RAIU

Urgent Safety Advice Notice (USAN) 006

Interim Safety Recommendations

PART 1 – Introduction	
Organisation involved	Iarnród Éireann Infrastructure Manager (IÉ-IM)
Occurrence synopsis	From the 27th February 2023 to 24th November 2025 there have been eight reported near misses between trains and IÉ-IM members of staff; carrying out activities such as track patrolling, infrastructure inspections and fault rectification. There were no injuries as a result of these occurrences, however, these incidents pose a serious risk to members of staff on the railway who could be hit by trains, causing injuries or fatalities to one or more members of staff.
Scope of USAN	The RAIU are currently conducting a trend investigation into these eight reported near miss occurrences, this investigation is ongoing. This USAN focuses on six of the reported near misses (two of the incidents, which occurred at Bray Tunnel No. 4 and Bray Tunnel No. 2 on the 6th December 2023 and 11th April 2025, respectively, were deliberate non-compliances, in that signal protection which was required to enter the tunnels, was not requested; therefore these are not included in this USAN; however, they will be included in the trend investigation). In advance of the publication of the final trend investigation report the RAIU have issued this USAN, with interim safety recommendations, with a view to IÉ-IM taking immediate action, to further protect their staff accessing the live railway line by the implementation of these additional risk mitigation measures.
USAN issue date	9th January 2026

PART 2 – Definitions	
Cess	The space on either side of the track ballast normally used for drainage.
General principles of prevention	In Ireland, the General Principles of Prevention are the fundamental duties that employers must follow when managing safety and health. They come from the Safety, Health and Welfare at Work Act 2005 (Schedule 3) and form the legal basis for all risk-management decisions. These principles must be applied in order, from most effective to least effective. For example, the first is “avoid risks”, with the last being “provide personal protective equipment”.
Line blockage	Prevention of trains from moving on a line managed by placing or maintaining signals to danger or securing points.
Lookout	A person trained and competent to watch for approaching trains and provide a warning as part of a safe system of work (SSOW).
On or near the line	Near the line is within 3 metres (m) (10 feet) of the nearest rail (IÉ Rule Book).
Patrol Ganger	A person who is trained and competent to undertake patrolling duties on a specified length of track on behalf of IÉ-IM.
Position of Safety	A place allowing a clearance of at least 1.5 m (5 feet) between you (including anything you are wearing or carrying) and the nearest rail of any line on which a train is approaching (IÉ Rule Book).
T3 Possession	An absolute possession, which is a planned period during which a section of railway is taken out of service so that engineering, maintenance, or construction work can be carried out safely without trains operating.
Red Zone Working	Red zone working is where work takes place on or near any line or siding, including in a possession, on which trains (or movements) may pass (IÉ Rule Book). It should be noted that track patrolling is considered to be “working” (Section B, 2.2, Responsibility for Your Safety, IÉ Rule Book).
Risk control hierarchy (Network Rail (Great Britain (GB))	A structured, priority-based approach used to decide how risks should be controlled when working on or near the railway. It ranks control measures from the most effective to the least effective, ensuring safety risks are managed in a consistent and defensible way.

Safe Systems of Work (SSOW)	The Health & Safety Authority (HSA) define a SSOW as “A set of procedures according to which work must be carried out. SSOW are required where hazards cannot be eliminated, and some risk still exists. When developing your safe systems of work, consider how the work is carried out and the difficulties that might arise and expose you or your workers to risk. Then develop a set of procedures detailing how the work must be carried out to minimise or reduce the risk of accident or injury”.
Sighting distance	The minimum distance at which an approaching train must be visible to the Track Safety Co-ordinator (TSCs), as determined by the Sighting Distance Charts, to allow sufficient time for them to reach a position of safety before the train arrives. Warning times differ, depending on the speed of the line.
Signal protection	The placing and maintaining of signals to danger in order to protect a section of line where people or objects may be obstructing the line.
Track Access Index (TAI)	An internal IÉ guidance document intended to be utilised at the planning stage of work or by TSCs when creating a SSOW when on or near the line. More information on the TAI is provided in Section 4.5 (page 15).
Track patrol	Patrol gangers patrol the line to check the day-to-day safe conditions of the track and general infrastructure., typically undertaken weekly on a Monday on the IÉ network. It should be noted that track patrolling is considered to be “working” (Section B, 2.2, Responsibility for Your Safety, IÉ Rule Book).
Track Safety Co-ordinator (TSC)	The TSC is responsible for implementing a SSOW for one or more persons working on or about the line (IÉ Rule Book).
TSC Solo	A person that may work alone on or near the line but are not permitted to act as TSC for a group.
Unassisted Lookout (Network Rail (GB))	An Unassisted Lookout is a person on a railway work site who is solely responsible for watching for and warning track workers about approaching trains, using methods such as whistles, horns and shouting. Unlike more advanced systems, this method relies on direct human observation and communication without the aid of electronic equipment.
Work Protector	A Signalling, Electrical and Telecommunications (SET) competence. Persons appointed as a Work Protector are used to warn a workgroup of the movement of trains on a line open to train movement, in a small group where Lookouts are not used.

PART 3 – Evidence: Description of occurrences

3.1 – Near miss at Ardgillan, Dublin, on the 27th February 2023

The railway at the location of the incident is on the double track mainline from Dublin to Belfast. The maximum permitted speed on the line is 90 miles per hour (mph) (145 kilometres per hour (km/h)).

On the 27th February 2023 a patrol ganger was undertaking a track patrol; during the patrol, as the patrol ganger was bending down to inspect an insulated joint, a train approached through a shallow left-hand curve at 90 mph (145 km/h).

On seeing the patrol ganger, the train driver sounded the horn; on seeing the train, the patrol ganger moved to a position of safety, reaching it approximately two to three seconds before the train passed (see image below from the train's forward-facing CCTV (FFCCTV) below).

The sighting distance, for the location, was approximately 500 m, whereas the required minimum sighting distance, for the speed of the line, is required to be 700 m.

The TAI for this location has not yet been published.

IÉ-IM have reported that a specific SSOW and risk controls for the Ardgillan area have since been implemented.

3.2 – Near miss at Clonnydonnin, Westmeath, on the 9th October 2023

The railway at the location of the incident is on a single line between Portarlington and Athlone; the maximum permitted speed for trains is 80 mph (129 km/h).

On the 9th October 2023 a patrol ganger was undertaking a track patrol; at the start of the patrol, there was fog present, but as the patrol progressed fog conditions became worse to the point that visibility was poor.

A train approached at 78 mph (126 km/h) with the train driver only seeing the patrol ganger as they moved clear of the line.

The patrol ganger saw the lights of the train (they did not hear the train) and stepped clear of the running line onto the adjacent siding (not a position of safety) approximately two to three seconds before the train passed (see image below from the train's FFCCTV below).

While the minimum sighting distances were achievable for the location in clear weather, the minimum sighting distances could not be achieved in foggy conditions.

The TAI for this location has not yet been published.

At the time of the incident, the IÉ Rule Book did not explicitly reference what should occur when someone is working alone during fog or falling snow. Since the incident, the IÉ Rule Book has been updated to include instructions for TSCs, namely that during fog or falling snow, the TSC must arrange for the line(s) concerned to be blocked to all movements; or for an emergency speed restriction to be imposed to ensure that sufficient warning of approaching trains can be obtained by the Lookout.

3.3 – Near miss at Killiney, Dublin, on the 11th October 2024

The railway at the location of the incident is double track railway and is used by DART services from Bray to Greystones and services beyond to Wexford and Rosslare; the railway is equipped with Overhead Line Equipment (OHLE).

On the 11th October 2024, two OHLE Workers were assigned to carry out an OHLE Ground Level Inspection; looking for asset condition issues on the OHLE and logging and photographing these using an electronic tablet device. One member of staff acted as TSC and the other as Lookout; the TSC would complete the OHLE Ground Level Inspection, with the Lookout remaining focused on looking out for approaching trains.

At approximately 12:44 hrs a Down direction DART service (Train E224) stopped at Killiney. Both the TSC and Lookout moved to the Up cess in anticipation of its departure. Thirty-two seconds later Train E224 departed Killiney Station. As Train E224 passed the TSC and Lookout, the 12:34 hrs Greystones to Malahide (Train E821) approached Killiney on the Up line. As Train E821 approached the driver (Driver E821) sounded the horn. As Train E821 continued to approach, the TSC appeared to step backwards towards the running line and was guided back towards a position of safety by the Lookout using their arm. Driver E821 sounded the horn two further times after placing the brake into full service.

It has not been possible to determine if the TSC was in a position of safety in the ten seconds before the train arrived at their location.

However, it has been determined, from the TAI, that the location would have been categorised as a Red Section (i.e. High Risk); however, the TAI was not published at the time of the incident. In addition, a site inspection, carried out by IÉ-IM, found that the sighting distance on the Up line was 154 m, significantly less than the required minimum sighting distance of 500 m.

3.4 – Near miss at Powerstown, Carlow, on the 18th October 2025

The railway at the location is a single line between Carlow and Muine Bheag with a maximum permitted speed of 80 mph (128 km/h). The required minimum sighting distance for the location is 700 m; however, at this location there is a curve (61 ¼ Milepost) with vegetation outside the railway boundary restricting sighting distance to less than 350 m.

On the 11th October 2025, the PWI decided to carry out an inspection of a culvert. The PWI planned to carry out the task alone using the TSC Solo competence; they thought that they would not be working on the line itself and would be in a position of safety away from the line when on site and therefore would not need Lookouts.

The PWI commenced walking in the Down direction from the access point. On reaching the curve, the PWI walked on the ballast shoulder to avoid long grass in the cess.

As the PWI approached overbridge OBW 79, a train approached in the Up direction. The train driver saw the PWI on the line approximately seven seconds before reaching the staff member and immediately sounded the horn as well as making an emergency brake application. The PWI reached a position of safety around four and a half seconds before the train reached them.

The TAI for this location has not yet been published.

3.5 – Near miss at Heuston, Dublin, on the 18th October 2025

The incident occurred near Islandbridge Junction on approach to Heuston Station, at HN709 Points. The location is in a cutting with three bi-directional running lines; these have a maximum permissible speed of between 25 mph (40 km/h).

At 19:15 hrs, the Signalman reported a fault at HN709 Points to the SET Department, two SET technicians were deployed to rectify the fault, one technician would take the role of TSC and the other of Work Protector (WP). The TSC and WP made their way to HN709 Points. As it was planned to visually inspect the point ends and drive mechanisms then check the relays in a lineside cabinet, the TSC identified the WP's position of safety as the Up cess. Whilst inspecting the point motor and drive between the Down main and the Relief, they would use the Down cess as a position of safety as this would involve crossing only one line to reach it. For inspecting the relays, this could be undertaken from a position of safety. Both the TSC and WP were equipped with head and hand torches (as it was dark at the time).

At 19:45 hrs, the 19:45 hrs Heuston to Portlaoise (Train D222) departed Heuston Station on the Relief line with the WP giving a verbal warning to the TSC. At approximately 19:51 hrs, whilst approaching through the underbridges on a curve at approximately 20 mph (32 km/h), the driver of Train D222 (Driver D222) saw the headtorches of the two SET technicians on the line and saw them moving to different sides of the line. The WP moved to the Up side, crossing over to the Up main line, with the TSC moving over the Down Relief to the adjacent cess. Driver D222 sounded an extended blast on the horn and made a brake application but did not stop. The FFCCTV footage was inconclusive as to whether the TSC reached a position of safety more than ten seconds before Train D222 reached their location, but it is probable that they were in position against the wall at least eight seconds before Train D222 arrived.

The TAI, which was published at the time of the incident, categorised the location as Low Risk (Yellow Section).

3.6 – Near miss at Clonygowan, Offaly, on the 24th November 2025

The railway at the location of the incident is on a single line, between Portarlington and Athlone.

On the 24th November 2025 a patrol ganger was track patrolling; during the patrol the patrol ganger was walking in the Up direction in the five foot when they heard a train approaching in the Up direction (i.e. the patrol ganger had their back to the approaching train). The train was travelling at 79 mph (127 km/h) as it approached the location. The patrol ganger, on hearing the train, moved clear, but only reached a position of safety less than three seconds before the train arrived (see image below from the train's FFCCTV below).

The sighting distance, for the location of the Patrol Ganger, was approximately 190 m, whereas the minimum sighting distance, for the speed of the line, is required to be 700 m.

The TAI for this location has not yet been published.

PART 4 – Evidence: Track Patrolling

4.1 – Legislation

Safety, Health and Welfare at Work Act 2005

Part 2, General Duties, Regulation 8 – General duties of the employer, states that in so far as is reasonably practicable, the general duties of the employer include (not all are listed here):

- Every employer shall ensure the safety, health and welfare at work of his or her employees;
- Managing and conducting work activities in such a way as to ensure the safety, health and welfare at work of his or her employees;
- As regards the place of work concerned, ensuring the design, provision and maintenance of it in a condition that is safe and without risk to health;
- Providing systems of work that are planned, organised, performed, maintained and revised as appropriate so as to be, so far as is reasonably practicable, safe and without risk to health;
- Providing the information, instruction, training and supervision necessary to ensure, the safety, health, and welfare at work of his or her employees;
- Determining and implementing the safety, health and welfare measures necessary for the protection of the safety, health and welfare of his or her employees when identifying hazards and carrying out a risk assessment or when preparing a safety statement and ensuring that the measures take account of changing circumstances and the general principles of prevention.

The general principles of prevention require, for example, the avoidance of risks and the evaluation of unavoidable risks.

Railway Safety Act 2005

The Railway Safety Act 2005 (Sections 36, 37, 39) states, that in so far as reasonably practicable:

- It shall be the general duty of a railway organisation to ensure the safety of persons in the operation of its railway;
- It shall be the general duty of a person working in the course of the operation of a railway organisation, and of any person being on a railway or railway premises or railway land or on a train, to conduct himself or herself in such a way as to ensure that no person (including himself or herself) is exposed to danger as a consequence of any act or omission of his or hers;
- A railway organisation shall implement a safety management system and shall prepare a document safety management document describing the components of such safety management system.

4.2 – IÉ Rule Book

Section B, Part Two, 6.0 Instructions to Track Safety Co-ordinators

Section 6.12.2, When it is safe for you to work alone, states "you can work alone provided:

- The work only involves patrolling, examining or inspecting or work of a minor nature as authorised in the Departmental Instructions;
- You will be able to remain sufficiently alert for the approach of trains and be able to reach a position of safety at least 10 seconds before a train arrives.

Alternatively you must arrange for the line(s) concerned to be blocked to all movements".

Section 6.12.3, What you must do during the work, states that the TSC must:

- Be alert constantly;
- Look up frequently;
- Avoid allowing the work you are doing, or anything else, to affect your seeing or hearing approaching trains.

4.3 – Risk assessments

RA12801, Track Patrolling, operative since 1st January 2023

Risk assessment RA12801, for the task of track patrolling, was the risk assessment relevant to the near miss at Ardgillan. It includes thirty hazards, risks, and risk controls. Relevant to patrol gangers being struck by trains is the following hazard, namely:

Hazard 1 – Train movements

With an initial risk ranking of 12 (severity = 4 and likelihood = 3), the risk controls are as follows:

- Patrol gangers to be provided with the following information: Working timetable; Weekly Circular; General Appendix; Occupation Features Form; additional running notices; IÉ Rule Book; CCE-TMS-361, Technical Standard for Track Patrolling;
- Supervisors must pay particular attention to ensure acting staff have all available information;
- Local knowledge essential;
- Staff must be trained, assessed and competent to carry out safety critical duties;
- Task appropriate personal protective equipment to be worn at all times.
- Patrol gangers are provided with a prescribed amount of equipment the following equipment (not listed here).

RA50, Track Patrolling, Version 2.2 & 2.4, operative since 8th August 2023 and 15th November 2023, respectively

RA50, Track Patrolling, is the risk assessment applicable to the incidents at Clonnydonnin and Clonygowan. There are twelve hazards identified with their associated risks, initial risk ranking, risk controls and updated risk ranking (after the application of risk controls). Relevant to patrol gangers being struck by trains are two hazards, namely:

Hazard 1 – Train, Engineering Trains, or Road Rail Vehicle (RRV) movements

With an initial risk ranking of 16 (severity = 4 and likelihood = 4), the risk controls are as follows:

- Supervisors must ensure the patrol gangers (and those acting) are briefed, are familiar with and have access to the following information: CCE-TMS-361, Technical Standard for Track Patrolling;
- Supervisors must pay particular attention to ensure acting staff have all available information;
- Local knowledge essential;
- Staff must be trained, assessed and competent to carry out safety critical duties;
- The patrol ganger must check the following before their inspection: weekly circular; weather conditions; additional running notices; working timetable; all equipment as per training;
- Persons undertaking track patrolling should walk in the direction facing oncoming traffic, where possible;
- On single track, look up frequently in both directions. Extra care must be taken in areas where views are reduced and there are external noises;
- Task appropriate personal protective equipment (PPE) must be worn at all times.

These risk controls, reduce the risk ranking to 8 (severity = 4 and likelihood = 2 (i.e. severity remains the same but the likelihood has been reduced).

Hazard 2 – Entering the railway environment

With an initial risk ranking of 16 (severity = 4 and likelihood = 4), the risk controls are as follows:

- Patrol ganger to use approved access points only; and, all access gates to be locked after use.

These risk controls, reduce the risk ranking to 8 (severity = 4 and likelihood = 2 (i.e. severity remains the same but the likelihood has been reduced).

RA1258, Foot Patrolling – Overhead Contact System (OCS), Version 2.0, operative since March 2022

RA1258 is the risk assessment for weekly Foot patrollng by SET (OCS) department and is relevant to the incident at Killiney. There are five hazards identified with their associated risks, initial risk ranking, risk controls and updated risk ranking (after the application of risk controls). Relevant to OHLE Workers being struck by trains are two hazards, namely:

Hazard 1 – Train movements

With an initial risk ranking of 12 (severity = 3 and likelihood = 4), the risk controls are as follows:

- TSC to establish a SSOW;
- SET Work Protector/ Lookout to be used to give adequate warning of approaching trains;
- Staff to be briefed on worksite hazards using Site Safety Briefing forms;
- Staff to be trained to PTS/Safe pass level;
- Approved high visibility clothing to be worn.

These risk controls, reduce the risk ranking to 6 (severity = 3 and likelihood = 2 (i.e. severity remains the same but the likelihood has been reduced).

Hazard 5 – Walking in areas of limited clearance and or tunnels

With an initial risk ranking of 12 (severity = 4 and likelihood = 3), the risk controls are as follows:

- When inspecting Bray – Greystones tunnels inspection will be done with CCE foot patrol;
- Be extra vigilant when working in areas of limited clearance;
- Walk on platforms when in station areas;
- When working in area of limited clearance contact signalman to arrange signal protection where possible.

These risk controls, reduce the risk ranking to 4 (severity = 4 and likelihood = 1 (i.e. severity remains the same but the likelihood has been reduced).

RA2102, SET General Risk Assessment, Version 2.0, operative since August 2020

RA2102 is the General Risk Assessment for the OHLE locations of the SET department at Killiney covering SET maintenance. There are thirty-nine hazards identified with their associated risks, initial risk ranking, risk controls and updated risk ranking (after the application of risk controls). Relevant to working Red Zone, the following hazards are identified:

Hazard 1 – Train, OTMs, or road rail machine movements

With an initial risk ranking of 20 (severity = 4 and likelihood = 5), the risk controls are as follows:

- Section B of the IÉ Rule Book must be adhered to when going on or near the line;
- When going on or near the line the TSC must complete a site safety briefing and record the briefing;
- When going on or near the line by yourself you must carry out the role of TSC and record the briefing;
- The briefing should include protection arrangements and refer to the following: risk assessments, SSOWs and IÉ Rule Book;
- Staff must be trained, assessed and competent to carry out safety critical duties;
- Task appropriate PPE to be worn at all times;
- If required, use Lookout/ SET Work Protector while working;
- Works of a minor nature: You must ensure you have sufficient sighting distances and can reach a position of safety at least 10 seconds before a train arrives;
- Staff must pay particular attention to quietly moving trains / OTMs / RRVs;
- All personnel on site must have completed a P.T.S. and Safe Pass Course and be certified.

These risk controls, reduce the risk ranking to 4 (severity = 4 and likelihood = 1) to 4.

Hazard 23 – Inspecting / working during poor weather (storms / lighting/ snow / fog)

With an initial risk ranking of 16 (severity = 4 and likelihood = 4), the risk controls are as follows:

- Implement same risk controls as per Hazard 1;
- Staff must take extra care during poor weather conditions;
- Task appropriate PPE to be worn;
- Lone working / StaySafe app to be used when required;
- Contact controlling signalman to establish train movements before going lineside;
- Only work on electrical equipment when it's safe to do so.

These risk controls, reduce the risk ranking to 6* (severity = 4 and likelihood = 2).

*This should be a risk ranking of 8 (error in the risk assessment).

4.5 – Track Access Index

The TAI which is a guidance document intended to be utilised at the planning stage of work or by TSCs when creating a SSOW when on or near the line.

The TAI breaks the IÉ network into quarter mile sections highlighting all hazards contained within the section. The three factors (hazards) with the highest scoring rate are: sighting distance availability; position of safety availability; and train frequency. Other hazards include: line speed; curves; and limited clearance.

As a result, the model has produced a colour coded hierarchy of risk for each quarter mile section of the network. Yellow = Low; Orange = Medium; Red = High; Black = Very high). Below is the breakdown of network percentages of the four risk bands from the risk model classification:

Network Percentages as per Risk Model Classification

BAND	RANGE	NO.	%
Low	0 to 2	791	19.1%
Medium	2 to 6	1419	34.2%
High	6 to 16	1543	37.2%
Very High	16 or more	392	9.5%

IÉ-IM have established that 46.7% of the quarter mile sections on the IÉ network have locations, within these sections, which are either high or very high risk.

The TAI also includes guidance on the most appropriate IÉ Rule Book protection measures to be adopted at the required location.

To date, only four of the twenty-five divisions in IÉ, have had the TAI published as “live”. The remaining divisions are considered draft. IÉ-IM have stated that the implementation by Divisional Departments may be considered in draft for the issued areas and that all the divisions were advised of the Red and Black areas in 2023.

It should be noted that, since the development of the TAI, there have been improvements to the infrastructure, such as the introduction of safe walking routes, which, once the TAI model is re-calculated, should show that the overall risk has reduced.

4.6 – RAIU Investigation Report: Near miss with an Iarnród Éireann Patrol Ganger near Woodlawn, Galway, 4th June 2019 (published 27th May 2020)

On the 4th June 2019, a patrol ganger was involved in a near miss with a train at Woodlawn, Galway. The RAIU conducted an investigation and found that the immediate cause of the incident was that the patrol ganger was in a position of danger as the requirements of the IÉ Rule Book could not be met in full for their patrol length.

Contributory factors to the incident were:

- The location of the incident did not have the required sighting distances available for a patrol ganger to conduct the inspection within the parameters set out in the IÉ Rule Book;
- The Patrol Ganger was walking in the same direction as the oncoming train;
- There was adverse weather conditions at the time of the incident, which may have affected the Patrol Ganger's ability to hear the train.

Underlying causes to the incident were:

- The IÉ-IM CCE Department Risk Assessment and Section B, Part Two of the IÉ Rule Book are not practical in the provision of protection to patrol gangers at locations with inadequate sighting distances;
- There appears that IÉ-IM have, over a long period of time, accepted a certain element of risk in relation to track patrolling given that known dangers are not being adequately mitigated by patrol gangers or their managers.

A root cause associated with the incident was that the mitigation measures set out in CCE-SMS-006, Hazards and Risk Assessments, were not robust in the protection of patrol gangers, given that the mitigation measures were not practical for the track patrolling task.

As a result of the incident at Woodlawn, the RAIU made two safety recommendations, as follows:

- Safety Recommendation 202002-01 – IÉ-IM should review its track inspection methods to see if technological/ mechanised systems and/ or other safety measures could be implemented to eliminate/ minimise track worker exposure to railway hazards whilst undertaking the task of track patrolling;
- Safety Recommendation 202002-02 – IÉ-IM should, through their risk assessment process, conduct a review of the patrol lengths, with the objective of identifying all patrol lengths with associated risks, and introducing adequate mitigation measures to eliminate these risks. Consideration should be given to the introduction of technologies (such as anti-collision devices) for use by patrol gangers, with the objective of warning patrol gangers of oncoming trains.

4.7 – Measures taken in Great Britain to protect track workers

Significant changes have been occurring in GB, in terms of the safety of track workers on or near the line, which the RAIU consider should be highlighted as part of this USAN.

In GB, the Network Rail (the GB Infrastructure Manager) manual entitled, Safety of people at work on or near the line (NR/L2/OHS/019), details the principles and processes for planning, authorising and making changes on site to SSOWs and assurance arrangements (for both walking and working). The requirements of NR/L2/OHS/019 are reflected in the rules, handbooks and other company procedures.

NR/L2/OHS/019 details a SSOW risk control hierarchy that must be followed and establishes the three key roles of the Planner, the Responsible Manager and the Person In Charge (PIC) of the work on site, with duties assigned to the three roles. It requires that all track access (including attending to infrastructure faults) is adequately planned with a safe work pack produced, and this is authorised by a Responsible Manager; to change a SSOW requires re-authorisation.

With progressive revisions and enforcement of NR/L2/OHS/019 since 2019 (as a result of two track workers being struck by a train and fatally injured in Margam in 2019), this has resulted in a 99% reduction in working with Lookouts with a corresponding increase in the use of arrangements similar to signal protection and T2 protection. Working on open running lines using temporary or fixed warning systems remains permitted.

On the 6th December 2025 a further revision came into effect, requiring further significant restrictions to the use of working with a Lookout (i.e. the equivalent of Red Zone working), namely:

- Using Unassisted Lookouts as a SSOW when a group is walking is no longer permitted;
- When a group is working, Unassisted Lookouts can only be used if this is planned in advance and authorised at company director level. The permissible speed of approaching trains must not exceed 25 mph and cannot be reduced to this speed by temporary or emergency speed restriction;
- No open lines can be crossed to reach a position of safety;
- Lookouts are not allowed during darkness or poor visibility or when in or near a tunnel;
- Lookouts can only be used if trains can only approach on the line being worked on or an adjacent line and cannot be routed on to that line after becoming visible. Distant or intermediate Lookouts cannot be used (these Lookout further extend the warning time).

In relation to these changes, with the significant increase in the use of line blockages (signal protection), additional technology has been deployed to overlay additional protection to this SSOW to reduce the potential for error by signalmen. This includes the ability to carry out remote disconnection/ route barring of signals after a line blockage has been put in place by the PIC using a simple electronic tablet interface.

PART 5 – Analysis & Conclusions

The RAIU found that the location of the incident in Woodlawn (2019) did not have the required sighting distances available for a patrol ganger to conduct the inspection within the parameters set out in the IÉ Rule Book and therefore was in a position of danger during their patrol length.

In three of the recent occurrences involving patrol gangers, the required sighting distances for the locations was not achievable; meaning that the patrol gangers were in a position of danger for some part of their patrol lengths.

Given that 46.7% of the IÉ network has areas within the quarter mile sections that are categorised as either high or very high risk for those accessing the line, it can be stated that the planned SSOW detailed in the IÉ Rule Book cannot be achieved by allocating lone patrol gangers (i.e. no Lookouts).

The RAIU have previously identified (in the investigation into the incident at Woodlawn) that IÉ-IM appear to have, over a long period of time, accepted a certain element of risk in relation to track patrolling given that known dangers are not being adequately mitigated by patrol gangers or their managers (see page 16); and this appears to continue to be the case.

The RAIU concludes that IÉ-IM is not fully discharging its duties under the Safety, Health and Welfare at Work Act 2005 and the Railway Safety Act 2005. By accepting an avoidable level of risk in relation to track patrolling, failing to provide a place of work that is safe and without risk to health (including ensuring the safe access of staff to the railway line), and failing to adequately control and mitigate the known hazards associated with track patrolling, IÉ-IM has not reduced these risks to a level that is as low as reasonably practicable (ALARP).

PART 6 – Measures taken, ongoing and proposed by IÉ-IM

6.1 – Trackworker Safety Improvement Programme Outputs to Date

Following on from a number of near miss events involving frontline IÉ-IM staff on the operational railway, IÉ-IM put in place the Trackworker Safety Improvement Programme, which has a steering committee which meets regularly to oversee and further develop safety improvements in this area. A number of work streams are at various different stages of development to improve safety for those who are walking/working on or near the line and these have generated a number of changes to systems of work, including (as reported by IÉ-IM to the RAIU):

Publication of the TAI

Four of the twenty-five divisions have had the TAI published as "live", outlined in Section 4.5 (page 15).

T3 Track Patrolling

After completion of the TAI for Division 1 (DART area), Division 1 was identified as a high-risk environment; as such track patrolling has moved to taking place within nighttime T3 Possessions.

Track patrolling has also been moved to daytime T3 Possessions for other divisions (Divisions 7,8, 13 and 18) of the network where lower levels of traffic permit daytime engineering access.

Bi-weekly Track Patrolling

After a review of the infrastructure asset base for asset assurance, there has been a move towards bi-weekly patrolling, which reduces the amount of time spent by patrol gangers on the track (thus reducing the exposure to risk). IÉ-IM have stated that "The coming weeks will see further moves to bi-weekly patrolling such that this will be standard for most of the network (some areas will remain for now at weekly patrolling due to asset condition, however other mitigations apply for these locations)".

Infrastructure Improvements

To improve the safety of those on or about the line, IÉ-IM has spent €10 million on improvements to walking routes and access points to reduce the need to walk on the line; this programme is ongoing and is prioritised on the basis of risk.

Incident Specific Actions

Following internal investigations, specific actions have been taken to prevent the reoccurrence of similar incident, for example, having briefings in relation to patrolling in foggy conditions and in the need for signal protection to access Bray Head Tunnels.

Bulletins are also issued, post-incident, to share any safety learnings.

Changes to Personal Protective Equipment

There has been a move to “full orange” high visibility clothing (i.e. tops and trousers are all orange with the required reflective strips), which improves the visibility of staff working on the line.

Implementation of Technologies

A drone strategy was commenced in 2025, to mitigate the need to access the track.

6.2 – Further Improvement Plans for 2026

IÉ-IM have reported the following improvement plans for 2026, as follows:

Introduction of the Loneworker App

The Loneworker App is an addition to IÉ-IM’s suite of mitigations, as lone working is a key risk identified in night patrolling and other activities. The app has been rolled out and is operational in some areas as of 2025 and the final mass rollout is planned for the first half of 2026.

IÉ Rule Book Change

IÉ-IM intends to revise the IÉ Rule Book during 2026 to support track patrolling in T3 Possessions.

Implementation of Signal Protection

A revision of the rules relating to signal protection is planned, this aims to develop a more formalised approach to signal protection, to the existing methodology.

PART 7 – USAN Safety Recommendations	
USAN Issue Date	Draft issued 09/12/2025
USAN Title	Safety of track workers on or near the line
USAN Number	USAN 006
Addressee	Commission for Railway Regulation (CRR)
Implementer	IÉ-IM
Synopsis of occurrences	From the 27th February 2023 to 24th November 2025 there have been eight reported near misses / near collisions between trains and IÉ-IM members of staff; carrying out activities such as track patrolling, infrastructure inspections and fault rectification.
Possible consequences	There were no injuries as a result of these occurrences, however, these incidents pose a serious risks to members of staff on the railway who could be hit by trains, causing injuries or fatalities to one or more members of staff.
USAN Safety Recommendation 1	The RAIU note that only four of the twenty-five divisions on the IÉ network have their TAI published, the RAIU consider this to be an essential guidance document to assist, in the planning process, for TSCs when creating a SSOW when on or near the line. As a result, the RAIU make the following safety recommendation: **IÉ-IM should expedite the publication of all TAIs, for all remaining divisions, with a view of having these published by the end of December 2026.** It should be noted that this is effectively a re-iteration of the safety recommendation (issued five years ago) made in the RAIU's investigation into the incident at Woodlaw, namely Safety Recommendation 202002-02 – IÉ-IM should, through their risk assessment process, conduct a review of the patrol lengths, with the objective of identifying all patrol lengths with associated risks, and introducing adequate mitigation measures to eliminate these risks. Consideration should be given to the introduction of technologies (such as anti-collision devices) for use by patrol gangers, with the objective of warning patrol gangers of oncoming trains.

USAN Safety Recommendation 2	The RAIU have found, that in three of the recent occurrences involving patrol gangers, the required sighting distances for the locations was not achievable; meaning that is not safe for patrol gangers to conduct track patrols; this information would be in the TAI. The RAIU considers that IÉ-IM is not fully discharging its duties under the Safety, Health and Welfare at Work Act 2005 and the Railway Safety Act 2005. By accepting an avoidable level of risk in relation to track patrolling, failing to provide a place of work that is safe and without risk to health (including ensuring the safe access of staff to the railway line), and failing to adequately control and mitigate the known hazards associated with track patrolling, IÉ-IM has not reduced these risks to a level that is ALARP. As a result, the RAIU make the following safety recommendation: **IÉ-IM should, with immediate effect, cease track patrolling, using TSCs working alone, in locations where the minimum sighting distances, set out in the IÉ Rule Book, cannot be met.** **Where in the interim, track patrolling is required, alternative SSOWs should be introduced; however, supervisors and managers planning the SSOW should apply a risk control hierarchy (developed with consideration to the general principles of prevention), to ensure Red Zone working is the last choice.**
USAN Safety Recommendation 3	The current arrangements for track patrolling do not adequately consider adapting technological processes for track inspection (previously recommended by the RAIU, in 2020, after the near miss at Woodlawn) for the prevention of patrol gangers and workers being struck by a moving train. As a result, the RAIU make the following safety recommendation: **IÉ-IM should review its track inspection methods with a view to introducing technological/ mechanised systems to eliminate/ minimise the need for track patrolling. Where staff must access the live railway, effective safety measures (technological/ mechanised systems) should be implemented to eliminate/ minimise track worker exposure to railway hazards.**

USAN Safety Recommendation 4	There were two incidents of track access, involving non-urgent inspections (to civil assets and site surveys) and one incident of track access responding to a fault. Currently, Red Zone working (lines open to traffic) is regularly used by TSCs for carrying out ad-hoc tasks and inspections with no oversight of the SSOW selected or the planning of the SSOW. The RAIU consider that IÉ-IM should identify these types of track access and therefore the RAIU make the following safety recommendation: **IÉ-IM, in terms of track access, are to carry out the following:** **1. Identify access opportunities on all lines, including new access opportunities, for example T3 Possessions, where possible;** **2. Identify work that needs to be done on or near the lines;** **3. In light of 1 & 2, assess what work can be done in the available access, taking into account all other risks (including, and not limited to, safety of the line) and the risk control hierarchy (to ensure Red Zone working is the last choice);** **4. Provide a requirement for the issuance of necessary management and supervisory authorisations, to ensure, so far as reasonably practicable, that the identified work is done in the identified access opportunities. ***

* Some wording taken from The Office of Rail and Road (Great Britain), Improvement Notice, IN/TW/2019/07/08/1, issued the 8th July 2019.

USAN Safety Recommendation 5	There were two incidents of track access, involving non-urgent inspections (to civil assets and site surveys) and one incident of track access responding to a fault. The RAIU consider that further planning and supervision is required for these types of track access and therefore make the following safety recommendation: **IÉ-IM are to introduce and implement effective management and supervisory authorisation arrangements to ensure, so far as is reasonably practicable, that:** **1. Any maintenance work not able to be done in access opportunities, for example T3 Possessions, including in response to faults and incidents, is planned and carried out in such a manner that each level of the risk control hierarchy (developed with consideration to the general principles of prevention) is demonstrably considered before the next one down is considered, including specifically line blockages using technological means of protection or warning where appropriate;** **2. Where, due to other risks of physical circumstances, work cannot be carried out in any manner other than with trains running (for example urgent repairs), technological means of additional protection and/ or warning must be provided and all other precautions are taken to prevent injury; and,** **3. Where necessary to prevent immediate risks, for example to the travelling public, and where it would be unreasonable to wait for technological means of protection and/or warning, all other precautions, including management and supervisory arrangements, are taken to prevent injury to persons working on or near the line from moving trains.**

* Some wording taken from The Office of Rail and Road (Great Britain), Improvement Notice, IN/TW/2019/07/08/2, issued the 8th July 2019.