

Accident cluster sites and fatal road accidents on the Welsh Trans-European Road Network, 2014-2016

25 April 2018
SB 24/2018

Key points

Between 2014 and 2016 there were 41 accident cluster sites on the Welsh Trans-European Road Network (TERN). These contain 172 personal injury accidents and 17 of these were KSI accidents meaning that they had casualties that were Killed or Seriously Injured (KSI).

In North Wales:

- there are 5 roads on the TERN route
- there were 6 accident cluster sites which resulted in 25 personal injury accidents and no KSI accidents
- the A55 had the largest number of cluster sites at 4, with no accident cluster sites on the A5, A483 and the A550
- there were 9 fatalities reported on the TERN roads.

In South Wales:

- there are 8 roads (9 different routes as the A40 is split into two sections) on the TERN route, 5 of which are in South-East Wales and 4 of which are in South-West Wales
- there were 35 accident cluster sites which resulted in 147 accidents with a personal Injury and of these 17 were KSI accidents
- the M4 had 16 accident cluster sites, which resulted in 63 personal injury accidents and of these 4 were classed as KSI
- apart from the M4, the A40 had the largest number of cluster sites at 5 and there were no accident cluster sites on the M48
- there were 28 fatalities reported on the TERN roads.

About this bulletin

European Directive 2008/96/EC requires that road users be informed of locations with high accident concentrations on roads in the TERN.

This annual bulletin identifies such concentrations of accidents.

All references to accidents are to personal injury road accidents.

In this bulletin

Accident cluster sites	2
Supplementary information	5
Background	5
Methodology	7
Key quality information	9

Accident cluster sites

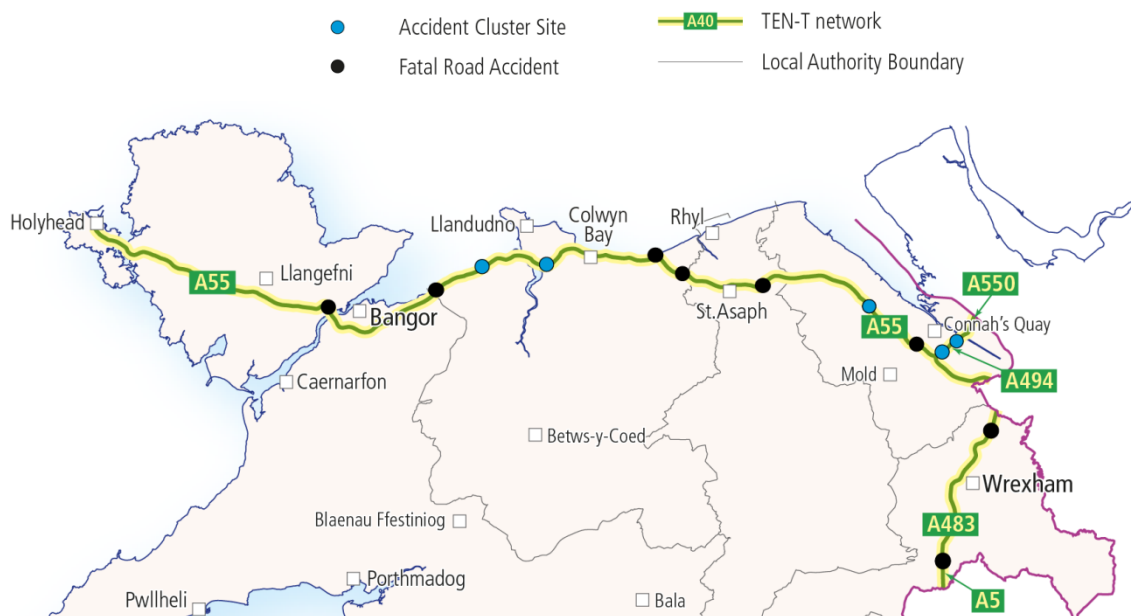
The criterion used to identify potential cluster sites for this statistical bulletin is that there were at least four personal injury road accidents in a 3-year period within a 100m diameter. The 3-year period covers 2014 to 2016 inclusive.

In **North Wales**, there are 5 roads on the TERN route:

- A55 (between the English border and Holyhead)
- A494 (between Ewloe to Deeside Park)
- A483 (between Chirk to English border)
- A5 (between the English Border to Halton)
- A550 (between Deeside Park and the English Border).

In North Wales there were six accident cluster sites, four of which were on the A55, two of which were on the A494 and no accident clusters were found on the A483, A5 and A550.

Map 1: Accident clusters and fatal accidents on TERN in North Wales, 2014-16



In **South Wales**, There are 8 roads (9 different routes as the A40 is split into two sections) on the TERN route, 5 of which are in South-East Wales and 4 of which are in South-West Wales.

The TERN roads in **South-East Wales** are the (shown in Map 2):

- A465 (Abergavenny to Neath)
- M4 (entire length)
- A40 (English border to Abergavenny)
- A449 (Raglan to M4 motorway)
- M48 (entire length).

The TERN roads in **South-West Wales** are the (shown in Map 3):

- A40 (Carmarthen to Fishguard Harbour)
- A4076 (Haverfordwest to Milford Haven)
- A477 (St Clears to Pembroke Dock)
- A48 (Pont Abraham to Carmarthen).

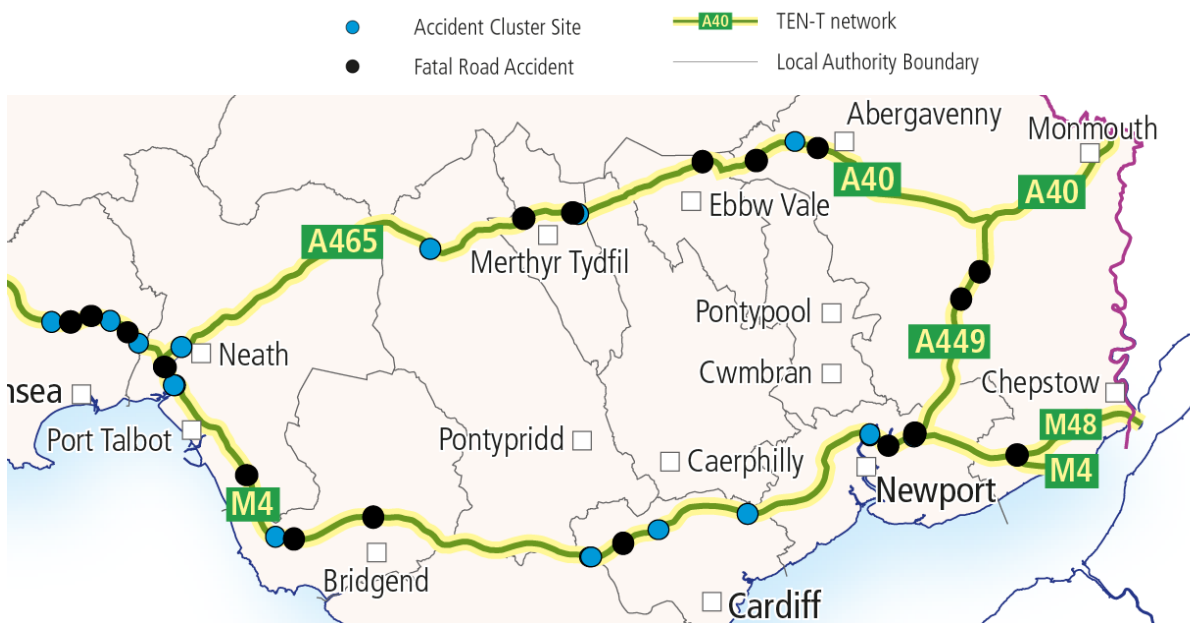
In South Wales there were 35 accident cluster sites, which can be further subdivided into 24 in South-East Wales and 11 in South West Wales. In South-East Wales, the M4 had 16 accident cluster sites, the A465 had 4 cluster sites and the A449 had 3 accident cluster sites. There was one accident cluster site on the A40 and no accident cluster sites were reported on the M48. In South-West Wales, the A40 had 4 accident cluster sites, both the A48 and the A4076 had 3 cluster sites and the A477 had one cluster site.

16 of the 41 reported cluster sites on TERN routes were on Welsh motorways. Welsh motorways measure 133 kilometres out of a total road network of just over 34,600 km¹ and in 2016 traffic volume on all of the motorways in Wales was 3.70 billion vehicle kilometres out of the total Welsh figure of 29.0 billion vehicle kilometres ².

Maps showing the TERN roads in Wales are on the following page and the accident cluster sites and locations of fatal road accidents are indicated. The accident cluster sites on the Welsh TERN network are listed in a series of tables that can be found on the [Statistics and Research Website](#).

Where online tables are not provided for roads of the TERN routes detailed below, then no Cluster Sites or fatal accidents have been identified.

Map 2: Accident clusters and fatal accidents on TERN in South-East Wales, 2014-16



¹ [Road Lengths & Conditions in Wales, 2015-16](#)

² [Road Traffic in Wales 2016](#)

Map 3: Accident clusters and fatal accidents on TERN in South-West Wales, 2014-16

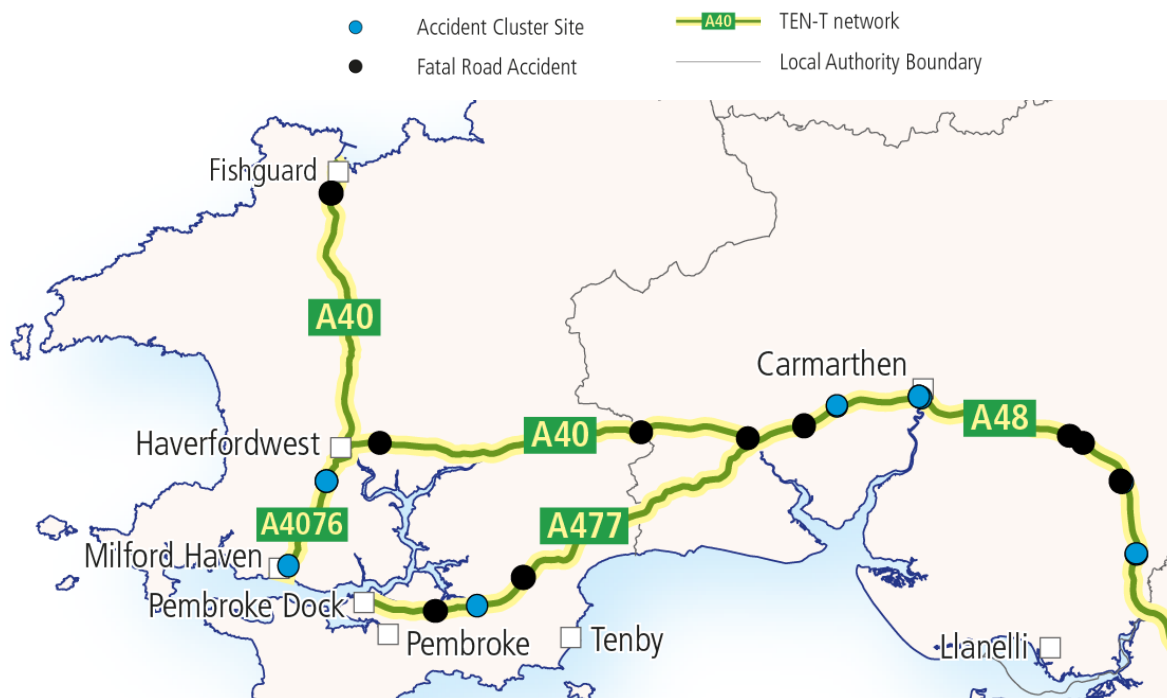


Table 1: Accident clusters and fatal accidents on Welsh TERN, 2014-16

TERN roads	Number of Cluster Sites	Total Accidents at Cluster sites	KSI Accidents at Cluster sites	Fatal Accidents on TERN roads
A55	4	16	0	6
A494	2	9	0	0
A483	0	0	0	3
A5	0	0	0	0
A550	0	0	0	0
A465	4	17	1	5
M4	16	63	4	9
A40	5	19	3	5
A449	3	12	1	3
M48	0	0	0	1
A4076	3	9	3	0
A477	1	4	3	2
A48	3	23	2	3

Source: Welsh Government analysis of Stats 19 Road Accident data

Supplementary information

This Statistical Bulletin sets out the location of identified accident cluster sites on the roads of the TERN in Wales. The TERN in Wales represents part of the overall Welsh trunk road network, which in turn is part of the total Welsh road network. This bulletin does not cover accident cluster sites on roads in Wales other than TERN (see 'Exclusions' below). The TERN network in Wales is mapped on page 6.

Diagram 1

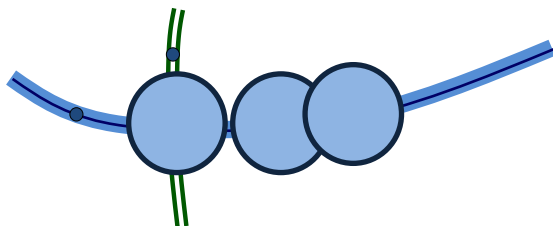


Diagram 1 (left) shows 3 cluster sites, two of which overlap by one accident. In this bulletin, total number of accidents at cluster sites refers to unique accidents, i.e. those in the overlap are only counted once.

Background

European Directive 2008/96/EC, requires specific road safety procedures for the TERN. One of these procedures is the identification, analysis, ranking and targeting of road sections with the highest potential for reducing accidents. In order to achieve this objective, the directive requires that road users be informed of locations with high accident concentrations. This annual statistical bulletin publishes the location of accident clusters on the TERN roads in Wales.

Trans European Road Network (TERN)

The TERN is a network which comprises roads, railway lines, inland waterways, inland and maritime ports, airports and rail-road terminals throughout the 28 Member States. This characteristic is a key factor for the network's efficient, safe and secure operation, using seamless transport chains for passengers and freight.

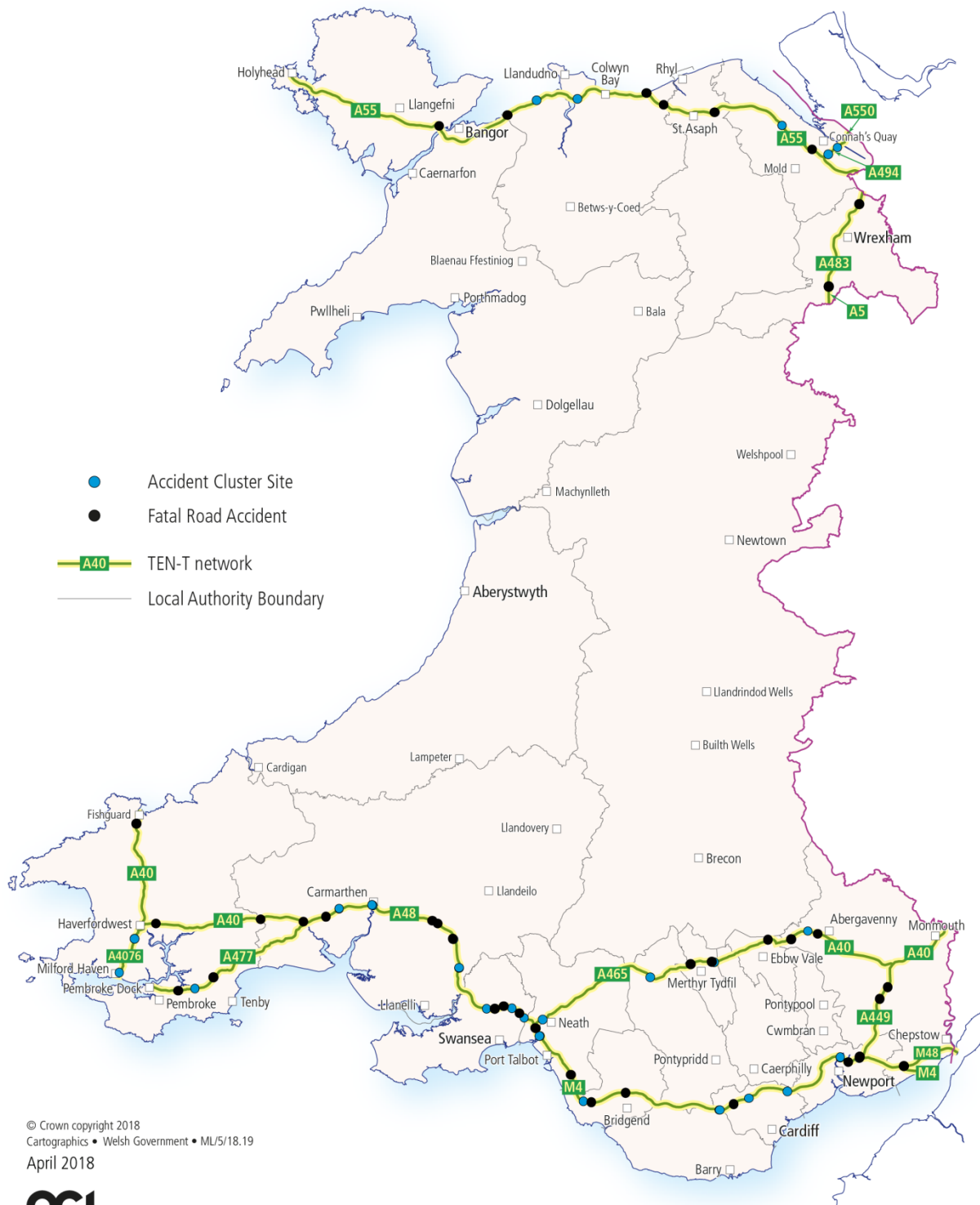
The TERN in Wales is shown on Map 4 and listed on page 6.

The section through North Wales runs from Holyhead in the West to the border with England in the East.

In South Wales it runs from Fishguard and Milford Haven in the West to the English border on the M48, M4 and A40.

Map 4: TERN roads in Wales

Accident Cluster Sites and Fatal Road Accidents on the Welsh Trans-European Road Network, 2014-2016



Methodology for identifying clusters

An example of a cluster site is illustrated below with the collisions recorded around Junction 33, Cardiff West along the M4. As shown in the below map, there is an overlap in terms of accidents across some of the cluster sites though we have used 'unique' accidents for the purpose of total accidents at cluster sites, so those accidents in the overlaps are counted only once.



Exclusions

The purpose of this bulletin is to provide information on the high accident concentration sections on the TERN, as required by the European Directive. It does not provide information on cluster sites and fatal collisions across all the trunk roads or country roads network (maintained by the Local Authorities). Additionally it does not reflect Welsh Government's priorities for addressing collision sites in Wales.

Routes on the Welsh element of the Trans-European Road Network (TERN):

Road name	Location
M4	Entire length (English border to Pont Abraham roundabout)
M48	Entire Length (English border to M4 J23 Rogiet)
A48	Pont Abraham to Carmarthen (Pont Abraham roundabout to Pensarn roundabout junction with A40)
A40	Carmarthen to Fishguard Harbour (Pensarn roundabout to Goodwick roundabout)
A477	St Clears to Pembroke Dock (St Clears roundabout junction with A40 to Waterloo roundabout)
A40	English Border to Abergavenny (English border to Hardwick roundabout junction with A465)
A449	Raglan to M4 Motorway (Raglan junction with A40 to Coldra roundabout junction with M4)
A465	Abergavenny to Neath (Hardwick Roundabout junction with A40 to Llandarcy roundabout junction with M4)
A55	English Border to Holyhead (English Border to Holyhead port end of A55)
A494	Ewloe to Deeside Park (Ewloe junction with A55 to Deeside Park interchange with A550)
A550	Deeside Park to English Border (Deeside Park interchange with A494 to English border)
A5	English Border to Halton (English border to Halton roundabout junction with A483)
A483	Chirk to English border (Halton roundabout junction with A5 to English border)
A4076	Haverfordwest to Milford Haven (Salutation Square roundabout to Victoria Bridge roundabout)

Key quality information

1 Context

The cluster site criterion of four personal injury accidents in three years in a 100m radius is contained in the Welsh Government document entitled "Guidelines for the Submission of Road Safety Schemes". Below is an extract from the section of this document that deals with the identification of sites:

"The assessment of the network should involve the study of collision patterns for a specified period (e.g. 3 years) according to location, circumstances and the vehicles and casualties involved and to subsequently compare them with national and regional averages The current criterion used for selecting clusters is 4 personal injury collisions in a 3 year period within a 100m radius."

These sites, and the sites of fatal accidents, were identified using the 'Welsh Government Accident Recording and Analysis Program' to analyse Stats19 Road Accident data.

1.1 Related publications

Related publications are available on the [Statistics & Research website](#)

2. Definitions

Accidents/Road Accidents: A personal injury accident which occurs on the public highway.

KSI Accident: A road accident in which one or more casualties are Killed or Seriously Injured.

3. Relevance

There are a variety of organisations that use the Welsh road traffic accident and casualty data. The Welsh Government uses road traffic collision and casualty data to help set road safety policy. It is also used for performance indicators, both for the Welsh Government's Transport Strategy and for some Health Performance indicators. They are also component indicators in the Welsh Government's Child Poverty, Programme for Government and Sustainable Development indicators.

Other users include Highway Authorities, covering the Welsh Government, which is responsible for the motorway and trunk road network, and local authorities, which are responsible for other roads in Wales. Other bodies involved in road safety include the Safety Camera Partnership, Trunk Road Agents, and Police & Community Safety Partnerships.

4. Accuracy

The statistics refer to personal injury accidents on public roads reported to the police and forwarded to the Welsh Government. The police compile statistical data about road traffic accidents and casualties (called Stats19 data) for the Welsh Government and the Department for Transport (DfT). This follows police attendance at accidents that involve any personal injury, together with members of the public reporting personal injury accidents directly to the police.

This data is obtained from administrative sources and thus may be affected by changes in procedures within those systems.

There is some possibility of under-reporting and under-recording as well as for the misclassification of accidents though these are minimised by local authorities and the Welsh Government conducting a number of data validations. For example, Welsh Government data analysts may query the location of an accident with a police force when the grid reference of an accident is in a different local authority to the one specified in the data return. These issues are discussed in more detail in a Statistical Article [Quality Report for Welsh Road Casualties](#).

This article also summarises the sources and methods used to compile the road accident and casualty figures for Wales. It also reviews the quality of the resulting figures in terms of the six dimensions of statistical quality of the European Statistical System. The aim is to provide background information about road casualty statistics for Wales in a single document for all users of the published statistics.

6. Timeliness and punctuality

Statistics on Police recorded road casualties for Wales in 2016 were first published on 29 June 2017 and are being followed by a number of Statistical Bulletins that are intended to provide users with more information. Related publications are available on the [Statistics and Research website](#).

Results for Great Britain were published by the Department for Transport in September 2017 in [Reported road casualties in Great Britain main results: 2016](#).

7. Accessibility and clarity

This Statistical Bulletin is pre-announced and then published on the [Statistics & Research website](#). Road Accident statistics for Wales will be added to [StatsWales](#) in the coming months.

8. Comparability and coherence

One accident may give rise to several casualties. Casualties are subdivided into killed, seriously injured and slightly injured categories. Casualties reported as killed include only those cases where death occurs in less than 30 days as a result of the accident. They do not include those who died as a result of natural causes (e.g. heart attack) rather than as a result of the accident, nor do they include confirmed suicides.

Well-being of Future Generations Act (WFG)

The Well-being of Future Generations Act 2015 is about improving the social, economic, environmental and cultural well-being of Wales. The Act puts in place seven well-being goals for Wales. These are for a more equal, prosperous, resilient, healthier and globally responsible Wales, with cohesive communities and a vibrant culture and thriving Welsh language. Under section (10)(1) of the Act, the Welsh Ministers must (a) publish indicators (“national indicators”) that must be applied for the purpose of measuring progress towards the achievement of the Well-being goals, and (b) lay a copy of the national indicators before the National Assembly. The 46 national indicators were laid in March 2016 and this release does not include any of the national indicators.

Information on the indicators, along with narratives for each of the well-being goals and associated technical information is available in the [Well-being of Wales report](#).

Further information on the [Well-being of Future Generations \(Wales\) Act 2015](#).

The statistics included in this release could also provide supporting narrative to the national indicators and be used by public services boards in relation to their local well-being assessments and local well-being plans.

Further details

The document is available at:

<http://gov.wales/statistics-and-research/accident-cluster-sites-fatal-road-accidents/?lang=en>

Next update

April 2019 (provisional)

We want your feedback

We welcome any feedback on any aspect of these statistics which can be provided to

stats.transport@gov.wales

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