

A Highways Accident Investigation Branch — What Lessons Can Be Learnt from the Rail Industry and the Cullen Inquiry?

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Introduction

The purpose of this paper is to follow up on the paper '*Towards an Accident Investigation Branch for Roads*?' published by RAC Foundation in December 2017 (which we shall abbreviate as TAIBR).

The approach to accident investigation on our roads has, to date, been focused on the driver and the vehicle, and therefore differs from the more system-focused approach used in aviation, rail and marine investigations. We agree with TAIBR that there is a growing consensus that as roads move, through technological advances, to more system integration (vehicle-to-vehicle and vehicle-to-infrastructure) there will be an increasing case for some form of accident investigation branch (AIB). With increased technology and a shift to a more interactive environment, the roles of both the driver and the system will be vital to ensuring improvements in safety.

There are clear benefits to be offered from some form of an AIB, including a reduction in the 'stubbornly stable number of deaths' (TAIBR, page 2) occurring each year on the roads.

Major 'movement accidents' in the rail industry are lower in frequency than those on the roads but historically they have had significant impact. For example, the Ladbroke Grove rail crash on 5 October 1999 killed 31 people, injured more than 400 and led to a structural review and update of rail safety. Although accidents on the road happen at a higher frequency, the societal acceptance of them means that individual accidents have not previously generated the same impetus for change. However, societal reaction varies according to perception at least as much as to statistics. Therefore the motivation for change may be impacted if '*the system*' as opposed to individual drivers, is seen to be in control.

The structural form of an AIB is still to be debated. Any solution in the short term needs to be both pragmatic and workable. Factors such as minimising cost and ease of set-up are likely to be attractive attributes when it comes to formulating policy in a post-Brexit world in which time and resources are both stretched.

Are there lessons that can be learnt from the rail industry? This paper will look at the lessons learnt by the industry following the Ladbroke Grove Rail Inquiry Part 2, overseen by Lord Cullen and known as the 'Cullen Inquiry', and the subsequent follow-up.



Background

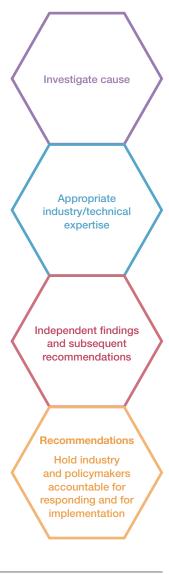
What is an accident investigation branch?

The purpose of an AIB is to investigate an accident in order to determine its circumstances and causes, and to improve future safety, so helping to avoid future accidents. An AIB is not a prosecuting body and does not apportion blame or liability.

AIBs also have a responsibility to assess constructively what each sector player is doing and how the parties are working together, with the aim of identifying what might be done better. This distance from any one party involved allows for an independence that encourages individuals to speak freely.

In order for an AIB to meet its purpose, it must be independent and must ensure that it is a 'safe space' where parties feel that they can be honest without fear of reprisal. In order to create this atmosphere and ensure that investigations are undertaken comprehensively, it is essential that those employed by the AIB have the expertise to deal with the issues that arise at a system level.

There is, rightly, a growing consensus that an AIB could assist in improving future safety and help avoid future accidents on the roads. However, there is also, equally validly, some concern about the scope of any AIB – which needs to distinguish between the risks generated by the industry and the complex mix of user-related factors involved in many accidents. It is essential that any AIB will have the ability to assess risks carefully. If this can be achieved, it will prevent confusion – legally, financially and in terms of reputation – between the different contributing causes of road accidents.



The Cullen Inquiry

The Ladbroke Grove rail crash on 5 October 1999 killed 31 people and injured more than 400. It formed part of a cluster of major accidents, which included Southall (1997) and Hatfield (2000). The resulting public inquiry therefore looked at structural issues, including accident investigation.

Lord Cullen conducted his inquiry in two parts. Part 1 dealt with the facts of the accident. Part 2 looked at the structural issues, to draw lessons learnt from the accident and to consider general experience derived from relevant accidents on the railways. The aim was to draw conclusions about:

- (a) factors that affect safety management; and
- (b) the appropriateness of the regulatory regime.

All major industry groupings were involved and the report was published in 2001.

The recommendations of the Cullen Inquiry

The Part 2 Cullen recommendations, and the subsequent Railway Safety Directive (which mirrored many of the same requirements), significantly changed the approach to rail safety, both in the UK and the EU. Subsequent accident statistics have shown significant improvement. There were two key recommendations relating to an AIB:

- separation from each sector player (as part of this, an AIB for rail was set up that was clearly separate from the other players in the sector); and
- protection of evidence collected by the AIB (to ensure that this cannot be used in any criminal or civil proceedings, post-accident).

We now look at the rail AIB approach and the benefits it offers, and discuss the two key recommendations in more detail.

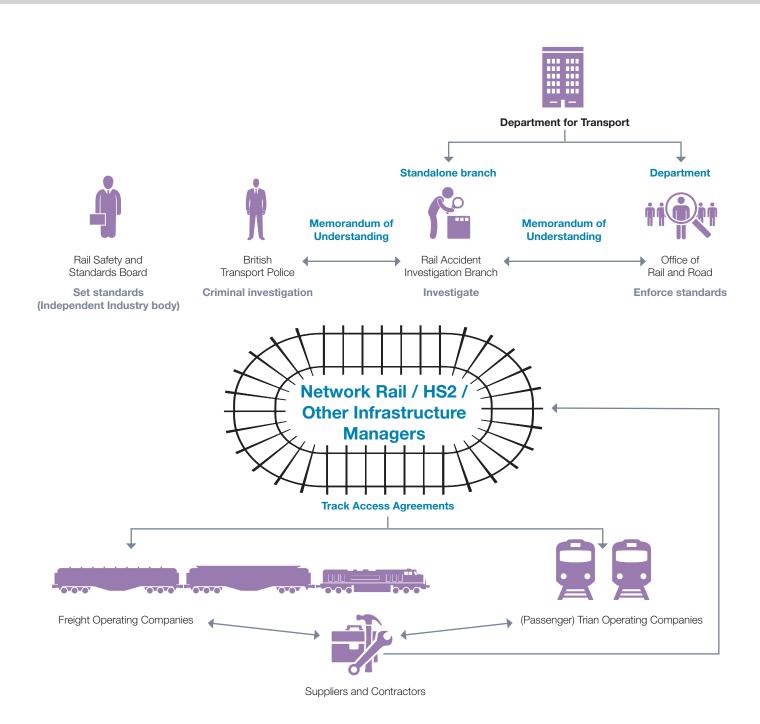
Rail Accident Investigation Branch: who are they?

The Rail Accident Investigation Branch (RAIB) was established in 2005.

RAIB is a standalone branch of the Department for Transport (DfT). It was established to fulfil the UK's duty under EU safety directives to create permanent bodies to undertake independent investigation of rail accidents (Railways and Transport Safety Act 2003). The powers and duties of these bodies are set out in the Rail (Accident Investigation and Reporting) Regulations 2005 (SI1992). Although RAIB is technically part of the DfT, its independence is a result of the governance arrangements and mandates in place.

Recital 23 of the 2004 EU Rail Safety Directive (2004/49/EU) (the Railway Safety Directive) states (emphasis added in bold)

"Serious accidents on the railways are rare. However, they can have disastrous consequences and raise concern among the public about the safety performance of the railway system. **All such accidents should, therefore, be investigated from a safety perspective to avoid recurrence** and the results of the investigations should be made public..."



What is RAIB's scope?

It is impractical for any AIB to investigate every single accident. All AIBs, including RAIB, have to be selective about what they investigate; these decisions are subject to system need, resource levels and the targeting of safety themes. For example, RAIB chooses to investigate some derailments and not others. This point is made in TAIBR, which recognises that, with road deaths running at more than 1,700 a year, to investigate every one of them would be an unmanageable task for any highways accident investigation branch (HAIB). However, a similar approach to that used by RAIB in rail could be carried across to any HAIB, which may, for example, choose to investigate only multi-fatality events, major environmental spillages and catastrophic disruption events, as well as precursor/near-miss events of significance.

In addition, it will be essential to ensure that it has the expertise to investigate the complex mix of factors behind each accident.

Who does RAIB work with?

RAIB works with the Office of Rail and Road (ORR) and the British Transport Police, and has Memorandums of Understanding (MoUs) in place to ensure that each party is clear about both its purpose and its jurisdiction, so as to prevent unnecessary overlap between them. These MoUs also set out how parties communicate with each other.

It is the connections between the parties, with the key responsibilities given to each, that enables the system to ensure that safety is put at the forefront of the risk management of the railways.

It is also an essential part of any AIB's purpose to ensure that it is trusted, by those involved, with the information that it needs for determining the circumstances and causes of an incident, so that it can improve safety and help avoid future accidents. In order to achieve this, it must be a safe, independent body where witnesses can speak freely and frankly without fear that they might be incriminating themselves. The AIB process and purpose is a 'no fault' approach aimed wholly at improving safety.

Evidence gathered in the course of safety investigations will therefore – save in *exceptional* circumstances – not be made available to the police. Disclosure of information to the police could deter people from assisting an AIB and thus hamper its ability to prevent future incidents.

A similar approach will be needed with the police and other bodies currently collecting data on the highways.¹

Key recommendation: separation of roles

Prior to the Ladbroke Grove incident, the accident investigatory function was undertaken by Her Majesty's Railway Inspectorate (HMRI), which also had responsibility for overseeing industry standards. During the Cullen Inquiry, legal counsel for HMRI argued that there had been no evidence of a conflict of interest between the HMRI's regulatory and investigatory roles. They focused on the crossover between the two areas and the opportunities for cross-fertilisation between them.

However, there was intensive discussion centred on the other major industry bodies' criticisms of the current system, which touched on the number of investigations, the effectiveness of communication used and the clear need for the separation of the following: standards, investigations and the management of infrastructure responsibilities.

The crux of the issue was whether it was possible for one body to manage more than one area when each had diverging priorities and interests. The issue of whether one body can manage this in practice was highlighted, with arguments about budgeting issues that arise when such major operations are overseen by a single body – internal conflicts regarding priorities and costs can be difficult for the relevant body to manage.

¹ The Transport Safety Commission Paper* UK Transport Safety: Who is responsible? sets out that any AIB would bring together data from the various responsible and involved organisations, including:

 ⁽a) Department for Transport; Ministry of Housing, Communities and Local Government; Department of Health; and Department for Education and Department for International Development, together with the Home Office and Ministry of Justice;

⁽b) Transport Scotland and the Northern Ireland Department of the Environment, and the Welsh Government;

⁽c) The Health and Safety Executive, Highways England, the police, coroners, child death overview panels, Public Health England, Fire & Rescue services, the Driver and Vehicle Standards Agency, the insurance industry;

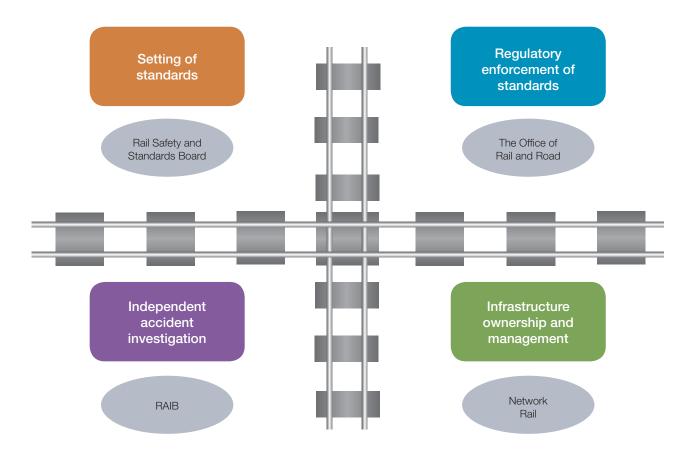
⁽d) Local authorities, and bodies in England such as the combined authorities and Local Enterprise Partnerships, which are gaining influence over road safety; and

⁽e) The European Commission and related sources of information from other European countries.

^{*} www.pacts.org.uk/wp-content/uploads/sites/2/TSCResponsibility_LowRes%20COMPLETE%20FINAL.pdf

It was accepted by Lord Cullen that it was inappropriate for one body – such as in this case the safety regulator – to carry out the function of investigation, where it might be necessary for the investigation to examine the decisions and activities of the regulatory body itself. Lord Cullen agreed that the AIB must provide a positive check on all parties involved, including the safety regulator and the infrastructure manager.

It has been a principle of governance, ever since the changes that resulted from the inquiry, that it is essential to keep the responsibilities for standards, management of infrastructure, regulatory enforcement and an independent accident investigation (by an AIB) in separate bodies.



In the rail industry this is carried out as set out in the diagram. The three key benefits of the procedure are:

- (a) a greater ability to focus on root causes of an incident and to identify lessons without the need to apportion blame;
- (b) the development of enhanced investigatory skills and efficiency in the process; and
- (c) improvements in the efficiency with which lessons are disseminated.

Under Article 16(1) of the Railways Safety Directive, each Member State of the EU is required to (emphasis added in bold):

"Establish a safety authority. This authority may be the Ministry responsible for transport matters and shall be **independent in its organisation**, legal structure and decision making from any railway undertaking, infrastructure manager, applicant and procurement entity." This is supported by Recital 24 of the Railway Safety Directive (emphasis added in bold):

"...a safety investigation should be kept separate from the judicial inquiry into the same incident and be granted access to evidence and witnesses. It should be carried out by a permanent body that is independent of the actors of the rail sector. The body should function in a way which avoids any conflict of interest and any possible involvement in the causes of the occurrences that are investigated; in particular, its functional independence should not be affected if it is closely linked to the national safety authority or regulator of railways for organisational and legal structure purposes..."

The principle of separation enables the AIB to be independent and meet its objectives. Independence has been held by the courts to mean a status that ensures the body concerned can act completely freely, without taking any instructions or being put under any pressure. This demonstrates the importance of the separation of responsibilities, as unless it can be ensured that the AIB is insulated from other parties whose actions are motivated by their own interests, the AIB cannot be truly said to be protected against undue interferences that could prevent it from carrying out its tasks and fulfilling its mission.

There have been a series of infraction cases brought by the European Commission (EC) against various Member States for failure to implement this separation. In 2016, Advocate General Michal Bobek declared, in a case brought by the EC against Poland (Case C-530/16²), that Poland had failed to guarantee the independence of the investigating body from the minister responsible for transport, who controlled the infrastructure manager and the railway undertaking.

Merging economic and safety regulation

Lord Cullen did not accept industry submissions seeking the merging of the economic and safety regulation into one body. This was, however, implemented by Government in 2005, with rail safety regulation transferred from the Health and Safety Executive to the Rail Regulator (as he then was) and now the ORR.³ ORR is responsible for enforcement of rail safety. It also regulates the monopoly and dominant positions of the companies in the industry. Broadly, it does this by issuing and enforcing licenses and by setting charges for access to the railway.

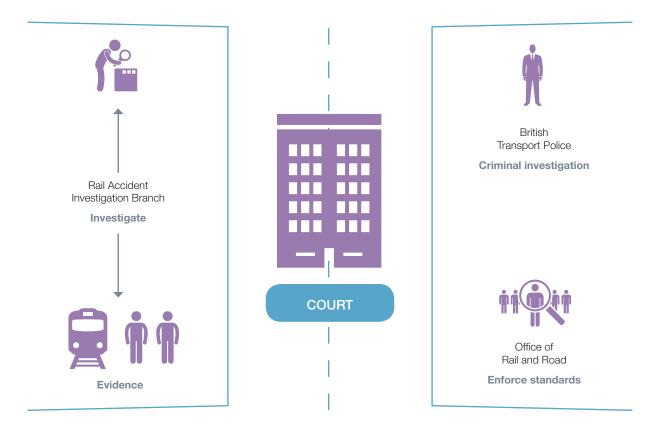
Key recommendation: separation of evidence

RAIB is able to obtain the evidence and then establish the primary and root cause following an incident. This can be done swiftly, as individuals are not incriminating themselves when they speak to investigating officers. Their statements may be compelled by the police (the British Transport Police in rail) but they cannot be used against them in criminal or civil proceedings without the court's express permission.

Only the court can decide whether information should be disclosed to the police. When deciding whether disclosure will be allowed, the court must be satisfied that the benefits of disclosure outweigh its adverse impact on the investigation, on any future investigation and on public safety. This is a **high bar** for the police to achieve and therefore it is only in **very exceptional cases** that the court has been satisfied to order disclosure.

² http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:62016CN0530

³ ORR has since 2015 had an economic oversight/mobility role for Highways England and the Strategic Road Network. It does not have a road safety remit (see the Infrastructure Act 2015).



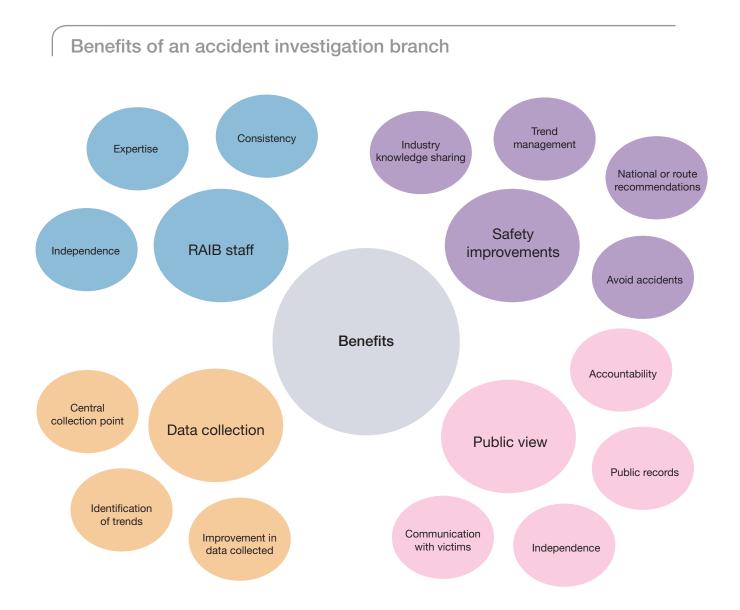
In rail incident investigations, an application for disclosure can be made to the Crown Court or the High Court. It is worth noting that the coroner has no jurisdiction to order disclosure from RAIB.

In *Chief Constable of Sussex Police* v *Secretary of State for Transport & Anor*,⁴ the Chief Constable of Sussex applied for disclosure of witness statements taken by the Air Accidents Investigation Branch (AAIB). The case related to an investigation into an aircraft that crashed whilst performing a manoeuvre at an air show in Shoreham. The aircraft crashed into the A27 and killed 11 people. The Court refused disclosure, as it would have been contrary to the fundamental purpose of safety investigations, which is to identify the lessons learnt and to prevent future accidents. The Court held that it was almost inconceivable that statements made to the AAIB could properly be subject to an order for disclosure as there would be a "serious and chilling effect which would tend to deter people from answering questions... with the candour which is necessary when accidents of this sort need to be investigated... this would seriously hamper future accident investigations and the protection of public safety by the learning of lessons which may help to prevent similar accidents."

Currently the protection of witness evidence (as described above) would not apply to evidence collected by a shadow government body. Therefore, in the absence of secondary legislation, there is a risk that evidence gathered by an AIB structured as a government shadow body would be disclosable to the police, who could go on to use it to obtain convictions or that other parties may use it to pursue civil claims against the relevant individual(s). In addition, the AIB would not have any powers to compel individuals to give evidence. This would in reality undermine the AIB and make it very difficult (if not impossible) for them to obtain the necessary co-operation from those involved.

A clear protocol with the commitment of the police and safety regulator would be needed (and would have to be adhered to) if an HAIB was to be created in 'shadow' form.

^{4 [2016]} EWHC 2280 (QB) - paragraph 42 quoted



The primary benefit of any AIB is that it is able to focus on safety improvements, by reviewing accidents and identifying any trends that might need to be dealt with at both an industry and national level.

As noted in TAIBR there are economic benefits. It is also widely accepted that a collateral benefit of RAIB and its primacy in evidence-gathering in major events was an improvement in both the quality of the physical evidence gathered and a significant speeding up of the process of reopening routes to traffic, when compared to the purely criminal/scene-of-crime protocol obtained before the RAIB was created. It also acts as a central point for data collection, which assists in root-cause analysis and the identification of trends in safety that need to be managed at a system level.

Since it is a distinct body, RAIB also benefits from staff with expertise who bring consistency to the process of identification of the cause of an accident, and subsequent recommendations of steps to prevent further accidents over time. This expertise enables the AIB to function more efficiently and consistently (which is essential when conducting analysis at a system level). RAIB's publicly available reports evidence an industry that is transparent, willing to learn, and willing to be accountable for safety changes that are needed – whether on the level of a single route or the whole system. There have also been improvements in communications with the victims and their families.

Highways

Currently, Highways England is responsible for the operation, maintenance and improvement of England's motorways and major A-roads. The Driver and Vehicle Licensing Agency is responsible for managing the licensing and records of all drivers.

Accidents are currently investigated by the relevant local police force and if there is a criminal element (i.e. the need for any enforcement action to be taken against a driver), this is also dealt with by the police. The DfT also prepares Road Accident In-Depth Studies (stored in the RAIDS database) but these reports are not publicly available. TAIBR discusses the limitations of these investigations on page 3 and, concludes that, despite the good work being done, there is a clear case for an 'effective single focal point for objective analysis'. Without this central point, the value of the data that is being collected is lost. Furthermore, without publicly available reports there is a lack of transparency and accountability in the industry as a whole.

The Highways sector is the only transport mode without an AIB. It also has the highest fatality and injury rate of all transport modes. Historically, roads have been an open system dependent on (largely) non-technologically-enabled infrastructure and on individual human behaviour. In contrast, rail and aviation are controlled systems operated by a limited number of participants. However, the adoption of connected and autonomous vehicles, and a range of intelligent transport systems technologies, is a rapidly approaching social and economic reality that will inevitably change perceptions and dynamics. As technology leaps forward, there will be increasing overlap with the other systems-based modes such as rail, and with this a move to a systems-based approach with transport technology, electric vehicles and charging (for example truck platoons).

This leap will inevitably involve regulations and standards. Any AIB created in the near future should be geared up to look at them as they emerge.

TAIBR highlights that, despite the difficulties posed by driver behaviour in investigating a crash, some system-level analysis is nevertheless possible. For example: are there any patterns in incidents of drivers making 'wrong-side' access to dual carriageways? Is there something that could be done to prevent accidents of this nature occurring? The investigatory analysis is still worthwhile, even if in order to tackle root cause it calls in some cases for broad behavioural interventions, rather than, or as well as, technical system interventions.

There is less network law about roads than about rail at an EU level and therefore roads regulation will be potentially less susceptible to change generated by Brexit than with other modes (such as rail). However, the extensive demands being made on the legislature in the UK during Brexit mean that any solution will have to be pragmatic. There is a clear need to consider the cost and ease of set-up when assessing the structural options for a future HAIB.

A highways accident investigation branch: the structural options

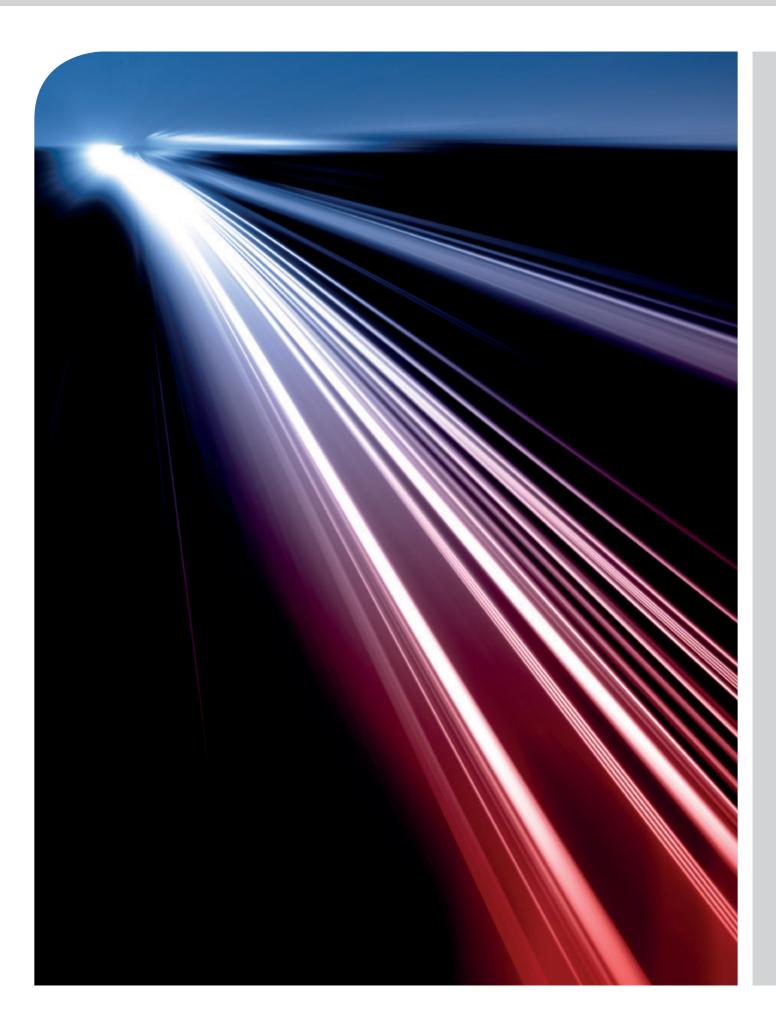
When attempting to look at the possible structural options for any HAIB, it is important to remember the two key themes from the Cullen Inquiry: separation of governance and protection of evidence. These will be crucial when assessing the benefits of each structural option. Set out in the table below are the different structural options, with the headline benefits and drawbacks:

Option	Structural independence	Protection of witness evidence	Comments
1 HAIB with legislation (RAIB/ AAIB/MAIB ⁵ model)	✓	\checkmark	Despite the clear benefits, this option is likely to be comparatively more challenging – and therefore more costly – to set up, as it requires the creation of a new and independent body.
2 HAIB as an informal/shadow body			As discussed above, there would be no protection of evidence without the introduction of secondary legislation.
	✓	×	This option would also be comparatively harder to set up and involve more costs than the options below (as it requires, similarly to the option above, a new body, as opposed to a new department within a current industry player).
3 HAIB within ORR	×		This option has the benefit of being relatively swift to set up and there would be a limit on the costs involved (as it requires the creation of a new department rather than a new legal body as set out in options 1 and 2).
		×	However it does not meet the requirements of independence or protection of evidence.
			The adequacy (or not) of prior action by regulators is, where necessary, picked up and commented on by an AIB.
4 HAIB as a department of the DfT	Possible	Possible	This option also has the benefit of being relatively swift to set up and there would, as with option 3, be a limit on the costs involved (as it also requires the creation of a new department rather than a new body as set out in options 1 and 2).
			The existing AIBs are autonomous entities within the DfT. Separation of governance and robust secondary legislation (or equivalent protections in protocols) would be needed to mirror the protections already in place for the marine, air and rail investigation branches.
5 HAIB as a department of Highways England	×	×	This option, like options 3 and 4, also has the benefit of being relatively swift to set up and of having a limit on the costs involved, for the same reasons.
			However, in addition to not meeting the requirement for independence and protection of evidence, it may struggle with the same internal resourcing and independence problems that the old system in rail faced during Part 2 of the Cullen Inquiry.

⁵ Marine Accident Investigation Branch

Conclusion

Although there are clear differences between road and rail, recent and imminent technological step changes now mean that there are also increasing numbers of crossovers between the two modes. We agree with the '*Towards an Accident Investigation Branch for Roads*?' (TAIBR) paper, published by RAC Foundation in December 2017, that there is a strong argument for some form of highways accident investigation branch (HAIB). However, the form that it should take needs further discussion and the option chosen must be pragmatic in terms of the time and the cost involved, as compared with what is realistically available. If an HAIB is to succeed, then the option chosen must address the two key structural issues of independence and the protection of evidence. Despite the clear lessons to be learnt from the experience of the rail industry, the implementation of an AIB for the highways may not be as straightforward as it is bound to run up against current policy limitations on both cost and time (post-Brexit).





The Royal Automobile Club Foundation for Motoring Ltd is a transport policy and research organisation which explores the economic, mobility, safety and environmental issues relating to roads and their users. The Foundation publishes independent and authoritative research with which it promotes informed debate and advocates policy in the interest of the responsible motorist.

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