

# HEALTH & SAFETY REPORT 2018



OIL&GAS<sup>UK</sup>





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## 1. Foreword

Welcome to the 2018 Oil & Gas UK *Health & Safety Report*, the overview of the offshore oil and gas industry's performance in health and safety in 2017, and a summary of activities Oil & Gas UK groups have undertaken to protect the people who work in our industry.

Health performance has seen a year-on-year improvement since 2014, as measured by RIDDOR reported ill health numbers, and reflects the continuing efforts of the health teams who work in this area. The health of the workforce is addressed through appropriate medical surveillance, which can provide an early indicator of health-related problems, as well as ensuring that people can only go offshore if they are fit to do so. Diabetes and blood pressure are the most common problems affecting the health of the workforce – constituting 29 per cent of failed medicals in 2017.

Offshore helicopter operations across the UKCS in 2017 were completed without accident. Industry remains alert to issues affecting the aviation sector and Oil & Gas UK continues to engage with stakeholders to further improve helicopter safety. We work closely with the Civil Aviation Authority through our attendance at the Offshore Helicopter Safety Leadership Group and with industry through the Aviation Safety Technical Group.

From a safety perspective, 2017 saw continuing improvement in personal and process safety, where the numbers of reportable injuries continued to fall along with another consecutive year of record-low numbers of reportable incidents, 67 per cent lower than in 2001.

Concerted industry action to reduce hydrocarbon releases since 2000, together with the Health and Safety Executive's (HSE) Key Programme initiatives, has resulted in a continued decrease. This reduction has been supported by the focus on reducing safety-critical maintenance backlog, which continued to deliver improvements in installation average backlog in 2017.

Despite the significant reduction in total hydrocarbon releases over the past decade, the number of major releases appears to have plateaued at around two per year. In April 2018, the HSE wrote to all UKCS duty holders asking them to confirm what measures their organisation had put in place since 2015, or would be putting in place, to improve safety management performance and challenged the wider industry to assess whether it could do more to reduce the occurrence of major hydrocarbon releases.

Acknowledging the HSE's challenge and in addition to individual duty holder responses, Oil & Gas UK, in collaboration with Step Change in Safety, reconfirmed its commitment to steer industry efforts in the areas of process safety leadership, audit, self-verification and sustainable learning.

The importance of preventing hydrocarbon releases was also emphasised this summer, when industry came together at Safety 30, a two-day event marking the 30<sup>th</sup> anniversary of the Piper Alpha disaster. The theme for the event was securing the future, with the aim of sharing lessons learnt from the tragedy, as well as remembering those who lost their lives and acknowledging the continuing impact of that loss.

Lord Cullen, whose recommendations following the inquiry into the disaster were the foundation of our present-day offshore safety regime, opened the conference proceedings. In his address, he reminded us of the dangers of complacency, and the importance of remaining alert to subtle warning signals. Steve Rae, a Piper Alpha survivor, closed the conference with a panel discussion about passing the safety legacy to the generation who will deliver the next 30 years of North Sea oil production; this new generation was ably represented by the industry's inspiring 2017 Graduate and Apprentice of the Year, Jo Reynolds and Sam Ash.

In summary, health and safety performance in 2017 showed an improvement in many of the key indicators and it is a testament to the effort being made by all those working in the industry. However, the message from Safety 30 was clear: complacency is a significant risk and we must remain vigilant to the subtle warning signs that remind us of the need to continuously improve. As our industry emerges from a sustained downturn, health and safety remains a core value and is at the heart of all that we do.

All these matters are expanded upon within this report and as always, we hope you find the content to be both interesting and informative. Any queries or feedback should be directed initially to Oil & Gas UK's Health and Safety Manager, Trevor Stapleton, at [tstapleton@oilandgasuk.co.uk](mailto:tstapleton@oilandgasuk.co.uk).



**Trevor Stapleton,**  
**Health and Safety Manager, Oil & Gas UK**

## 2. Key Findings



### Process Safety

- The downward trend in reportable incidents continues, with 255 such occurrences in 2017 - 67% lower than in 2000-01. This is the lowest on record.
- Hydrocarbon releases were the single largest category of reportable incidents (39% of the total), followed by dropped objects (26%).
- The trend in RIDDOR reportable hydrocarbon releases since 1996 remains downward. There are fewer significant releases than in any previous year.
- Major releases have been reduced since 2012, but have plateaued at around 2 per year in the past few years.
- The installation average safety-critical maintenance backlog continues to decrease year-on-year.



### Personal Safety

- There were no work-related fatalities in 2017.
- The three-year rolling average non-fatal injury rate continued to decrease. This measure is based on the number of over-seven-day and specified injuries.
- Fractures were the most common type of reportable injury, followed by strains and sprains.
- The most common cause of injury was slips, trips, and falls on the same level, 37% of the total.



## Health

- 110,688 Oil & Gas UK medicals were performed by our registered doctors in more than 60 countries, up from 99,104 in 2016.
- The most frequent cause of medevacs was for suspected cardiac incidents.
- Blood pressure and diabetes were the most common health conditions causing people to fail the offshore medical.



## Aviation

- Offshore helicopter operations in 2017 were conducted without accident.
- There was a decrease in the five-year accident rate to 0.52 per 100,000 flying hours.
- Flying hours decreased in 2017 from 88,983 to 69,005 but more passengers were transported – 820,158 against 715,011 in 2016.
- The active helicopter fleet in 2017 numbered 70 aircraft, of six airframe types. Over half the fleet is of a single airframe type, the S-92, which carried two-thirds of passengers.

### 3. 2017 Performance

#### In Summary

The UK offshore oil and gas industry is committed to protecting people, the natural environment and assets by maintaining safe operations. The industry continually strives to improve personal and process safety, using performance indicators to monitor how well this is being managed. Personal safety metrics point to industry's performance in managing risks to an individual. However, to minimise harm to people, the primary focus for this major-hazard industry must be on process safety, and the effective containment of hydrocarbons and associated hazards.

Major accidents occur rarely and leading indicators must be assessed in addition to lagging indicators, such as hydrocarbon releases. Leading indicators such as maintenance backlogs for safety critical elements and overdue verification findings are also used to monitor how well safety critical elements — which are designed to prevent, control or mitigate the effects of major incidents on an installation — are being managed. Process safety performance indicators, while perhaps not as obviously correlated with 'safety' as injury statistics, are nevertheless critical to measuring performance and ensuring the industry continues to manage major accident risk effectively.

**The downward trend in RIDDOR reportable HCRs has been maintained throughout 2016 and 2017**



**After HCRs, the second most common reportable incidents were dropped objects at 26%**



**Continued focus on average maintenance backlog has seen further year-on-year decreases**



It is also important to manage the health and well-being of the offshore workforce effectively, given the remoteness of the worksite and the nature of the work they perform. A suite of occupational health-related legislation regulates the offshore working environment to ensure that risks to health are controlled. In addition, it is industry policy that all persons working offshore are examined regularly by a medical professional and deemed medically fit before travelling offshore. The Oil & Gas UK medical standard and the registered examining doctors who conduct assessments in line with this standard help to ensure that the workforce is medically fit for work offshore.

2017 saw 255 reportable incidents – the lowest year on record and

**67%**



lower than in 2000-01

Slips, trips and falls account for 37% of all injuries



The number of significant HCRs continues to decrease, while major releases have plateaued



## 3.1 Process and Personal Safety

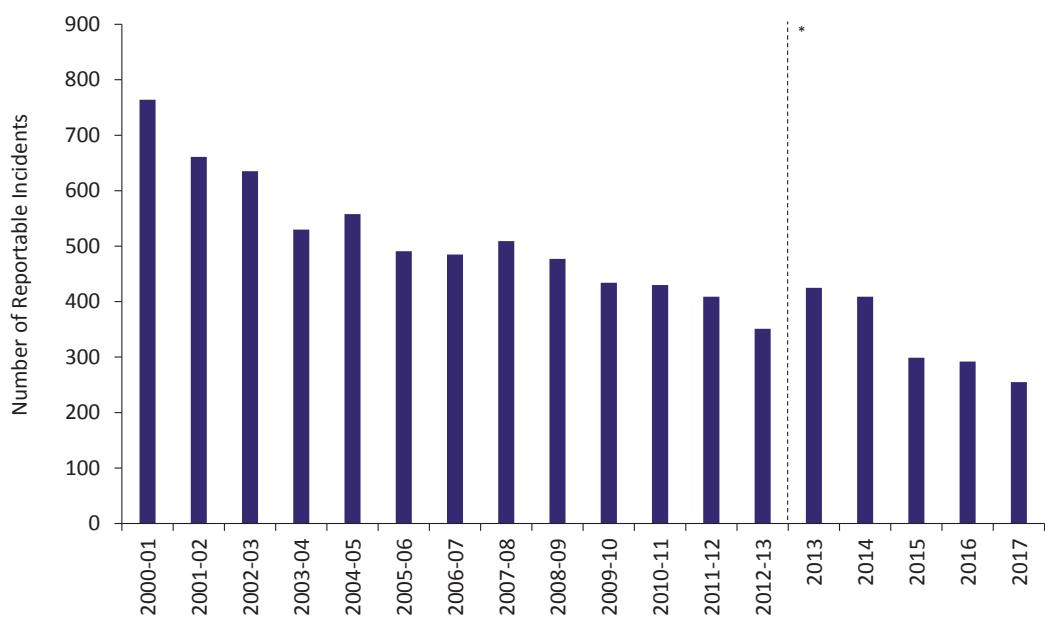
### Reportable Incidents

Requirements relating to reportable incidents are defined by the RIDDOR regulations<sup>1</sup>, and the EU Offshore Safety Directive (OSD) Implementing Regulation No 1112/2014. Under this legislation, defined incident types with high potential to cause significant injuries, termed dangerous occurrences, and other defined incidents – e.g. the failure of a safety and environmental critical element (SECE) – must be reported to the Health and Safety Executive (HSE).

Reporting requirements under the European regulations are broadly aligned with those of RIDDOR, but additional reportable incident categories have been introduced, and some category names are different.<sup>2</sup> The section below includes information on both RIDDOR and EU reportable offshore incidents.

As seen in Figure 1, there has been a downward trend in the overall number of incidents since the peak in 2000-01. 2017 saw 255 such incidents, the lowest year on record and 67 per cent lower than in 2000-01.

**Figure 1: Reportable Incidents**



\*Period of reporting changed from fiscal to calendar year

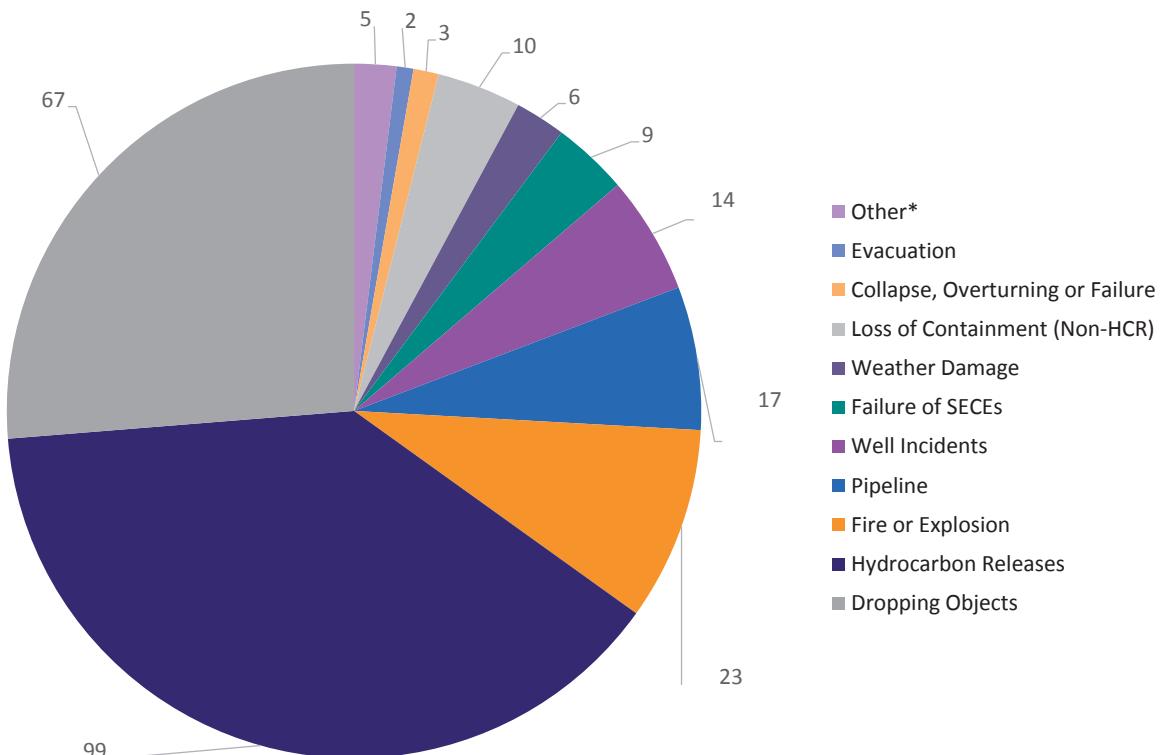
Source: Health and Safety Executive

Figure 2 breaks down the reportable incidents by type. Categories from the EU Implementing Regulation and RIDDOR have been combined where appropriate, e.g. “release or escape of a dangerous substance” and “unintentional release of hazardous substances” have been combined into the loss of containment (non-HCR) category. Hydrocarbon releases (HCRs) are the largest single type of reportable incident, followed by dropped objects.

<sup>1</sup> Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 2013.

See <http://www.legislation.gov.uk/uksi/2013/1471/schedule/2/made>

<sup>2</sup> See <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32014R1112>

**Figure 2: Breakdown of Reportable Incidents**

\* Other includes collision, failure of a pressure system, loss of station, unintentional change of position, and unassigned      Source: Health and Safety Executive

### Hydrocarbon Releases

The HSE collates detailed data on hydrocarbon releases within the offshore oil and gas industry. Most HCRs are identified as such in the Figure above, but it should be noted that some incidents defined as wells, pipeline and/or fire and explosion may also include hydrocarbon releases.

In addition to introducing new reporting requirements, Implementing Regulation No 1112/2014 has changed the criteria for what is deemed to be a reportable hydrocarbon release. During the transitional period and until all installations had transferred to the new Safety Case Regulations (SCR), the industry in effect had two reporting regimes for HCRs. In 2017 some installations still reported under RIDDOR, while others reported under the new RIDDOR “plus” regime. In July 2018 the remaining installations completed the transition, and from that date the UK offshore industry shares a uniform system for HCR reporting again.

The HSE assigns a severity classification to reported HCRs, defining them as either minor, significant or major. A minor release has the potential to cause serious injuries or a fatality within the immediate vicinity but would not be expected to result in a multiple-fatality event or significant escalation. A significant release is one with the potential to cause serious injury or fatality to personnel within the local area and to escalate within that local area, e.g. by causing structural damage, secondary leaks or damage to safety systems. A major release is one with the potential, if ignited, to cause multiple casualties or rapid escalation affecting, for example, other modules, the temporary refuge or escape routes.

Figure 3 shows the total number of reportable HCRs in 2017 under both the existing reporting regime and the EU regulations. The upward trend apparent in the three-year moving average in 2017 is attributable to the number of additional releases reported under the new legislation, as a comparison with Figure 4 demonstrates. The number of significant releases continues to decrease year on year, while major releases have plateaued. While only one major release is identified in the 2017 results below, the HSE has indicated that it believes at least one of the releases yet to be classified is likely to be assigned to the major category.

**Figure 3: Number of Hydrocarbon Releases Occurring Offshore**

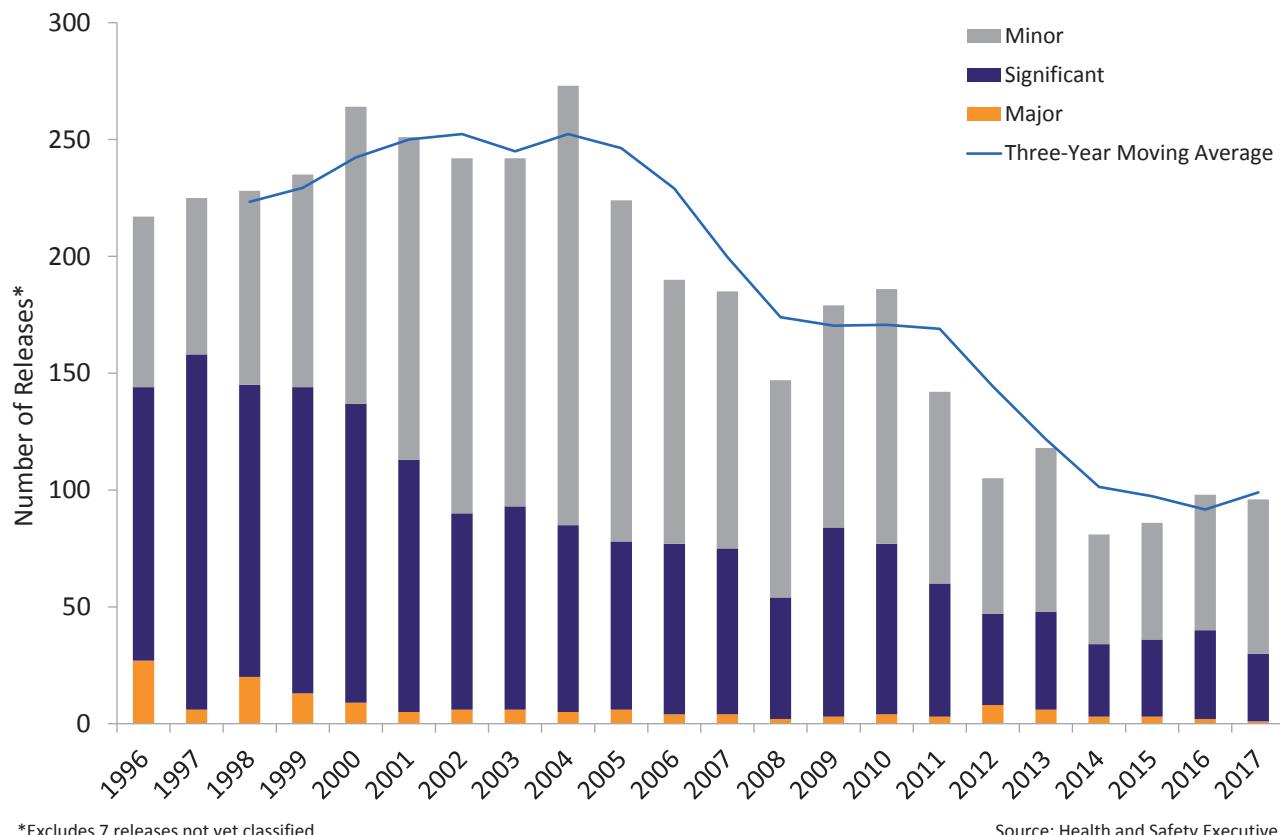


Figure 4 shows the same data with the additional EU reportable HCRs excluded to allow comparison. This shows that the downward trend in HCRs has been maintained throughout 2016 and 2017.

**Figure 4: Hydrocarbon Releases (Excluding EU)**

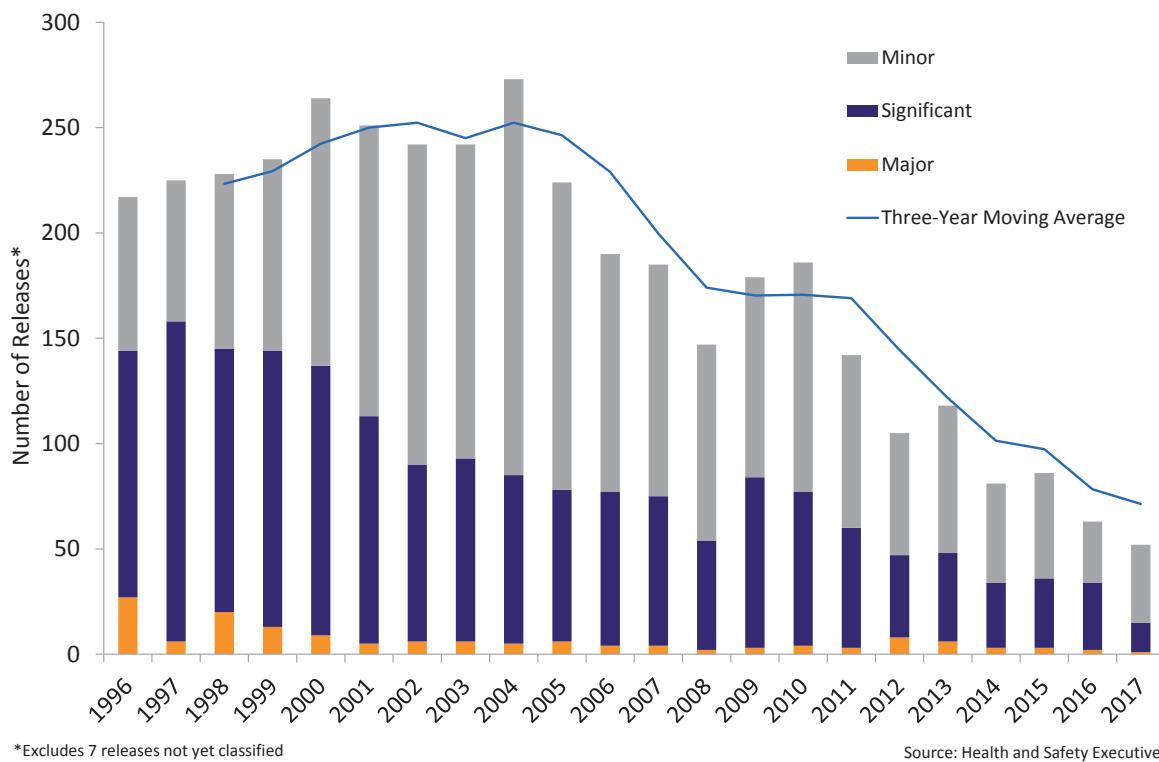
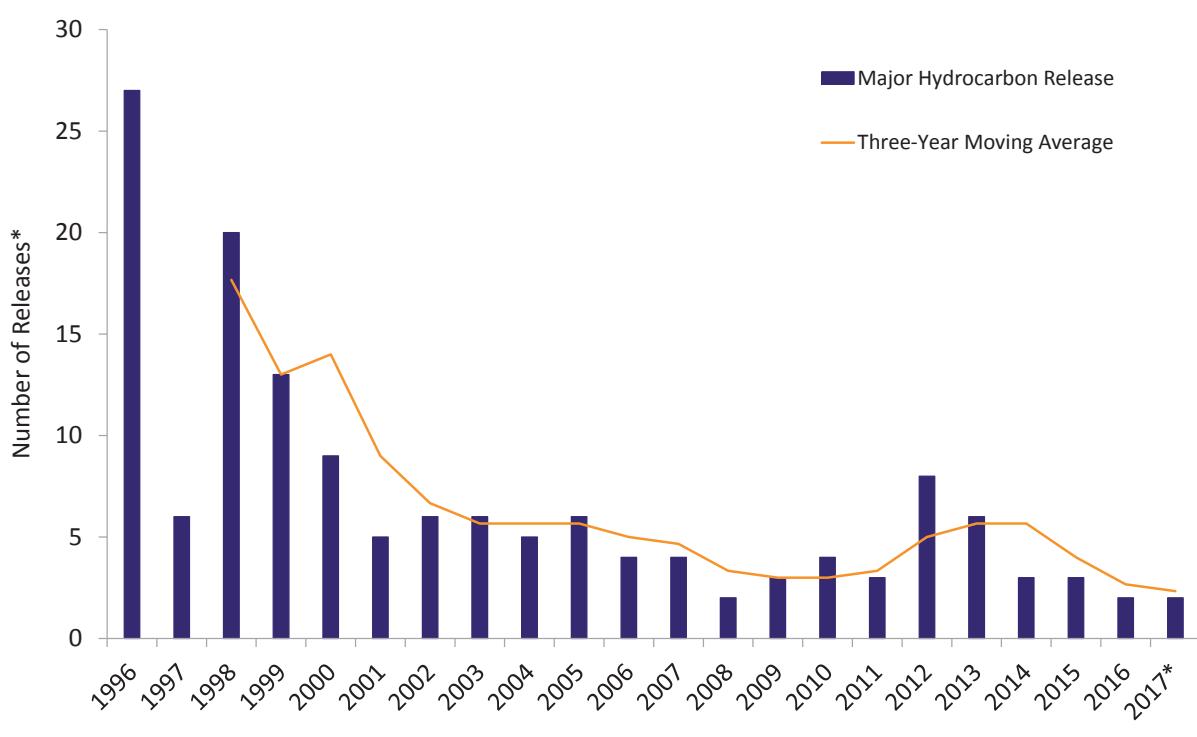


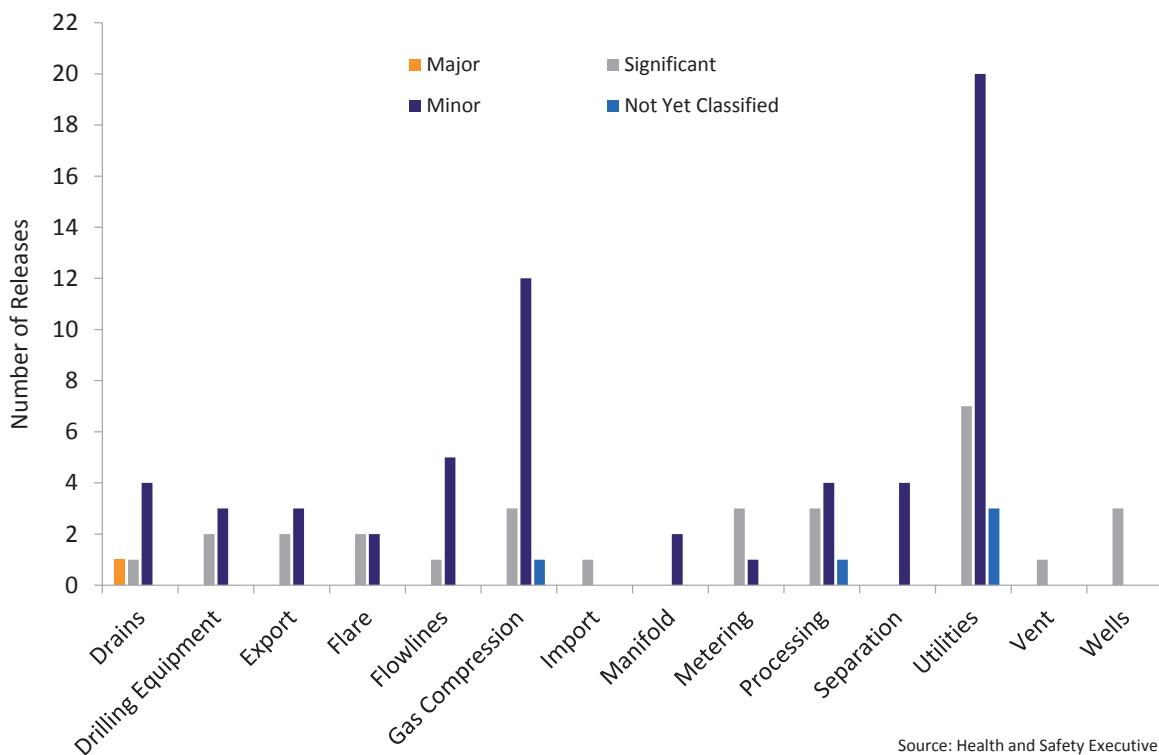
Figure 5 shows the releases with a severity classification of major only. Annual fluctuations aside, the general trend has been a reduction in major releases, but in the last four years the number of major releases has plateaued at two or three per year.

**Figure 5: Major Hydrocarbon Releases**



A breakdown of all HCRs by source is provided below and illustrates that most releases came from utilities (27), followed by gas compression (15). Most of the releases attributed to utilities were of non-process hydrocarbons such as diesel or hydraulic and lubricating oil, from systems containing limited quantities of these hydrocarbons.

**Figure 6: Hydrocarbon Releases by System**



The most frequent equipment types from which releases were reported were valves (26), piping (20) and flanges (13).

### Personal Injuries and Fatalities

Reportable injuries in the UK are categorised into two types: over-seven-day injuries, where a work-related injury results in the injured person being unable to return to work for seven days or more; and specified injuries and fatalities. Figure 7 shows work-related fatalities at offshore installations recorded since 1996 (excluding helicopter incident figures, which are covered in the aviation section of this report). In 2017 there were no work-related fatalities in the UK sector.

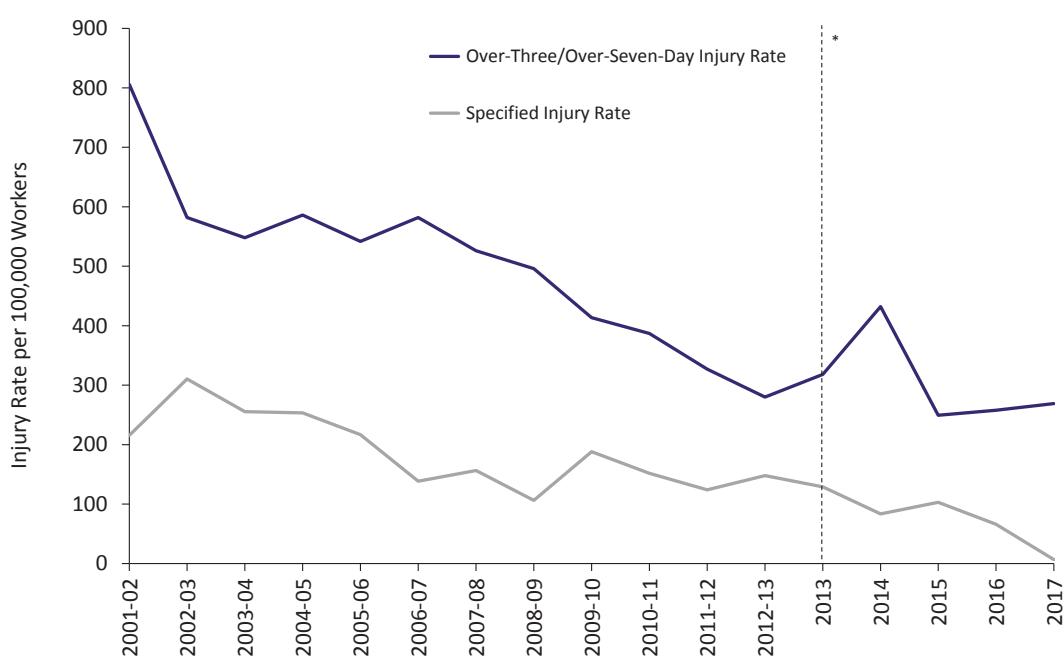
**Figure 7: Fatal Injuries Offshore**

Year	Number of Fatalities	Year	Number of Fatalities
1996-97	2	2006-07	2
1997-98	3	2007-08	0
1998-99	1	2008-09	0
1999-00	2	2009-10	0
2000-01	3	2010-11	0
2001-02	3	2011-12	2
2002-03	0	2012-13	0
2003-04	3	2013-14	2
2004-05	0	2015	0
2005-06	2	2016	1
		2017	0

The non-fatal injury rate shown in Figure 8 is calculated from the number of over-seven-day and specified injuries reported to the HSE, as well as offshore population figures calculated from Vantage POB data. The breakdown of over-seven-day and specified injuries per 100,000 workers since 2001 is given below. The over-seven-day injury rate increased from 258 to 269 injuries per 100,000 workers in 2017, which is marginally higher than the 249 recorded in 2015.

The specified injury rate showed a sharp decrease in 2017, falling to seven from 73 per 100,000 workers in 2016. Given the larger drop compared with last year and the overall low number of injuries reported in recent years, this is likely to be a statistical anomaly, but is consistent with a downward trend since 2013, the first directly comparable year when the RIDDOR category “major injury” was redefined to “specific injury”.

**Figure 8: Over-Seven-Day and Specified Injury Rate per 100,000 Workers**

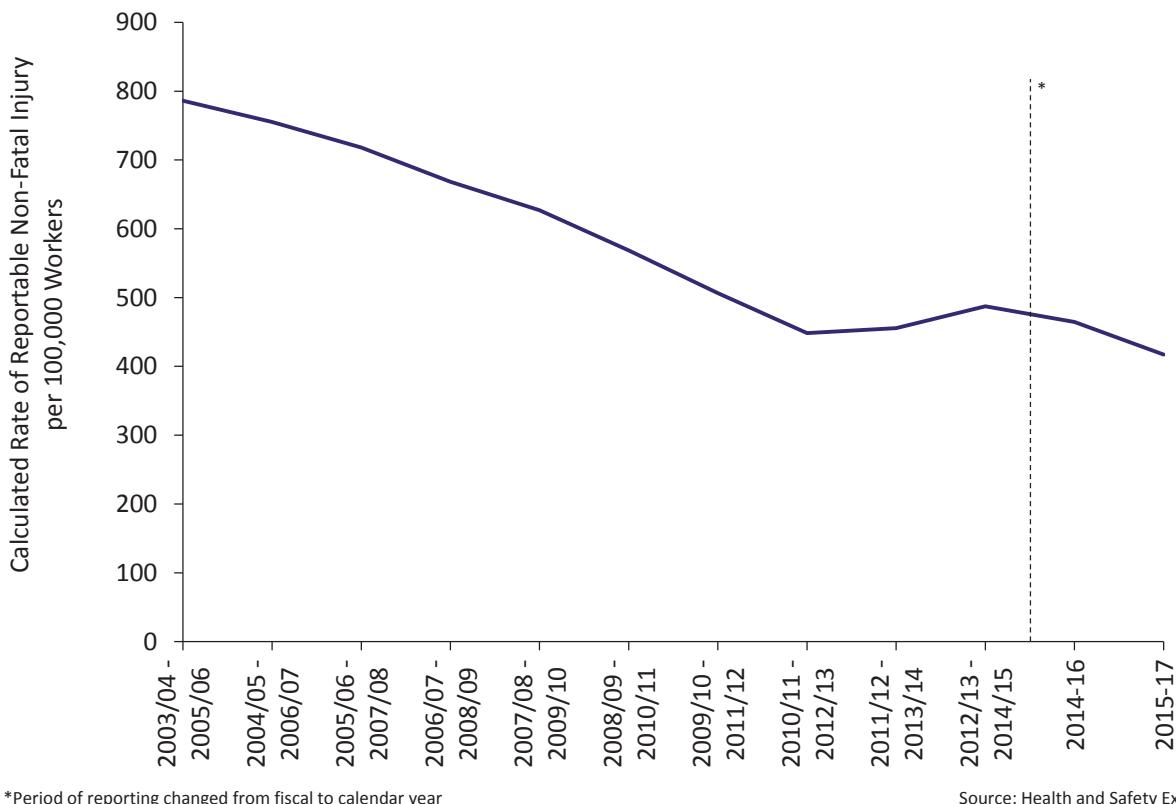


\*Period of reporting changed from fiscal to calendar year

Source: Health and Safety Executive, Vantage POB

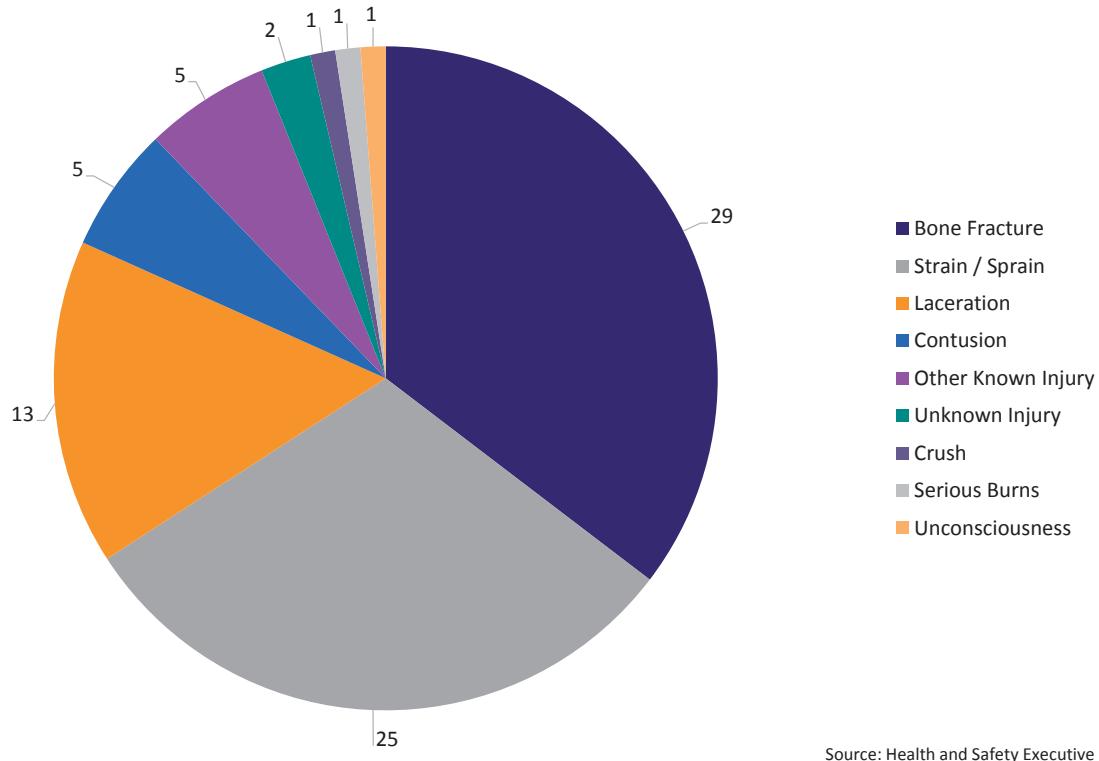
The three-year rolling average non-fatal injury rate is considered in Figure 9 below. Taking a longer-term average means that annual fluctuations are smoothed and provides a clearer trend. It is notable that after a period of slight increase in the years to 2014-15, a downward trend is apparent in the years since.

**Figure 9: Three-Year Rolling Average Reportable Non-Fatal Injury Rate per 100,000 Workers for the UK Offshore Oil and Gas Sector**



Fractures were the most common reportable injury in 2017 with 29 recorded, followed by strains and sprains (25) and lacerations (13). The full breakdown of injury types is given in Figure 10.

**Figure 10: Reportable Injuries by Type**



The most common cause of injury was slips, trips and falls on the same level. A full breakdown of the type of accident involved in the injury is shown in Figure 11 below.

**Figure 11: Reportable Injuries by Direct Cause**

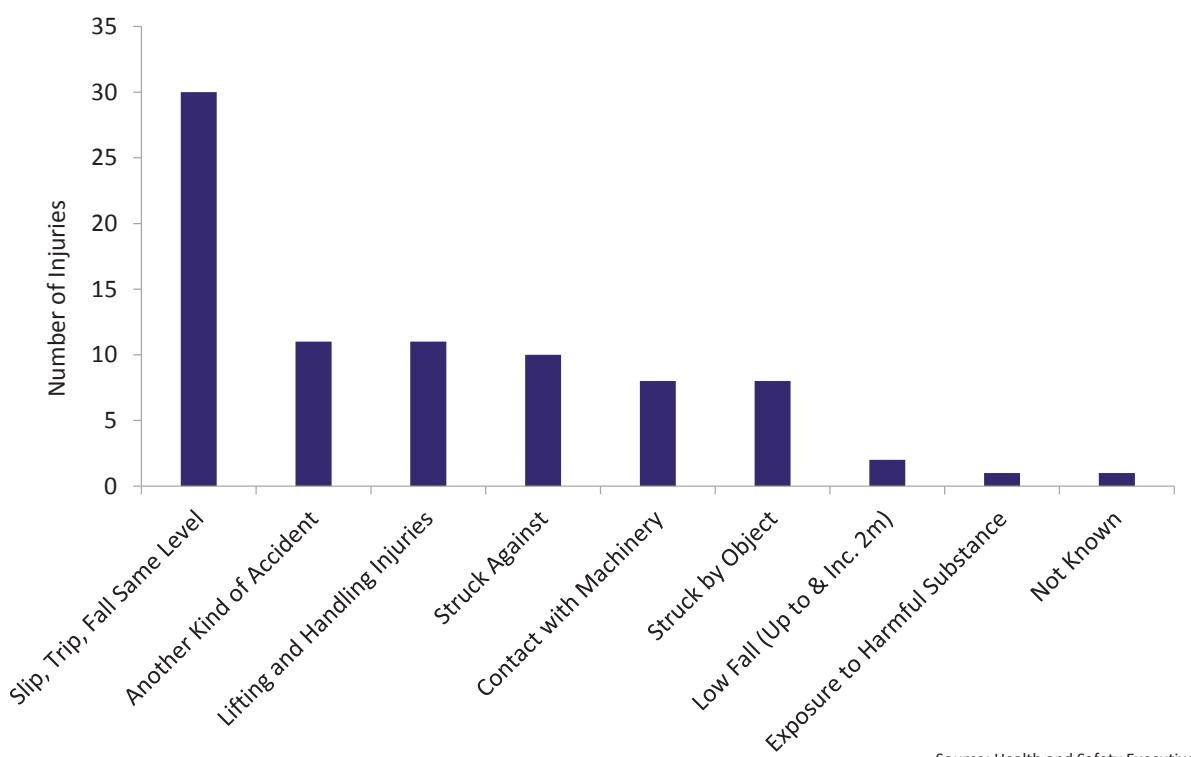
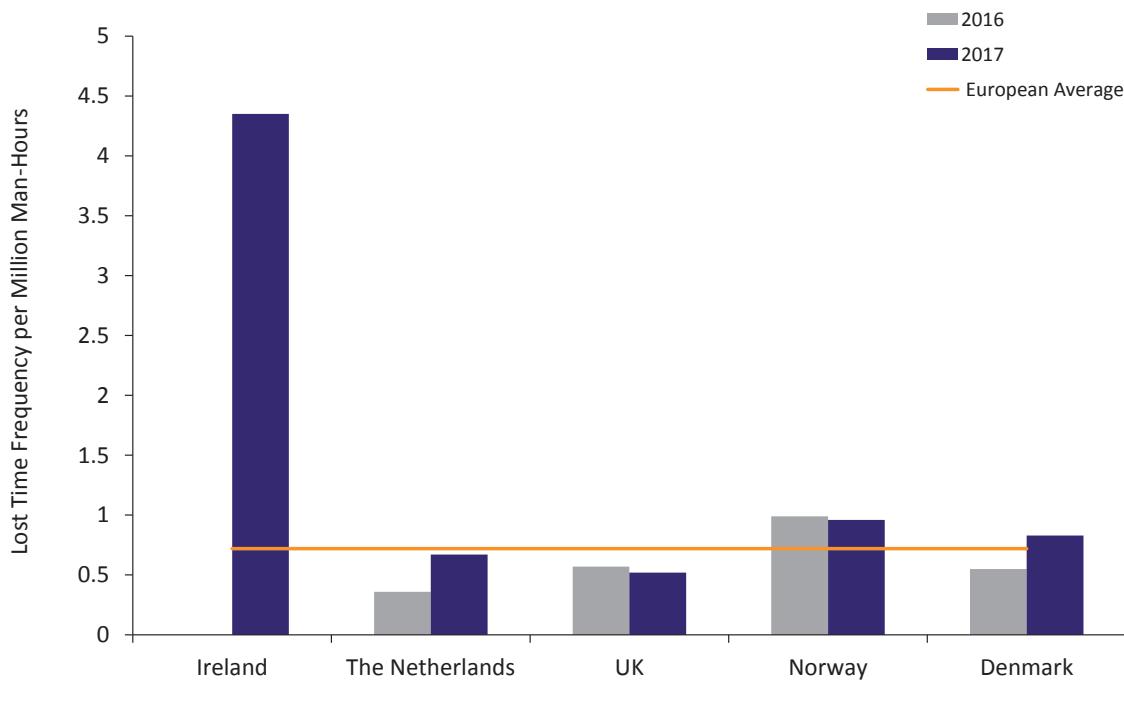


Figure 12 compares the UK offshore oil and gas industry's performance with other European offshore sectors, based on the lost time injury frequency (LTIF) data from the International Association of Oil and Gas Producers (IOGP).<sup>3</sup> This comparison demonstrates that the UK remains below the European average and had a lower LTI frequency than directly comparable sectors in the North Sea, with 0.52 LTIs per million man-hours compared with 0.96 in the Norwegian sector.

**Figure 12: Lost Time Injury Frequency for Oil and Gas Sectors Surrounding the UK in 2017**



Source: International Association of Oil and Gas Producers

<sup>3</sup> The IOGP data is voluntarily submitted by its members before being validated by its Safety Committee. It should be noted that IOGP membership is limited to international exploration and production operators, and therefore incident frequencies per country are based on submissions from member operators only.

### 3.2 Operator Safety Performance Benchmarking

Every year, Oil & Gas UK conducts a benchmarking exercise so that installation operators can compare their own safety performance against the industry average. Other industry associations monitor and report the safety performance of marine and drilling contractors, which are therefore not included.

Thirty-six installation operators were included in the benchmarking exercise for 2017 data. Participating companies receive their individual results, but for the purposes of presenting the aggregated anonymised data, each company is allocated a letter. Note that the same identifier is not assigned to the same operator for each of the categories shown.

The following figures list the participating companies and present the anonymised results from key elements of the benchmarking exercise. The average frequency rate for those companies is calculated to the industry standard of incidents per million man-hours based on a 12-hour working day.

Incident frequency rates, rather than absolute numbers, are used for comparison in this exercise. However, even with that standardisation, the wide variation in frequency rates between the best and worst performers is affected by the relative size of the company's operations. In the more detailed benchmarking report issued to companies directly, organisations are therefore separated by size into three bands to minimise this effect.

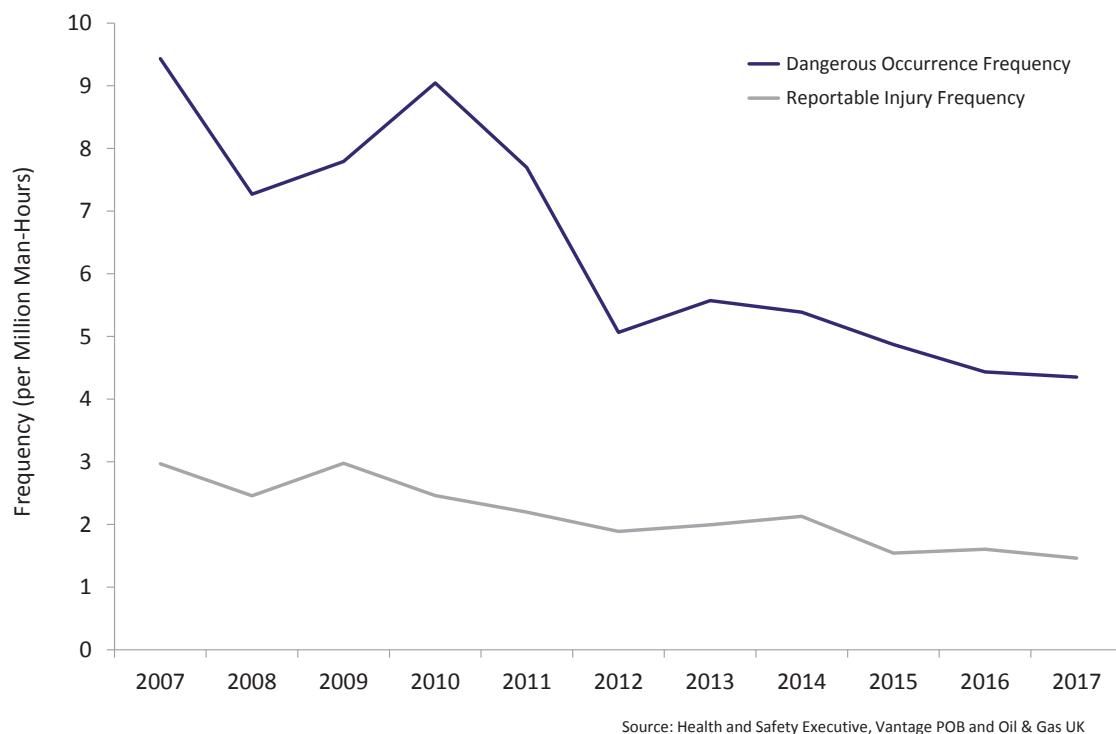
*Figure 13: Participating Companies*

Participating Companies	
Apache North Sea Limited BG Group (Shell UK Ltd) Bluewater Services UK Limited BP Exploration Operating Company Ltd Bumi Armada UK Ltd BW Offshore UK Centrica Storage Limited Chevron Upstream Europe Chrysaor CNR International (UK) Limited ConocoPhillips (UK) Limited Dana Petroleum plc EnQuest Plc Equinor UK Limited EOG Fairfield Energy Ltd Ineos UK E&P Holdings	Maersk Oil North Sea UK Ltd (Total E&P North Sea Limited) Marathon Oil UK Ltd Neptune Energy Nexen Petroleum UK Ltd Oranje-Nassau Energie UK Limited Perenco UK Limited Petrofac Facilities Management Ltd Premier Oil plc Repsol Sinopec Resources UK Limited Shell UK Ltd Spirit Energy TAQA Bratani Ltd Teekay Offshore Total E&P North Sea Limited Wintershall Nordzee B.V. Wood Plc

**NB:** Companies are listed in alphabetical order and this does not correspond to the letters allocated to companies in the performance charts

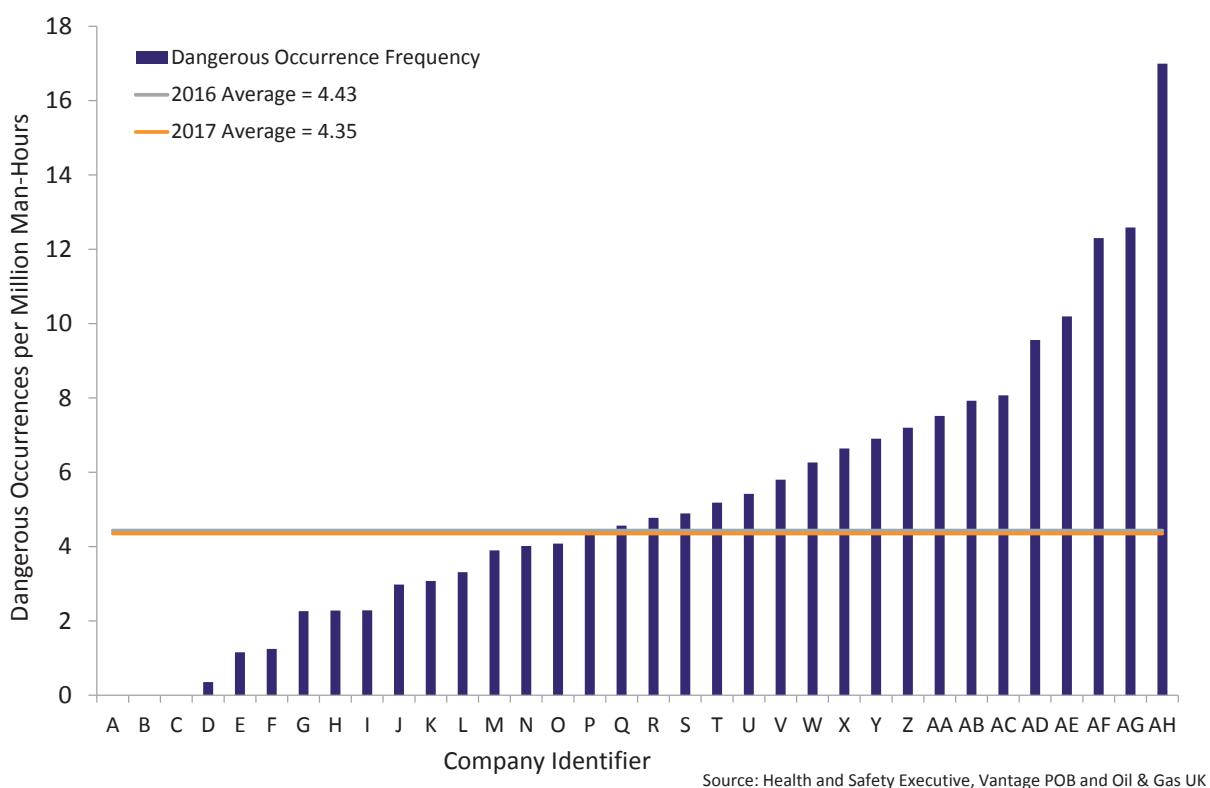
Figure 14 shows the average frequencies for dangerous occurrences and reportable injuries for all duty holders over the last decade. The frequency of dangerous occurrences has fallen by over 50 per cent during this period, from a high of 9.04 in 2010 to its current low of 4.35 per million man-hours. The average frequency of reportable injuries has also fallen by over 50 per cent from 2.98 in 2007 to 1.46 per million man-hours in 2017, the lowest on record.

**Figure 14: Dangerous Occurrence and Reportable Injury Frequencies**

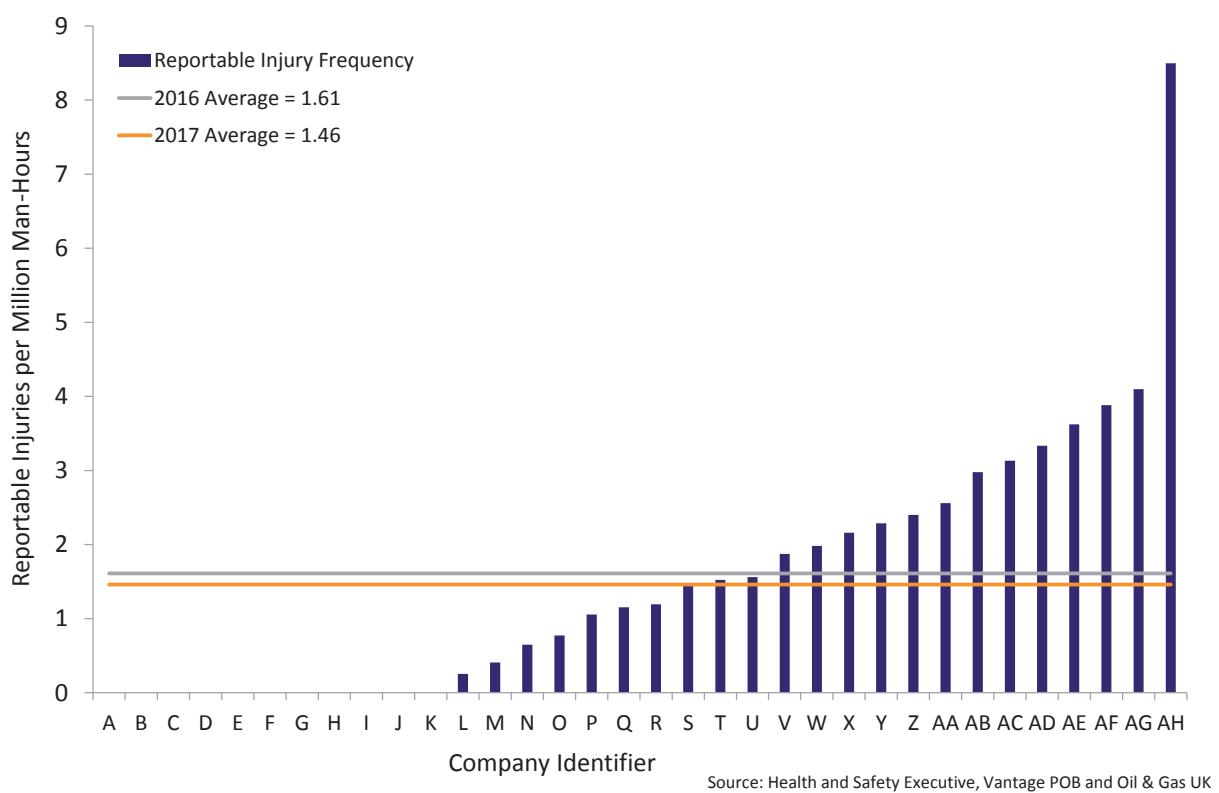


Figures 15 and 16 overleaf show the dangerous occurrence and reportable injury frequency for each company against the average for the group over the past two years. The majority of operators (19) recorded frequencies below the 2017 and 2016 averages for reportable injuries, and almost as many (16) were below the 2016 average for dangerous occurrences. Three operators completed 2017 having recorded no dangerous occurrences. Eleven operators experienced no reportable injuries in 2017, compared with nine in 2016.

**Figure 15: Production Installation Operators' Safety Performance Benchmarking Results – Dangerous Occurrences**



**Figure 16: Production Installation Operators' Safety Performance Benchmarking Results – Reportable Injuries**



The table below summarises production installation operator safety performance benchmarking in absolute numbers for 2017 and over the last ten years.

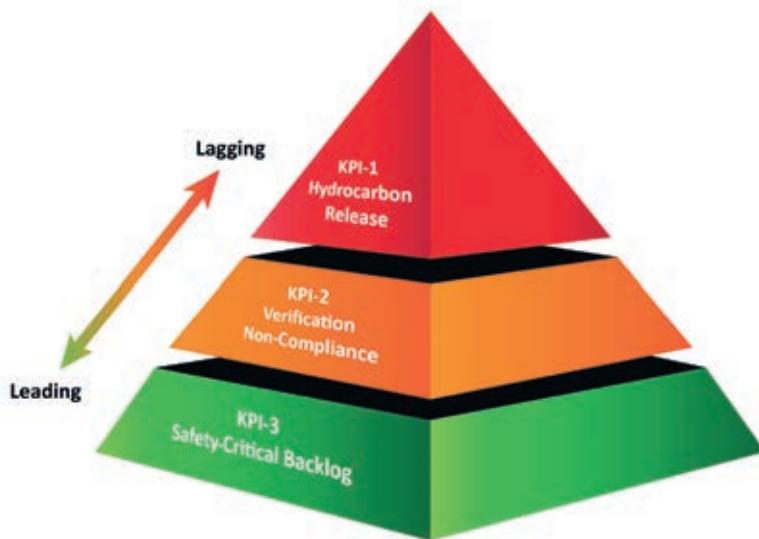
***Figure 17: Benchmarking Performance Summary***

Year	Fatalities	Major / Specified Injuries	Over-Seven-Day Injuries	Dangerous Occurrences	Man-Hours
2008	0	26	90	343	47,167,713
2009	0	36	95	343	44,009,650
2010	0	23	85	397	43,897,119
2011	2	25	72	347	45,081,195
2012	0	27	70	260	51,339,945
2013	0	32	81	316	56,695,543
2014	2	16	103	306	56,793,896
2015	0	15	68	262	53,778,551
2016	1	18	65	232	52,332,393
2017	0	2	81	247	56,759,996
10-Year Average	0.50	22	81	305	50,785,600

### 3.3 Asset Integrity Performance Indicators

The industry has an asset integrity Key Performance Indicator (KPI) scheme which uses the data provided by Oil & Gas UK member companies on a voluntary basis at the end of every quarter. KPI-1 measures HCRs, while KPI-2 and -3 measure verification non-compliance and safety-critical maintenance backlog, respectively.

**Figure 18: UK Asset Integrity Key Performance Indicators**



#### KPI-2 Verification Non-Compliance

The Offshore Safety Case<sup>4</sup> regime requires duty holders to identify and maintain safety and environmentally critical elements (SECE). SECE are systems that are critical to preventing, controlling or mitigating the safety and/or environmental impacts of potential major accident hazards (MAH) and are specific to an installation. Each SECE must comply with a defined performance standard which has been developed based on the parameters of the MAH present on the installation.

Every installation will have many SECE, including fire and gas detection systems, emergency shutdown systems and lifeboats. To ensure that these are suitable for their intended purpose, remain in good condition and repair, and comply with the relevant performance standard, they are subject to a verification process. Verification is undertaken by an independent competent person (ICP), who must report any deficiencies in relation to the performance standards or the verification scheme itself. Findings raised by the ICP are ranked as levels 1, 2 or 3 depending on their severity using common definitions as outlined below. Oil & Gas UK collects data on the performance of these systems from duty holders on a quarterly basis. KPI-2 monitors and measures non-compliances under levels 2 and 3, as they are the more significant findings.

<sup>4</sup> Every offshore installation has a Safety Case – accepted by HSE – that demonstrates the ability and means to control major accident risks effectively.

**Figure 19: Current Definitions – Verification Findings**

Level	
1	Performance standard satisfied, but ICP may suggest an improvement to the system or may request additional information to demonstrate compliance with a performance standard.
2	Single performance standard failure with no significant threat to the installation.
3	Fundamental weakness of the SECE assurance system that involves multiple failures of a performance standard(s) or presents a significant threat to the integrity of the installation.

At the end of 2017, the average number of open (unresolved) level 2 findings per installation was four, slightly improving on the six open at the end of 2016. Findings in 2017 were higher for floating installations (nine) and lower for normally unmanned installations (three). The average number of level 2 findings that are raised and closed each quarter has remained consistent since 2011, sitting at around two to three per quarter.

The industry KPI reporting further categorises open findings into “open-overdue” and “related to process containment”, as it is the latter which are the most important type of SECE.

Level 3 findings relate to more serious matters raised by the ICP. As such, findings are relatively rare and the number per installation is small. The total number across all participating installations is monitored and reported. At the end of 2017 there were no unresolved level 3 findings reported.

### KPI-3 Safety-Critical Maintenance Backlog

KPI-3 produces a record of safety-critical (SC) maintenance backlog in three distinct categories:

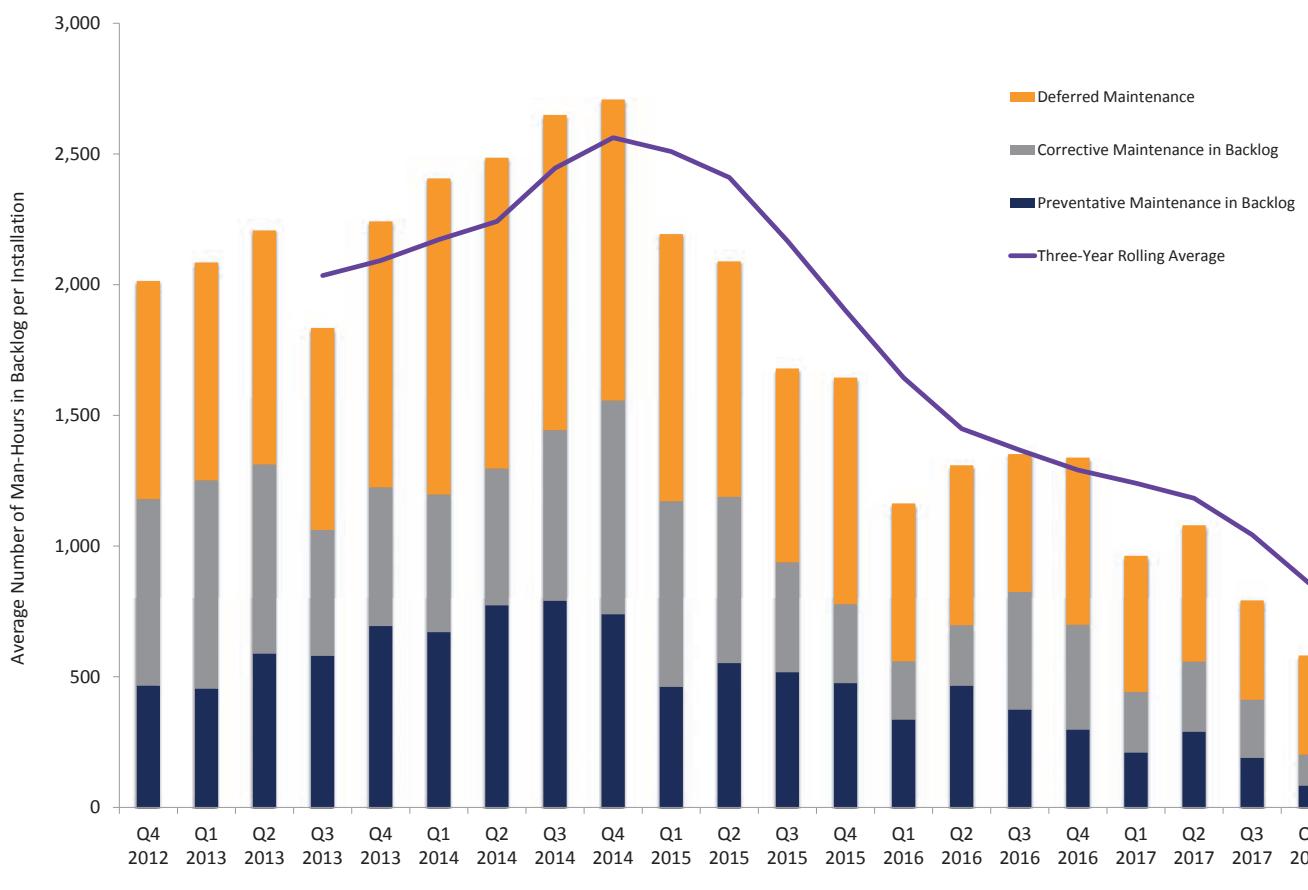
- Planned preventative SC maintenance that has passed its scheduled completion date and is now overdue
- Corrective SC maintenance where equipment undergoing SC maintenance has been found to need some form of repair or recertification
- Deferred SC maintenance that has not been carried out at its planned completion date but has been rescheduled following a robust deferral assessment of the risk associated with deferring maintenance

Figure 20 is a high-level snapshot of industry performance since late 2012. As can be seen, backlog man-hours increased significantly from mid-2013 to the end of 2014.

Following the peak in 2014 there has been a sustained downward trend in safety-critical maintenance backlog hours. This trend is reflected in reduced backlog for preventative and corrective hours. Although the deferred maintenance backlog began to show an increase at the end of 2016, in 2017 the downward trend continued and the average maintenance backlog decreased.

Fluctuations in the quarterly figures are apparent: 2016 and 2017 both saw increases in backlog between quarters one and two. However, each quarter in 2016 was lower than any in the preceding year, and lower again in each quarter of 2017.

**Figure 20: Average Number of Preventative, Corrective and Deferred Safety-Critical Maintenance Man-Hours in Backlog per Installation**



Given the maturity of the industry asset integrity KPI scheme, Oil & Gas UK set up a task and finish work group to review the scheme with a view to identifying and implementing any potential improvements. The major finding from this work was that although there are differences among operators in how they classify the hours, the information that they have been regularly reporting to Oil & Gas UK has been consistent. Therefore, the trends in performance shown remain a valid indicator for the industry. The above graph includes an annualised rolling average to clearly illustrate the changes in performance.

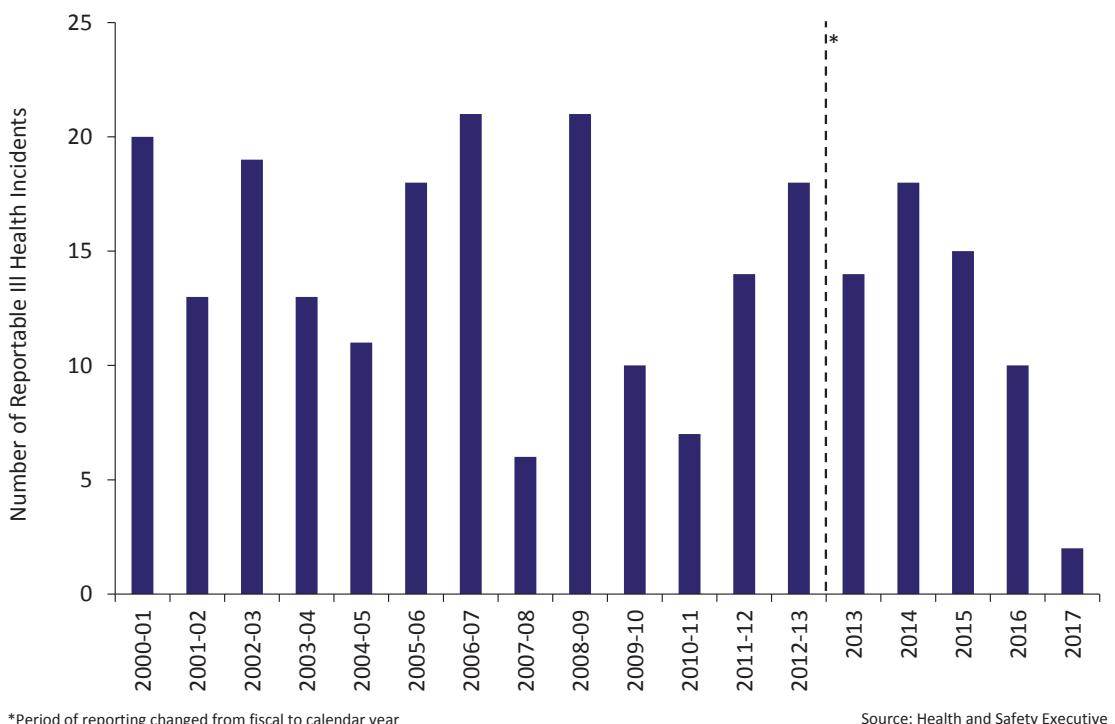
## 3.4 Health

### Occupational Health and Hygiene

RIDDOR legislation requires the reporting of certain diseases as well as injuries and dangerous occurrences. These are primarily occupational diseases such as Hand Arm Vibration Syndrome (HAVS) or occupational dermatitis. Some infectious diseases are also reportable.

The number of RIDDOR reportable cases of ill health offshore has fluctuated over the years, although the annual number reported since 2000 has been, on average, just under 15. In 2017 just three ill health reports were recorded.

**Figure 21: Number of RIDDOR Reported Ill Health Incidents**



### Examining Doctors' Assessments and Training

The Oil & Gas UK standard for medical fitness to work offshore is recognised as a global standard in the industry. The list of examining doctors on the Oil & Gas UK register that can carry out such assessments includes practitioners from around 60 countries across Europe, Asia-Pacific, the Americas and Africa.<sup>5</sup>

To register, medical professionals must complete the association's Introduction for Oil & Gas UK Registered Doctors training. The training course is designed to give delegates knowledge of life and work offshore so that they have a better understanding of the standard of medical fitness required. Over 100 new doctors were trained and registered in 2017.

<sup>5</sup> Find out more about the Oil & Gas UK Register for Examining Doctors at [www.oilandgasuk.co.uk/doctors](http://www.oilandgasuk.co.uk/doctors)

Oil & Gas UK also hosts an annual Examining Doctors Conference to bring together registered doctors from across the world, providing them with essential updates and networking opportunities. Almost 100 doctors from across four continents attended the 2017 conference.

Each year, the registered doctors carry out medical assessments of offshore oil and gas employees around the globe using the *Oil & Gas UK Medical Aspects of Fitness for Offshore Work: Guidance for Examining Physicians*.<sup>6</sup> The doctors are asked to submit a statistical return, indicating the total number of medicals they have performed and the numbers of cases in which individuals have failed to pass their assessments. The number of medicals performed in 2017 returned to levels seen through 2013-2015.

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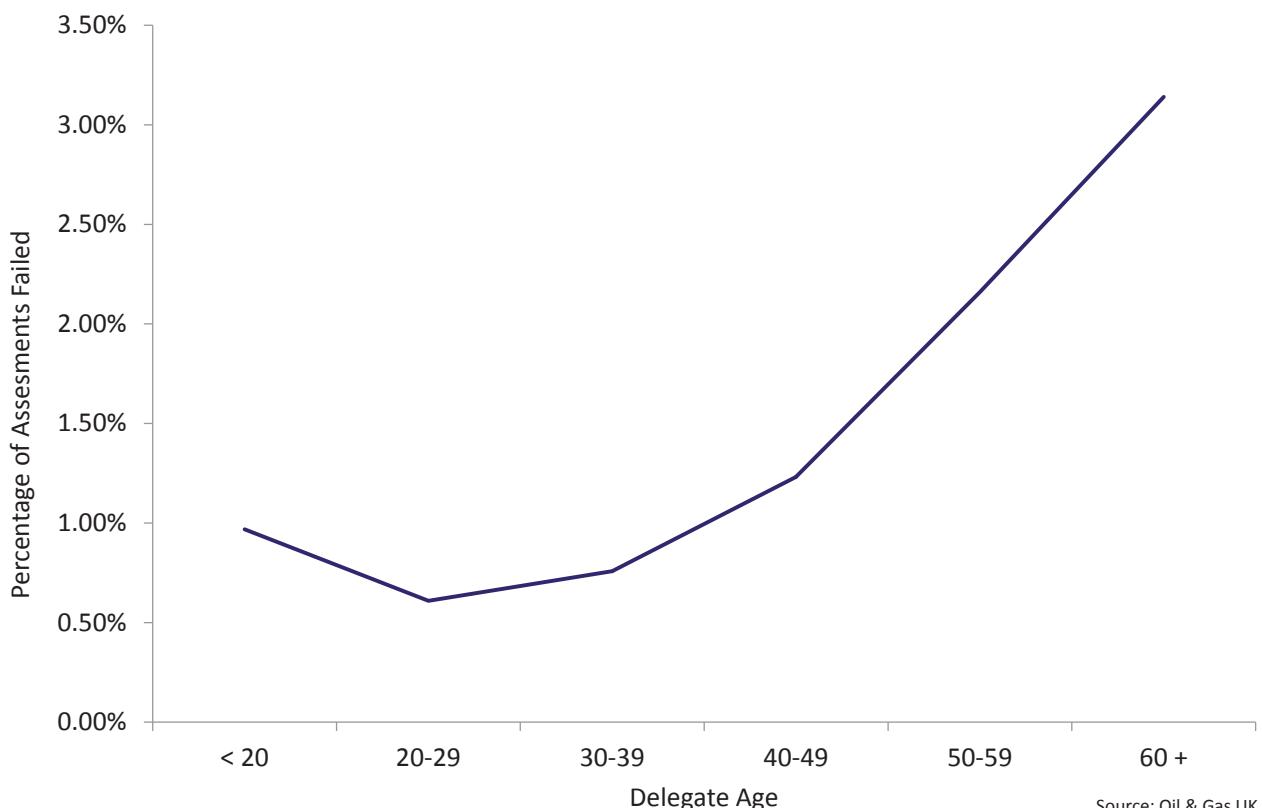
**Figure 22: Examining Doctors Statistics**

Year	Total Number of Medicals Conducted	Number of Medicals Failed	Percentage Medicals Failed
2010	56850	784	1.38
2011	59900	665	1.11
2012	93219	1284	1.38
2013	113006	1333	1.18
2014	118597	1285	1.08
2015	111651	1125	1.01
2016	99104	1125	1.14
2017	110688	1339	1.21

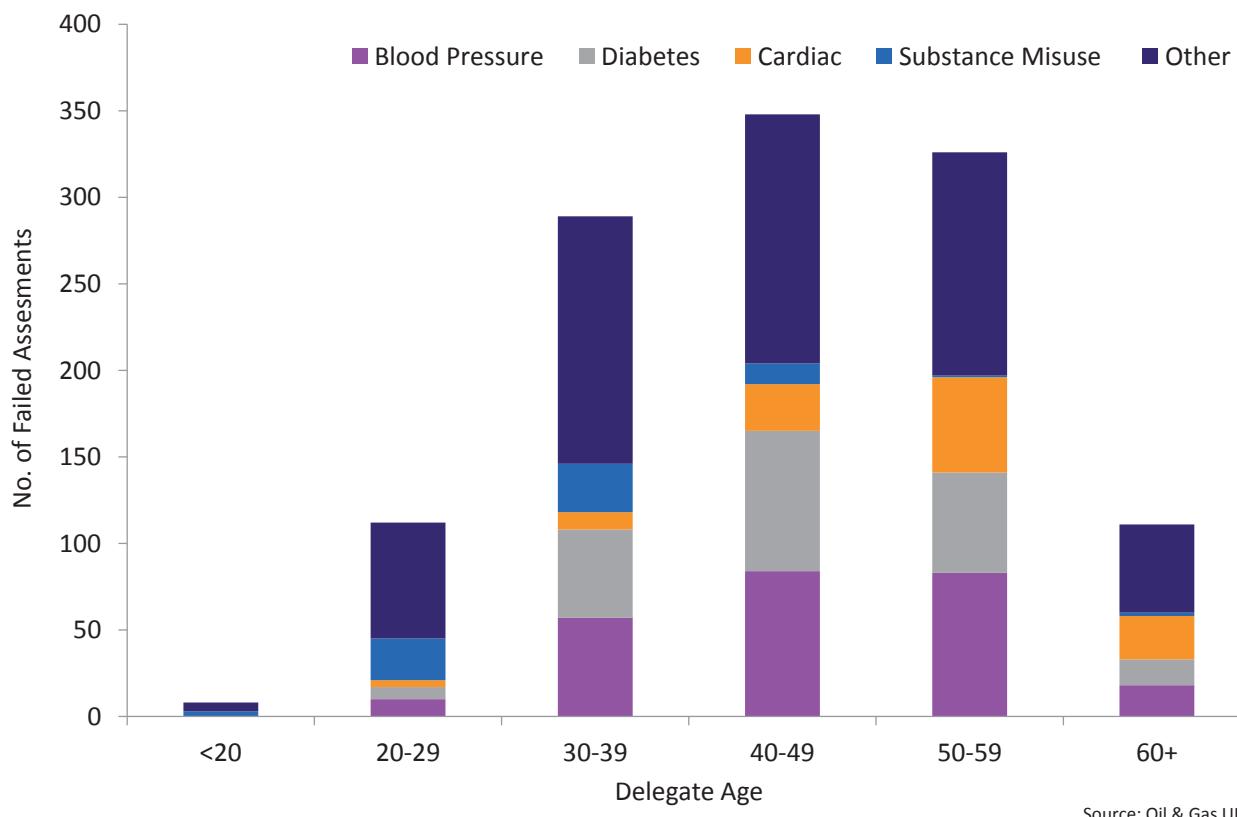
<sup>6</sup> The *Medical Aspects of Fitness for Offshore Work: Guidance for Examining Physicians* is available to download at <http://bit.ly/medicalguidelines>

2017 saw a marginal increase in the fail rate of examinations to 1.21 per cent. Overall, those over the age of 50 are around three times more likely to fail their examination than those under 30.

**Figure 23: Percentage of Failed Assessments by Age**



As in previous years, the most common reason for individuals being declared unfit to work offshore was blood pressure (21 per cent), which was most prominent in the 40-49 age group. Weight issues (9 per cent) and diabetes (8 per cent) were also significant causes for failure, and were similarly higher in that age group. Substance misuse, whilst not one of the most common reasons of examination failure (just 6 per cent of total failures), formed a larger percentage of failed examinations for those below 40 (13 per cent), and just under 2 per cent of failed examinations for those over 40. Figure 24 overleaf illustrates the numbers and reasons for failed assessments by age group.

**Figure 24: Reason for Failed Assessment by Age**

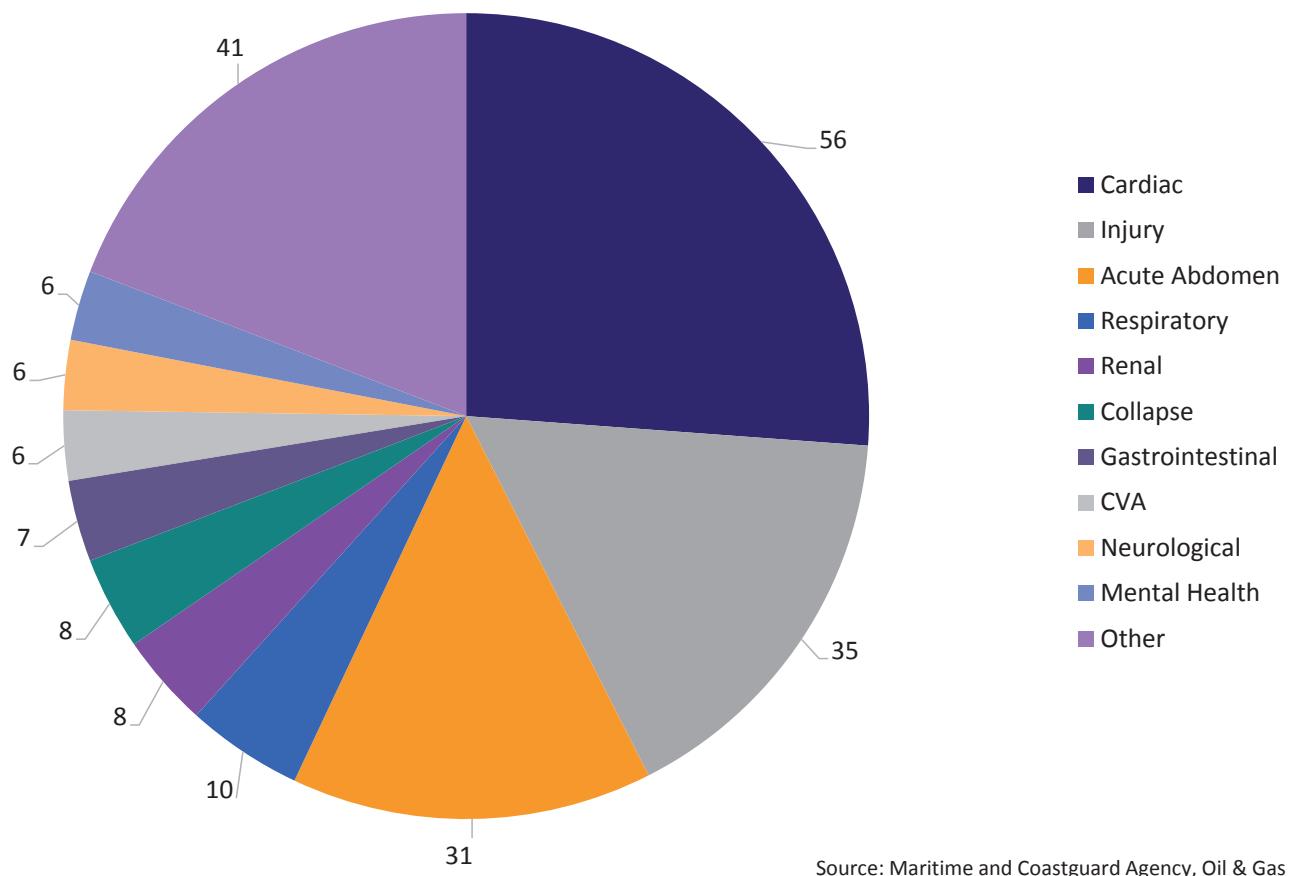
In 2017, Oil & Gas UK worked closely with OPITO, the HSE and industry to complete a project to include the new Category A Compressed Air Emergency Breathing System (Cat-A EBS) for helicopter transit into the mandatory in-water Basic Offshore Safety Induction and Emergency Training for offshore workers (BOSIET). Prior to this, personnel travelling offshore had received dry training with the system. The move to shallow water training was delayed due to the view that this approach increased risk to personnel during training, particularly for those individuals with respiratory illnesses. An update to *Medical Aspects of Fitness for Offshore Work: Guidance for Examining Physicians* was completed in 2017 to address the assessment of fitness to train in water with Cat-A EBS as well as fitness to work. From March 2018, all personnel completing the BOSIET or Further Offshore Emergency Training (FOET) who are deemed fit to participate receive familiarisation with the equipment in-water as well as pool-side.

### Medical Evacuations

As a remote and potentially hazardous workplace where support from the usual emergency services is not available, offshore installations are required to have medical facilities onboard to allow the medic, supported by a topsides doctor, to provide appropriate medical treatment and care to injured or ill personnel until they can be returned to shore. For less acute conditions or minor injuries, this may mean the person is treated onboard and continues to work the rest of their rota on normal or restricted duties. For some personnel the appropriate approach may be to wait until the next scheduled flight, but for the most serious conditions which require onshore treatment as a matter of urgency, either industry or coastguard search and rescue (SAR) helicopters are used.

In 2017, medical evacuations (medevacs) were requested a total of 214 times, with peak demand during the months of December (25) and the months of June (23) and May (22). The medevacs were completed using a mix of scheduled crew change flights, industry and coastguard SAR helicopters. The most common reason for a call-out was a cardiac incident, while injury and acute abdominal issues were the second and third most frequent causes, respectively.

**Figure 25: Reasons for Medical Evacuations**



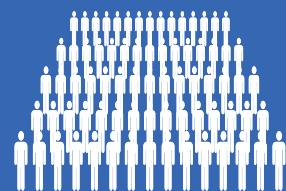
## 4. Offshore Helicopter Operations

### In Summary

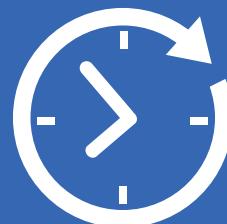
The UK Continental Shelf (UKCS) is a major industrial sector that cannot operate without helicopters. They are intrinsic to offshore operations and, although for some installations walk-to-work provision is practical, there are no realistic alternatives for the UK offshore oil and gas sector as a whole. Commercial air transport (CAT) operations on the UKCS take place in a hostile environment. While the overall safety record is good for this type of operation, there have been incidents over the past 41 years, 13 of which have, tragically, resulted in fatalities.

The UK oil and gas industry continues to work in concert with helicopter operators, helicopter and safety equipment manufacturers, and regulators to further reduce aviation risks. This is achieved by collectively and vigorously pursuing robust operating procedures and practices, by pursuing offshore helicopter safety initiatives and research projects, as well as ensuring, where practicable, swift implementation of actions and recommendations arising from accident investigations, inquiries and reviews (such as CAP 1145).

Over 820,158 passengers were flown offshore in 2017



Totalling nearly 69,005 flight hours



There were 70 active aircraft in the UKCS helicopter fleet, made up of 6 airframe types



## 4.1 Overview

Since 1976, commercial air transport helicopter flight statistics and reportable accident data for UKCS offshore operations have been collected by the Civil Aviation Authority (CAA) under its mandatory occurrence reporting (MOR) scheme. Over this period to year-end 2017, over 68 million passengers have been transported to and from UKCS offshore installations on over 8.1 million flights (or sectors flown), totalling nearly four million flying hours. During the same period, 13 fatal accidents have claimed the lives of 119 offshore workers and flight crew. There have also been 61 non-fatal accidents.

To provide a report that is representative of today's offshore flight operations using a fleet of modern helicopters, data since 1997 have been used for comparison. As an indicator of current UKCS activity, 99,031 sectors were flown in 2017, totalling over 69,005 flight hours. Helicopters were used to transport 820,158 passengers to and from offshore. Overall activity continued to decline year on year – 2016 saw 108,775 sectors flown and 88,983 flight hours – but there was an increase in passengers transported, up from 715,011 last year.

Since 1997, four fatal accidents have claimed the lives of 38 offshore workers and flight crew, and there have been 16 non-fatal accidents.

Over the past 20 years and more, industry-led initiatives and CAA research projects have brought many safety improvements to UKCS helicopter operations. The most recent changes have resulted from the industry's response to CAP1145 recommendations from the CAA following the Sumburgh helicopter incident in 2013. This led to the identification and management of passengers with Extra Broad shoulders (XBR) and the introduction of the Category A Compressed Air Emergency Breathing System (Cat-A EBS) in place of the rebreather used previously.

## 4.2 Current Helicopter Types

At the end of 2017 the active UKCS helicopter fleet numbered 70 aircraft and comprised a mix of medium and heavy twin-engine airframe types. Since 2001, only heavy and medium twin-engine helicopters have been used for commercial air transport on the UKCS. This is because two-pilot, light, helicopter operations generally do not have sufficient range or payload to meet contemporary offshore commercial requirements.

In 2016, there were 96 helicopters in the fleet, including 31 Super Pumas (H225 and AS332L2). These were ‘grounded’ by a CAA directive in early 2016 following a fatal accident in the Norwegian sector. In July 2017 the restriction was lifted, although no operator has reintroduced the Super Puma to the UKCS to date. The total active fleet (excluding the 31 Super Pumas) has therefore increased slightly in 2017 compared to 2016, with five more airframes in use than at the end of 2016. Six Airbus H175 aircraft have been added, and one H155 withdrawn.

The helicopter types in active use for UKCS offshore oil and gas support at the end of 2017 are shown in the table below.

**Figure 26: Current Helicopter Types used for UKCS Offshore Oil and Gas Support**

Type	Weight Class	Introduced	In Fleet
Leonardo AW139	Medium	2005	19
Airbus AS365N3 (Dauphin)	Medium	1979	2
Airbus H155	Medium	2007	1
Airbus H175	Medium	2016	8
Leonardo AW189	Heavy	2014	3
Sikorsky S92	Heavy	2005	37

The S92 helicopter is the most common type in use in the UKCS, making up nearly half of the offshore fleet and carrying over two-thirds of the passengers transferred in 2017 (552,314). The AW139 is second, carrying one-fifth of passengers (167,195). Reliance on a single airframe model for the majority of offshore commercial air transport could limit the resilience of industry arrangements for the transfer of personnel in some sectors. The Oil & Gas UK Aviation Safety Technical Group maintains a watching brief on this aspect of aviation logistics.

## 4.3 Offshore Helicopter Reportable Accidents

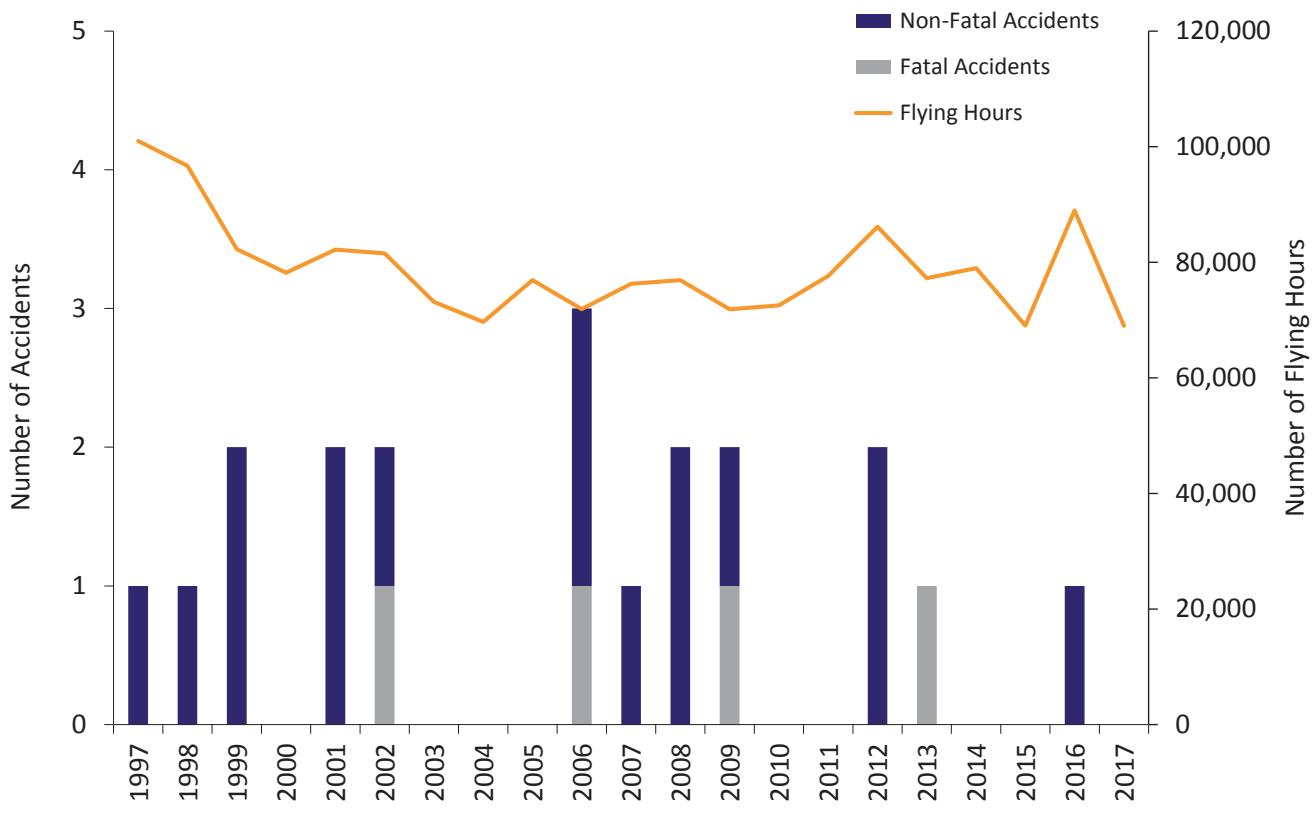
Helicopter accidents and serious incidents, as defined in Regulation (EU) No 996/2010, are reported to the CAA. In addition, all flight safety occurrences as described by the CAA's CAP 382 are reported to the CAA using the mandatory occurrence reporting (MOR) scheme. There are reports submitted every month, providing constant oversight of safety-related occurrences.

Between 1997 and 2017, four fatal accidents claimed the lives of 38 offshore workers and flight crew. Two accidents were caused by catastrophic component failure and two were attributed to human factors. Sixteen reportable non-fatal accidents have also occurred since 1997. Causes for these incidents include major component failures, pilot error, lightning strikes, major airframe damage, and main and tail rotor damage. In most cases, only the helicopter was damaged but, infrequently, these accidents have resulted in injury to personnel.

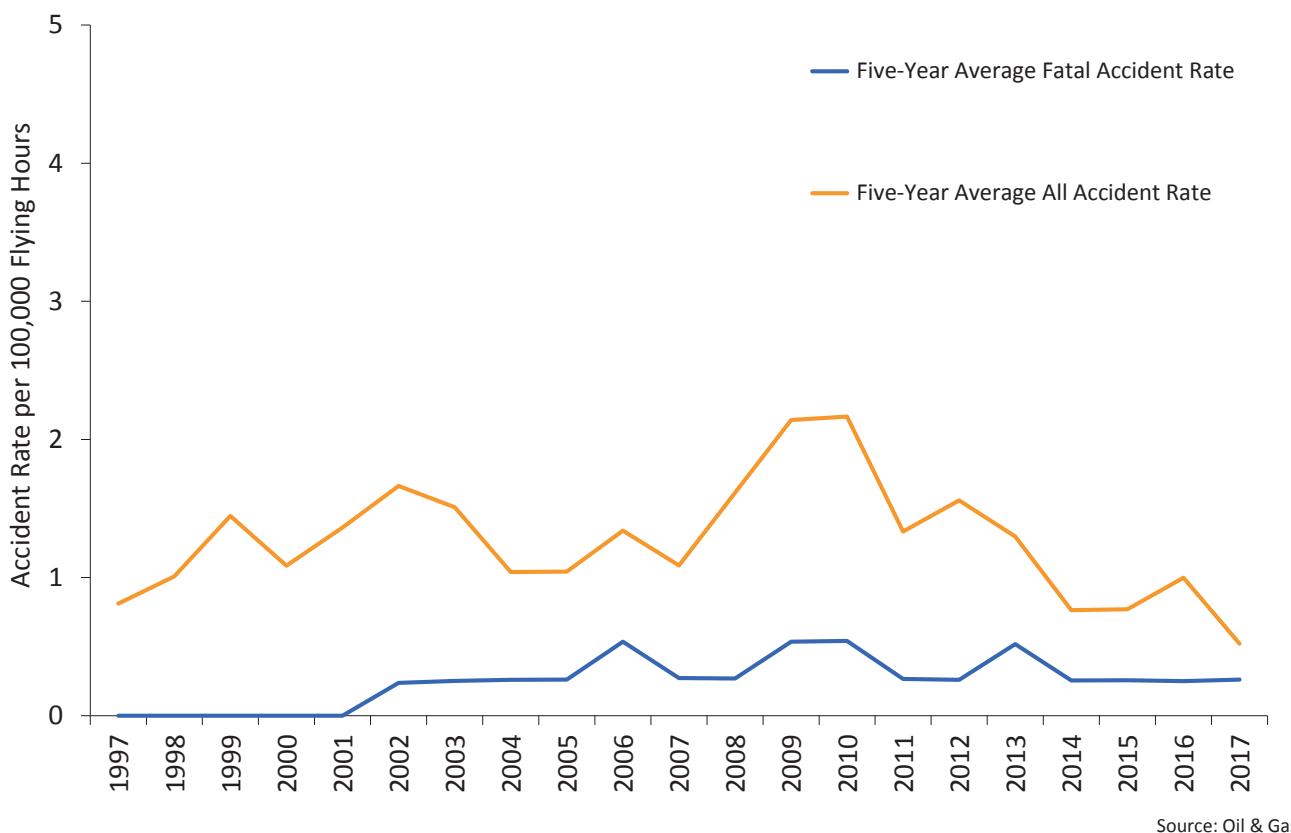
2017 was an accident-free year in offshore helicopter operations. As a result, the UKCS' five-year average all accident rate has decreased from 1.0 to 0.52 per 100,000 flying hours. The accident rate data show that the five-year average for fatal accidents has remained between 0.2 and 0.5 per 100,000 flying hours for the last decade.

The following graphs illustrate the distribution of fatal and reportable accidents from 1997 to 2017 on the UKCS, as well as fatal and all accident rates per 100,000 flying hours.

**Figure 27: Fatal and All Accidents Distribution**



Source: Oil & Gas UK

**Figure 28: Fatal and All Accident Rates per 100,000 Flying Hours**

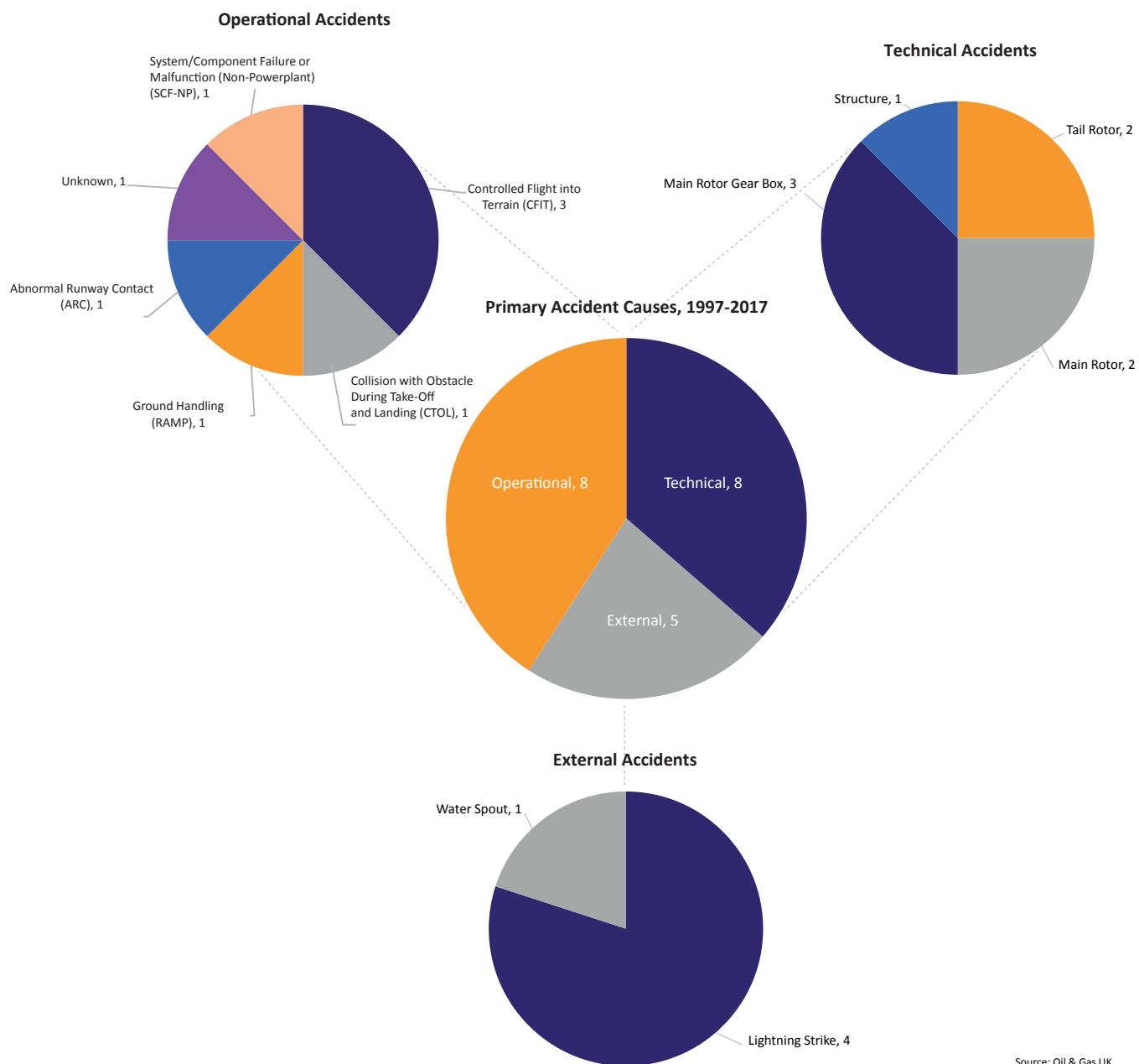
#### 4.4 Accident Analysis

A breakdown of reportable accident causes from 1997 to 2017 is provided in the following charts. As 2017 was an incident-free year, the data below is unchanged from last year.

From 1997 to 2017, operational causes (flight and ground) accounted for 35 per cent of accidents, 40 per cent were due to technical failures and 25 per cent caused by external factors.

All the operational accidents that occurred during flight were attributed to pilot error. Eighty-seven per cent of the technical failures were attributed to dynamic component failures (main rotor gear box, main rotor blade and tail rotor). A structural issue accounts for the remaining 13 per cent.

Of the 25 per cent of accidents caused by external factors, all resulted from weather-related events, including four lightning strikes and an encounter with a water spout.

**Figure 29: Breakdown of Reportable Accident Causes, 1997 to 2017<sup>7</sup>**

<sup>7</sup> For accident events to be identified using a recognised international code, categorisation and causation follows the International Civil Aviation Organisation/Commercial Aviation Safety Team Common Taxonomy Team Taxonomy.  
 Operational (F) = an event related to the helicopter while in flight or abnormal contact with terrain  
 Operational (G) = an event related to the helicopter while on the ground.  
 Technical = an event involving system/component failure or malfunction, fire/smoke.  
 External = an event involving icing, turbulence, wind shear, thunderstorm or bird strike.

## 5. Significant Activities

### In Summary

**A**s the industry association for UK offshore oil and gas, Oil & Gas UK promotes open dialogue across all areas of the sector, engages with government, regulators and other external stakeholders, and maintains industry-wide networks and expertise. Collaboration and co-operation between members and stakeholders allow the industry to strengthen its health and safety culture.

In 2017, Oil & Gas UK worked with stakeholders and members to ensure that accumulated experience, knowledge and expertise is shared broadly within the industry. One way in which this is achieved is by developing industry guidance to promote awareness of sector-specific good practice and regulatory compliance. Oil & Gas UK guidelines are produced by bringing together interested parties, including technical experts, relevant industry figures and organisations, and often with the involvement of the relevant regulator.

In 2017, documents were produced on such topics as fire and explosion risk management, emergency response and rescue vessel (ERRV) requirements and electrical operations. Oil & Gas UK co-ordinated industry input to and feedback about regulatory guidance and legislative changes, including the *Inspection of Loss of Containment Guidance* produced by the HSE. Oil & Gas UK-led technical groups also provided a mechanism to communicate pending changes in regulatory approach and/or legislation affecting industry relating to, among others, adverse weather, radioactive substances and occupational exposure limits for benzene.

The association supported industry in resolving significant issues and co-ordinating activities, including the management of accommodation fire risk, lifeboat familiarisation requirements, safety case improvements, and finalising the inclusion of the Cat-A EBS into basic offshore safety induction and emergency training.

A key role for Oil & Gas UK is the identification of potential changes to the operating environment arising from legislative and constitutional changes, as the practicalities and implications of the UK exit from the EU are yet to be understood. Monitoring of relevant legislative developments and communication with external stakeholders continues.

In 2018, Oil & Gas UK will continue to support its members in all aspects of offshore health and safety performance.

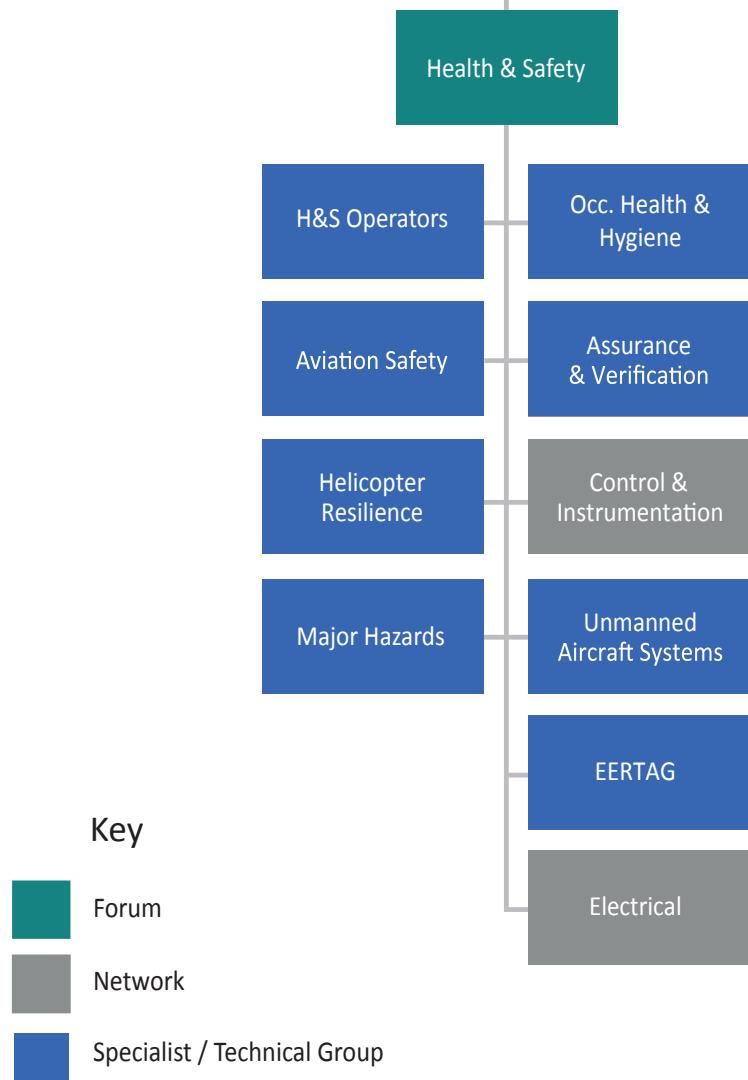


## 5.1 Health and Safety Groups Within Oil & Gas UK

Oil & Gas UK supports an industry Health and Safety Forum which meets quarterly, along with various technical groups and networks, as illustrated below. The specialist groups also form work groups as required to address specific issues within their areas of expertise.

### Forums and Work Groups

#### Oil & Gas UK Health & Safety Team



## 5.2 Safety 30

In the thirtieth anniversary year of the Piper Alpha disaster, Oil & Gas UK replaced its annual conference with Safety 30, a two-day event dedicated to exploring how the legacy of Piper has shaped current operations and how industry can create an even safer future. The conference was run by Oil & Gas UK in collaboration with the International Regulators' Forum, and opened with a keynote speech by Lord Cullen, who reminded delegates of the need to build on safety lessons drawn from investigations of Piper and other major accidents for our industry and its people today and tomorrow.

Presenters at the conference considered how the business environment affects health and safety; the impact of increased efficiency and lower costs; new operators; technological advances; and engaging a 'digital' generation of workers. The event also explored the importance of sustainable learning from incidents and transferring experience from one generation to the next. These topics and others were brought to life in plenary and workshop sessions by key industry and regulatory figures from around the world as well as experts from other industries. Plenary sessions are available to watch online at [www.safety30.co.uk](http://www.safety30.co.uk).

## 5.3 Regulatory Engagement

During 2017, Oil & Gas UK and HSE continued the schedule of regular meetings to improve engagement between industry and regulatory authorities. The aim is to enable regular constructive discussions around potentially contentious issues that have been raised by members of Oil & Gas UK or which the regulator wishes to address with industry. This arrangement has proved effective in enhancing communication and understanding between duty holders and the HSE. Similar arrangements with other regulatory bodies with responsibility for safety are in place, including with the Maritime And Coastguard Agency, and the CAA.

## 5.4 Tripartite Committees and Groups

Oil & Gas UK represents the industry in legally constituted tripartite groups. The Offshore Major Accident Hazards Advisory Committee (OMAHAC) brings together representatives from regulators, installation operators, asset owners and workers to support the work of the Offshore Safety Directive Regulator (OSDR). In 2016, Oil & Gas UK took up the role of vice-chair, and in 2018 will be taking over the secretariat role from the HSE. OMAHAC is a requirement of the Offshore Safety Directive, and the tripartite committee provides a valuable opportunity for trade union representatives, regulators and industry to identify and address upcoming issues.

The Evacuation, Escape & Rescue Technical Advisory Group (EERTAG) has a range of technical interests including equipment and procedures to be used in evacuation, escape and rescue (EER), improving EER capabilities in areas such as temporary refuge, escape to sea and recovery to place of safety, and the PPE to be used in such emergencies.

## 5.5 Category A Emergency Breathing System

In response to the recommendations from the CAA in CAP 1145, following the helicopter accident at Sumburgh in 2013, the UK offshore oil and gas industry introduced Cat-A EBS as standard survival equipment for offshore helicopter operations. The workforce underwent classroom training on how to use the system in 2015.

In 2017, work towards replacing the classroom training with in-water training continued, and the updated Basic Offshore Safety Induction and Emergency Training and Further Offshore Emergency Training (BOSIET/FOET) was implemented in March 2018. As a result, those candidates whose health does not preclude use of the equipment underwater can experience the system in-water.

To manage the associated risks of such in-water training – which are heightened for some, particularly those individuals with respiratory illnesses – and to ensure compliance with the Diving at Work Regulations 1997, Oil & Gas UK published a supplement to the *Medical Aspects of Fitness to Work Offshore: Guidance for Examining Physicians*, providing a framework for assessing fitness to use the Cat-A EBS underwater. A request has also been made to the HSE to exempt candidates who hold both a seafarer's medical fitness certificate (ENG1) and a fitness to train assessment from the requirement to complete a diving medical.

## 5.6 External Groups and Organisations

Oil & Gas UK represents the offshore oil and gas industry on behalf of members in external organisations and groups within the UK, in Europe and internationally. This provides an opportunity for sharing information, ensuring co-ordination and alignment where appropriate, and giving the UK offshore oil and gas industry a voice. Co-ordination with international industry bodies such as the International Association of Drilling Contractors (IADC) and International Oil and Gas Producers (IOGP) is well established and allows Oil & Gas UK to participate in discussions at European level, among other benefits. The cross-sector Process Safety Forum and Energy Institute provide an opportunity to share experience and improvements between sectors.

Oil & Gas UK also sits on the UK Industry Forum (UKIF) advising on the development and review of OPITO training and competence standards, and works closely with other national offshore industry associations (NOIAs) such as NOROG, NOGEPA and Oil Gas Denmark. Links to other related sectors are maintained through attendance at and support for the work of the Marine Safety Forum (MSF), Helioffshore and Renewables UK, among others.

## 5.7 Guideline Review

In 2017, Oil & Gas UK conducted a status review of all health and safety guidelines, identifying those to be withdrawn, those still up to date, and those requiring priority review. Some publications have been removed from the website, although remain available to members on request for information only. Others have been updated as outlined overleaf.

## 5.8 Publications

### **Fire & Explosion Guidance**

These guidelines set out good practice for designing against fire and explosions on offshore installations, setting a philosophy for design and assessment in a realistic and accessible manner. They provide a rational and pragmatic foundation to support design decisions. Topics addressed include fire and explosion hazard types, fire and explosion management, derivation of fire loadings, heat transfer and explosion loads, and the response of equipment and systems to fires and explosions.

### **Emergency Response and Rescue Vessel Management Guidelines and Survey Guidelines**

These guidelines have been created as part of a joint effort between Oil & Gas UK and the Emergency Response and Rescue Vessel Association (ERRVA), and are intended to provide masters and crews of standby vessels, offshore installation managers (OIM) and other offshore personnel with general guidance on the conduct of ERRV activities as part of the effective arrangements for the recovery and rescue of personnel. The survey guidelines are intended for marine surveyors, standby vessel owners and charterers in assessing the suitability for vessels standing by offshore installations as required by legislation.

### **Guidelines for Management of Electrical Operations**

These guidelines have been prepared to assist owners, operators and contractors to safely manage electrical operations in the UK upstream oil and gas industry. They are relevant for onshore terminals as well as fixed and mobile offshore installations.

### **Medical Aspects of Fitness for Offshore Work: Guidance for Examining Physicians Supplement A – Fitness to Undertake In-Water EBS Training Exercises**

A new supplement to the *Medical Aspects of Fitness for Work Offshore: Guidance for Examining Physicians*, setting out the approach to assessing a candidate's medical fitness to participate in the in-water Cat-A EBS training element of the FOET/BOSIET course.

### **JIP: Guidance for UK Safety Case Management During End of Life (EoL), Decommissioning and Dismantling**

Oil & Gas UK supported the publication of this joint industry project (JIP) offering guidelines to duty holders in maintaining compliance with the Safety Case Regulations (SCR) during end of life, decommissioning and dismantling of installations, based on experience of recently completed and current decommissioning projects.

### **Fire Risk Management in Offshore Accommodation – Technical Note**

This technical note was issued to outline good practice for the management of fire risk in offshore accommodation modules. It addresses risk drivers, risk-based decision making and risk management controls available and sets out how these can be used to achieve as low as reasonably practicable (ALARP) risk levels.

## 5.9 2018 Look-Ahead

### **Hydrocarbon Release Reduction**

In May 2018, the head of the HSE Energy Division wrote to all duty holders in the UKCS requesting details of the arrangements they have in place to prevent hydrocarbon releases. While recognising the significant progress made by industry, the letter expressed concern about the number of major HCRs. It made clear the HSE's position that the "oil and gas industry must improve further in this area to reduce the likelihood of an incident with potentially catastrophic consequences".

Oil & Gas UK scheduled a special board meeting in response to this publicly expressed concern about hydrocarbon release reduction, inviting the HSE to present details of recent major HCRs and to discuss their concerns directly with the board members. Working with Step Change in Safety, Oil & Gas UK will facilitate a co-ordinated and comprehensive industry response to this challenge, and lead industry to reach a view on the necessity of initiating further joint action to address the three key areas highlighted in the letter: process safety leadership; audit, assurance and review; and how to support sustainable learning from incidents.

### **Maintaining Safe Operations Where the Emergency Rescue and Recovery Vessel is Unavailable to Perform Normal Duties**

A work group has been set up to develop good practice on maintaining safety in the event that the ERRV is unable to perform its normal range of duties (e.g. in the event of adverse weather). In such situations, vessel support might not be available to the installation during for example, a major incident, which could hamper rescue at sea. The group will review the arrangements duty holders have in place for operational risk management in such situations, share good practice with industry on what constitutes ALARP in this context and publish a Technical Note to capture all relevant information.

### **Changes to Benzene Occupational Exposure Limits**

The Occupational Health & Hygiene Technical Group will be monitoring the changes to benzene occupational exposure limits through trilogue of a proposal by the European Chemicals Agency to reduce occupational exposure limits to one-tenth of the existing limit. Some concern surrounds the possibility that current biological monitoring techniques available in remote locations such as offshore installations will not be technically appropriate at the new threshold. The group has raised these concerns with the regulator and will work closely with occupational health specialists within the HSE Energy Division to identify a practical solution.

### **Review of Cat-A EBS and Medical Fitness**

Following the roll-out of the revised OPITO FOET/BOSIET curriculum, Oil & Gas UK will seek feedback from stakeholders including training providers, registered doctors, employers, regulators and candidates on the fitness to train framework later in 2018.

### **Helicopter Operations Safety and Resilience**

Oil & Gas UK's Aviation Safety Technical Group anticipates a continuing need for close collaboration with the regulatory authority, service providers, and industry and workforce representatives in 2018 to manage the ongoing impact of helicopter models H225 and AS 332 not being used by industry following on from the lifting of restrictions in 2017. The helicopter fleet now consists of 70 airframes, with one model of airframe constituting more than 90 per cent of the heavy twin airframes capable of travel to the more distant installations.

Oil & Gas UK will participate fully with affected stakeholders, along with partners in the CAA and Step Change in Safety, in any activities regarding the potential resilience issues arising.

### **Mental Health**

Recognition across industry of the importance and complexity of managing mental health and wellbeing in the workforce has led to an increased focus on the issue. Through the Occupational Health & Hygiene Technical Group, Oil & Gas UK intends to review this area and develop a position paper detailing what, if any, next steps should be taken in areas such as the development of related guidelines, appropriate training or identification and management of mental health risk.

## 6. Glossary

<b>BOSIET</b>	Basic Offshore Safety Induction and Emergency Training
<b>CAA</b>	Civil Aviation Authority
<b>Cat-A EBS</b>	<p>Category A Compressed Air Emergency Breathing System</p> <p>A compressed air breathing system that can be deployed at very short notice and/or underwater for underwater escape</p>
<b>Dangerous occurrences</b>	Certain specified events as defined in RIDDOR 2013, includes events such as dropped objects, hydrocarbon releases, fires or explosions
<b>Duty holder</b>	In relation to a production installation, this means the operator, and in relation to a non-production installation, the owner
<b>EASA</b>	European Aviation Safety Agency
<b>ERRV</b>	Emergency response and rescue vessel
<b>FOET</b>	Further Offshore Emergency Training
<b>HAVS</b>	Hand Arm Vibration Syndrome
<b>HCR</b>	Hydrocarbon release(s)
<b>HSE</b>	Health and Safety Executive
<b>ICP</b>	Independent Competent Person
<b>IOGP</b>	International Association of Oil & Gas Producers
<b>KP</b>	Key Programme
<b>KPI</b>	Key Performance Indicator
<b>Lagging indicator</b>	Output oriented measurement of past performance
<b>Leading indicator</b>	Input oriented prediction of future performance
<b>LTIF</b>	Lost time injury frequency
<b>MAH</b>	Major accident hazard
<b>MCA</b>	Maritime and Coastguard Agency
<b>MOR</b>	Mandatory Occurrence Report
<b>NUI</b>	Normally unattended installation
<b>OIM</b>	Offshore installation manager
<b>OMAHAC</b>	Offshore Major Accident Hazards Advisory Committee
<b>OPITO</b>	The Offshore Petroleum Industry Training Organisation
<b>Over-seven-day injuries</b>	Accidents that cause an employee to be away from work or unable to perform their normal work activities for more than seven consecutive days
<b>Personal safety</b>	Protecting an individual from harm
<b>Process safety</b>	Managing major hazards that may cause incidents that harm many people e.g. fires, explosions or structural collapse
<b>Reportable injury</b>	A work-related injury that has either resulted in an employee being away from work, or unable to perform their normal work duties, for more than seven consecutive days due to their injury, or which is listed as a specified injury

<b>RIDDOR</b>	Reporting of Injuries, Diseases and Dangerous Occurrences Regulations
<b>Safety critical maintenance backlog</b>	An accumulation of uncompleted maintenance associated with safety and environmental critical elements (SECE) that is still to be cleared
<b>SAR</b>	Search and rescue
<b>SC</b>	Safety critical
<b>SCR</b>	Safety Case Regulations 2005/2015
<b>SECE</b>	<p>Safety and Environmental Critical Elements</p> <p>Parts of an installation and such of its plant (including computer programmes), or any part of those – (a) the failure of which could cause or contribute substantially to a major accident; or (b) the purpose of which is to prevent, or limit the effect of, a major accident</p>
<b>Specified injuries</b>	Defined list of reportable injuries detailed in Regulation 4 of RIDDOR 2013
<b>Topside Doctor</b>	A registered medical practitioner providing support from onshore to the offshore medic in connection with an illness or injury
<b>XBR</b>	Extra broad

## Notes

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