National Investigation Body (NIB) Network

NIB Peer Review Report for Norway

Review date: 2019

Version	Date	Changes
0.1	04/10/19	To Panel and subsequently to NIB
0.2	6/11/19	NIB's comments incorporated and circulated to Panel
1.0	21/1119	For issue (NIB name included)

PART 1 – INTRODUCTION

This report describes a Peer Review of a National Investigation Body (NIB) undertaken to meet the requirements of Article 22.7 of the European Directive on Rail Safety dated 11 May 2016 (EU 2016/798). The Article states:

> *The investigating bodies, with the support of the Agency in accordance with Article 38(2) of Regulation (EU) 2016/796, shall establish a programme of peer reviews where all investigating bodies are encouraged to participate so as to monitor their effectiveness and independence.*
>
> *The investigating bodies, with the support of the secretariat referred to in Article 38(2) of Regulation (EU) 2016/796, shall publish:*
>
> *(a) the common peer-review programme and the review criteria; and*
>
> *(b) an annual report on the programme, highlighting identified strengths and suggestions for improvements.*
>
> *The peer review reports shall be provided to all investigating bodies and to the Agency. Those reports shall be published on a voluntary basis.*

The Peer Review seeks to monitor the effectiveness and independence of a NIB by considering its organization, processes and outputs (eg accident reports, safety recommendations, annual reports). The Peer Review process also seeks to assist development of all NIBs by sharing with them strengths and suggestions for improvements identified during reviews.

The Peer Review is based on the NIB responses to a questionnaire and on a site visit in which peer reviewers visit the NIB. Details of the questionnaire and the review criteria are given in the NIB Peer Review Handbook for the year in which the review was carried out. This can be found at [link to NIB Network website].

The Peer Review relies on answers given by the NIB in the questionnaire and during the site visit. The Peer Review process is not intended to fully investigate all issues covered by the questionnnaire and does not address all issues in the documents used as review criteria. It is targeted at issues where the reviewers believe there will be greatest greatest value to the NIB being reviewed and to other NIBs.

This peer review report has been prepared by the NIB peer review team in the frame of the common peer-review programme established by the investigating bodies in accordance with Article 22(7) of the Directive (EU) 2016/798 on railway safety.

The NIB peer review team examined data during the peer review of the NIB using the process described in the Peer Review Handbook. The collection of data was based on the review of some documents, internal procedures or case studies provided on a voluntary basis, as well as on interviews with management and other staff members of the NIB.

The report reflects the collective judgement of the peer-review team regarding the findings resulting from the peer-review process. However, the individual members of the peer-review team and their NIBs are not liable for the contents of the report and/or for any omissions.

The peer review report will be provided to all investigating bodies and to the European Union Agency for Railways. It is owned by the reviewed NIB and shall not be published or supplied to other parties without the prior written consent of this NIB.

PART 2 – BACKGROUND AND STATISTICS

The information in the following tables is taken from the completed questionnaire except route length and rail traffic data to be taken from the ERA website.

Table A – NIB & Review Information	
National Investigation Body (NIB)	*see front cover*
NIB type (eg multi-modal)	MULTI MODAL (AVIATION, RAIL, ROAD AND MARINE)
Date questionnaire completed by NIB	*25/7/2019*
Date of site visit	*25/9/2019*
Date report finalised by Peer Review Panel	*21/11/2019*
Peer Review Panel members (name/state)	1. *Chris Ford* 2. *David Murton* 3. *Johan Gustafsson*
Observers (name/state)	1. *Anita Koprivnjak* 2. *Tomislav Antun Biber* 3. *Maurizio Greco*
Route length of track in NIB's country (kilometres)	With regular train traffic: 3848 km No regular train traffic: 352 km Total route of track: 4200 km (single and double track) Double track: 290 km
Freight rail traffic in NIB's country (train-kilometres per year)	7473204 km (year 2018) (Working machines 3587493 km year 2018)

Passenger rail traffic in NIB's country (passenger train-kilometres per year)	39809097 km (year 2018)

Table B – Staffing		
B1	Number of permanently employed rail investigators (including part time workers).	5 + Manager
B2	Full time equivalent number of permanently employed rail investigators.	None
B3	Full time equivalent number of administrative staff permanently employed on rail investigators.	The admin staff serves every transport mode in AIBN. Total number of admin staff: 8 + Manager
B4	Number permanently employed rail investigators who can act as Investigator in Charge.	5
B5	Are there <u>general</u> rail investigators not permanently employed by the NIB who can be employed on an ad hoc basis. Briefly explain the contractual arrangements. *Do not include people employed on an ad hoc basis when specialist advice is needed for a particular investigation. These people are covered by later questions.*	None

B6	If the NIB is multi-modal or has formalised arrangements with a independent national investigation body for other transport modes, how many investigators from other modes can assist rail investigators? If some are part time, give full time equivalent.	25 (None part time)

Table C – NIB Activity Averaged Over Last 3 Years (include any joint investigations)										
		Heavy rail			**Metro railways**		**Trams**		**Other (trolley bus, cable car, etc.)**	
		Article 20(1)) accidents	National law requirement outside Article 20(1)	Discretion to investigate other events	National law requirement	Discretion to investigate other events	National law requirement	Discretion to investigate other events	National law requirement	Discretion to investigate other events
C1	In NIB scope? (delete as appropriate)	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*No*	*No*
C2	Number of notifications per year averaged over last 3 years	36 *See Peer Review Panel note following this table*	228	0	>3	>5	<3	>7		
C3	Average number of accidents investigated per year*	1	6	0	>1	O	0	0		
C4	Average number of incidents investigated per year*	Not applicable to Article 20(1) investigations	*No entries were made in response to this question - see Peer Review Panel note following this table*							
C5	Average number of full investigation reports published per year	1	6	0	>1	0	0			
C6	Average number of briefing notes (or similar short documents) published per year	0	0	0	0	0	0			

C7	Average number of recommendations produced per year	>8 (incl. 20(1) and other			>3	0	0			

* include accidents and incidents for which the NIB carries out significant investigation work (eg attends site and/or obtains significant amounts of evidence) but no full report, briefing note, etc. is published

Peer Review Panel Note:

During the on-site visit, the NIB stated that:

- the 36 notifications reported in response to question C2 included notifications for accidents and serious incidents which were below the severity threshold given in Article 20(1);
- the NIB investigates all accidents when this is required by the Directive;
- the NIB normally investigates fatal accidents but may not do so if a reckless act with no likely safety learning; it does not investigate fatalities due to deliberate acts;
- the NIB also investigates some less serious accidents and some serious incidents;
- the NIB is not notified of less serious incidents (this is consistent with national law, the 2004 Directive and the 2016 Directive); and
- the NIB gave no response to question C4 because it understood this question related only to less serious incidents for which it had no information.

Table D – Outcome of recommendation made during the last 5 Years

Please include an estimate for the likely outcome for recommendations which have not yet been closed.
Please take account of information obtained informally and information provided formally by the NSA etc.
*** 'reasonable time period', 'excessive delay' and 'not implemented effectively' refer to the NIB's opinion.**

		Heavy Rail		Metro railways	Trams	Other (trolley bus, cable car, etc.
		Article 20(1)) accidents	Other investigations			
D1	Proportion of recommendations implemented effectively within a reasonable* time period	100%	100%	100%	100%	Not relevant
D2	Proportion of recommendations implemented effectively but after an excessive delay*	0	0	0	0	
D3	Proportion of recommendations reported as implemented but not implemented effectively*	0	0	0	0	
D4	Proportion of recommendations reported as not implemented	0	0	0	0	
	Total	***100%***				

Table E - Number of joint investigations with other NIBs - Averaged over 3 Years		
E1	Deployed (Some or all work undertaken out of the office)	None (partly one with NIB UK)
E2	Not deployed (All work undertaken from the office)	All

Table F - Number of Open Investigations and average times to complete investigations			
		At the time of completing this questionnaire	***At the time of the Peer Review visit****(to be completed during the visit)*
F1	Investigations required by Article 20(1)	See separate document	
F2	National law requirement outside Article 20(1)	See separate document	
F3	Non-mandatory accidents and incidents	None	
F4	Other investigations (eg class investigation)	None	
F5	Average time to complete mandatory investigations (average of investigations completed in previous three years)	12 months or less than 12 months	12 months or less than 12 months
F6	Average time to complete non-mandatory investigations (average of investigations completed in previous three years)	12 months or less than 12 months	12 months or less than 12 months

PART 2 – COMMENTS FROM PEER REVIEW PANEL

The comments of the Peer Review Panel should address the NIB Peer Review objectives which are to:

- Help NIBs improve practices where this is identified as necessary to meet the requirements of Directive (EU) No 2016/798.
- Assist individual NIBs establish and maintain a sufficiently resourced capability for the investigation of serious accidents and, where appropriate, other, accidents and incidents affecting railway safety.
- Assist NIBs to act effectively and independently.
- Encourage an active exchange of views and experience for the purposes of the development of common investigation methods, drawing up common principles for follow up of safety recommendations and adaption to the development of technical and scientific progress.
- Encourage effective arrangements for cooperation between NIBs when necessary.
- Spread good practice amongst NIBs by sharing information about strengths identified during reviews.

Legal framework (100 series questions in questionnaire)

- 2016 Directive not yet implemented, expected to be implemented in 2020.
- Current legislation is consistent with current 2004 Directive requirements.
- National legislation requires NIB to be notified of all events required by 2004 Directive and some other events.
- National legislation provides for NIB to act independently and gives the NIB the powers needed to access sites and collection information needed for accident investigation.
- National legislation requires railway organisations to interact appropriately with the NIB in connection with an accident investigation.
- National legislation provides protection for witnesses so their statements cannot be used against them and allows exchange of factual information between the judicial authorities, police, RUs, IMs and the NIB.
- NIB has one MOU at present providing support at major sites (see below). Experience shows no MOU is required for effective working with the police. Likely MOU or similar will be needed with NSA in connection with recommendations (see below).

Type of investigations undertaken & NIB organisation (200 series questions)

- NIB investigates all accidents which it is required to investigate according to the 2004 Directive.
- National legislation requires NIB to investigate some accidents and serious incidents in addition to accidents required by the 2004 Directive. This includes some tram and metro events.
- The NIB has discretion whether to investigate less serious events.
- The NIB actively participates in the NIB Plenary, work related to these plenaries, the Nordic group of NIBs, conferences, etc. **(strength 10)**
- The NIB provides new main line train drivers with an introduction to its activities as part of its aim to be an open organisation and as a means of making staff aware of the NIB's role before they encounter the NIB in an accident situation. **(strength 11)**.
- The NIB is part of a multi-modal organisation with a dedicated head of rail investigations reporting to the multi-modal DG.

- The NIB has a quality management system which the NIB describes as compatible with ISO9000:2015 as an aid to effective accident investigation. NIB management review processes annually. Assists compliance with GDPR (data protection requirements). **(strength 9)**.
- The quality management system includes routine progress monitoring of all investigations and a debrief at the end of typically two investigations each year
- The NIB invited ERA to undertaken an assessment in 2014.

Resources (300 series questions)

- Processes provide the NIB with sufficient resources for typical years and additional funding when the number/complexity of investigations makes this necessary.
- Resources shared with other modes includes human factors, legal advice and HR **(strength 5)**.
- One investigator on call 24/7. A second person is always available so immediate response to a site is by two people **(strength 1)**.
- NIB does not have an arrangements for field representatives (eg rail industry staff) to preserve/collect evidence during the sometimes longperiod required for NIB staff to travel to site. Railway staff at the accident site provide the NIB with information, and police sometimes take photos, before NIB staff arrive on site. However, it is possible that vulnerable evidence is lost before NIB staff arrive at site **(suggestion for improvement 1).** The NIB stated that it used to have a field representative based in an area which was a long distance from the NIB's office. Over a period of about 3 – 4 years, the NIB called him out only once. To keep a field representative current requires refresher training, and of course on-the-job training, which the NIB was not able to fulfil. The NIB therefore decided not to renew his contract, and instead rely on NIB investigators. So far the NIB considers it has been able to reach accident sites within a reasonable time, and does not think that information, evidence etc. has been lost. To reach the accident site as soon as possible, the NIB sometimes goes by plane or by helicopter.
- Support from other modes available for major incidents **(strength 5)**.
- All current NIB investigators are competent to act as investigator in charge.
- NIB has process to authorise rapid deployment of specialist outside resource if needed.
- NIB is party to Nordic group MOU providing mutual support for major accidents **(strength 10).**
- NIB has remote (internet) access to some rail industry signalling data **(strength 3).**
- NIB resources are sufficient for on-site and subsequent investigation phases, including use of specialist companies (eg obtaing data from corrupted databases, **strength 6)**.
- NIB has a secure working location at its base including workshop and storage facilities.
- The NIBs budget is sufficient for typical years and experience has shown additional funding is made available when needed due to the number and/or complexity of accidents requiring investigation.

Training arrangements (400 series questions)

- The NIB provides new investigators with training in investigation methods, use of investigation equipment, and media handling.
- Investigators are expected to work as a team allowing mentoring of new staff and on the job training when required.
- Attendance at conferences etc. is agreed between staff and their managers.

- The need for refresher and other further training is discussed, and appropriate action taken, based on regular discussion between staff and their managers.
- The NIB reports that its budget is sufficient to meet training needs.

Notification & decision process (500 series questions)

- Accidents and incidents are reported promptly to the NIB by the rail industry when necessary; the NIB then informs the NSA.
- Accidents and incidents are classified in accordance with European Agency for Railways system and reported, where necessary, to the Agency.
- The decision on whether to investigate includes consideration of event severity, similarity with other events, overlap with existing NIB recommendations, accident/incident trends, etc.
- Decisions on whether to investigate and the scope of investigations are made by the NIB with no involvement of other organisations.

Evidence collection and analysis (600 series questions)

- NIB reports they have good access to accident sites and receive good cooperation from railway organisations at site **(strength 2**.
- NIB provides its investigators with check lists to use on site; these can be accessed on investigators' phones **(strength 4)**.
- NIB reports no issues with obtaining access to witnesses or with conducting reconstructions of accidents when these are required.
- The NIB reports effective cooperation with police and judicial authorities; it shares only factual information with them.
- The NIB does not pro-actively seek contact with victims or their families unless this is required to assist determining the cause of the accident. The NIB relies on the police to liaise with these people when appropriate. If approached by victims or families, the NIB does provide them with information **(suggestion for improvement 2)**.
- NIB investigators seek advice from the NIB's human resources staff and human factors specialists when dealing with victims and their families
- The NIB has developed, and publishes on its web site, a structured method for analysing accidents **(strength 8)**.
- The NIB cooperates with other NIBs when necessary.
- Investigation progress is reviewed at monthly meetings.

Report preparation and publication (700 series questions)

- The NIB does not consult with victims or their families, unless they were contacted earlier by the NIB to get information. The families are advised when a report is to be published either by the NIB, by the Police or by other means. If approached by victims or families, the NIB does consult with them. In some instances, families do not want to be contacted by the NIB so the NIB has liaised through the Police. **(suggestion for improvement 2).**
- As part of its aim to be an 'open' organisation, the NIB's web site lists on-going investigations and some news stories relating to the NIB's contribution to railway safety **(strength 13).**
- The content of the report is decided by the NIB with the final report being signed off also by the multi-modal DG.
- The NIB uses a standard template for its reports.
- Accident reports are published on the NIB's web site, always within one year of the event.

- Accident report summaries and recommendations are always translated into English and the whole report is translated if the NIB considers there is international interest in the investigation **(strength 7)**.
- Annual reports are submitted to the Agency.

Handling safety recommendations (800 series questions)

- Drafting of recommendations is part of the NIB's structured method for analysing accidents.
- Draft recommendations are shared with interested parties during the consultation process.
- The NSA provides feedback to the NIB every six months.
- All recommendations are reported as closed within about one year.
- Recommendations are currently being closed by the NSA with an explanation which shows an intent to complete the recommendation but also shows that the recommendation is not yet fully implemented **(suggestion for improvement 3)**.
- Some recommendations include a requirement for improvements to be implemented when the NIB states it is content that the NSA has closed the recommendation based on a plan for implementing the improvement **(suggestion for improvement 4)**.
- The NIB has asked the Ministry to amend legal regulations so that the NIB monitors closing of recommendations.

Health & safety of investigators (900 series questions)

- NIB provides its investigators with initial and refresher H&S training relevant to railway accident sites and the PPE provided by the NIB.
- There is no formal process for establishing initial or refresher H&S training needs, but these are among training needs discussed regularly between staff and managers.
- NIB provides investigators with jacket/hard hat/boots and specialist equipment including over-pressure hoods and specialist masks for fire scenes (hoods are considered appropriate partly because a significant part of the national rail network is in tunnels) **(strength 12)**.
- Additional PPE can be purchased if required urgently
- There is a risk assessment process to be applied at sites; this includes an option to complete risk assessments electronically (part of QMS).
- Specialist advice is obtained from the fire service when appropriate.
- NIB staff on site given H&S brief by investigator in charge

Effectiveness of NIB

- The NIB generally performs effectively.
- The NIB is performing the work that it is required by the National Legislation. This legislation requires more investigations than required by the Directive.
- The reports examined by the Panel are technically well supported.
- Information reported to the NIB by the NSA does not always show whether recommendations are being fully implemented.

Independence of NIB

- Based on information provided by the NIB, the Panel considers that the NIB works with a high level of independence.

Actions taken by the NIB relevant to the Peer Review findings (if any).

- NIB and NSA are working on the MOU for closing of safety recommendations.

Identification of strengths (if any)

1. Robust 24/7 process for receiving notifications of accidents and rapid deployment of inspectors.
2. Effective cooperation with other parties at accident sites; these organisations do not prevent or delay the NIB accessing the accident sites, rolling stock, etc.
3. NIB staff have rapid (internet) access to some industry signalling data.
4. Providing a check list which reminds inspector of the activities they should consider undertaking on site.
5. Specialist advice and additional investigator resource available from investigators in other transport modes.
6. Successful use of a specialist company to recover data from a corrupted computer database.
7. Translation of report summaries, recommendations and, in some instances, the whole of the report into English allows other NIBs to obtain key safety learning.
8. Development and use of an accident investigation method which is also available for use by other organisations.
9. Investigation quality management system compatible with ISO9000:2015.
10. Active participation in the NIB network, conferences, etc.
11. Explaining the NIB's role to rail industry staff (in this instance as part of a trainee driver course) so staff are aware of the NIB's role before encountering it in an accident investigation.
12. Providing NIB investigators with PPE appropriate to its particular rail network, in this instance over-pressure hoods to assist investigation in the many tunnels found on its network if fire debris or other issues make this necessary.
13. Providing information about on-going investigations on the NIB's web site.

Identification of areas where improvements are suggested (if any)

1. The NIB could consider training rail industry staff to act as field agents to protect or collect evidence which could be lost between an accident and the arrival of NIB staff. This would be particularly valuable because the country's geography means it sometimes takes NIB staff a significant time period to reach an accident site.
2. The NIB could consider pro-actively offering information about investigations to bereaved families and victims rather than providing this only to those who approach the NIB and those contacted to provide evidence. Of course, information should not be provided to those who do not want this.
3. The NIB could consider phrasing recommendations to clearly state the criteria to be met before a recommendation should be closed. For example, stating whether action is required or whether a plan to take action is sufficient.
4. The NIB needs, and is seeking, more information about actions taken to implement the NIB's recommendations. This type of feedback is needed by all NIBs to understand what, if anything, a NIB can do to improve the effectiveness of its recommendations.

Additional comments by the Panel (if any).

- The NIB reports include information about safety issues which did not contribute to the accident. No recommendations result from these observations but the NIB expects that NSA to take appropriate action. The NSA always send a letter to the RU or IM asking for actions taken, or to be taken, about safety issues which did not contribute to the accident.
- In investigation reports with no safety recommendation, the NSA send letters to RU/IM/railway industry asking for response to the report. This may include questions about what follow up measures will be taken. The reports may also be followed up by the NSA during meetings with the actors, audits etc. At present, the NIB has to ask for the written communication between the NSA and actors; in future, this will be included in the MOU handling safety recommendations. The audit reports are found on the NSA web site.

PART 3 – COMMENTS FROM NIB

Comments by the NIB (if any).
• The NIB Network Peer Review program is a very good process to “take a look” at ourselves from another angle. It was a great opportunity to “see” our strengths, weaknesses, opportunities and threats. The NIB is very thankful to the Peer Review Panel for sharing their experience and best practice. We are thankful for your understanding and support.