

**LANCASTER & MORECAMBE
MODEL ENGINEERING SOCIETY Ltd**

**SUPPLEMENT 02 - 2012
TO
RISK ASSESSMENT 2011
CONCERNING
SIGNAL BOX SWITCH FRAME UPGRADE**

**Based on HSE Guideline - HSG 216
PASSENGER – CARRYING MINIATURE RAILWAYS
(CIRCA 2001)**

Rev	Date	Purpose of Revision	Writer	Approvals
Draft	27.01.12	For Committee Consideration of Initial Content.	G. A. Duffy	Presented at Feb 2012 Committee Meeting

**CONSIDERED UNECESSARY BY MALCOLM FORD (SBSF
DESIGNER) AND COMMITTEE AGREED**

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Part 2

This part of the original Risk Assessment is not appropriate to the subject

Introduction to the Assessment Supplement 02-2012

This Supplement has been prepared to provide a documented assessment of the upgrade to the Signal Box Switch Frame console to ensure that existing safety and functionality is unchanged or improved from that provided by the existing proven control system equipment.

To guide the assessment process the Risk Assessment format used in the original assessment at Revision B has been utilised and edited to show topics related only to signalling and related safety operations.

¹ Note: Full title of HSG216 is "Passenger-carrying miniature railways – Guidance on safe practice" referred to hereon as PCMR

Part 1

Miniature Railway Installation Compliance Assessment and Review in respect of HSG216.

1A Outline Description of the Switch Frame Changes

Part 1B: Miniature Railway Installation Compliance Assessment and Review in Respect of HSG 216

PCMR Ref	Guideline Topic	Guideline Extract	LMMES Status
57	Signalling	<i>Any miniature railway that has more than one train in operation needs a system to prevent conflicting movements. The system of control needs to be as simple as possible, while ensuring the safe operation of the railway.</i>	When more than one train is running on a track circuit and the public are passengers the signal box must be manned. There is a signalling system to prevent conflicting movements of trains.
58	Signalling	<i>The primary function of any control or signalling system is to:</i> <ul style="list-style-type: none"> • <i>prevent collisions between trains;</i> • <i>give indications of the route that has been set;</i> • <i>control access of trains to a section of the line; and</i> • <i>protect level crossings.</i> 	
59	Signalling	<i>Where the safety of operation of a miniature railway can be ensured by a system of driving on a line-of-sight basis, no signalling system may be required. Train speeds need to be regulated so that the driver can stop within line of sight at all times.</i>	The tracks at Cinderbarrow comply with these objectives.
61	Signalling	<i>There are various types of suitable control systems in addition to full signalling. These include one engine in-use, tokens giving authority over specific areas of the line and two-way radio communication. There may be cases where it is advisable to use a mixture of systems, in which case you need to ensure that the basic functions listed earlier are ensured. The choice of signalling system needs to be supported by an appropriate risk assessment.</i>	The tracks at Cinderbarrow comply with these objectives.
62	Signalling	<i>The signals need to be spaced at appropriate intervals for the frequency, speed and braking performance of all trains using the line. Signals may include visual indications passed to the train crew by means of coloured lights, semaphore signals, fixed markers, coloured flags or similar manual operations. Where these are to be used during the hours of darkness or reduced levels of visibility, they need to have supporting lighted indications.</i>	The tracks at Cinderbarrow comply with these objectives.
63	Signalling	<i>Signal aspects need to be visible for an adequate length of time on the approach to the signal and when a train has stopped at the signal. Where an adequate sighting cannot be obtained, another signal, which repeats the main one, may be provided on the approach.</i>	The tracks at Cinderbarrow comply with these objectives.

64	Signalling	<i>Any signalling system provided should ensure that, in case of failure, all signals return to danger. Points should remain in the same position as they were at the time of the failure.</i>	The tracks at Cinderbarrow comply with these objectives.
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