Safety, Accessibility and Sustainability Panel

Date: **30 June 2016**

Item: **Bus Safety Programme**

This paper will be considered in public

1 Summary

1.1 This paper provides a response to the request from the Safety, Accessibility and Sustainability Panel on 10 March 2016 for further details on the Bus Safety Programme and supporting arrangements.

2 Recommendation

2.1 **The Panel is asked to note the paper.**

3 Background

3.1 In February 2016 the Bus Safety Programme was launched to address the increase in the number of collisions and injuries on the bus network and to continue to reduce the numbers of people killed or seriously injured. The programme deliverables form six main work streams as set out below:

(a) develop a world leading bus safety standard for London;

(b) update TfL's bus contracting system to enhance how we use road safety performance indicators to incentivise an even greater focus on safety;

(c) provide a new safety training module to all 25,000 drivers;

(d) provide a UK first Incident Support Service for those affected by fatal of serious injuries;

(e) publish additional bus collision data and making it more accessible; and

(f) provide greater transparency on bus collision investigations.

3.2 At the meeting of the Panel on 10 March 2016, a paper on the Bus Safety Programme was presented. The Panel requested further details of TfL activity and made suggestions in addition to the current programme. These suggestions covered six key areas:

(a) a bus casualty data warehouse;

(b) TfL investigation of every bus related Killed and Seriously Injured (KSI);

(c) 'Big data' analysis;

(d) an annual bus safety report;

(e) encouragement of reporting by the public and drivers; and

(f) clear rules on releasing closed-circuit television (CCTV) footage and other evidence.

3.3 Further detail of TfL's activities in respect of each of these is outlined below.

4 Bus Casualty Data Warehouse

4.1 There are two key data sources which are used to help understand TfL's bus casualty performance and trends. Data relating to fatal, serious and slight injuries is included within the STATS19 data set for buses and coaches. TfL's Incident Reporting and Information System (IRIS) also captures data from bus operators in respect of all incidents, including those reported under STATS19 and those that have not required police involvement. Drawing on both data sets enables performance and trends to be examined in respect of all levels of incident severity. Data related to both data sets is published quarterly on the TfL website.

4.2 TfL is currently preparing an analysis of 10 years worth of STATS19 data on collisions and casualties involving buses and coaches to show the long term trends in collisions and casualties. This will be available for publication in July 2016. Work has also been undertaken to separate TfL Buses from the Bus/Coach category of STATS19 using vehicle registrations. This will enable TfL bus data and trends to be published separately alongside the annual STATS19 publication.

4.3 The ability to link information on incidents between IRIS (TfL's incident management system) and STATS19 records now exists. Through this, incidents recorded within the IRIS system can inherit the geolocation information within the STATS19 process. Work is underway to consolidate the STATS19 and IRIS datasets through a matching exercise which will enable the publication of more comprehensive performance information, covering all levels of severity of outcome going forward.

4.4 Matching data sets from other sources, such as hospital data, is more challenging. In a recent study conducted by the Transport Research Laboratory, on TfL's behalf, it was found that only 40 per cent of Hospital Episode Statistics data could be matched to STATS19. The differing infrastructure of the National Health Service, police services, local authority and TfL's databases and information technology systems that hold incident information makes reconciling datasets challenging but an aspiration for the longer term.

4.3 Collisions involving buses or coaches reported by the police in STATS19 are currently displayed publically on the London Collision Map (this can be accessed on the TfL website at: https://tfl.gov.uk/corporate/safety-and-security/road-safety). There is an ambition of future development of this map to show 'vehicle involvement' as well as casualty mode – i.e. all casualties that were involved in a collision with a TfL bus, regardless of their mode.

5 TfL Investigation of every bus related KSI

5.1 All bus collisions where a bus occupant (driver or passenger) or third party are killed or seriously injured are reported through the Notification and Investigation of Major Incidents of the London Bus Network (NIMI) process. This is a TfL defined process mandated on the bus operators. The NIMI process requires the investigation to consider factors relating to people (injured parties, third parties and the driver), the

vehicle and instruments, the route, environmental conditions, legal breaches and organisational factors (e.g. TfL or operator's procedures). Investigations are led by bus operators unless TfL assets or employees are implicated. TfL supports the investigations carried out by operators by providing the information requested. This includes, but is not limited to, CCTV footage, copies of any photos or reports of the incident made by TfL employees and statistics relevant to the incident. Bus Operator Guidance for conducting a NIMI investigation can be found in Appendix 1.

5.2 The Bus Safety Programme is seeking opportunities and mechanisms for TfL to take a more proactive approach to providing Operators with information and data to assist in their investigations. TfL is also working with the Operators to establish minimum standards for the collision investigation process to ensure a consistency of approach across the network.

5.2 NIMI's are peer reviewed by senior managers from the TfL Buses Directorate and the Surface Transport Health and Safety Team at the TfL Bus Safety Governance Meeting. The Surface Transport Health and Safety Steering Group has recently approved the extension of the NIMI process to all Surface Transport Directorates, with the most significant incidents being subject to independent review by the Steering Group in addition the Directorate level peer review. Learning is shared across all operators via the Industry NIMI Summary Report.

5.3 As part of the Bus Safety Programme, TfL has committed to provide greater transparency on bus collision investigations**.** TfL will clearly set out how fatal and serious injury collisions on the bus network are investigated and the processes followed by TfL, the bus operators and the police. On 5 May 2016, TfL's Surface Health and Safety Team met with the Bus Operators to discuss how best to make the findings of investigations available to the public without identifying individual cases for the purposes of data protection. It was agreed that an annual summary would be produced alongside findings and recommendations starting summer 2016.

5.4 TfL has also committed to reporting annually on the legal outcome of all fatal and serious bus collisions. This is not just an issue for collisions involving buses but all collisions resulting in fatalities or serious injuries on the road network. TfL is working with the Metropolitan Police Service to establish a process whereby this information can be shared publically.

6 Big Data Analysis

6.1 TfL is keen to harness the power of 'big data' and utilise data sources from around the business. Work is currently underway on a proof of concept project, which involves putting a selection of large datasets into a cloud storage and analysis environment to trial this method. Linking data sets up from around the business is a key aim for TfL and cloud services have been procured to permit the merging of incident data such as that included in STATS19 and IRIS with other dataset stored in TfL's 'data lake'. For example, during 2016/17, the capability will be developed to combine STATS19 data with traffic, travel diary and weather data to enrich our analytical capability.

6.2 TfL undertakes detailed analysis of road safety data, including the identification of priority locations (by nature of their casualty history) which drives the investment programme. This is shared with the boroughs to help target local action. To determine whether there are particular user groups who are at greater risk than others, TfL has

undertaken risk analysis, published online at http://content.tfl.gov.uk/road-risk-and-vulnerable-road-user-working-paper.pdf. This provides a resource for TfL and borough road safety practitioners to target actions to improve road safety. In addition, the interrogation of a wide variety of other road safety data sources, information and intelligence builds the evidence on which to base action and track progress.

6.3 TfL draws on the support of external parties where necessary to supplement in-house analysis. An example of this is the commissioning of an analysis of bus collisions using police collision investigation files. This research will identify trends that will enable prioritisation of existing bus safety initiatives and the addition of new ones. The findings of this research will be available in autumn 2016 with a finalised report for publication in December 2016.

7 Annual Bus Safety Report

7.1 TfL is proactive in sharing best practice in road safety planning and delivery and hosts an annual London road safety conference to drive best practice and knowledge sharing with boroughs and other stakeholders.

7.2 In addition to publishing a comprehensive annual account of progress in casualty and collision reduction 'Collision and Casualties on London's Roads Annual Report', available at https://tfl.gov.uk/corporate/publications-and-reports/road-safety, TfL has made use of 'open source' techniques to make data simple to access online. This enables the public, boroughs and stakeholders to have open access to road safety information and to track progress.

7.3 TfL regularly releases the data supporting the action being taken to protect the most vulnerable groups and undertakes regular public information campaigns to get those messages across.

7.4 In addition to the bus safety data currently published (outlined in paragraph 4.1), there is a need for the publication of a succinct summary of key safety statistics and improvement activities, to facilitate the public's understanding and scrutiny of TfL's performance over time. This will initially be addressed through the publication of safety trends in addition to the raw data currently provided. Further opportunities to communicate bus safety performance will be progressed through the TfL wide work stream looking at safety reporting and transparency across the business. This programme is being led by TfL's Director of Health, Safety and Environment.

8 Encouragement of reporting by the public and drivers

8.1 From October 2014, all reported incidents involving a bus in London have been directed to TfL via the Contact Centre. Details of the Contact Centre are displayed on posters on every bus, as well as the TfL website and include telephone, textphone and online form options. The TfL Customer Service team coordinates the response to the complainant, liaising with the relevant bus operator to ensure action is taken and a response provided.

8.2 During 2015, TfL agreed with all existing bus operators that they would join the Confidential Incident Reporting and Analysis System (CIRAS) under TfL's membership. This was agreed by negotiation rather than becoming a contractual requirement. Initial feedback from CIRAS and the level of reports made since the

launch to Bus Operators in January 2016 indicates that the industry is embracing CIRAS. TfL will continue to monitor this through the TfL Director of Health, Safety and Environment, who represents TfL on the CIRAS Steering Group and feeds back any bus related queries to the Director of Buses.

9 Clear rules on releasing CCTV footage and other evidence

9.1 TfL and the Bus Operators have an agreed CCTV protocol regarding the sharing of CCTV footage when an incident has occurred. This is a reciprocal arrangement to ensure that the collision investigator has access to all the available evidence. Uniform rules are also in place across all bus companies dictating CCTV footage retention time and conditions of release. The same protocol also applies in the event that TfL appoints an independent investigator or reviewer.

List of appendices to this report:

Appendix 1: Notification and Investigation of Major Incidents on the London Bus Network - Bus Operator Guidance

List of Background Papers:

- Bus Safety Programme, Safety, Accessibility and Sustainability Panel, 10 March 2016
- Collision and Casualties on London's Roads Annual Report (https://tfl.gov.uk/corporate/publications-and-reports/road-safety)
- TfL risk analysis (http://www.tfl.gov.uk/cdn/static/cms/documkents/road-risk-and-vulnerable-road-user-working-paper.pdf).
- London Collision Map https://tfl.gov.uk/corporate/safety-and-security/road-safety

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Appendix 1

TRANSPORT FOR LONDON

Notification and Investigation of Major Incidents on the London Bus Network

Bus Operator Guidance

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Introduction

The Notification and Investigation of Major Incidents (NIMI) process requires bus operators to report their investigation findings to TfL when an incident defined under the framework occurs. This process is a major part of efforts to ensure London buses are as safe as possible.

Across the London bus network where around 25, 000 collisions and 3,000 passenger falls are recorded annually, the NIMI process will primarily be used to examine low frequency/high impact incidents with a view to learning lessons which will help to drive down accidents generally. The overarching purpose of NIMI is to systematically capture and share lessons learned across the London bus network.

The NIMI is intended to complement bus operators' individual policies on management of major accidents and incidents arising from their undertakings. It is likely that bus operators have a broader definition of what constitute a major incident so the criteria provided within the NIMI process is designed specifically for the purpose of sharing lessons learned and best practice.

The NIMI process is not concerned with attributing blame rather it is designed to establish the root causes of incidents from investigations conducted by bus operators and other bodies such as the Police, HSE and TfL to facilitate learning and better targeting of preventative strategies.

Definitions

TfL defines an incident as an undesired event that resulted in, or under slightly different circumstances, could have resulted in, harm to people, damage to property, damage to the environment or loss of service.

Reportable incidents to TfL are those set out in the London Buses Framework Agreement, Vol 2, Part C1.

Major incidents are those set out in the London Buses Framework Agreement, Vol 2 Part C1 and further clarified in the sections that follow.

NIMI Criteria

NIMI is intended to complement bus operators' investigation policies in establishing the criteria set out in the box below as triggers for the process. The procedure requires bus operators experiencing any of the incidents below to commence the NIMI process immediately.

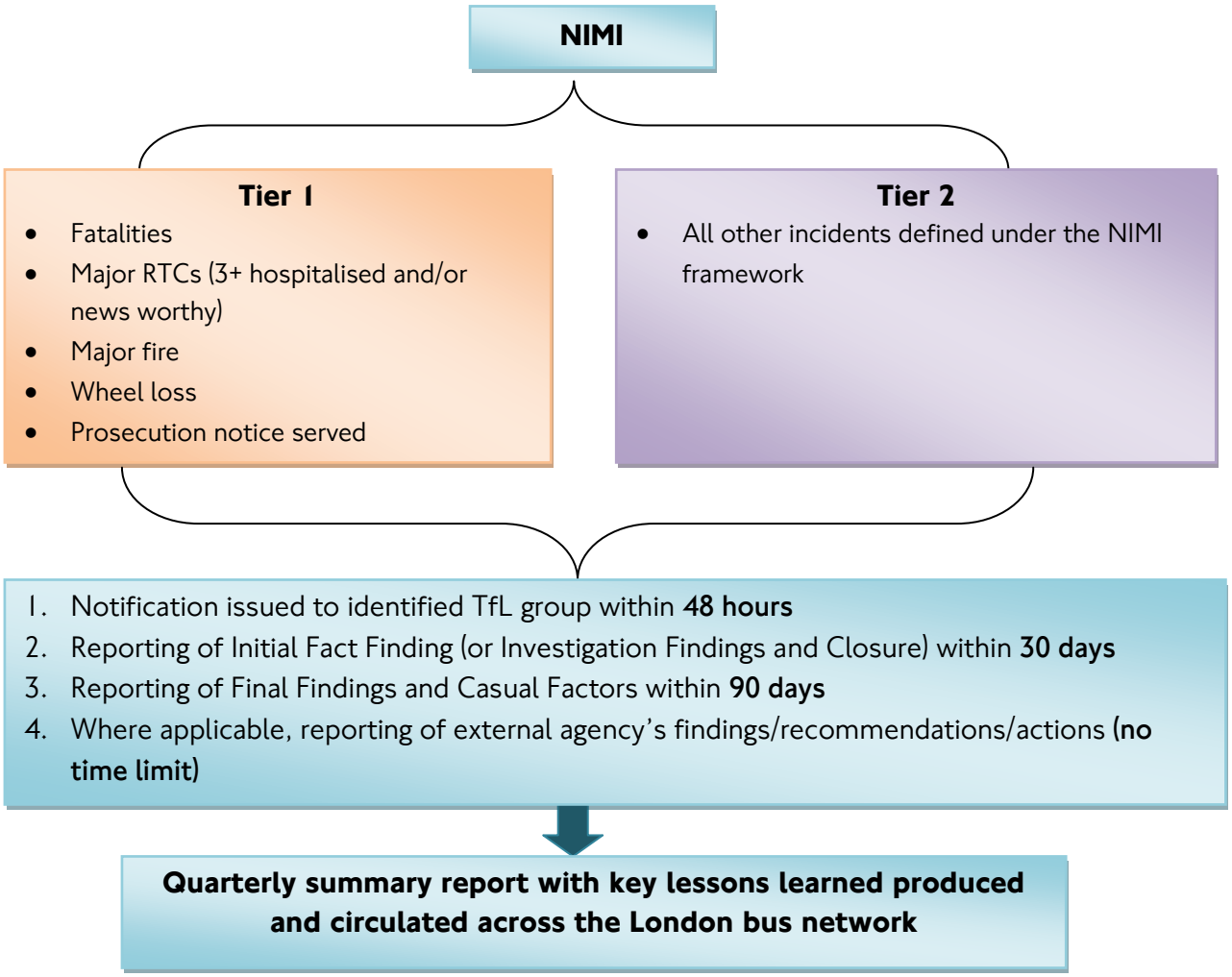
Events	Criteria Overview
Fatalities	• All fatalities including suspected medical related cases

Major Road Traffic Collisions	• Life changing injuries or injuries requiring being held overnight in hospital for treatment to a:
	  ○ Transport worker
	  ○ Passenger
	  ○ Vulnerable Road Users (VRU) - pedestrian, cyclist or motorcyclist
	• Where three or more people were injured and taken from scene of incident to hospital for treatment
	• Where three or more vehicles were involved and leading to an injury.
	• Involving a tree with a branch overhanging the roadway
	• Involving a bridge or other signposted overhead structures
	• Serious RTC involving a building, a tree, street furniture, TfL bus infrastructure and scaffolding
	• Involving two or more buses within a bus station/stand environment
	• An RTC arising from a run-away bus situation (unattended bus)
	• Where the bus driver was medically incapacitated
	• Involving a tram or railway infrastructure

Safety Critical Failures	• Bus fires due to mechanical or electrical failure • Brake failure whether or not an accident resulted • Steering failure whether or not an accident resulted • Wheel loss
Security, crime and disorder	• Accidental fire to a bus or property involved in bus operation • Arson on a bus or to a property involved in bus operation • Where the driver is arrested for failing a drug/alcohol test
Other serious incidents	• Serious injury to a wheelchair user or a child in a pushchair • Serious injury after a fall from an open rear platform of an NRM on two crew mode • Noteworthy incident involving new technologies (not limited to buses) • Any incident not listed above with significant cost implications to the operator and/or TfL • Any serious incident not listed above with significant operational impact on bus operations or on third parties. • Any incident investigated by the HSE or where prosecution is likely by an enforcement authority. • Any incident not listed above where there is significant media interest. • Any other incident where there are substantial learning opportunities for industry

Overview of the NIMI Process [1]

The diagrammatic presentation below provides an overview of the NIMI process with an expectation that all events are fully investigated within 90 days by the operator involved.



[1] Tier incidents are classified as formal incidents by TfL therefore require additional internal reporting

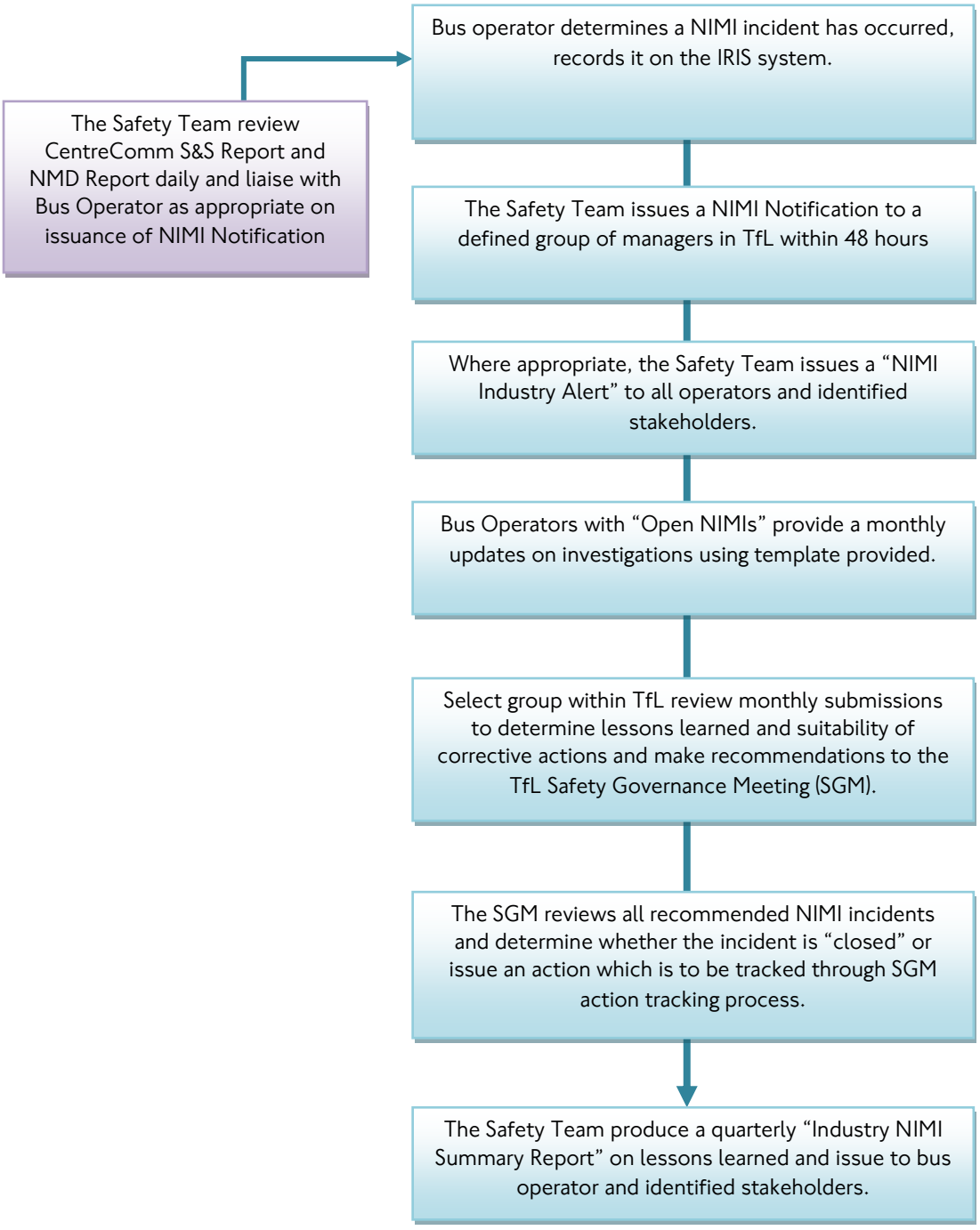
Outline of NIMI Process

The table below and the flowchart that follows provide detailed overview of the NIMI process.

Stage	Description	Time frame	Outline of stage
1	Notification and reporting	48 hours	• Bus operators will be responsible for determining when a NIMI incident has occurred then commence the process without being prompted. • TfL will monitor daily CentreComm reports for incidents notified to the organisation through that process. • The Safety team issues a NIMI Alert to an identified distribution list within TfL within 48 hours. • For high profile incidents, the Safety Team may request factual information and/or CCTV if available. • The operator advises TfL where the incident has immediate safety implications for bus operations generally. • TfL decides whether to issue a network-wide alert (and/or guidance)
2	Preliminary findings (factual) and/or Closure	1 Month [2]	• As appropriate, TfL commissions an investigation (including independent investigations) • Factual information for the incident and preliminary findings submitted to the Safety Team proactively by the bus operator involved as part of a **standard monthly submission process.** • Where applicable, the incident is closed by the operator and submit a NIMI Form. • All relevant information summarised and reviewed by the TfL "NIMI Review Group" • The "NIMI Review Group" makes further recommendations including whether or not to close the incident to the TfL Safety Governance Meeting (SGM) • On a monthly basis, the SGM reviews the incidents and decide whether to close the incident or make recommendations for further actions. • Any identified actions tracked through the SGM Action tracking process, where appropriate, included in the annual H&S objective setting process.
3	Final findings and suspected casual factors	3 months	• Bus operator concludes its internal investigation if not previously concluded at stage two. • Investigation form submitted to the TfL Safety Team.
4	NIMI Summary Report for Industry	Quarterly	• The Safety Team produces a quarterly report outlining details of concluded NIMI events, their findings, lessons learned and corrective actions taken where applicable. • The quarterly report will be distributed to interested stakeholders except where it has been determined that immediate circulation of lessons learned is essential.
5	Final closure of incidents (complex incidents)	No time limit	• Final closure of "complex incidents" • Progress through Stages 3 and 4

[2] Some incident investigations may be closed at this stage.

NIMI Process Flowchart



Further Guidance on NIMI Incident Triggers

#	Incident	Guidance
1	**Fatal** - All fatalities including suspected medical related cases	These include fatalities arising from any incident connected with the bus company. This is not limited to bus related incidents. Deaths from suspected natural causes or suicide are also included. There is no time limit between the initial incident and the subsequent fatality provided it is conceivable that the death was as a direct result of the injury suffered from the incident.
2	**VRU Collision** – All collisions leading to a life changing injuries or injuries requiring being held overnight in hospital for treatment to a: • Transport worker • Passenger • Vulnerable Road Users (VRU) - pedestrian, cyclist or motorcyclist	Any incident which leads to a bus driver or other transport workers or a bus passenger or a vulnerable road user suffering a life changing injury such as loss of sight, amputation or brain injuries. This also includes incidents which caused any other serious injuries to any of the people listed which required them being held overnight for medical treatment (not as precaution).
3	**Multi Casualty Collision** – All collisions where three or more people were injured and taken from scene of incident to hospital for treatment	A single incident where three or more people were taken from the scene of the incident to hospital for treatment. This is not limited to buses.
4	**Multi Vehicle Collision** - All collisions where three or more vehicles were involved and leading to an injury.	A major road traffic collision involving three or more vehicle (excluding bikes) where there was an injury.
5	T**ree Collision** – A collision involving a tree with a branch overhanging the roadway	Bus involved in a collision with a tree which is overhanging the roadway. This also includes trees which are signposted.
6	**Bridge Collision** – A collision involving a bridge or other signposted overhead structures	Any bus collisions with a low bridge or other limited headroom obstructions whether or not damage was caused.
7	**Other Serious Collision** – A road traffic collision involving a building, a tree, street furniture and TfL bus infrastructure	Major road traffic collision leading to significant damage to the bus or the object struck and potential leading to injuries or significant service disruption.
8	**Bus Station Collision** – A collision involving two or more buses within a bus station/stand environment	A noteworthy collision involving two buses within the bus station or stand environment.

#	Incident	Guidance
9	**Unattended Bus Collision** - An RTC arising from a run-away bus situation.	A collision as result of an untended bus rolling away and striking an object.
10	**Medical Collision** - A collision due to the bus driver being medically incapacitated	A road traffic collision directly attributed to the bus driver being medically incapacitated.
11	**Tram/Rail Infrastructure Collision** - A collision involving a tram or railway infrastructure	Any bus collisions with a tram or railway infrastructure whether or not damage was caused.
12	**Bus Fire** – a fire due to mechanical or electrical failure	All electrical/mechanical fire incidents involving buses where flames were seen or fire suppression system prevented the fire but damage was caused to the bus.
13	**Brake Failure** - a brake failure whether or not an accident resulted	Where the bus in use suffered brake failure and as a result had to be taken out of service.
14	**Steering Failure** – a steering failure incident whether or not an accident resulted.	Where the bus in use suffered steering loss and as a result had to be taken out of service.
15	**Wheel loss** – a wheel detachment	Where the bus in use suffered a wheel loss and as a result had to be taken out of service.
16	**Fire** – an accidental fire to a bus or property involved in bus operation	Accidental fires on buses or other properties causing service disruption.
17	**Arson** – an arson on a bus or to a property involved in bus operation	An act of arson resulting in major damage to bus or property causing service disruption.
18	**Drug/Alcohol Failure** - where the bus driver was arrested for failing a drug/alcohol test	Where a bus driver was arrested for failing a drug or alcohol test. This is not limited to for cause.
19	**Wheelchair User Injury** – incidents leading to serious injury to a wheelchair user	Any incident which caused a wheelchair user to suffer serious injuries and was taken to hospital for medical treatment.
20	**Pushchair User Injury** – incidents leading to serious injury to a child in a pushchair	Any incident which caused a child in a pushchair/buggy to suffer serious injuries and was taken to hospital for medical treatment.
21	**Open Platform Injuries** – a fall from an open platform of an NRM leading to a serious injury (NRM on two crew mode)	Where a passenger falls while hopping on or off a moving New Routemaster and suffering serious injuries which require hospitalisation.
22	**Tech Related Incidents** – any noteworthy incident involving new technologies (not limited to buses)	Noteworthy safety critical incident involving new technologies (not limited to buses) such as while being trialled.
23	**High Cost Incidents** - any incident not listed above with significant cost implications to the operator and/or TfL	Any noteworthy safety critical incident involving a bus not listed above but has the potential to result in a significant cost to the operator and/or TfL
24	**High Impact Incidents** - any serious incident not listed above with significant operational impact on bus	Any noteworthy safety critical incident involving a bus not listed above which had a significant impact on bus operations or the

#	Incident	Guidance
	operations or on third parties.	activities of a third party.
25	**Prosecution Likely** -any incident investigated by the HSE or where prosecution is likely by an enforcement authority.	Any incident investigated by the Health and Safety Executive (HSE) or where prosecution is likely by an enforcement authority.
26	**High Media Interest** - any incident not listed above where there is significant media interest.	Any noteworthy safety critical incident involving a bus not listed above which attracted significant media interest.
27	**High Learning Opportunity** - any other incident where there are substantial learning opportunities for industry	Any other safety critical incident where there are substantial learning opportunities for the bus industry.

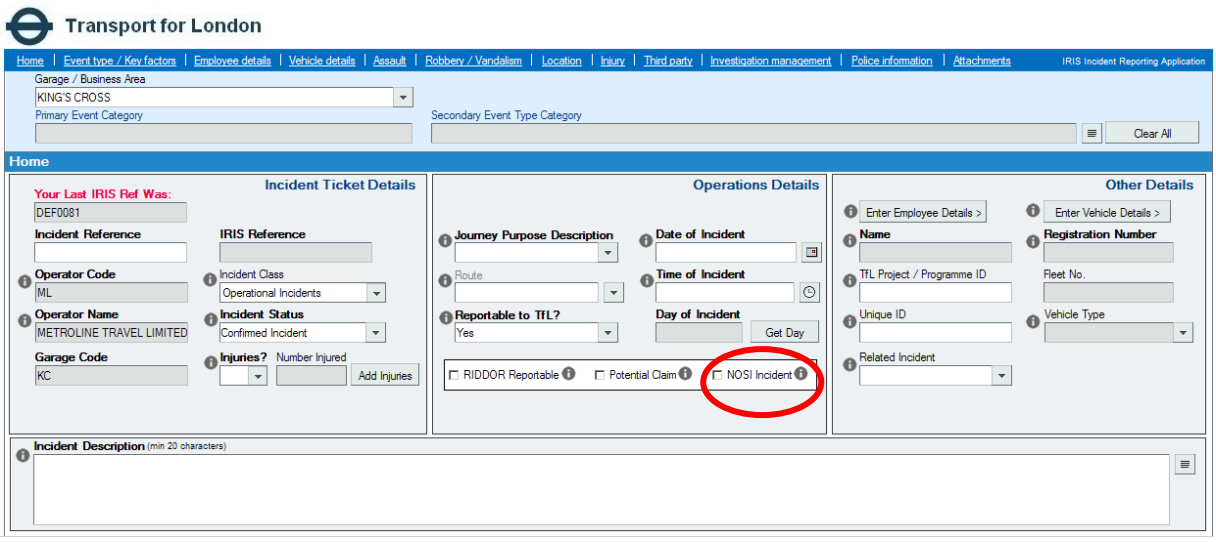
NIMI Steps for Bus Operators

The five steps of the NIMI Process

Step	Details
1	Enter incident on IRIS within 48 Hours
2	TfL Safety Team issues a NIMI Alert within 48 Hours.
3	Commence investigation
4	If the investigation is not closed within 30 days, provide details of an initial fact finding in the form of an email to STIncidents@tfl.gov.uk or in a report (whichever is easiest). This must include: 1. Full details of what happened 2. Vital information about the driver and vehicle 3. Any other vital information including photos where appropriate 4. The primary focus of the ongoing investigation
5	If the investigation is otherwise concluded, submit a completed Major Incident Investigation Form. Wherever possible, operators are expected to conclude their internal investigations within 90 days.

Recording the Incident on IRIS

All NIMI incidents should be entered on the IRIS system within 48 hours. The recording of the incident on IRIS is not any different to reporting incidents generally to TfL (see the Framework Agreement for details). However, it is important that the IRIS field which is highlighted in the system screenshot below is checked to denote the incident as **NIMI. Information supplied should be robust with all relevant sections completed**.



NOTE! Access to IRIS is restricted to approved users only, to request an account please contact your companies Principal IRIS Administrator.

Early Alerts

Where it is deemed necessary, TfL will issue network wide alerts to notify of specific issues with a view to preventing a recurrence. This action will be based on the initial report submitted by the bus operator. In order that this is done in a timely manner and to safeguard the safety of transport users and the public, all NIMI events must be notified to TfL within 48 hours.

Single Point of Contact for NIMI

TfL's intension is to liaise with a designated individual within the bus company for purpose of administering the NIMI process. This "go to" person will be responsible for ensuring there is adequate arrangements internally to support the requirements of the process. To this end, they should:

- Ensure they familiarise themselves with the NIMI criteria
- Be aware of the requirements of the process
- Advise of a substitute in their absence or when the decision is taken to transfer the responsibility to someone else within the company.

Sharing Lessons Learned

The sharing of lessons learned from major incident investigations is a critical aspect of the NIMI process. Information shared will take into account the need to maintain confidentiality and relevance. For instance, the route and operator involved in a NIMI event are not particularly relevant so will not be systematically included in the information shared unless there are compelling reasons to do so.

So that the information shared is useful for stakeholders seeking to reduce incidents on the bus network, it is imperative that the process for gathering investigation findings is consistent and focused. Effectively, a specific form has been devised which bus operators' will be required to complete when closing out a major incident. The primary purpose of the London Buses Major Incident Investigation Form will be to:

- Provide verified details of the incident
- Identify tools used to facilitate a thorough investigation
- Confirm the causal factors and root cause
- Identify steps taken to prevent a recurrence

Completing the NIMI Form

A template has been provided which all operators will be required to complete when closing out a NIMI event. The form may be completed within 30 days of the incident but no later than 90 days. If after 30 days the incident continues under investigation, the operator will be required to provide a general update on their investigation which could be in the form of an email or a report.

TfL is not seeking to teach bus operators how to conduct an investigation, but it is important that seven sections of the form are completed robustly. The NIMI form is only required when the investigation is concluded with as much information as possible.

The NIMI form is a simple Word document so will expand easily to accommodate information being provided within it. A sample of the form is shown below. It is anticipated that the information required to complete the form will be readily available from the operator's internal investigation report.

Still photographs may also be attached when submitting the form

NIMI Form Page 1

London Buses Major Incident Investigation Form	Version 1

Section 1: About the Incident

IRIS Ref	
Your Ref	
Date of incident	
Operator	
Route	
Road Name and Borough	
Route Risk Assessment last review date	

Details of Major Incident	

Section 2: The Investigator

Person Conducting Investigation	
Telephone	
Email	

Section 3: Other Investigators

Police	**DVSA**	**HSE**	**TfL**	**Coroner**	**Other**

Section 4: Investigation Tools

CCTV	**Telematics**	**Locus Report / Re-enactment**	**Other**

NIMI Form Page 2

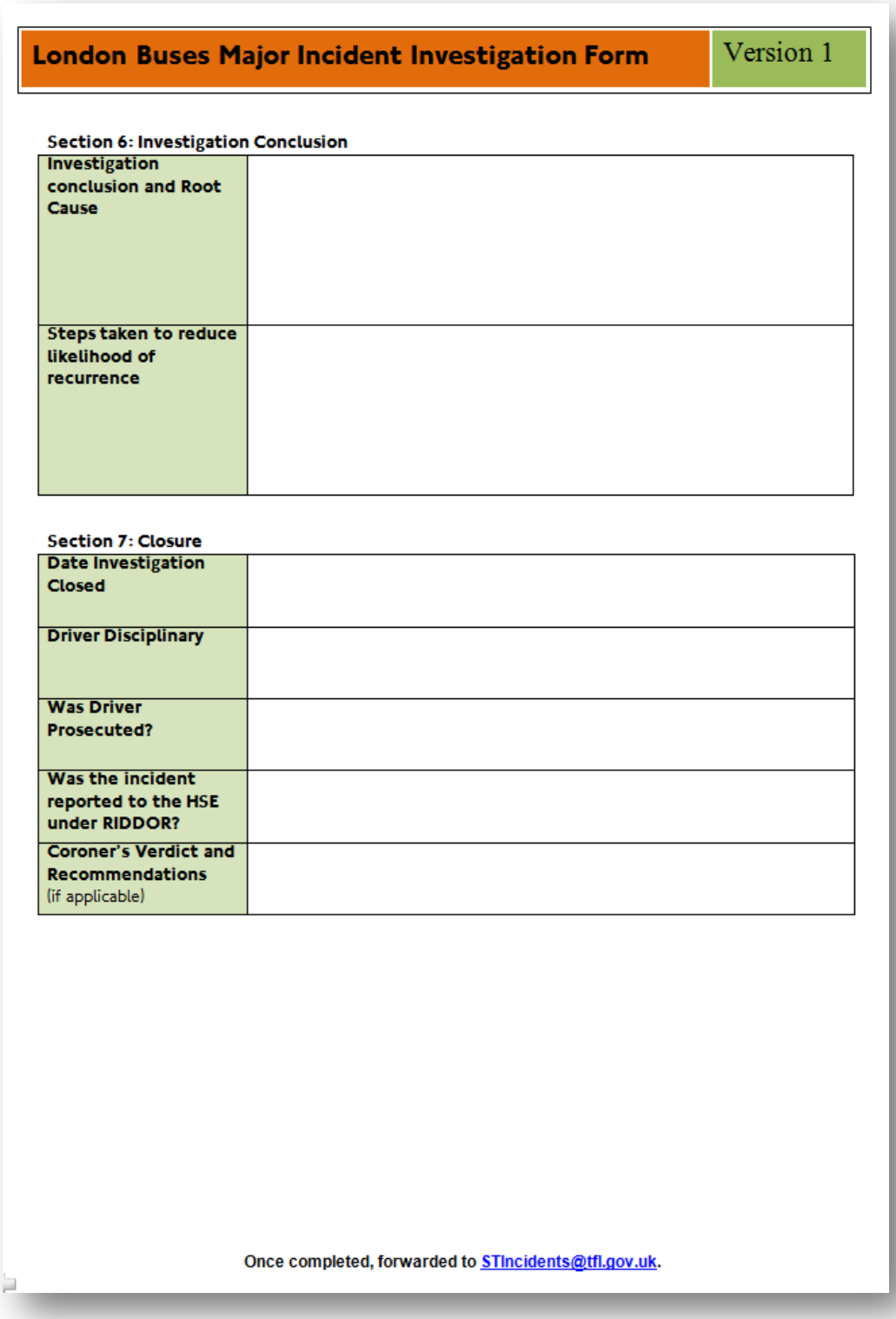
London Buses Major Incident Investigation Form — Version 1

Section 5: Contributory Factors (bus operation)

Factors	Investigation Findings
People Factors • *Actions of third party including* ✓ *3rd party driver/rider/cyclist* ✓ *Pedestrian* ✓ *Passenger* ✓ *Other persons*	
Driver Factors • *Actions of bus driver* • *Driver's age* • *Driver's experience* • *Driver's training* • *Driver's working hours* • *Driver's attentiveness (distractions)* • *Driver's fitness (fatigue/tiredness)* • *Driver's health*	
Vehicle Factors • *Vehicle type* • *Vehicle fitness* • *Vehicle maintenance* • *Defect* • *Vehicle design*	
Route Factors • *Route risk/hazards* • *Traffic density* • *Road design /type* • *Bus station/stand* • *Obstructions (on highway)* • *Road signage/warning*	
Environment Factors • *Weather* • *Light* • *Road surface*	
Instrument Factors • *Safety equipment (failure)* • *Alert systems* • *Fire Suppression System*	
Legal Factors (bus driver) • *Drug and alcohol use* • *Speeding* • *Disobeying traffic laws*	
Organisational Factors • *TfL procedures/policies* • *Internal procedures/policies*	

Once completed, forwarded to STIncidents@tfl.gov.uk.

NIMI Form Page 3



London Buses Major Incident Investigation Form Version 1

Section 6: Investigation Conclusion

Investigation conclusion and Root Cause	
Steps taken to reduce likelihood of recurrence	

Section 7: Closure

Date Investigation Closed	
Driver Disciplinary	
Was Driver Prosecuted?	
Was the incident reported to the HSE under RIDDOR?	
Coroner's Verdict and Recommendations (if applicable)	

Once completed, forwarded to STIncidents@tfl.gov.uk.

Information Required on the NIMI Form

The operator should ensure NIMI event investigations are:

- Thorough
- Timely
- Beyond blame
- Seeks to identify casual factors
- Seeks to identify root cause

When completing the NIMI form, please consider the following

Section	General nature of information required
Section 1	**"About the incident"** • General and factual information including details of route risk assessment. • Brief summary of what happened, people affected and general impact of incidents.
Section 2	"**The Investigator"** • Please provide the details of the lead investigator. This may not be the main NIMI contact but the person who actually undertook the investigation for the operator
Section 3	"**Other Investigators"** • The details of external agencies that may also be conducting an investigation into the incident should be provided. It is important to note that they may not necessarily be investigating the incident to determine the root cause, for instance, a Coroner's interest will be seeking to determine the cause of death. • Bus operators are required to include the findings of these investigations or inquest in their own investigation conclusions. • Where recommendations are made or action is being taken by an enforcement authority, this should the recorded in section six of the form.
Section 4	**"Investigation Tools"** • This section is for indicating the tools used in the investigation. Information obtained from their use should be reflected in the body of the report.
Section 5	**"Contributory Factors"** • This sections is mainly concerned with bus operations and other road traffic related events • The section requires information obtained from bus operator's investigation to be supplied to TfL in a consistent and structured way. This will help ensure the usefulness of the information sharing aspects of the NIMI process. • The principal purpose of the section is to provide details of the level of information required for each of the causal factors. • Only relevant sections should be completed.

Section 6	"**Investigation Conclusion"** • This section requires details of the investigation conclusions. This could include what is thought to be the root cause of the incident. • Details of any steps taken or proposed to reduce the likelihood of the incident happening again should be noted in this section. • Note! The section expands so don't be constrained by the size of the box.
Section 7	**"Closure"** • The basis on which the incident is being closed should be noted in this section including the date the investigation was concluded.

Key Focus for Major Incident Investigations

In support of a thorough investigation, the Major Incident Investigation Form includes a section which requires the investigator to provide information on factors which may have played a part in the incident. This may not always mean they were contributory, for instance, the age of the driver maybe useful information but not necessary a causal factor. The section below lists typical causal factors in bus related incidents for which information will be required in order to achieve consistency across the network.

It is worth noting that the information provided in this section will also be analysed to help form a view on the cause and effect these factors are having on major incidents.

Investigation Scope	Factors	Description
People Factors	• Actions of third party driver/rider/cyclist • Actions of pedestrian • Actions of passenger • Actions of other persons	This section should be used for information relating to the actions of other road users in the event of road traffic incident and extent to which they were factors in the incident.
Driver Factors	• Actions of bus driver • Driver's training • Driver's experience • Driver's age • Driver's working hours • Driver's attentiveness (distractions) • Driver's fitness (fatigue/tiredness) • Driver's health	This section should be used for information relating to the actions of the bus driver and also his or her experience. This will include training they have had such as type and route training. This section should also cover issues such as the state the driver was in at the time of the incident and any likely impact they may have had on the event.
Vehicle Factors	• Vehicle type • Vehicle fitness • Defect • Vehicle design • Vehicle maintenance	This section should be used for information relating to the state of the bus involved in the incident. This may include any contributory defects, Driving and Vehicle Standard Agency (DVSA) test result, maintenance and other vehicle factors likely to have played a part in the incident.
Route Factors	• Route risk/hazards • Traffic density • Road design /type • Bus station/stand • Obstructions (on highway) • Road signage/warning	This section should cover the specific of the authorised route including known hazards, the physical environment and road signs.
Environment Factors	• Weather • Light • Road surface	This section should be used for the environmental conditions at the time of the incident and any role they might have played in the event.

Investigation Scope	Factors	Description
Instrument Factors	• Safety equipment (failure) • Alert systems • Fire Suppression System	This section should cover operation of alert and safety control systems such as the extent to which they minimise the impact of the incident or whether a failed activation was a factor in the incident.
Legal Factors (bus driver)	• Drug and alcohol use • Speeding • Disobeying traffic laws	This section should be used for information relating to whether a legal contravention by the bus driver was a factor in the incident.
Organisational Factors	• TfL procedures/policies • Internal procedures/policies	This section should be used for information relating to the role organisational polices might have played in the incident. This include TfL's polices.

Where TfL is implicated

In some cases, TfL assets or employees will be implicated in a NIMI event, in these situations the incidents will be formally investigated internally in accordance with specific policies on incident investigations. The conclusion of this additional investigation by TfL will form part of overall information gathering process. Lessons learned from these TfL investigations will also be shared in line with the framework for sharing information.

TfL Commissioned Investigations

There are instances where it would be appropriate for TfL to commission an independent investigation of a major incident with a view to complementing operator's internal investigation. In most cases, these will involve the use of subject matter or technical experts to examine the incident and establish the causal factors and make recommendations where appropriate. The details of such investigation will be shared with the operator involved where it is appropriate to do so. It would be advisable that the findings of these investigations are considered when concluding any internal investigation by the bus operator involved.

Accident Statistics

The investigations of major events should consider as much information as possible including accident history for the location of the incident. This information can be obtained from the IRIS system on request. The investigator should send their request to irisadmin@tfl.gov.uk stating the period they require the data for and the road name involved. The information released will not include details which identifies the operator involve, so for instance, it will not show bus route or operator information unless that information is vital for the determination of the root cause of the incident.

TfL Official on Scene

In the event of a major incident which has been reported to CentreComm in the usual way, a decision may be taken by TfL to dispatch an Incident Response to assist with dealing with the immediate aftermath of the incident. This role is undertaken by Network Traffic Controllers (NTC) whose primary purpose is to return bus service to normality as quickly as possible. Whilst the NTC is on the scene of the incident they will undertake key functions which may include:

- Making the area safe
- Liaising with the Police and other emergency services
- Obtaining basic facts about the incident
- Instigating a diversion if necessary
- Taking pictures if appropriate

The nature of their involvement means they may have information which may be of use to the investigating bus operator(s). If such information is required, please contact the Safety Team on STIncidents@tfl.gov.uk.

CCTV

CCTV evidence is a vital part of incident investigation, wherever possible operators are expected to use it for fact finding. Bus station environment are generally covered by CCTVs managed by TfL, this can be made available on request which should be made within 30 days of the incident and inline with CCTV request protocol.

TfL may also request bus operator's CCTV as part of its internal investigation or aid the provision of accurate information to interested parties.

Additional Information from TfL

To support operator's investigations, TfL will supply information on low bridge alarm activation in the event of a bridge strike. This information will be provided on request.

Police Investigation

Where the police are conducting an investigation to determine if a crime has been committed, the operator's investigation which should focus on the root cause of the incident may also consider any relevant information from the police involvement.

It is important to note that all incidents dealt with by the police are given a CAD reference number which operators are encouraged to obtain and recorded on the IRIS system. For obvious reasons, these incidents will need to be dealt with inline with police protocols so information may not be available to bus operators who are investigating the incident from a root cause perspective in a timely manner. However, the Operational Police Liaison team within TfL may be able to provide limited information on police involvement in the incident in support of bus operator's investigation. In this situation, the operator should send an email requesting information to eospoliceliaison@tfl.gov.uk stating the CAD number (the crime reference number).

In addition, the Operational Police Liaison team will be able to assist the investigating bus company with access to CCTV of a vehicle that has been impounded and also help to speed up the process for returning the vehicle to the operator.

Coroner's Hearings

Where a fatal incident is the subject of a Coroner's hearing, the operator will be required to include the findings and verdict of the coroner and any recommendation made in its investigation conclusion. A list is provided with this guidance which shows the details of coroners' court and the area they cover. The list is correct at the time of writing this guidance, but further information is available on the Coroner's Society's website http://www.coronersociety.org.uk/

RIDDOR Incidents

Most incidents involving buses are road traffic related therefore come under the jurisdictions of the Metropolitan Police Service. However, where an injuries has not been as a result of vehicle movement such as whilst the bus was stationary then a RIDDOR report may be required if the injuries or incident fall within the criteria defined under the regulations. In this event, section 7 of the NIMI form should be annotated accordingly.

RIDDOR 2013 has identified the events below as reportable (full detail available on http://www.hse.gov.uk/RIDDOR/reportable-incidents.htm):

- The death of any person
- Specified injuries to workers
- Over-seven-day incapacitation of a worker
- Over-three-day incapacitation
- Non fatal accidents to non-workers (eg members of the public)
- Occupational diseases
- Dangerous occurrences
- Gas incidents

Freedom of Information (FOI) Act

TfL is a public body and as such is subject to the FOI Act 2000. The act permits TfL not to disclose information on incidents which are under investigation. However, information on concluded investigations may be discoverable under the act. TfL understands the potential implications for organisations which are not covered by the act but previous experience has shown that the Act has not interfered or disrupted normal public duties or adversely impacted on bus operations.

Record Retention

TfL's record retention policy is as follows:

- minimum of 4 years after the date of the incident where the injured party is at least 18 years old
- A minimum of 4 years after the injured party's 18th birthday where the injured party is less than 18 years old
- 40 years for any incident involving chemicals, asbestos, lead or other defined conditions

List of Coroner's Court

Area	Coroner	Telephone
City (Corporation of London)	Coroner – Dr Roy Palmer City of London Coroner's Court, Milton Court, Moor Lane, London EC2Y 9BL	Tel: 020 7332 1800 Fax: 020 7601 2714 paul.major@cityoflondon.gov.uk
Eastern District of Greater London (Romford, Barking, Dagenham) Linked with below East (Newham, Redbridge and Waltham Forest)	Coroner – Mr Chinyere Inyama Romford Coroner's Court, Oldchurch Hospital, Oldchurch Road, Romford, Essex RM7 0BE Coroner – Mr Chinyere Inyama Walthamstow Coroner's Court, Queens Road, Walthamstow E17 8QP	Tel: 020 8496 3886 Tel: 020 8496 3886 Fax: 020 8496 3378 Sharon.caton@walthamforest.gov.uk
Inner North (Camden, Hackney, Islington and Tower Hamlets)	Coroner – Dr S M T Chan St Pancras Coroner's Court, Camley Street, London NW1 0PP Poplar Coroner's Court 127 Poplar High Street, London E14	Tel: 020 7387 4882 Fax: 020 7383 2485 Tel: 020 7987 3614 Fax: 020 7538 0565
Inner South (Greenwich, Lambeth, Lewisham and Southwark)	Coroner – Ms S Lynch Southwark Coroner's Court, Tennis Street, London SE1 1YD Lewisham Office Greenwich Office	Tel: 020 7407 5611 Fax: 020 7378 8401 Tel: 020 8690 2327 Fax: 020 8314 1230 Tel: 020 8692 0530 Fax: 020 8694 8692
Inner West (Kensington and Chelsea, Merton and Wandsworth)	Coroner – Chinyere Inyama Westminster Coroner's Court, 65 Horseferry Road, London SW1P 2ED Battersea Office 48 Falcon Road, SW11 2LR	Tel: 020 7834 6515 Fax: 020 7828 2837 Tel: 020 7228 6044 Fax: 020 7828 2837

Area	Coroner	Telephone
West (Ealing, Hammersmith, Hillingdon, Hounslow, Richmond upon Thames and Kingston upon Thames	Coroner – Dr J D K Burton Hammersmith Coroner's Court, 25 Bagleys Lane, London SW6 2QA	 Tel: 020 7371 9935 Fax: 020 7384 2762
South (Bexley, Bromley, Croydon and Sutton)	Coroner – S Lynch Coroner's Court, The Law Courts, Barclay Road, Croydon CR9 3NE Bexley Office: Queen Mary's Hospital Bromley Office: Farnborough Office: Sutton Office: Sutton Public Mortuary	 Tel: 020 8686 3491 Fax: 020 8686 3491 Tel: 020 8313 1883 Fax: 020 8313 3673 Tel: 020 8460 6015 Fax: 020 8460 6015 Tel: 016898 563 999 Fax: 016898 563 999 Tel: 020 8641 3240 Fax: 020 8644 1709
Westminster Inner London West	Susan Lord Westminster Coroner's Court Horseferry Road SW1P 2ED	020 7802 4750

Contacting TfL

TfL
Surface Transport Safety Team
Safety Performance Manager
10th Floor, G7
Palestra
197 Blackfriars Road
Southwark
SE1 8NJ

Tel: 020 3054 0220
Email: STIncidents@tfl.gov.uk
IRIS Website: https://iris.gov.uk