitors to the railway, whether as passengers on the trains, as visitors to the museum or as customers in the shop. The other group consists of what are referred to for this purpose as casual staff, meaning contractors or others coming to work at the railway in a casual capacity.

Visitors

11.2 The primary element in managing the safety of visitors is to ensure that they only have access to areas where they will not be exposed to hazards from train operation or engineering work. The risks relating to this, and the detail of the relevant control measures, are analysed in the risk assessment. Essentially, they consist of ensuring that all hazardous areas are protected by fencing or gates, and that notices prohibiting public access are displayed at any points (such as platform ramps) where open access to these areas has to be provided for the safety of operating staff.

11.3 The other element in managing the safety of visitors is to ensure that those areas to which they do have access are safe. The risks relating to this, and the detail of the relevant control measures, are analysed in the risk assessment. Since all such areas over which the railway has control were reconstructed during 2005, these control measures essentially involved ensuring that the new construction complied with all relevant statutory requirements, such as building regulations for those areas that are under cover, and the relevant sections of the railway safety principles and guidance for the platform and related station facilities.

Casual Staff

11.4 The management of the safety of casual staff essentially involves ensuring that they are aware of the particular hazards that may result from the fact that whatever activities they are undertaking are being undertaken in a railway environment. For this purpose a safety guide for casual staff has been produced, and copies of this are kept in the induction file: the version control for it is defined in 4.16. This guide is a very simplified version of the volunteers' handbook (which was described in 8.1(ii)), where the simplifications have involved reducing it to three bullet points covering general procedures, four bullet points covering emergency procedures, six bullet points covering site and track safety, and three bullet points covering engineering work. Hence, it is sufficiently simple that the required induction procedure for any casual staff is simply to give them a copy of this guide, ask them to read it through, and then answer any questions that they may have about it.

Section 12: Managing Accidents and Emergencies

12.1 The need to create guidance on the procedures to be followed in order to manage an emergency situation or the immediate consequences of an accident (as opposed to subsequently reporting or investigating it, as described in section 13) was identified during the creation of version 1 of this document. In response a single document was created which collects together this guidance, and which is referred to as the emergency plan. The process of managing such incidents does, however, involve other aspects as well.

12.2 In particular, the fact that an incident may well involve a train which could be anywhere on the railway line means that the emergency plan has to identify how responsibilities for managing an incident are divided between those who are at its location and those who, because they are at the Moor Road site, may actually have to take action such as summoning the relevant emergency services or arranging for a breakdown train to be run. The plan also has to define a procedure for designating the staff at each of these locations who will handle the incident.

12.3 The possibility that emergency services or other may need to be summoned to attend a location on the railway other than the Moor Road site also means that sets of reference documentation have been created to define the various locations and provide the directions that the emergency services would need to reach them. Furthermore, different patterns of operation mean that more than one set of this documentation needs to be kept available. The plan therefore defines the points on the Moor Road site, referred to as emergency control centres, where this documentation is kept, and the plan also defines a procedure for deciding which emergency control centre should be used to handle an incident. As the plan is enhanced, other sets of information are being added to the reference material kept at each emergency control centre.

12.4 The plan then provides a general classification of the different major kinds of incident that may need to be managed, based essentially on whether the emergency services need to be summoned, and if so which ones. For each of these major classes of incident it then provides some general guidance as to particular issues that may need to be considered in managing that kind of incident, such as the need to avoid a steam locomotive being trapped in a situation that would prevent it from being able to get to a water supply if this were needed. The plan also provides some guidance for managing events following an incident, such as making any reports that are required (as discussed in section 13) and managing enquiries from news media.

12.5 A consequence of meeting these various requirements is that the emergency plan is a fairly substantial document, and following its use in a major emergency in August 2013 it was recognised that general operating staff needed a much simpler summary, which would define in flowchart form the procedure that they would need to follow if an emergency arose. This was therefore created initially as a basic emergency procedure, and more recently other reference material has been added to it. This version was issued as the Emergency Procedure Summary in March 2015, and copies of it are provided in the guard's compartment for each train, and in each emergency control centre.

Section 13: The Reporting and Investigation of Incidents

13.1 As described in 3.18, the general regulations place responsibility on all staff to report any incidents that may occur while work is being undertaken at the railway, and the regulations and instructions define the specific procedures by which certain kinds of incidents must be reported. These regulations and instructions also place responsibilities on the senior engineers to ensure, as appropriate, that any such reports are followed up, including where necessary involving either the R&DSC or the S&OC or both to investigate the circumstances further.

13.2 These instructions include details of the circumstances under which any incident may need to be reported to either or both of RAIB or HMRI. For those classes of incidents that require to be reported immediately by telephone they specify a priority order of roles in order to define who is responsible for making the necessary telephone reports. For other classes of incidents they define in the same way who is responsible for notifying the Safety Officer of the incident, and the Safety Officer is responsible for collating internal reports from others and for then making the necessary reports to RAIB, HMRI or both, as appropriate.

13.3 Incidents that do not require external investigation by either of RAIB or HMRI are investigated internally by either or both of the R&DSC and the S&OC. Investigation by the R&DSC is governed by the railway's disciplinary code, for which the current version is issued as a PD under the reference 4/96/1. This code lays down the procedures that the R&DSC are to follow for collecting reports from staff, for conducting interviews with staff, and for reporting the outcomes of the investigation to the council. The code also defines a classification scheme for the severity of incidents, and the range of disciplinary actions that are considered appropriate for each class of incidents.

13.4 A key element in the procedures in this code is that, while the R&DSC makes recommendations to the council for the results of its investigation, it does not have the power to take disciplinary action, except that for a serious incident it may suspend staff from duties temporarily while the process of investigating the incident and reporting to council operates. On the other hand, these procedures also prohibit the council from attempting to reconsider the details of the incident as reported by the R&DSC: the only decisions that the council can make on the recommendations in such a report are either to accept them, or if some weakness is identified in the report that makes one or more of the recommendations unacceptable they can refer the report back to the R&DSC for further discussion of the recommendations concerned.

13.5 By contrast, the S&OC has no responsibility for discipline, and it does not formally have the power to demand reports of incidents from those involved in them. Thus, typically its investigations are based on copies of the reports that are supplied by the R&DSC, or on summaries of the information in these reports. It then considers these, to determine what lessons need to

be learned from any incident, and whether changes to procedures should be considered. It reports its findings to the council, and where it believes that changes should be made to procedures it reports these to the R&DSC for discussion.

Section 14: Reviewing and Auditing the SMS

14.1 Situations that give rise to a need to review the SMS, meaning usually to review some procedure or procedures that form part of the SMS, typically arise in one of three ways.

- (i) As part of the planning for some project for a change to infrastructure, equipment or rolling stock, it may be identified that this change may require some part of the SMS to be reviewed. In such a situation the council will, as described in 10.2, refer the project to the R&DSC for consideration of its likely impact on safety, and this may result in a proposal being developed for an amendment to the SMS.
- (ii) Proposals made to the council, in response either to external circumstances or to the ongoing need to develop the railway's business, may be identified as requiring some part of the SMS to be reviewed. As with projects for changes to infrastructure, equipment or rolling stock, in such a situation the council will refer the proposal to the R&DSC for consideration of its likely impact on safety, and again this may result in a proposal being developed for an amendment to the SMS.
- (iii) The investigation of incidents by the R&DSC or the S&OC may lead to a need being identified for improvements to the SMS.

14.2 Any review of a part of the SMS will involve five phases. These may well all occur within a single meeting of either the R&DSC or S&OC, or they may be spread out over several meetings of either or both committees, or these meetings may be supplemented by or even replaced by discussions conducted via email.

- (i) The first phase will be a discussion of the issue that caused the review to be initiated, to determine what the requirements are for that review, and in particular to identify clearly any problems with the parts of the SMS that are relevant to the review.
- (ii) If this first phase identifies some aspect of the SMS that needs improvement, then the second phase will be a discussion that aims to identify possible ways in which the SMS could be improved, so as to try to solve the problems identified in the first phase.
- (iii) The third phase will be to evaluate the various possible solutions, referring where appropriate to relevant reference sources (such as the Railway Safety Principles and Guidance, or guidance documents produced by the Heritage Railway Association), or if appropriate taking advice from external individuals with relevant expertise. This phase will finish once a decision has been made as to which of the possible solutions appears to be the best one.
- (iv) The fourth phase will be to draw up a report for the council, summarising the original problem and the reasons for recommending the proposed solution.
- (v) The fifth and final phase of the review will be for the council to take a decision on the basis of the report as to whether or not to amend the SMS, and if so to approve the amendments.

Implementing Amendments

14.3 Once a review of part of the SMS has been completed, then if the result of the review has been to approve amendments to the SMS these amendments need to be implemented. Depending on which part of the SMS has been amended, and how major the amendment is, this may involve some or all of the following steps, and the decision as to which steps are required would be made by the council on the basis of advice from either or both of the R&DSC and the S&OC.

- (i) Revised instructions may need to be issued for some procedure, which will therefore come to the attention of staff when they read the instructions at the start of duty, as described in 3.11.
- (ii) A revised version of one of the sets of regulations may need to be issued. For a minor revision this would take the form of issuing a document that describes the revision, and sending a copy to every member of staff who is qualified to undertake duties that would be affected by this revision. For a more major revision this would take the form of producing a complete new copy of the regulations, and sending a copy to every member of staff who is qualified to undertake any relevant duties, as was done with the eighth revision.
- (iii) A revised version of the company rulebook may need to be issued. Again, for a minor revision this would take the form of issuing a document that describes the revision, and sending a copy to every member of the railway. For a more major revision this would take the form of producing a complete new copy of the rulebook, and in principle a copy of this could then need to be sent to every member of the railway, although in practice for the eighth revision this was not necessary, and it is unlikely to be necessary in future.
- (iv) For any revision that might invalidate procedures where the competence of individuals to operate them had been formally assessed, as described in 8.7 and 8.8, then appropriate training courses would need to be devised and run for all staff whose competence was thereby affected. Associated assessments of competence to carry out the revised procedures would then need to be made before operating staff would be permitted to undertake any duties that would require them to operate the revised procedures, as described in 10.11 for revised procedures that result from major changes to the infrastructure.

Safety Management System Part 3 - Detail

14.4 As well as such reviews of specific aspects of the SMS, there is a need to conduct periodically a more systematic audit or review of the whole SMS. Prior to the initial creation of this master document, the previous such review had been in 2003, and had resulted in complete revisions of the company rulebook and train operating regulations being issued by the council in August 2003, to take effect from April 2004. The creation of the first version of this document then identified various areas where improvements were needed to the SMS that it documented, and it was these enhancements that led to the creation of the second version. That in turn identified various aspects where further developments were in progress, and led to the production of the third version. From this the need was identified to revise the train operating regulations, and this and the associated revisions of the company rules and other regulations meant that it was necessary to produce this fourth version to document the changes that had been made.

14.5 For the future, it is planned that such systematic reviews of the whole SMS will take place every five years, unless the impact of some particular situation leads the R&DSC or S&OC to recommend to the council that this situation requires such a review to be conducted after a shorter period of time.