URGENT SAFETY ADVICE

1. INCIDENT DESCRIPTION			
LEAD / INSPECTOR	Graham Clark	CONTACT TEL. NO.	**01332 253312**
INCIDENT REPORT NO	**0776**	DATE OF INCIDENT	23 March 2015
INCIDENT NAME	Derailment at Washwood Heath West		
TYPE OF INCIDENT	Freight train derailment		
INCIDENT DESCRIPTION	At 08:03 hrs on 23 March 2015, the failure of signalling equipment in the vicinity of Washwood Heath West Junction, Birmingham, following the passage of train 4O14, alerted the Network Rail signaller to a possible problem with that train. It was subsequently discovered that the train had derailed and then re-railed when crossing from the Up Derby Slow line to the Down Derby Fast line. The train was brought to a stand at Landor Street Junction at 08:10 hrs and the driver was asked to examine the train. He found evidence that the 10th wagon on the train had run derailed. Train 4O14 was the 05:58 hrs Basford Hall (Crewe) to Southampton container service. It consisted of a Class 66 locomotive pulling a mix of 24 container wagons and had been travelling at 15 mph while negotiating a series of crossovers. The wagon that derailed was an IKA 'Megafret' wagon (8049091473), consisting of two flat wagons permanently coupled together. Examination of the track confirmed that the train had run derailed for a distance of 121 metres, before re-railing at a set of trailing points. The derailment caused significant damage to track and signalling equipment. No-one was injured.		
SUPPORTING REFERENCES	 Figure 1: The wagon involved.		

Figure 2: Centre pivot liner worn below level of steel rim, leading to contact between steel surfaces

Figure 3: Sidebearer showing signs of frequent contact with end stops

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2. URGENT SAFETY ADVICE	
USA DATE:	9 September 2015
TITLE:	The control of risks associated with worn centre pivot liners on freight vehicle bogies.
SYSTEM / EQUIPMENT:	Centre pivot liners on Y-series freight bogies, and other types of bogie with the same centre pivot arrangement.
SAFETY ISSUE DESCRIPTION:	The safe operation of bogie freight vehicles is dependent on: • The bogies being able to rotate freely so as to be able to negotiate curved track, especially reverse curves through crossovers between tracks; and • The sidebearers having sufficient clearance to their end stops to enable the wagon to cope with twisted track without the load on a wheel reducing to such an extent that it derails by flange climbing.
CIRCUMSTANCES:	The wagon involved in the derailment was tested for wheel unloading, in accordance with Railway Group Standard GM/RT2141, and the amount of wheel unloading significantly exceeded the permitted 60%. This would have increased the likelihood of derailing on track which was twisted. The track at the site contained a twist with a magnitude that, according to Network Rail's standard NR/L2/TRK/001, fell within the band for which the remedial action was 'Correct within 36 hours'. When lifted from its bogies to examine the wagon further, it was found that the plastic centre pivot liners had worn to such an extent that the steel centre pivots on the wagon body were in direct contact with the steel bowl attached to the bogie (figure 2). This would have led to high friction between the surfaces, compared to the intended level of friction between the steel pivot and the plastic liner. The increased friction reduces the ability of the bogies to rotate. The worn centre pivot liner also led to a reduction in the clearance between the side bearers and their end stops (figure 3). This increased the amount of unloading of vertical load on the wheels as the wagon traversed cant transitions and twisted track. The combination of reduced load on the wheels on one side, combined with the increased resistance of the bogies to rotate, led to the wagon derailing by flange climbing as it negotiated a reverse curve with a track twist.
CONSEQUENCES	Risk of wagons derailing on track which is curved or which contains a twist with a magnitude that does not require immediate closure of the line.
SAFETY ADVICE:	The life of centre pivot liners will be dependent on the material that they are made from. Where the maintenance plan for a vehicle has been devised on the basis of using a particular type of centre pivot liner with a known rate of wear, Entities in Charge of Maintenance (ECMs) should ensure that the specified liner, or one with the same (or better) rate of wear, is always fitted (regardless of whether the maintenance is done by their own staff or by contractors). The liner should not be substituted for one with different wear characteristics unless the ECM has previously revised the maintenance plan to take account of the new liner. Where the wear characteristics of a new liner are unknown, steps should be taken to understand them before installation. When it is decided to install a new liner with characteristics different to those specified, the adequacy of the existing maintenance regime should be assessed. In particular, the intervals between liner inspection and replacement should be set such that the regular maintenance activities ensure that the liner is replaced before it has worn to such an extent that it adversely affects the ability of the bogie to rotate or reduces the sidebearer clearance beyond its limit.

USA SIGN-OFF*			
INSPECTOR NAME:	G Clark	**CI / DCI NAME:**	S French
INSPECTOR SIGNATURE:	ELECTRONIC COPY	**CI / DCI SIGNATURE:**	ELECTRONIC COPY
DATE:	9 September 2015	**DATE**	9 September 2015

*When sending this form by email insert ELECTRONIC COPY into the signatory boxes.