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Mr Andrew Hall
Deputy Chief Inspector of Rail Accidents
Cullen House
Berkshire Copse Rd
Aldershot
Hampshire GU11 2HP

Dear Andrew,

RAIB Report: Penetration and obstruction of a tunnel between Old Street and Essex Road stations, London

I write to provide an update¹ on the action taken in respect of recommendations 1, 2, 3 and 4 addressed to ORR in the above report, published on 13 February 2014.

The annex to this letter provides details of the action taken. The status of recommendations 1, 2 and 4 is '**Implemented**'. We do not propose to take any further action in respect of these recommendations unless we become aware that any of the information provided becomes inaccurate, in which case I will write to you again.

The status of recommendation 3 is '**Implementation ongoing**'. ORR will advise RAIB when further information is available regarding actions being taken to address these recommendations.

We will publish this response on the ORR website on 9 October 2015.

Yours sincerely,

Oliver Stewart

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

1. All 5 recommendations were addressed to ORR when the report was published on 13 February 2013.

Previously reported to RAIB

2. On 12 February 2015 ORR informed RAIB that after considering the report / recommendations we passed recommendations 1, 2 and 3 to the following, asking them to consider and where appropriate act upon them and advise ORR of its conclusions.

- Glasgow SPT Subway
- HS1 Ltd
- London Overground Rail Operation Ltd
- London Underground Ltd
- Network Rail
- Merseyrail
- DB Regio Tyne and Wear
- Docklands Light Railway

3. As RAIB also addressed recommendation 5 to another public body, the ORR has not taken any formal action as the Railways (Accident, Investigation and Reporting) Regulations 2005 place an equal obligation on these bodies or authorities to report directly to RAIB. We will therefore await a copy of any response that RAIB receives for information.

4. DB Regio Tyne and Wear and London Overground Operations Ltd had both confirmed that due to the nature of their operations the recommendations did not apply to them.

5. Merseyrail had confirmed that Network Rail had liaised with both Liverpool City Council and Wirral Borough Council, who have both agreed to work with Network Rail regarding this issue.

Recommendation 1

The intent of this recommendation is to include Railway Infrastructure Managers in property-related searches, and to provide information for developers to reduce the risk presented to existing railway infrastructure where widely available mapping does not show tunnel alignments, or shows them incorrectly.

Publication of accurate alignments is not required if implementers prefer alternative approaches (e.g. publishing maps showing bands of land encompassing tunnel alignments together with advice that the railway company should be contacted in respect of all proposed developments in these bands).

Railway Infrastructure Managers with tunnels and associated subterranean structures which are under urban areas and not shown on Ordnance Survey

mapping should implement a process to publish information concerning those areas of land that are in reasonable proximity to this infrastructure.

They should then take all reasonable steps to publicise this information, and to ensure that it is available to those providing the legal and ground engineering professions with significant numbers of searches relating to property in Great Britain.

6. We wrote to you on 12 February 2015 with an update on the progress with implementation of the recommendations. We reported recommendation 1 as implemented for all end implementers with the exception of Network Rail where the status was recorded as 'Implementation ongoing' on the grounds that whilst the data had been reconciled it had yet to be published.

7. On 29th April Network Rail provided a closure statement for Recommendation 1 which stated:

167 local authorities in total have Network Rail owned tunnels located within their administrative areas and 167 individual data sets have been produced.

Network Rail's Land Information Manager also confirmed on 19 March 2015 that all data sets had been successfully sent to Local Authorities and National Parks.

The tunnels information will be available to all users within each local authority – whether for property searches, planning applications or other purposes.

Network Rail's land ownership details and tunnels data has been has been uploaded onto the Government's e-PIMS database which is available for all users to access and is widely recognised for its coverage and quality of information.

ORR decision

8. ORR, in reviewing all the information received from Network Rail 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.

Recommendation 2

The intent of this recommendation is to inform Local Planning Authorities so that the planning approval process can reduce the risk to railway tunnels due to construction activities in close proximity.

Railway Infrastructure Managers with tunnels and associated subterranean structures which are under urban areas and not shown on Ordnance Survey mapping should provide Local Planning Authorities with the information needed for these authorities to identify when a planning application has the potential to affect this infrastructure.

9. We reported to you on 12 February 2015 that HS1, London Underground, Docklands Light Railway Ltd and Nexus had implemented this recommendation. The status for Glasgow SPT and Network Rail was 'Implementation on-going'.

Network Rail

10. We have subsequently received a closure statement from Network Rail which states:

The tunnels data referred to recommendation 1 will enable each local authority planning department to add this data to their individual hazard directories (or similar) against which proposed development is referenced. The data will enable planning officers to make applicants/developers aware of network Rail owned tunnels to their schemes.

11. Following a request from ORR, Network Rail provided an example of the dataset they provide (a GIS file) to local authorities. The example showed a tunnel located in North Lanarkshire. Each local authority was supplied with this level of information for all tunnels located within their administrative area.

ORR decision

12. ORR, in reviewing all the information received from Network Rail 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.

Glasgow SPT

13. Glasgow SPT wrote to ORR on 1 May 2015 outlining how they would be meeting the requirements of recommendations 1, 2 and 3.

14. SPT liaised with Glasgow City Council regarding recommendation 2 and agreed to review and revise the protocol and consultation zone. The updated consultation zone was expected to be live early in December 2014 and the protocol agreed early in 2015. SPT wrote to ORR on 24 August 2015 to provide the following information:

SPT have reviewed the accuracy of their consultation zone and have provided improved documentation to GCC (Glasgow City Council) which has been adopted. GCC also advise SPT of any planning application within this consultation zone, although SPT also complete their own weekly checks on planning applications.

Although this action addresses Recommendation 2, SPT continue to improve on the information available to the industry. Due to the depths of SPT Subway Tunnels, we are also reviewing the opportunity to included our tunnels within the street gazetteer of "Symology" which forms the Scottish Road Works Register. This identifies utilities within the road along with engineering difficulties and other special factors.

ORR decision

15. ORR, in reviewing all the information received from Glasgow SPT has concluded that, in accordance with the Railways (Accident Investigation and Reporting) Regulations 2005, Glasgow SPT has:

- taken the recommendation into consideration; and
- has taken action to implement it

Status: Implemented

Recommendation 3

The intent of this recommendation is to encourage Railway Infrastructure Managers to undertake pro-active measures to identify works which could affect the railway.

Railway Infrastructure Managers should review, and where appropriate, revise existing arrangements for identifying infrastructure development which could affect tunnels and associated subterranean structures in urban areas. Where not already done, this should include pro-actively searching for planning applications and undertaking visual inspections of the ground surface above tunnels.

16. We reported to you on 12 February 2015 that Network Rail, HS1, London Underground and Glasgow SPT had implemented this recommendation. The status of Docklands Light Railway Ltd was 'implementation on-going' and for Nexus, 'In progress'.

Nexus Ltd

17. On 25 February 2015 we have received a response from Nexus which provided the following update:

Nexus does not believe that there is any significant advantage to be gained by undertaking visual inspections of the ground above tunnels. Our reasons for this decision are as follows:

- The Nexus tunnels in the centres of both Newcastle and Gateshead are mostly deep bored tunnels. From our analysis approximately 50% are situated under existing buildings, 25% under adopted roads and 25% under adopted pavements or other pedestrian areas. In our circumstances one of the problems with a visual survey is that it is very difficult to determine what works may be carried out in the basements of buildings, perhaps to deepen them or underpin existing foundations. This poses a particular problem because such works are not necessarily subject to planning permission. We recognised this when contacting our local authority partners and stressed in those letters that information on the location of our tunnels should be passed to Building Control departments as we only receive details of planning applications. Visual inspection from the surface would not pick up such works.*
- A similar argument exists with regard to works behind facades and in private courtyards where it is not possible, from a visual inspection, to determine if any works are taking place. In such instances it is the planning application process that must be relied upon to alert us to any potential conflicts.*
- Protection from unscrupulous or negligent developers is primarily the responsibility of planning enforcement officers who have powers of prohibition etc. not available to our staff. In our judgement we consider the benefit of regular visual inspections to be small and that existing processes (including recent actions to publish the locations of the tunnels on our website) and contacts with our local authority partners are sufficient to adequately control the risk.*

As part of our considerations we have taken the view that it would be beneficial to reinforce the information already sent to the local authorities by sending a reminder letter on a 2 yearly basis. This would have the added advantage of controlling the risk of knowledge loss due to staff turnover within the local authorities of Tyne and Wear. We are able to log this activity into our asset management system so that it is not forgotten in the event of staff turnover in our own organisation.

ORR decision

18. ORR is content that Nexus has addressed the recommendation by reviewing its existing arrangements and concurs with its view that it is not reasonable practicable to take further action.

19. ORR in reviewing the responses provided by Nexus Ltd has concluded that, in accordance with the Railway (Accident Investigation and Reporting) Regulations 2005, it has:

- taken the recommendation into consideration; and
- has taken action to implement it.

Status: Implemented.

Network Rail

20. On 30 October 2014 Network Rail provided the update below:

The DCLG are currently receiving advice from Treasury Solicitors on the proposed drafting of changes on consultation. It appears that ministers are minded to accept the requirement to consult within 10m of the operational boundary and Network Rail continues to work with DCLG on implementation. We understand that this is likely to come into effect in April 2015.

21. Since then additional guidance has been made available by Department for Communities and Local Government (DCLG). Section 7.14 of the explanatory memorandum to the Town and Country Planning (development Management Procedure (England) Order 2015, which came into effect on 15 April 2015 states:

The Development Management Procedure Order 2015 introduces a new requirement to notify railway infrastructure managers of planning applications within the vicinity of railway land. This responds to a recommendation made by the Rail Accident Investigation Branch in 2014 that followed their investigation of an incident where a construction drill penetrated a Network Rail tunnel in Hackney. The report investigated the cause of the accident and set out a number of recommendations on different organisations to ensure that steps were taken to avoid similar incidents occurring. One of the recommendations of the report was that the Department for Communities and Local Government should “introduce a process to ensure that Railway Infrastructure Managers are made aware of all planning applications in the vicinity of railway infrastructure. This process should at least meet the intent of the statutory consultation process 4. The new proposal contained in the Development Management Procedure Order 2015 will have the effect of making railway infrastructure managers aware of proposed development near their railway. They will then be able to make representations if they have any concerns over the safe operation of their network without putting them under the duty to respond in every instance, as is the case with statutory consultation.

22. We wrote to Network Rail on 14 July 2015 stating that it was our opinion that the information it had provided in the closure statement regarding their collaboration

with DCLG and other Railway Infrastructure Managers addresses the first part of the recommendation: *“Railway Infrastructure Managers should review, and where appropriate, revise existing arrangements for identifying infrastructure development which could affect tunnels and associated subterranean structures in urban areas”*.

23. Network Rail replied with the following information:

Tunnels are subject to annual inspections, which include a walk over survey along the length of the tunnel at grade by appropriately qualified staff who provide the results of their assessment to the appropriate Route Asset Engineers. Changes in land use and new developments form a key part of the assessment and those that are of concern are investigated firstly with the Route Asset Protection team and others, including legal. This addresses the proactive investigation comment of ORR.

Development that is permitted by virtue of it being ‘permitted development’ is difficult to reverse as legal remedies may be limited.

Unauthorised development – i.e. that which does not have planning permission or deemed consent – has the greater potential to reverse as local planning authorities have dedicated resources, through planning enforcement officers, whose role is to investigate such breaches and to use the full range of statutory powers that they possess. Neighbours and communities are usually very proactive in such situations and report alleged breaches as soon as they happen. If a local authority finds that development is unauthorised enforcement action is taken.

ORR decision

24. ORR is content that the information provided by Network Rail regarding its collaboration with DCLG and other Railway Infrastructure Managers addresses the first part of the recommendation. As with Nexus, ORR, taking account of the information Network Rail has provided, does not consider it is reasonably practicable for Network Rail to take further action in respect of this recommendation.

25. ORR in reviewing the responses provided by Network Rail has concluded that, in accordance with the Railway (Accident Investigation and Reporting) Regulations 2005, Network Rail has:

- taken the recommendation into consideration; and
- has taken action to implement it.

Status: Implemented.

Docklands Light Railway (DLR)

26. DLR has provided ORR with a draft copy of BCP-06 Third Party Developments and provided the following additional information:

We have not yet formally issued the document, as we are still resolving one or two wording issues with our stakeholders. Nevertheless, it is substantively complete and we are, and have been, working to the principles of the document. This includes:

- *Allocation of the Third Party Interface Manager role;*
- *Issuing of Letters of Responsibility and Asset Protection Agreements to the third party;*
- *Assessing, reviewing and monitoring the activities of third parties across the DLR, including review of method statements and use of safety observers;*
- *Holding the fortnightly meeting of all stakeholders to review and co-ordinate the management of third party activities;*
- *Carrying out the infrastructure protection patrols.*

ORR decision

27. ORR, in reviewing all the information received from DLR has concluded that, in accordance with the Railways (Accident Investigation and Reporting) Regulations 2005, DLR has:

- taken the recommendation into consideration; and
- is taking action to implement it.

Status: Implementation ongoing. ORR will advise RAIB when the DLR document BCP-06 has been finalised, which is expected to be by 30 October 2015

Recommendation 4

The intent of this recommendation is for the British Standards Institution to amend British Standard 5930:1999+A2:2010 to clarify that some railway tunnels are not shown on Ordnance Survey mapping.

The British Standards Institution should amend British Standard 5930:1999+A2:2010 'Code of practice for site investigations' to make clear

- a that tunnels used by underground railways and associated subterranean structures may not be shown on Ordnance Survey mapping; and

- b. that rail infrastructure owners should be contacted during desk studies and utility searches where appropriate

28. BSI wrote to us on 25 November 2014 with details of the process they were going through to amend the relevant standard in line with recommendation 4. The revised standard (BS 5930:2015) was published on 31 July 2015.

ORR decision

29. ORR, in reviewing all the information received from BSI has concluded that, in accordance with the Railways (Accident Investigation and Reporting) Regulations 2005, BSI has:

- taken the recommendation into consideration; and
- is taking action to implement it.

Status: Implemented