

# RSC-G-011-A Railway Third Party Guidance on Railway Risk Safety Volume 2 Neighbours

# **CONTENTS**

1	INTRODUCTION	3	
1.1	WHO HAS PUBLISHED THIS GUIDANCE AND WHY?	3	
1.2	WHO SHOULD READ THE GUIDANCE ?	3	
1.3	WHAT DOES THE GUIDANCE COVER?	3	
1.4	PASSENGER AND THIRD PARTY RISK	3	
1.5	PASSENGER AND THIRD PARTY GUIDANCE	3	
2	GUIDANCE	5	
2.1	WHO SHOULD USE THIS VOLUME?	5	
2.2	FARMER	6	
2.3	OWNER/OCCUPIER	10	
2.4	SCHOOL	15	
2.5	RETAIL OUTLETS	19	
2.6	RECREATIONAL ACTIVITIES NEAR THE RAILWAY	21	
2.7	MEDIA AND BROADCASTER	22	
3	KEY CONTACT POINTS	24	
4	GLOSSARY OF TERMS	28	
5	REFERENCES	31	

The Railway Safety Commission is grateful for the help of Sotera Risk Solutions Ltd. (<a href="www.sotera.co.uk">www.sotera.co.uk</a>) in the drafting of these Guidelines.

# 1 INTRODUCTION

#### 1.1 Who has published this Guidance and Why?

This document has been published by the Railway Safety Commission to show all external parties how their various activities might affect railway safety. It also deals with how these risks can be controlled.

#### 1.2 Who Should Read The Guidance?

The guidance covers all passenger and third party actions that might affect the safety of the railway or the safety of those undertaking such actions. These third parties include those who live, work, or go to school next to the railway.

# 1.3 What does the Guidance Cover?

The guidance is applicable to the mainline railway, Luas, heritage railways and the Bord na Móna industrial railway system (where it comes into contact with public areas).

# 1.4 Passenger and Third Party Risk

Some railway dangers are solely the responsibility of the railway company. Examples include collisions between trains and derailments. However, the risk from such types of accident accounts for only about 10% of the total safety risk. Passengers and third parties must play their part to control the remainder of risk on the railways.

# 1.5 PASSENGER AND THIRD PARTY GUIDANCE

Volume 1: Planning and Development.

Volume 2: Neighbours.

Volume 3: Crossing the Railway.

Volume 4: Passengers.

Volume 5: Emergency Services.

A risk rating has been provided, for each activity and hazard, using a thermometer symbol. The higher the thermometer level, the higher the risk involved.

Find the relevant guidance for you and your activities on the next page.

Figure 1 Neighbours – page number for guidance on each activity

	Person					
Activity	Farmer	Owner / Occupier	School	Retail Outlet	Person engaged in Recreation	Media and broadcaster
Maintaining roads	See "Road Authority" and "Railway Specific					
Accessing or maintaining utilities	Company Guidance" in Volume 1.  See "Utility" and "Railway Specific Company Guidance" in Volume 1.					
Changing field drainage arrangements	7	7				
Changing the use of a field	7					
Burning off	8	8				
Felling trees	8	8				
Extracting water	8	8				
Planting or removing vegetation	9	9				
Building or extending existing buildings	12	12	12	12		
Maintaining existing buildings	12	12	12	12		
Trespassing	16	16	16	16	16	16
Crossing road with Luas	16	16	16	16	16	16
Responding to incident affecting railway	13	13	13	13	13	13
Responding to gas release incident	13	13	13	13	13	13
Responding to incident where ESB power lines are down or damaged	14	14	14	14	14	14
Reporting incidents, injuries and substandard conditions	14	14	14	14	14	14
Crossing railway at a level crossing						
Anti-social behaviour and dangerous/suspicious acts Deliveries, loading and unloading	17	17 19	17	17	17	17
		19	19	19		
Queuing				20		
Giving out leaflets/papers around station	0.4	2.1	24	20	0.1	0.4
Flying over railway	21	21	21	21	21	21
Hiking/walking near railway	21	21	21	21	21	21
Recording sound or images	22	22	22	22	22	22
Portraying risk-taking behaviour to the general public	23	23	23	23	23	23
Showing distracting images adjacent to the railway	23	23	23	23	23	23

# 2 GUIDANCE

#### 2.1 Who should use this Volume?

This guide is for *anyone* who owns, rents, uses or has responsibilities for the land next to the *railway* or who portrays images of the railway.

**Anyone** includes occupiers of private property, farmers, schools, colleges, industry, public bodies with responsibilities for land, road authorities, utility companies, gun clubs, model aeroplane clubs, hang-gliders, balloonists, paragliders, hunters, fishermen, hikers, aircraft or airfield operators, port authorities, advertisers, record producers, film-makers and the media.

For the purposes of this guide, the term *railway* describes tramways, passenger and freight railways and heritage railways.

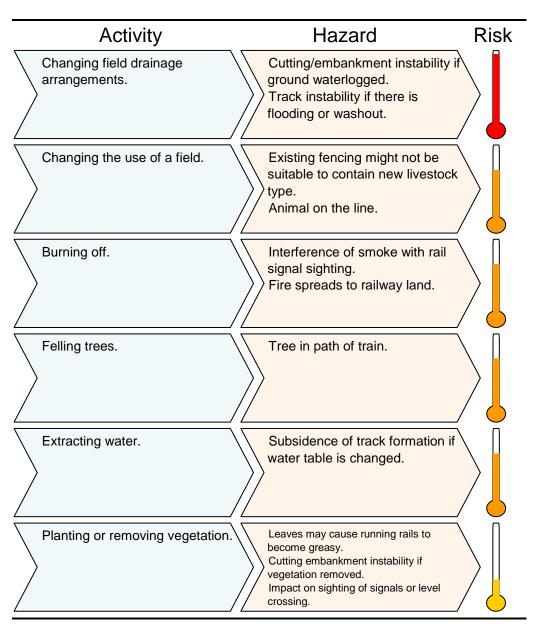
Modification or maintenance of buildings or structures close to the railway is covered in *Volume 1*.

Crossing the track is covered in *Volume 3*.

#### 2.2 FARMER

The main activities and hazards for the farmer are summarised in *Figure 2*. Guidance then follows for each activity. In each case, you should talk to the railway company if you need detailed guidance. The point of contact for larnród Éireann is the appropriate Divisional Engineer; for Luas, it is the Veolia Contract Manager (see *Section 3* for contact details).

Figure 2 Farmer Activities and Hazards



# Changing Field Drainage Arrangements

Changing field drainage arrangements.

Cutting/embankment instability if ground waterlogged.
Track instability if there is flooding or washout.

Sloped ground next to the railway is vulnerable to changes in water drainage, flooding or digging/excavation. If the ground begins to slip, the track may be undermined or material might fall onto the running line. The stability of the track is also dependent on the adequacy of the drainage from the railway.

Drains sited near the railway should not be altered and railway drainage facilities should not be used without the permission of the railway company. If you are considering altering drainage arrangements in any way, you should get permission from the local Divisional Engineer (larnród Éireann) or the Veolia Contract Manager (the Luas). See *Section 3* for contact details.

#### Changing the Use of a Field

Changing the use of a field.

Existing fencing might not be suitable to contain new livestock type.

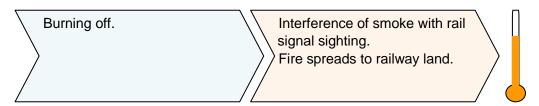
Animal on the line.

#### If you are:

- Putting livestock in a field for the first time, or
- Changing livestock type in a field,

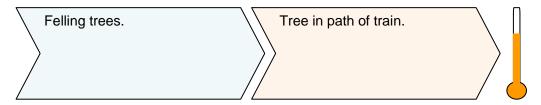
next to the railway, you should contact your local Divisional Engineer four weeks in advance. This will allow the Railway Company to make any changes to the fencing, if this is required.

# **Burning Off**



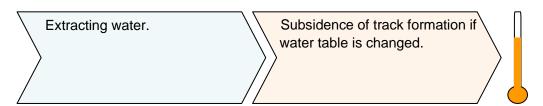
Consider the railway when burning off. The burning must be well controlled and carried out when the wind is not blowing towards the railway. Burning off is not allowed from 1<sup>st</sup> March until 31<sup>st</sup> August. This cuts down the risk from fire and also helps protect nesting birds and other wildlife (1).

# Felling Trees



If you are going to fell trees or cut branches from them, you should contact your local Divisional Engineer four weeks in advance if there is a chance of their fouling the railway boundary. This will allow suitable precautions to be put in place. See *Section 3* for contact details.

# **Extracting Water**

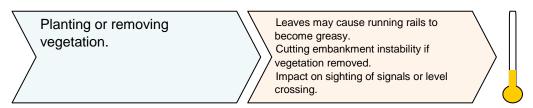


Water extraction can lower the water table and lead to subsidence of the railway formation, a loss of stability of the track and the potential for a train derailment even if the extraction is some distance from the railway.

For larnród Éireann, you should get permission from your local Divisional Engineer in advance changing any water extraction arrangements near to the railway. For the Luas, contact the Veolia Contract Manager. See Section 3 for contact details.

<sup>(1)</sup> Wildlife (Amendment) Act, 2000.

# Planting or Removing Vegetation



Cuttings and embankments depend on vegetation to bind the soil. This helps prevent erosion and subsidence. Leaves from trees and bushes may make the track slippery in autumn. Some types of vegetation make this effect worse. When planting vegetation near to the railway, you should ensure that vegetation is of the appropriate type.

For larnród Éireann, you should get permission from your local Divisional Engineer in advance of planting or removing vegetation alongside the railway. For the Luas, contact the Veolia Contract Manager. See *Section 3* for contact details.

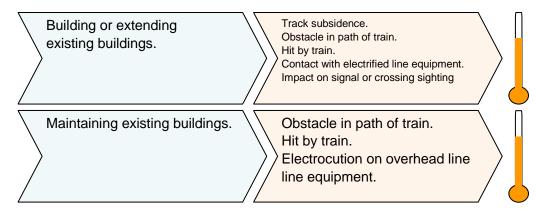
# 2.3 OWNER/OCCUPIER

The main activities and hazards for the owner/occupier are summarised in *Figure 3*. Guidance then follows for each activity. In each case, you should talk to the railway company if you need detailed guidance. The point of contact for larnród Éireann is the appropriate Divisional Engineer; for Luas, it is the Veolia Contract Manager (see *Section 3* for contact details).

Figure 3 Owner/Occupier Activities and Hazards

Activity	Hazard Risk
Building or extending existing buildings.	Track subsidence. Obstacle in path of train. Hit by train. Contact with electrified line equipment.
Maintaining existing buildings.	Obstacle in path of train. Hit by train. Electrocution on overhead line equipment.
Felling trees.	Tree in path of train.
Planting or removing vegetation.	Leaves may cause running rails to become greasy. Cutting embankment instability if vegetation removed. Impact on sighting of signals or level crossing.
Responding to incident affecting the railway.	Release from any facility affecting railway.
Responding to gas release incident.	Release from gas transmission system affecting railway. Train equipment ignites gas cloud.
Responding to incident where ESB power lines are down or damaged.	Electrocution. Train hits ESB OHLE.
Reporting incidents, injuries and substandard conditions.	Fail to report hazard. Hazard persists and results in injury.

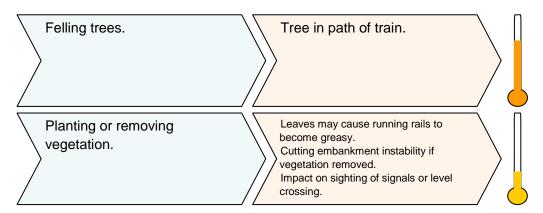
# Building or Extending Existing Buildings & Maintaining Existing Buildings



If maintenance works are required near to a train line or Luas, care should be taken not to go near the overhead wires or equipment or affect the path of the train/tram. If you do need to work near the overhead lines or track, you will need to get permission from the railway company. For larnrod Éireann, you should get permission from your local Divisional Engineer. For the Luas, you should get permission from the Veolia Contract Manager. See *Section 3* for contact details.

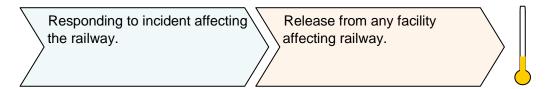
Detailed guidance for construction is given in *Volume 1* for any development near to the railway. You should in particular follow the guidance for activities for "*Designers*" and "*Construction*" and "*Railway Specific Company Guidance*". For maintenance work, you should look in *Volume 1* under the activities "*Working near to the track*" and "*Working near railway overhead line equipment*" and under the "*Railway Company Specific Guidance*".

#### Felling Trees & Adding or Removing Vegetation



Guidance on "Felling trees" and "Adding or removing trees/vegetation" is given in the previous section.

# Responding to Incident Affecting Railway

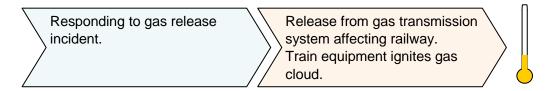


If an incident with the potential to affect any railway line or premises has occurred, the number for the appropriate central traffic control should be used (see *Section 3* for Contact details), in addition to any local coordination that is necessary.

If you are reporting an emergency, you should do so as follows:

- 1) Identify yourself, your location and your status (e.g. neighbour, level crossing user etc.)
- 2) Confirm who you are talking to
- 3) State "This is an emergency call"
- 4) Clearly state:
  - Location by reference to a station, signal, level crossing, bridge or other unambiguous reference also direction of travel of train if applicable
  - Nature of emergency e.g. cattle on line, collision, fire
  - Required actions e.g. call ambulance, turn off power, stop trains
- 4) Give your name and contact details in case further information is required.

# Responding to Gas Release Incident



In addition to alerting the railway central traffic control of the presence of a gas release, you should also contact the Bord Gáis 24-hour Emergency Line (see *Section 3* for Contact details). Bord Gáis have statutory powers to enter land and property to find and secure gas leaks.

# Responding to Incident where ESB Power lines are Down or Damaged

Responding to incident where ESB power lines are down or damaged.

Electrocution.
Train hits ESB OHLE.

If the emergency relates to damaged overhead ESB power lines near to the railway, you should contact railway central traffic control and the ESB Networks emergency telephone number (see *Section 3* for Contact details).

#### Reporting Incidents, Injuries and Substandard Conditions

Reporting incidents, injuries and substandard conditions.

Fail to report hazard. Hazard persists and results in injury.

The railway company should be taking all reasonable steps to ensure the safety of the passengers, staff and the general public. If you are injured or you see something unsafe, you should report it to a member of staff. The railway companies record all incidents and accidents, which are reviewed periodically to allow them to learn and continuously improve the level of safety.

Similarly, the railway companies have an obligation to provide a railway that is accessible to all <sup>(2)</sup>. Guidelines exist that describe what is meant by "accessibility" for a transport operator in Ireland <sup>(3)</sup> including what information is made available, the requirements for adequate and clear signage <sup>(4)</sup> <sup>(5)</sup>, the need for disability awareness training and coping in an emergency so that the needs of the public are met. If you feel that the railway company is not taking adequate action to address your concerns, you can report the matter to the Information Officer at the Railway Safety Commission (see *Section 3* for contact details). The RSC would also like to be told if you have suffered an injury associated with the railway requiring you to be detained in hospital for more than 24 hours.

<sup>(2)</sup> Ref [N]: Disability Act 2005 - Part 3.

<sup>(3)</sup> Ref [O]: Recommended Accessibility Guidelines for Public Transport Operators in Ireland.

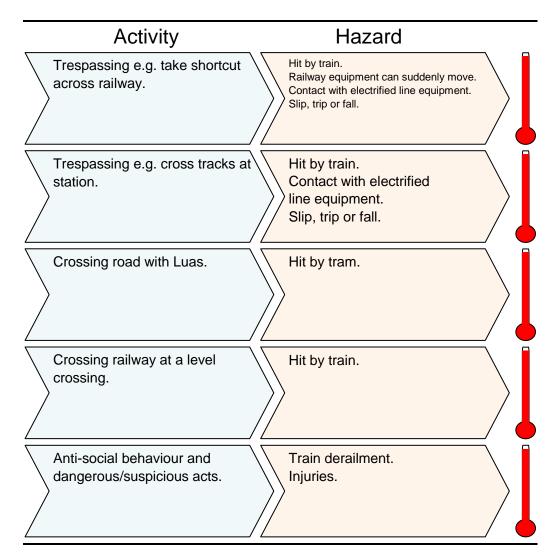
<sup>(4)</sup> Ref [S]: BS8501:2002, Graphical symbols and signs. Public information symbols.

<sup>(5)</sup> Ref [T]: BS8502:2003, Graphical symbols and signs. Creation and design of public information symbols. Requirements.

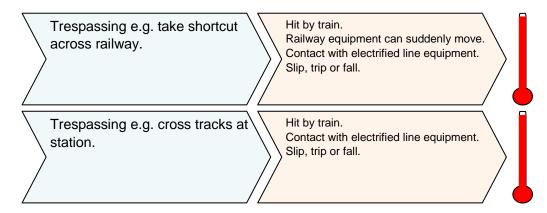
# 2.4 SCHOOL

The main activities and hazards for pupils and their schools are summarised in *Figure 4*. Guidance then follows for each activity.

Figure 4 School Activities and Hazards



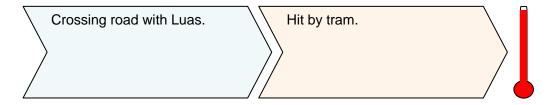
# Trespassing



Trespass is a very high-risk area on the railway. It can lead to several fatalities each year. Key points to remember are:

- Don't play on or near railway tracks. Apart from the risk of injury or death, trespass could result in six months in prison or a substantial fine.
- Don't play near high-voltage electric cables.
- Don't take shortcuts across tracks always use the footbridge or subway provided; remember, trains may operate at any time of the day or night.

# Crossing Road with Luas



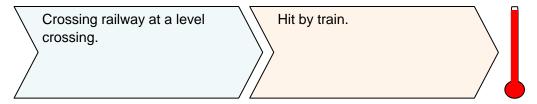


Pedestrians should stay vigilant, never walk out in front of a tram when it is moving, cross at designated pedestrian crossing points and be alert. There are prohibited areas associated with the Luas tramway which are marked with the no pedestrian access sign. Trespass into these areas is not allowed <sup>(6)</sup>. A DVD <sup>(7)</sup> that describes the hazards associated with the Luas (and how to be safe around it) is available from the Veolia Communications Manager. A Braille and audio CD with all details associated with the Luas is also available. Luas drivers also visit schools to provide safety information to the children. If you wish to arrange such a visit, contact the Veolia Communications Manager (see Section 3 for contact details). The use of a Luas road intersection is covered in *Volume 3*.

<sup>(6)</sup> Reference [J]: Light Railway (Regulation of Travel and Use) Bye-Laws.

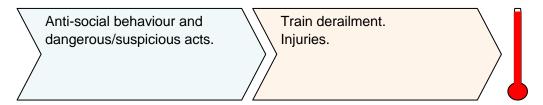
<sup>(7)</sup> Reference [I]: 'Luas Safety Message'.

### Crossing Railway at a Level Crossing



You should obey warning lights and signs when crossing the railway. Detailed guidance on the use of railway level crossings is covered in *Volume 3*.

# Anti-Social Behaviour and Dangerous/Suspicious Acts



#### Anti-social acts include:

- Stone throwing.
- Leaving objects on the line.
- Interference with railway equipment.
- Riding on the outside of trains.
- Graffiti.

It is an offence <sup>(8)</sup> to damage railway infrastructure or to put another person in danger. Dangerous or suspicious acts, or incidents such as fire or objects on the railway line, should be reported to a local member of staff or the Central Traffic Control (see *Section 3* for contact details). There is an obligation <sup>(9)</sup> to report danger caused to the railway. If you are reporting an emergency, you should do so as follows:

- 1) Identify yourself, your location and your status (e.g. neighbour, level crossing user etc.)
- 2) Confirm who you are talking to
- State "This is an emergency call"
- 4) Clearly state:
  - Location by reference to a station, signal, level crossing, bridge or other unambiguous reference also direction of travel of train if applicable
  - Nature of emergency e.g. cattle on line, collision, fire

<sup>(8)</sup> Reference [A]: Railway Safety Act (S 115, 117)

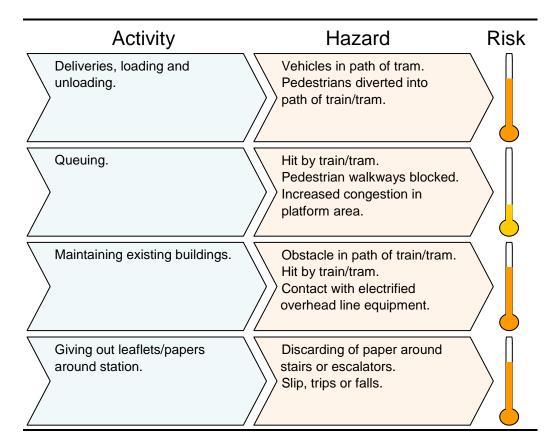
<sup>(9)</sup> Reference [A]: Railway Safety Act (S 116)

- Required actions e.g. call ambulance, turn off power, stop trains
- 5) Give your name and contact details in case further information is required.

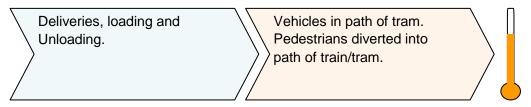
# 2.5 RETAIL OUTLETS

The main activities, hazards for retail outlets are summarised in *Figure 5*. Guidance then follows for each activity.

Figure 5 Summary of Retail Outlet Activities and Hazards



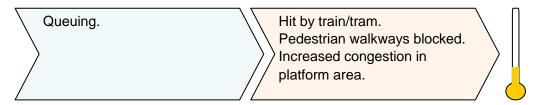
# Deliveries, Loading and Unloading



Retail outlets near railway concourses or platforms should ensure that delivery vehicles do not increase the level of congestion on the concourse or platform, nor obstruct passengers wishing to pass along the platform.

Retail outlets near the Luas should ensure that delivery vehicles or maintenance works do not obstruct the tramway or divert pedestrians into the 'swept path' of the tram. If in doubt, you should contact a member of station staff in the case of larnrod Éireann or the Veolia Contract Manager in the case of Luas (see *Section 3* for contact details).

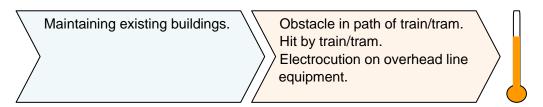
## Queuing



Retail outlets near train platforms should manage their queues so there is no increase the level of congestion on the platform, nor obstruction to passengers wishing to pass along the platform.

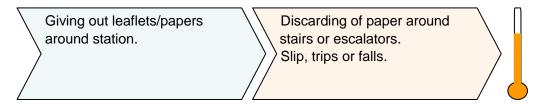
Retail outlets near the tram should manage their queues so ensure that do not queue into the path of the tram.

# Maintaining Existing Buildings



See "Building or Extending Existing Buildings & Maintaining Existing Buildings" on page 12.

#### Giving out leaflets/papers around station

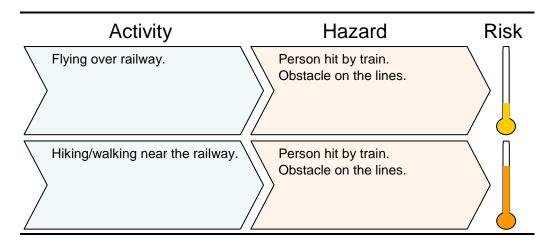


Passengers receiving leaflets or newspapers at stations tend to discard them. This can be particularly hazardous if they are discarded near stairs or escalators. You must always get the permission of the railway company if you want to give out leaflets/newspapers of any kind at stations/stops. Leaflets/newspapers should never be given out near stairs or escalators.

# 2.6 RECREATIONAL ACTIVITIES NEAR THE RAILWAY

The main activities, hazards and guidance for recreational activities are summarised in *Figure 6*. Guidance then follows for each activity.

Figure 6 Recreational Activities and Hazards



# Flying over Railway

Model aeroplane clubs, kite flyers, hang-gliders, balloonists, paragliders, and flying clubs should avoid over-flying the railway at low altitudes. Where there is interference with the overhead line or railway tracks, the appropriate traffic control should be contacted (see *Section 3* for contact details). There should be no trespass on the tracks until clearance has been given by the rail traffic controller.

## Hiking/walking near the Railway

Hikers and those walking near to the railway should avoid trespassing on railway land. There is more guidance on trespass on page 16.

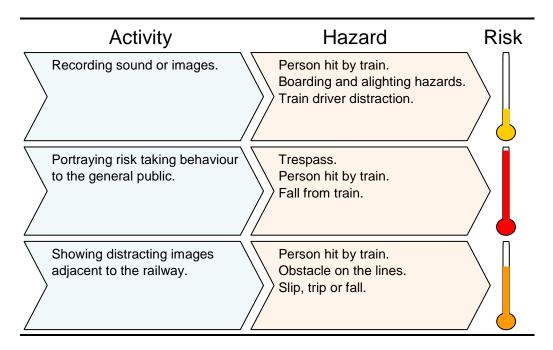
Hikers should use level crossings safely – see *Volume 3* for how to use level crossings safely.

Gun clubs operating near the railway should agree a procedure with the railway company to make sure that the railway cannot be affected. The first point of contact at larnród Éireann for planning to ensure your own safety and that of the railway is the *Chief Safety & Security Officer* (see *Section 3* for contact details).

# 2.7 MEDIA AND BROADCASTER

The main activities, hazards and guidance for media activities are summarised in *Figure 6*. Guidance then follows for each activity.

Figure 6 Media and Broadcaster Activities and Hazards



# Recording sound or images

You must always seek the permission of the railway company if you want to film, take pictures or make recordings of any type on or near the railway.

The first point of contact for the Luas is the Veolia Communications Manager (see *Section 3* for contact details). Permit applications are available on the <a href="https://www.luas.ie">www.luas.ie</a> website.

The first point of contact for filming at stations or on board train is the appropriate General Manager (see *Section 3* for contact details).

You should also ensure that you cross and use the railway safely - see *Volume 3* for how to use level crossings safely and *Volume 4* for using the railway.

# Portraying risk-taking behaviour to the general public

The media, advertising and broadcasting industries including internet sites have a responsibility to avoid showing risk-taking behaviour on the railways that might encourage copycat behaviour. If you are in doubt, you should contact the information officer of the Railway Safety Commission prior to broadcast to get further advice (see *Section 3* for contact details).

# Showing distracting images adjacent to the railway

Distracting images should be avoided at key locations such as roadside on the approach to level crossings/bridges or locations which can be seen as passengers board or alight.

# 3 KEY CONTACT POINTS

#### General

Emergency services (24-hour):

999 on any public or fixed land line or 112 on a mobile telephone.

# **Railway Safety Commission**

Information Officer

Railway Safety Commission

Trident House

Blackrock

County Dublin

Ireland

info@rsc.ie

www.rsc.ie

Tel: (01) 206 8110 Fax: (01) 206 8115

#### **Bord Gáis**

Bord Gáis 24-hour Emergency Line:

Tel: 1850 20 50 50

#### **ESB Networks**

ESB Networks Emergency Line (24-hour):

Tel: 1850-372-999

#### Iarnród Éireann

larnród Éireann Central Traffic Control (24-hour Emergency Number for reporting an immediate danger)

(01) 855 5454

larnród Éireann Electrical Control - DART area (Emergency Number for reporting an immediate danger)

(01) 878 7035

Third Party Co-ordinator Infrastructure

Iarnród Éireann

Track and Signals HQ

Inchicore

**Dublin 8** 

Tel: (01) 703 4494

Principal Engineer Track and Structures

Iarnród Éireann

Track and Signals HQ

Inchicore

**Dublin 8** 

Tel: (01) 703 4207

Chief Safety & Security Officer

Iarnród Éireann

Connolly Station

Dublin 1

Tel: (01) 703 2370

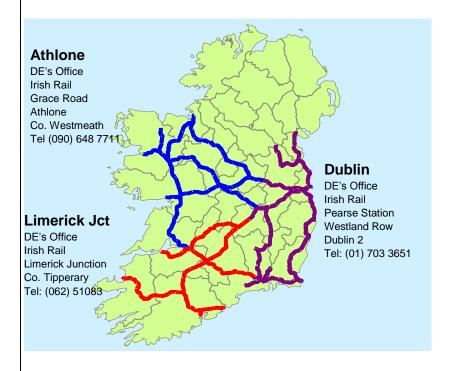
Accessibility Officer

http://www.iarnrodeireann.ie/about\_us/contact\_disabled\_access.asp

Email: access@irishrail.ie

(01) 703 2634

Divisional Engineer (DE) as appropriate:



General Manager via switchboard (01) 836 3333 as appropriate:

General Manager DART for the area bounded by Greystones, Howth and Malahide

General Manager Intercity & Commuter Network for all other areas

#### Luas

Luas – Central Traffic Control (24-hour Emergency Number for reporting an immediate danger)

(01) 467 3040

Veolia Contract Manager

Veolia Transport Ireland Limited

Luas Depot

Red Cow Roundabout

Clondalkin Dublin 22

Tel: (01) 461 49 10

Email: maintenance@veolia-transport.ie.

Safety Manager

Veolia Transport Ireland Limited

Luas Depot

Red Cow Roundabout

Clondalkin Dublin 22

Tel: (01) 461 49 10

Alignment Design

Railway Procurement Agency

Parkgate Business Centre

Parkgate St

Dublin 8

Tel (01) 6463400 or FREEFONE 1800 67 64 64

Communications Manager

Veolia Transport Ireland Limited

Luas Depot

Red Cow Roundabout

Clondalkin Dublin 22

Email: Luascustomercare@veolia-transport.ie

Tel: (01) 461 49 10 Freefone: 1800 300 604 Fax: (01) 461 4992

#### Heritage or Bord na Móna

Bord Na Móna <a href="http://www.bnm.ie/">http://www.bnm.ie/</a>

Fintown Railway

http://www.antraen.com

Irish Steam Preservation Society Limited

http://www.irishsteam.ie/

Lartigue Monorailway

http://homepage.eircom.net/~lartiguemonorail/Page%202.htm

Railway Preservation Society of Ireland

http://www.rpsi-online.org/

Tralee & Dingle Railway

http://www.tdlr.org.uk/

Waterford & Suir Valley Railway

http://www.wsvrailway.ie/
West Clare Railway

http://www.westclarerailway.com/

# 4 GLOSSARY OF TERMS

Catch Points	A pair of sprung trailing points usually located in
Catchi Folits	
	gradients steeper than 1 in 260. Their purpose is
	to derail any train running backwards without
0.1.17.6	authority or out of control.
Central Traffic Control	Main control room from which the passage of
(CTC)	trains is controlled.
Clearance	Gap between the 'swept path' of the train and the
	railway infrastructure.
Connex	Former name of Veolia Transport, the operator of
	the Luas.
Culvert	Small bridge or pipe carrying a stream under a
	railway or road.
DART	Dublin Area Rapid Transit. An area of electrified
	commuter mainline railway running from
	Greystones in the South to Howth and Malahide
	in the North.
Electromagnetic	This is a type of electromagnetic radiation,
interference (EMI)	produced from the operation of a primary
	equipment item. It is normally associated with
	electrical circuits that carry rapidly changing
	signals as a by-product of their normal operation.
	It is also sometimes called Radio Frequency
	Interference (RFI).
Height restricted bridge	Bridges are considered to have a height
	restriction if they do not provide a vertical
	clearance of 5.03m (16'6") for a 40' vehicle.
Heritage railway	A railway which is run as a tourist attraction and
	seeks to re-create railway scenes of the past.
larnród Éireann	The infrastructure provider and train operator of
	the mainline railway.
Industrial Railway	Private railway used exclusively to serve a
	particular industry – the largest industrial railway
	in Ireland belongs to Bord na Móna.
Luas	Tramway in Dublin.
Mainline railway	Railway operated by Iarnród Éireann. Excludes
	tramways such as the Luas.
Major Accident	Document required under major hazard
Prevention Document	legislation made under the Seveso II Directive.
(MAPP)	
Overhead line	Equipment suspended over the railway for
equipment (OHLE)	supplying electricity to electric trains. Sometimes
	called the overhead conductor system (OCS).
t	

Overhead conductor	Equipment suspended over the railway for		
system (OCS)	supplying power to electric trains. Sometimes		
, system (2 2 3,	also called overhead line equipment (OHLE).		
Over-line bridge	A bridge where the railway runs below another		
	route (e.g. a road).		
Parapet	Bridge side wall.		
Railway	Means of transport where vehicles run on iron		
Ranway	rails. In this booklet, the term includes both the		
	mainline railway and tramways.		
Railway airspace	The airspace above railway land.		
Railway company	A company that is responsible for tracks and		
Training Company	other railway infrastructure, or which operates		
	trains/trams (or both).		
Railway infrastructure	Fixed equipment and structures on and around		
Training initiating	the railway, including track, bridges, signals,		
	stations, platforms, buildings and level crossings.		
Railway Safety	The body responsible for regulating/enforcing		
Commission (RSC)	railway safety and investigating/reporting on		
(	railway incidents.		
Railway Procurement	The company responsible for the design and		
Agency (RPA)	build of the Luas.		
Running Rail	The rail on which a train's wheels sit.		
Safety Report	Document required under major hazards		
	legislation for the sites with large quantities of		
	major hazard materials.		
Signal	Similar to a road traffic light. Used to control the		
_	safe separation of trains.		
Signal sighting	Ability of the train driver to see the signal at the		
	correct distance.		
Swept path	The volume of space swept through by a train in		
	motion. It takes account of overhang on curves,		
	tilting, etc.		
Track formation	The material underneath the track and ballast		
	that provides support.		
Track destabilisation	Loss of track support.		
Third Party	Anyone not working for the railway company or		
	travelling on the railways as a passenger.		
Under-line bridge	A bridge where the railway runs over another		
	route (e.g. a road or a river).		
Veolia Transport	The company responsible for operating the Luas.		
Wayleave	A wayleave gives a right to use the land of		
	another for a special purpose. Unlike a lease, a		
	wayleave does not give the holder a right of		
	"possession" of the property, only a right of use		
Wheelbase	The distance between the front and back wheels		
	of a vehicle.		

# 5 REFERENCES

- [A] Statutory Instrument No. 31 of 2005, Railway Safety Act 2005.
- [B] Department of Transport, *Draft Guidelines for the Design of Railway Infrastructure and Rolling Stock: Section 5 Level Crossings*, 1<sup>st</sup> March 2002.
- [C] Statutory Instrument No. 476 of 2000, Control of Major Accident Hazards Involving Dangerous Substances Regulations, 2000, which give effect to European Directive 96/82/EC.
- [D] Department of Transport, *Draft Guidelines for the Design of Railway Infrastructure and Rolling Stock: Section 1 Permanent Way*, Earthworks and Structures, 1<sup>st</sup> March 2002.
- [E] Statutory Instrument No. 101 of 2004, *Light Railway (Regulation. of Works) Bye-Laws 2004*, The Stationary Office Dublin.
- [F] Railway Procurement Agency, Code of Engineering Practice for Works on, Near or Adjacent to the Luas Light Rail System, 7<sup>th</sup> August 2004.
- [G] Iarnród Éireann, Infrastructure Departmental Standard I-DEP-0120, Guidance on Third Party Works, Issue 1.0.
- [H] Wildlife (Amendment) Act, 2000.
- [I] Veolia Transport, Luas Safety Animation, DVD, 2006.
- [J] Statutory Instrument No. 100 of 2004, *Light Railway (Regulation of Travel and Use) Bye-Laws 2004*, The Stationary Office Dublin.
- [K] Iarnród Éireann, *The Safe Use of Unattended Railway Level Crossings*, July 2001.
- [L] Iarnród Éireann, Guide for Sensory and Mobility Impaired Passengers.
- [M] Railway Procurement Agency, *The RPA's Luas Accessibility Newsletter: Keeping in touch with the whole community.*
- [N] Disability Act 2005 Part 3.
- [O] National Disability Authority, Recommended Accessibility Guidelines for Public Transport Operator in Ireland, September 2005.
- [P] Health and Safety Authority, Code of Practice for Avoiding Danger from Underground Services, 1<sup>st</sup> Edition, February 2005.
- [Q] Iarnród Éireann, Infrastructure Departmental and Multidisciplinary Standard, I-DEP-0121, *Third Party Works: Railway Safety Requirements*, draft.
- [R] Statutory Instrument 1998 No. 2456, The Rail Vehicle Accessibility Regulations 1998, ISBN 0 11 079652 7.
- [S] BS8501:2002, Graphical symbols and signs. Public information symbols.
- [T] BS8502:2003, Graphical symbols and signs. Creation and design of public information symbols. Requirements.
- [U] Department of the Environment, "A Framework for Major Emergency Management in Ireland", 2006.