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19 June 2014

Ms Carolyn Griffiths
Chief Inspector of Rail Accidents
Cullen House
Berkshire Copse Rd
Aldershot
Hampshire GU11 2HP

Dear Carolyn,

Investigation into the Safety of Automatic Open Level Crossings, Class Report

I write to provide an update¹ on the consideration given and action being taken in respect of recommendations 1, 3 and 4 addressed to ORR in the above report, published on 28 July 2011.

The annex to this letter provides details of the action taken in respect of each recommendation where the status of:

Recommendation 1 is 'Implementation on-going': ORR will advise RAIB when the programme to upgrade the highest risk AOCLs has been completed.

Recommendation 3 is 'Implemented': We do not propose to take any further action in respect of this recommendation unless we become aware that any of the information provided becomes inaccurate, in which case I will write to you again².

Recommendation 4 is 'In-progress: ORR will update RAIB by 19 December 2014

Yours Sincerely,

Chris O'Doherty

¹ In accordance with Regulation 12(2)(b) of the Railways (Accident Investigation and Reporting) Regulations 2005

² In accordance with Regulation 12(2)(c)

Recommendation 1

The intention of this recommendation is that Network Rail should upgrade the highest risk AOCLs [Automatically Open Crossing Locally Monitored] by fitting barriers, or implementing other measures to deliver an equivalent or improved level of safety, such as by closing crossings.

The RAIB envisages that when identifying those crossings to be upgraded, special consideration should be given to those 32 crossings with an enhanced likelihood of a road vehicle and train collision (listed at appendix D of the RAIB's report). However, it is anticipated that Network Rail's more detailed assessment of risk, taking into account factors such as the speed of trains, may identify different and/or additional crossings for upgrade.

The RAIB is aware that Network Rail's development of retrofit half barriers should allow a cost effective upgrade, but if this development is not completed and proved in the near future, the upgrading of the highest risk AOCLs should still be implemented based on existing forms of level crossing protection.

In addition, the RAIB is of the view that the implementation of a programme to upgrade AOCL crossings should not be delayed by the need to review and improve existing risk assessment management arrangements (as outlined in Recommendation 3).

Network Rail should immediately implement a programme to upgrade the highest risk AOCLs. The crossings for upgrade should be selected by appropriately skilled personnel, on the basis of factors that include:

- Past record of incidents and accidents;
- An assessment of risk and the safety benefit of the upgrade; and
- The human factors issues present at each.

Upgrades should consist of fitting barriers or other measures delivering an equivalent or improved level of safety.

Brief Summary on what was previously reported to RAIB on 22 February 2012

Network Rail was developing a cost effective barrier 'overlay' for AOCLs (known as AOCL+B [Barrier]). Development funding had been secured and trials at three locations were due to commence in December 2011. Funding for the roll out programme was being sought at an Investment Panel at the end of September 2011. Dependent on a successful trial, the roll out programme at high risk AOCLs was to take place during 2012.

Timescale: by 31 December 2012

Update

1. On 19 February 2014 Network Rail provided ORR with a programme of works with the following commissioning dates:

	SITE	ROUTE	ELR	Mileage	COMMENCE INSTALLATION (CIVILS)	COMMENCE INSTALLATION (SIGNALLING)	COMMISSIONING DATE
1	Laundry Lane	Anglia	CCH	0m 29ch	10-Mar-14	21-Apr-14	12-May-14
2	Weston	Anglia	ESK	106m 30ch	12-Mar-14	14-Apr-14	13-May-14
3	Brampton	Anglia	ESK	104m 46ch	07-Apr-14	22-Apr-14	14-May-14
4	Althorne	Anglia	WIS	40m 31ch	17-Mar-14	28-Apr-14	15-May-14
5	Blaxhall	Anglia	ESK	86m 31ch	09-Apr-14	05-May-14	16-Jun-14
6	North Green	Anglia	ESK	93m 27ch	30-Apr-14	12-May-14	17-Jun-14
7	Melton Station	Anglia	ESK	80m 31ch	07-May-14	30-May-14	19-Jun-14
8	Willow Marsh	Anglia	ESK	96m 09ch	06-May-14	06-Jun-14	23-Jun-14
9	Wenhaston	Anglia	ESK	99m 52ch	30-Apr-14	02-Jun-14	07-Jul-14
10	Dawdys	Anglia	ESK	114m 75ch	22-May-14	09-Jun-14	08-Jul-14
11	Ferry Lane	Anglia	ESK	79m 04ch	15-May-14	13-Jun-14	29-Jul-14
12	Haywards	Anglia	ESK	79m 07ch	23-Apr-14	13-Jun-14	29-Jul-14
13	Lime Kiln Quay	Anglia	ESK	79m 29ch	17-Mar-14	03-Jul-14	19-Aug-14
14	Sun Wharf	Anglia	ESK	79m 31ch	15-May-14	10-Jul-14	19-Aug-14
15	Winchelsea	Kent	ATH	73m 16ch	03-Feb-14	28-Apr-14	01-Jun-14
16	Dawes Lane	LNE	NOP	0m 32ch	25-Nov-13		07-Mar-14
17	Morton Carr	LNE	MBW1	4m 68ch	28-Feb-14		21-Mar-14
18	Battersby Road	LNE	MBW2	12m 46ch	18-Feb-14		28-Mar-14
19	Seacroft	LNE	GRS4	8m 02ch	10-Mar-14		29-Mar-14
20	Snaith Station	LNE	WAG1	68m 08ch	25-Apr-14		02-Jun-14
21	Brewster Lane	LNE	GRS4	3m 06ch	06-May-14		03-Jun-14

	SITE	ROUTE	ELR	Mileage	COMMENCE INSTALLATION (CIVILS)	COMMENCE INSTALLATION (SIGNALLING)	COMMISSIONING DATE
22	Field Lane	LNE	WAG1	66m 66ch	28-Apr-14		03-Jun-14
23	Gowdall Lane	LNE	WAG1	66m 51ch	08-Apr-14		03-Jun-14
24	Lymn Bank	LNE	GRS4	1m 46ch	06-May-14		04-Jun-14
25	Matt Pitts Lane	LNE	GRS5	3m 62ch	06-May-14		05-Jun-14
26	Turton	LNW	BBB	15m 19ch	21-Oct-13	28-Oct-13	10-Nov-13
27	Green Road	LNW	CBC1	42m 34ch	25-Nov-13	02-Dec-13	15-Dec-13
28	Whitbeck	LNW	CBC1	49m 55ch	09-Dec-13		19-Jan-14
29	Bush-on-Esk	LNW	KMG2	1m 07ch	20-May-14		17-Jun-14
30	Forsinard	Scotland					COMMISSIONED
31	Corpach	Scotland					COMMISSIONED
32	Dalchalm	Scotland					COMMISSIONED
33	Hoy	Scotland					COMMISSIONED
34	Kinbrace	Scotland					COMMISSIONED
35	Watten	Scotland					COMMISSIONED
36	Bunchrew	Scotland					COMMISSIONED
37	Lairg	Scotland					COMMISSIONED
38	Balnacra	Scotland					COMMISSIONED
39	Achterneed	Scotland					COMMISSIONED
40	Strathcarron	Scotland					COMMISSIONED
41	Ardrossan Princess St.	Scotland					COMMISSIONED
42	Dingwall Middle	Scotland					COMMISSIONED
43	Dingwall 2	Scotland					COMMISSIONED
44	Brora	Scotland					COMMISSIONED
45	Kirkton	Scotland					27-Apr-14
46	Morar	Scotland					27-Apr-14

	SITE	ROUTE	ELR	Mileage	COMMENCE INSTALLATION (CIVILS)	COMMENCE INSTALLATION (SIGNALLING)	COMMISSIONING DATE
47	Rovie	Scotland					27-Apr-14
48	Bucknell	Wales (North)	CWL	8m 61ch	17-Feb-14	24-Feb-14	07-Apr-14
49	Dolau	Wales (North)	CWL2	25m 24ch	24-Feb-14	03-Mar-14	08-Apr-14
50	Rhiwderin	Wales (North)	BJR	1m 5ch	03-Mar-14	10-Mar-14	09-Apr-14
51	Borth Capel Soar	Wales (North)	SBA	87m 59ch	17-Mar-14	07-Apr-14	12-May-14
52	Fairbourne	Wales (North)	DJP	97m 69ch	24-Mar-14	14-Apr-14	13-May-14
53	Bennar Fawr	Wales (North)	DJP	105m 04ch	31-Mar-14	22-Apr-14	14-May-14
54	Talwrn Bach	Wales (North)	DJP	107m 67ch	07-Apr-14	28-Apr-14	15-May-14
55	Llangadog	Wales (South)	VOT	23m 62ch	25-Nov-13	06-Jan-14	03-Feb-14
56	Ffairfach	Wales (South)	LLA	17m 16ch	05-Dec-13	20-Jan-14	04-Feb-14
57	Llandybie	Wales (South)	LLA	13m 08ch	25-Nov-13	20-Jan-14	05-Feb-14
58	Manorbier	Wales (South)	PEM	279m 06ch	25-Nov-13	28-Jan-14	06-Feb-14
59	Brynmariias	Wales (South)	LLA	12m 28ch	10-Mar-14	17-Mar-14	10-Apr-14
60	Chapel Road	Wessex	SOY	78m 52ch	07-Apr-14	16-May-14	15-Jun-14
61	Plassers	Western	WEL	6m 71ch	02-Jan-14	25-Feb-14	29-Mar-14
62	Coswarth	Western	NEW	298m 48ch	03-Feb-14	03-Mar-14	27-Mar-14
63	Halloon	Western	NEW	296m 22ch	03-Feb-14	04-Mar-14	28-Mar-14
64	Trencreek	Western	NEW	301m 33ch	03-Feb-14	03-Mar-14	31-Mar-14

2. On 19 March 2014 Network Rail stated why the timescale had been extended to 31 September 2014:

The AOCL+B project was developed as an overlay solution to add half barriers at AOCLs. It was assumed that the generic +B solution could be "copied and pasted" across the list of high risk sites during the nationwide rollout. This assumption has proven to be misplaced.

In practice, each site has specific details that demand variation from the generic solution. These variations range from minor improvement works to bring the crossing up to standard, through to more extensive land purchase requirements and network change submissions for speed changes. Whilst it has been possible to mitigate the impact of minor variations, the project has been forced to extend programme timescales to allow for negotiations and re-designs to take place for the larger variations.

In addition to the impact of variations from anticipated scope, there have been a number of worksites where the signalling source records required to support AOCL+B have already been booked out to other projects. Wherever necessary and possible, the AOCL+B project team have entered into overlapping design agreements to manage the records and to keep AOCL+B designs progressing. However, these agreements have required additional time. In some instances, it has not been possible to enter into an overlapping design agreement. In such cases, it has been necessary to defer design & delivery of the affected sites until the records become available.

Revised timescale: 31 September 2014

ORR Decision

3. Network Rail has implemented a programme of works to upgrade AOCLs. However, ORR believes the programme is incomplete and may not be addressing the high risk level crossings identified in the RAIB report. ORR is continuing to engage with Network Rail on its programme to upgrade high risk AOCLs.

4. After reviewing all the information received ORR has concluded that, in accordance with the Railways (Accident Investigation and Reporting) Regulations 2005, Network Rail has taken the recommendation into consideration and is taking action to implement it.

Status: Implementation on-going.

Recommendation 3

In parallel with, but not delaying Recommendation 1, the intention of this recommendation is to improve the risk assessment of level crossings by the correct identification of specific human factors issues, other local factors and the implementation of appropriate mitigation measures:

Network Rail should review, and as necessary update, its processes, guidance, training and briefing of its staff, on how to identify and assess the specific human and local factors at level crossings, so that it can establish whether further mitigation measures should be implemented.

Brief Summary on what was previously reported to RAIB on 22 February 2012

Network Rail had commenced a Level Crossing Risk Management Improvement Programme as a result of a review held between October 2010 and February 2011.

The Programme contained 17 work streams which include updating processes, guidance and training of staff to better identify and assess human and local factors at level crossings.

Timescale: 31 May 2012.

Update

5. On 7 February 2014 Network Rail provided ORR with a copy of its closure statement:

Network Rail has reviewed and updated its processes, guidance and training to staff as part of its wider National Level Crossing Programme which has focused on identification, assessment and management of risk. The Programme will see the implementation of over 100 Level Crossing Managers (LCMs) across the network. The introduction of LCMs will see a dedicated resource being implemented along with a new operating regime for level crossings. The LCMs will be responsible for identifying, assessing and managing risk at level crossings. They will develop good knowledge of their zone of crossings and undertake risk assessments, asset inspections, faulting and limited maintenance. The training programme mandatory to LCMs includes detailed guidance on how to identify and assess the specific human and local factors at level crossings including distraction and impatience.

The improved operating regime and process establishes when LCMs need to implement measures to mitigate the risk at crossings in the long term and also in the interim.

However, it is considered difficult to initially judge if the action taken to address the recommendation has reduced the associated risk. The risk assessment of level crossings will be improved by the correct identification of specific human factors issues and other local factors which will lead to improved risk assessments and implementation the appropriate mitigation measures. The improvements are expected to be seen in the long run and will be measured as part of the National Level Crossings Improvement programme's assurances.

The National Level Crossing Team will track the LCM's training progress using a training qualifications framework. The qualifications framework supports the mentoring framework a key element to the improved regime. The National Level Crossings team has identified that training is the first step in improved level crossing risk assessments but will really come into fruition when LCMs are competent and

confident in their role. The training modules are available so any future staff undertaking risk assessments will also be trained in identifying human factors.

ORR Decision

6. Network Rail has reviewed and updated its processes, guidance and training, as part of its wider National Level Crossing Programme, and has committed to monitor the LCM's training progress using a training qualifications framework. Network Rail is also introducing a narrative risk assessment process, which is also to be supported with training.

7. After reviewing all the information received ORR has concluded that, in accordance with the Railways (Accident Investigation and Reporting) Regulations 2005, Network Rail has taken the recommendation into consideration and has taken action to implement it.

Status: Implemented. *ORR will write to RAIB again if it becomes aware that the information above is inaccurate.*

Recommendation 4

The intention of this recommendation is to make sure that the development of digital red light enforcement equipment [RLEE] is not delayed unnecessarily and that it is installed at selected AOCLs with a high incidence of violations:

In collaboration with the police, Network Rail should, without unnecessary delay, complete the development of digital red light enforcement equipment and install it at selected AOCLs which have high levels of violations.

Brief Summary on what was previously reported to RAIB on 16 January 2013

8. *Network Rail stated that it was working with the Association of Chief Police Officers (ACPO) to help source a Home Office approved RLEE camera and a client specification has been produced. The plan was to go to the 'market' in order to source a suitable camera system with 'back office' offence processing support and roll out cameras at high risk locations. Timescale: by 31 May 2012.*

9. *On 4 September 2014 Network Rail stated that it did not anticipate completing its actions until 31st March 2014. As an interim mitigation measure, mobile enforcement vehicles are already on line and have been allocated to Level Crossings with a high incidence of violations.*

Update

10. On 19 December 2013, Network provided ORR with a programme of works with a commissioning date of 31 March 2014.

Network Rail also provided a 'periodic update' stating that:

- *6 trial sites installed – testing started at 3 sites.*

- *Value management workshop held on 13th November 2013. Option selected and plan being developed to integrate solution.*
- *Funding for rollout in CP5 is yet to be secured. Final Determination does not make provision for this. Business case for self-financing being written by sponsor on behalf of the BTP.*
- *Current authority likely to be reduced following de-scope and subsequent revision to project estimates.*
- *Asset management and maintenance strategy being developed with SISS category Manager.*
- *Red status due to cost and deliverability risks [Risk of delivery date being missed].*

11. On 19 March 2014 Network Rail stated why the timescale had to be extended to 1 August 2014:

Protracted Home Office Type Approval (HOTA) processes, design complexities and political change in Scotland impacting establishment of back office in Scotland.

Revised timescale: 1 August 2014

12. Network Rail has been allocated £109m³ for the closure of level crossings. As there is no specific budget for RLEE Network Rail is hopeful that this initiative will be self-funding, in that any fines from enforcement will be returned to the Routes to pay for the commissioning of the equipment.

13. Network Rail intends to leave it to each Route to decide where and when to fit RLEE.

ORR Decision

14. After reviewing all the information received from Network Rail, ORR concluded that, in accordance with the Railways (Accident Investigation and Reporting) Regulations 2005, Network Rail has taken the recommendation into consideration and is taking action to implement it.

Status: In-progress. ORR will update RAIB by 19 December 2014.

³ Control Period 5 (2014 -19)