

Rail Safety statistics

Statistics through to the period ended 31 December 2022



Copyright information

This publication is copyright © Waka Kotahi NZ Transport Agency. Material in it may be reproduced for personal or in-house use without formal permission or charge, provided suitable acknowledgement is made to this publication and Waka Kotahi NZ Transport Agency as the source. Requests and enquiries about the reproduction of material in this publication for any other purpose should be made to:

Manager, Information
Waka Kotahi NZ Transport Agency
Private Bag 6995
Wellington 6141

The permission to reproduce material in this publication does not extend to any material for which the copyright is identified as being held by a third party. Authorisation to reproduce material belonging to a third party must be obtained from the copyright holder(s) concerned.

Disclaimer

Waka Kotahi NZ Transport Agency has endeavoured to ensure material in this document is technically accurate and reflects legal requirements. The document does not override governing legislation. Waka Kotahi does not accept liability for any consequences arising from the use of this document. If the user of this document is unsure whether the material is correct, they should refer directly to the relevant legislation and contact Waka Kotahi.

More information

Waka Kotahi NZ Transport Agency, Safer Rail Team

Published January 2023.

ISSN 2537-9070

If you have further queries, call our contact centre on 0800 699 000 or write to us:

Waka Kotahi NZ Transport Agency
Private Bag 6995
Wellington 6141

This document is available on the Waka Kotahi website at www.nzta.govt.nz

RAIL SAFETY STATISTICS

This report is based on rail occurrence reports provided by rail operators. These occurrence reports cover accidents (events that caused death, serious injury or significant property damage) and incidents (events that placed, or could have placed, someone or something at risk of death, serious injury or significant property damage). Only a relatively small number of occurrences result in injury or significant property damage. The less serious occurrences are useful for analysing and identifying potential safety issues.

Notes

- Occurrence reports are provided to the NZ Transport Agency by rail operators, usually within 72 hours of the occurrence or when enough information has been compiled.
- Rail deaths and serious injuries can include suicides and attempted suicides.
- Caution should be exercised in interpreting the statistics in this report given the small number in some categories.
- From time to time historic statistics may be updated to reflect late notifications, clarifications or errors found. For this reason it is recommended that the reader always refer to the latest version of this report available at <http://nzta.govt.nz/resources/rail-safety-statistics/>

RAIL ACCIDENT DEATHS AND SERIOUS INJURIES

Definition: all severe injuries/fatalities on the rail corridor. (A single occurrence may result in multiple deaths and/or serious injuries.)

This includes collisions and other accidents involving trains, motor vehicles, cyclists, rail workers, pedestrians, passengers, and people on the rail tracks without authorisation. Serious injuries are those defined in the Health and Safety at Work Act (HSWA) 2015 as ‘notifiable injuries’.

The number of reported serious injuries may not truly reflect the actual number of injuries. Only those injuries which meet the threshold of the HSWA definition are included in these statistics. For reporting purposes Waka Kotahi rely on the information supplied by a variety of sources including rail operators, through investigations, volunteered by the victim or through a third party.

			2014	2014	2015	2015	2016	2016	2017	2017	2018	2018	2019	2019	2020	2020	2021	2021	2022	2022		
			Jan - Jun	Jul - Dec	Jan - Jun	Jul - Dec	Jan - Jun	Jul - Dec	Jan - Jun	Jul - Dec	Jan - Jun	Jul - Dec	Jan - Jun	Jul - Dec	Jan - Jun	Jul - Dec	Jan - Jun	Jul - Dec	Jan - Jun	Jul - Dec	Jan - Jun	Jul - Dec
Level Crossing Incident	Motor Vehicle	Fatal Injury	4	1	0	0	0	0	1	4	0	2	2	2	1	1	2	0	0	0	1	
		Serious Injury	2	2	0	1	2	1	2	2	4	3	5	0	0	0	0	0	0	0	0	2
	Pedestrian	Fatal Injury	0	0	1	2	3	3	2	1	1	1	2	2	2	0	0	2	2	2	2	
		Serious Injury	0	2	0	0	0	1	0	0	0	0	2	0	0	0	0	1	0	0	0	0
	Cyclist	Fatal Injury	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Serious Injury	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Non Level Crossing Incident	Motor Vehicle	Fatal Injury	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		Serious Injury	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Passenger and public on platform	Fatal Injury	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Serious Injury	1	0	4	0	0	0	0	0	1	0	0	0	0	0	0	1	2	2	2	0
	Unauthorised members of the public	Fatal Injury	1	4	4	7	10	1	1	7	7	6	2	5	6	3	6	2	2	2	3	
		Serious Injury	1	0	1	0	1	0	2	0	1	1	2	1	1	1	1	2	0	0	0	1
	Rail Personnel	Fatal Injury	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
		Serious Injury	2	0	2	2	1	0	0	1	2	1	2	0	1	3	0	3	3	3	1	
Total	Fatal Injury	5	5	5	10	14	5	4	12	8	9	6	9	9	4	8	4	4	4	6		
	Serious Injury	7	4	7	3	4	2	4	3	8	7	9	1	3	4	4	5	5	5	4		

VEHICLE COLLISIONS

Definition: all collisions between rail vehicles and motor vehicles at level crossings or anywhere else in the rail corridor.

Year	Calendar Quarter	Financial Year	Financial Quarter	Months	Heavy Vehicle Collision	Light Vehicle Collisions
2014	Q1	2013/14	Q3	Jan-Mar	1	10
2014	Q2	2013/14	Q4	Apr-Jun	2	4
2014	Q3	2014/15	Q1	Jul-Sep	2	2
2014	Q4	2014/15	Q2	Oct-Dec	2	7
2015	Q1	2014/15	Q3	Jan-Mar	1	4
2015	Q2	2014/15	Q4	Apr-Jun	2	3
2015	Q3	2015/16	Q1	Jul-Sep	4	8
2015	Q4	2015/16	Q2	Oct-Dec	-	5
2016	Q1	2015/16	Q3	Jan-Mar	2	10
2016	Q2	2015/16	Q4	Apr-Jun	1	2
2016	Q3	2016/17	Q1	Jul-Sep	3	4
2016	Q4	2016/17	Q2	Oct-Dec	2	4
2017	Q1	2016/17	Q3	Jan-Mar	-	12
2017	Q2	2016/17	Q4	Apr-Jun	1	10
2017	Q3	2017/18	Q1	Jul-Sep	2	8
2017	Q4	2017/18	Q2	Oct-Dec	3	8
2018	Q1	2017/18	Q3	Jan-Mar	-	8
2018	Q2	2017/18	Q4	Apr-Jun	3	14
2018	Q3	2018/19	Q1	Jul-Sep	1	6
2018	Q4	2018/19	Q2	Oct-Dec	-	4
2019	Q1	2018/19	Q3	Jan-Mar	1	6
2019	Q2	2018/19	Q4	Apr-Jun	-	5
2019	Q3	2019/20	Q1	Jul-Sep	1	2
2019	Q4	2019/20	Q2	Oct-Dec	3	2
2020	Q1	2019/20	Q3	Jan-Mar	2	7
2020	Q2	2019/20	Q4	Apr-Jun	2	1
2020	Q3	2020/21	Q1	Jul-Sep	1	1
2020	Q4	2020/21	Q2	Oct-Dec	-	6
2021	Q1	2020/21	Q3	Jan-Mar	1	6
2021	Q2	2020/21	Q4	Apr-Jun	1	6
2021	Q3	2021/22	Q1	Jul-Sep	1	4
2021	Q4	2021/22	Q2	Oct-Dec	3	12
2022	Q1	2021/22	Q3	Jan-Mar	0	5
2022	Q2	2021/22	Q4	Apr-Jun	3	4
2022	Q3	2022/23	Q1	Jul-Sep	1	5
2022	Q4	2022/23	Q2	Oct-Dec	3	5

LEVEL CROSSING EVENTS

Definition: occurrences at a level crossing (public or private). This includes occurrences where a train has struck or nearly struck a motor vehicle, pedestrian, cyclist, animal or obstructing object (for example a tree, rocks or stones, rail equipment, a shopping trolley). Counted occurrences also include damage and vandalism to level crossings, and instances of level crossing infrastructure not operating properly.

Year	Calendar Quarter	Financial Year	Financial Quarter	Months	Number of Level Crossing Events
2014	Q1	2013/14	Q3	Jan-Mar	114
2014	Q2	2013/14	Q4	Apr-Jun	109
2014	Q3	2014/15	Q1	Jul-Sep	98
2014	Q4	2014/15	Q2	Oct-Dec	97
2015	Q1	2014/15	Q3	Jan-Mar	94
2015	Q2	2014/15	Q4	Apr-Jun	99
2015	Q3	2015/16	Q1	Jul-Sep	114
2015	Q4	2015/16	Q2	Oct-Dec	108
2016	Q1	2015/16	Q3	Jan-Mar	110
2016	Q2	2015/16	Q4	Apr-Jun	140
2016	Q3	2016/17	Q1	Jul-Sep	146
2016	Q4	2016/17	Q2	Oct-Dec	150
2017	Q1	2016/17	Q3	Jan-Mar	152
2017	Q2	2016/17	Q4	Apr-Jun	170
2017	Q3	2017/18	Q1	Jul-Sep	160
2017	Q4	2017/18	Q2	Oct-Dec	167
2018	Q1	2017/18	Q3	Jan-Mar	134
2018	Q2	2017/18	Q4	Apr-Jun	161
2018	Q3	2018/19	Q1	Jul-Sep	161
2018	Q4	2018/19	Q2	Oct-Dec	206
2019	Q1	2018/19	Q3	Jan-Mar	153
2019	Q2	2018/19	Q4	Apr-Jun	154
2019	Q3	2019/20	Q1	Jul-Sep	133
2019	Q4	2019/20	Q2	Oct-Dec	128
2020	Q1	2019/20	Q3	Jan-Mar	141
2020	Q2	2019/20	Q4	Apr-Jun	81
2020	Q3	2020/21	Q1	Jul-Sep	123
2020	Q4	2020/21	Q2	Oct-Dec	115
2021	Q1	2020/21	Q3	Jan-Mar	122
2021	Q2	2020/21	Q4	Apr-Jun	137
2021	Q3	2021/22	Q1	Jul-Sep	116
2021	Q4	2021/22	Q2	Oct-Dec	118
2022	Q1	2021/22	Q3	Jan-Mar	92
2022	Q2	2021/22	Q4	Apr-Jun	128
2022	Q3	2022/23	Q1	Jul-Sep	129
2022	Q4	2022/23	Q2	Oct-Dec	130

SPAD A (SIGNAL PASSED AT DANGER – A CATEGORY)

Definition: occurrences where a rail vehicle passes a signal showing danger (typically this is running past a red light, but also includes exceeding a written authority) and continues into a section of track that, if occupied, could result in a collision with an opposing rail vehicle, track worker or other obstruction authorised to be in that section of the track. See the technical explanation here. [Australasian SPAD classifications](#).

Year	Calendar Quarter	Financial Year	Financial Quarter	Months	Number of SPAD As
2014	Q1	2013/14	Q3	Jan-Mar	24
2014	Q2	2013/14	Q4	Apr-Jun	8
2014	Q3	2014/15	Q1	Jul-Sep	12
2014	Q4	2014/15	Q2	Oct-Dec	11
2015	Q1	2014/15	Q3	Jan-Mar	22
2015	Q2	2014/15	Q4	Apr-Jun	16
2015	Q3	2015/16	Q1	Jul-Sep	13
2015	Q4	2015/16	Q2	Oct-Dec	17
2016	Q1	2015/16	Q3	Jan-Mar	14
2016	Q2	2015/16	Q4	Apr-Jun	9
2016	Q3	2016/17	Q1	Jul-Sep	7
2016	Q4	2016/17	Q2	Oct-Dec	13
2017	Q1	2016/17	Q3	Jan-Mar	22
2017	Q2	2016/17	Q4	Apr-Jun	11
2017	Q3	2017/18	Q1	Jul-Sep	10
2017	Q4	2017/18	Q2	Oct-Dec	2
2018	Q1	2017/18	Q3	Jan-Mar	11
2018	Q2	2017/18	Q4	Apr-Jun	9
2018	Q3	2018/19	Q1	Jul-Sep	6
2018	Q4	2018/19	Q2	Oct-Dec	7
2019	Q1	2018/19	Q3	Jan-Mar	3
2019	Q2	2018/19	Q4	Apr-Jun	10
2019	Q3	2019/20	Q1	Jul-Sep	14
2019	Q4	2019/20	Q2	Oct-Dec	9
2020	Q1	2019/20	Q3	Jan-Mar	6
2020	Q2	2019/20	Q4	Apr-Jun	7
2020	Q3	2020/21	Q1	Jul-Sep	7
2020	Q4	2020/21	Q2	Oct-Dec	8
2021	Q1	2020/21	Q3	Jan-Mar	6
2021	Q2	2020/21	Q4	Apr-Jun	5
2021	Q3	2021/22	Q1	Jul-Sep	6
2021	Q4	2021/22	Q2	Oct-Dec	10
2022	Q1	2021/22	Q3	Jan-Mar	9
2022	Q2	2021/22	Q4	Apr-Jun	8
2022	Q3	2022/23	Q1	Jul-Sep	7
2022	Q4	2022/23	Q2	Oct-Dec	2

DERAILMENTS

Definition: occurrences where a rail vehicle has derailed while moving along a rail track.

- **Mainline** = the railway line that rail vehicles use to travel between destinations.
- **Sidings and terminals** = the railway that rail vehicles use for loading, unloading or servicing (such as a depot).

Note: A new occurrence category was introduced in November 2019 for lift off derailment (LFTOF). This accounts for the level shift in derailments (DRM) reported from Q3 2017 (FY-Q1 2017/18) as data has been adjusted. Prior dates include both lift off and normal derailments.

Year	Calendar Quarter	Financial Year	Financial Quarter	Months	Derailments by type		
					Rail Maintenance Vehicles	Trains/trams – Mainline	Trains/trams - Terminals and Sidings
2014	Q1	2013/14	Q3	Jan-Mar	6	13	53
2014	Q2	2013/14	Q4	Apr-Jun	2	4	49
2014	Q3	2014/15	Q1	Jul-Sep	1	7	52
2014	Q4	2014/15	Q2	Oct-Dec	2	7	54
2015	Q1	2014/15	Q3	Jan-Mar	4	6	37
2015	Q2	2014/15	Q4	Apr-Jun	3	5	43
2015	Q3	2015/16	Q1	Jul-Sep	2	6	44
2015	Q4	2015/16	Q2	Oct-Dec	5	6	47
2016	Q1	2015/16	Q3	Jan-Mar	4	8	60
2016	Q2	2015/16	Q4	Apr-Jun	4	1	48
2016	Q3	2016/17	Q1	Jul-Sep	7	2	50
2016	Q4	2016/17	Q2	Oct-Dec	1	4	58
2017	Q1	2016/17	Q3	Jan-Mar	-	7	43
2017	Q2	2016/17	Q4	Apr-Jun	3	3	44
2017	Q3	2017/18	Q1	Jul-Sep	4	4	25
2017	Q4	2017/18	Q2	Oct-Dec	1	3	38
2018	Q1	2017/18	Q3	Jan-Mar	5	2	24
2018	Q2	2017/18	Q4	Apr-Jun	6	6	22
2018	Q3	2018/19	Q1	Jul-Sep	3	2	23
2018	Q4	2018/19	Q2	Oct-Dec	3	5	25
2019	Q1	2018/19	Q3	Jan-Mar	1	9	18
2019	Q2	2018/19	Q4	Apr-Jun	1	8	25
2019	Q3	2019/20	Q1	Jul-Sep	3	7	26
2019	Q4	2019/20	Q2	Oct-Dec	3	6	21
2020	Q1	2019/20	Q3	Jan-Mar	1	3	14
2020	Q2	2019/20	Q4	Apr-Jun	2	-	15
2020	Q3	2020/21	Q1	Jul-Sep	4	1	26
2020	Q4	2020/21	Q2	Oct-Dec	3	7	25
2021	Q1	2020/21	Q3	Jan-Mar	2	5	28
2021	Q2	2020/21	Q4	Apr-Jun	1	3	12
2021	Q3	2021/22	Q1	Jul-Sep	2	1	21
2021	Q4	2021/22	Q2	Oct-Dec	3	4	17

Rail Safety statistics through to the period ended 31 December 2022

2022	Q1	2021/22	Q3	Jan-Mar	3	1	15
2022	Q2	2021/22	Q4	Apr-Jun	2	6	21
2022	Q3	2022/23	Q1	Jul-Sep	1	4	24
2022	Q4	2022/23	Q2	Oct-Dec	2	1	21