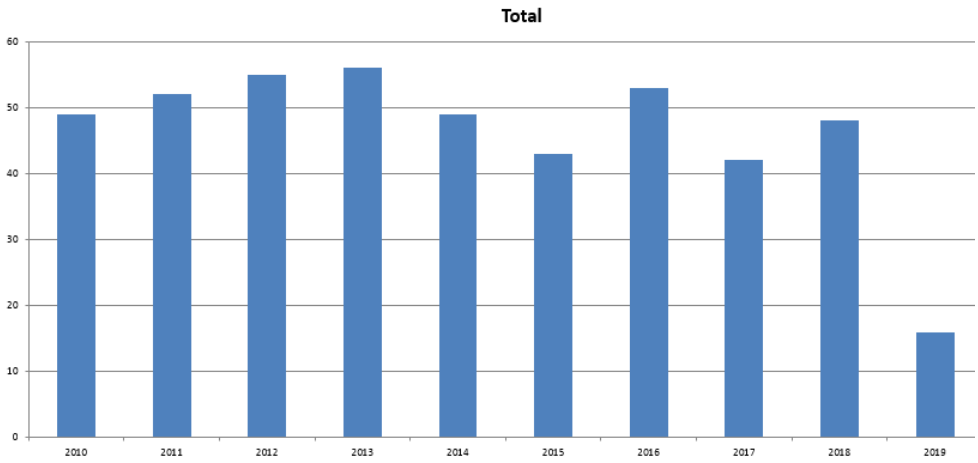
A trend analysis of Inland Waterways Class V Passenger Vessel incident statistics—January 2010—July 2019

Overview

On average there are 50 incidents and/or Near Misses per year involving Class V Passenger Vessels on the tidal Thames. Since January 2010 there has been a total of 461.



Definitions

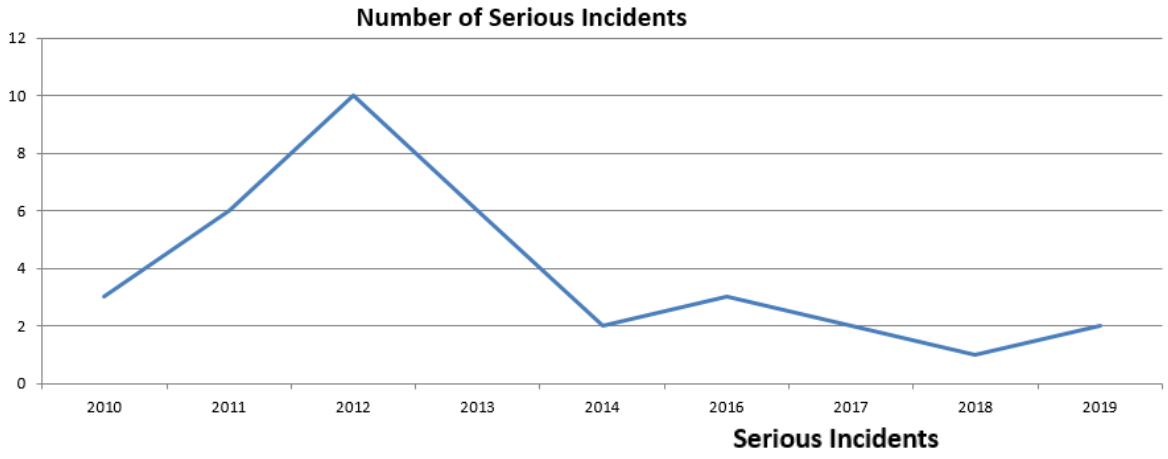
Class V Passenger Vessel: These are vessels licensed to carry more than 12 passengers and are certificated by the Maritime & Coastguard Agency to operate on category C waters (tidal rivers, estuaries and large, deep lakes).

Definitions

Older Vessel:

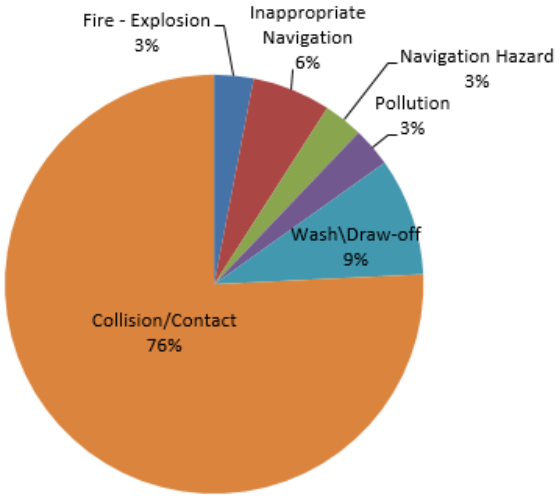
For the purposes of this report, an older vessel is considered anything built prior to 1992.

A Modern Vessel is considered anything built after 1992



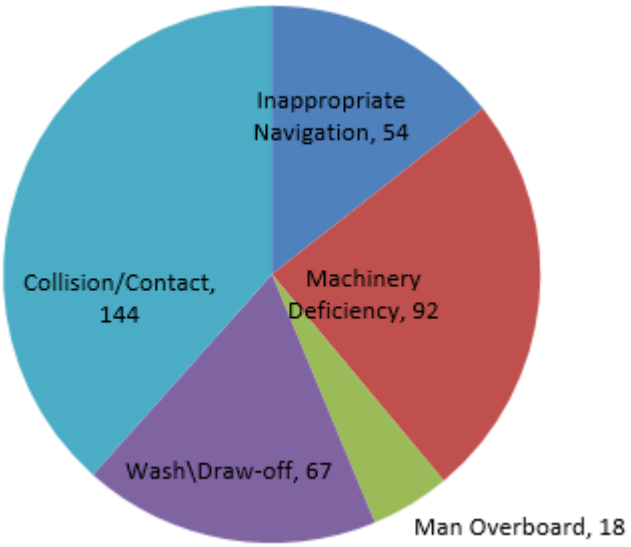
Serious and Very Serious Incidents

- There has been an average of two serious incidents per year since 2014, down from a peak in 2012. This year has seen two serious incidents with Class V Passenger Vessels, one of which was holed below the waterline.
- 33 Class V Passenger Vessel incidents since 2010 have been serious in nature, with 76% of the more serious incidents being collision/contact.



A Closer Look at the Top 5 Categories 2010-2019

- **'Collision/Contact** is the biggest at 144 incidents. 38% of the total.
- **'Machinery Deficiency** is the next most significant with a total of 92 since Jan 2010. 24% of the total.
- Of the 375 incidents in the top 5 incident types, 44% involved older vessels.

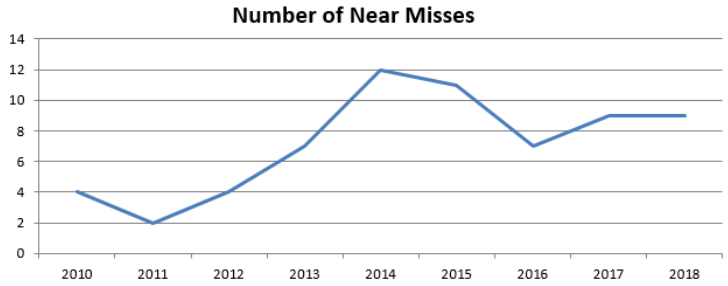


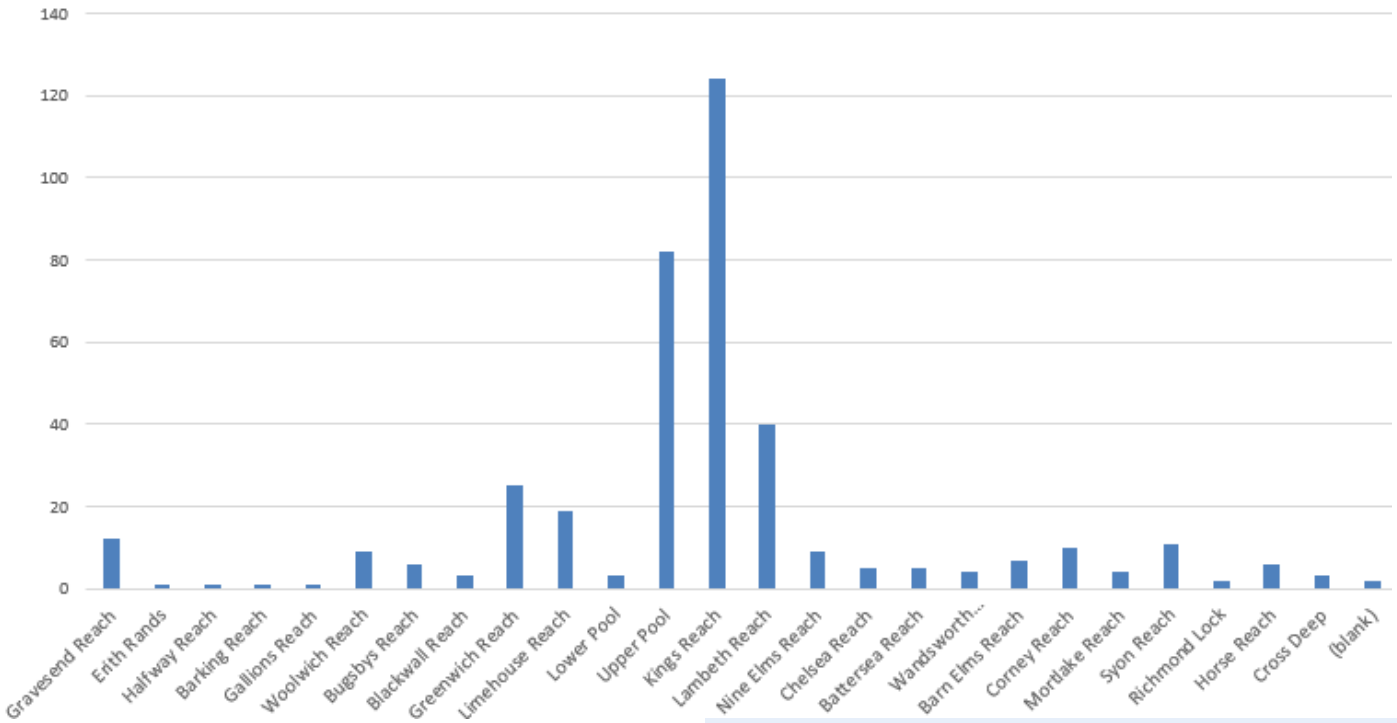
Causes

- **Human Error** accounts for around 40% of the incidents over the period in question.
- Of those Human Error occurrences, 50% are under the **Misjudgement** category.

Near Miss Trend

- Since 2010, whilst incident numbers have steadily declined for Class V's, Near Miss reporting is steadily increasing, giving a strong indication of an improving reporting culture





Incident Locations

- Kings Reach has the significant majority of incidents for Class V passenger vessels with 124 since January 2010
- This is almost a third (31%) of the 395 incidents during the period in question
- Upper Pool has 82 (21%) and Lambeth Reach is the third most common with 40 (10%).

Please Note:

This report only relates to Class V Passenger Vessels and therefore does not include statistics for Thames Clippers, as these are High Speed Craft.

By way of a broad comparison, Thames Clippers were involved in 227 Incidents and Near Misses since January 2010, involving 16 different vessels.

- Kings Reach is the most incident prone stretch of the river. This is as you would expect, given that it is one of the busiest stretches, with the highest density of moving traffic.
- The Upper Pool (London Bridge to Wapping) and Lambeth Reach (Waterloo Bridge to Vauxhall Bridge) is adjacent to Kings Reach and should also be considered one of the busiest stretches of water.
- Unsurprisingly, the further you move away from Central London the less frequent Class V Passenger vessel incidents become.

Focus on Collision/Contact incidents

- Contact is a vessel colliding with a fixed object, whereas a collision is colliding with another moving object (such as another vessel).
- Contacts most commonly occurs during berthing and unberthing
- As with collisions, consequences can escalate quickly if a vessel is holed below waterline and can lead to rapid sinking in some older vessels as they do not have the same survivability standards as modern vessels.
- Collision/Contact incidents and near misses average about 15 occurrences per year.

Top 4 Locations	Percentage
Kings Reach	31%
Upper Pool	21%
Lambeth Reach	10%
Greenwich Reach	6%

Definitions

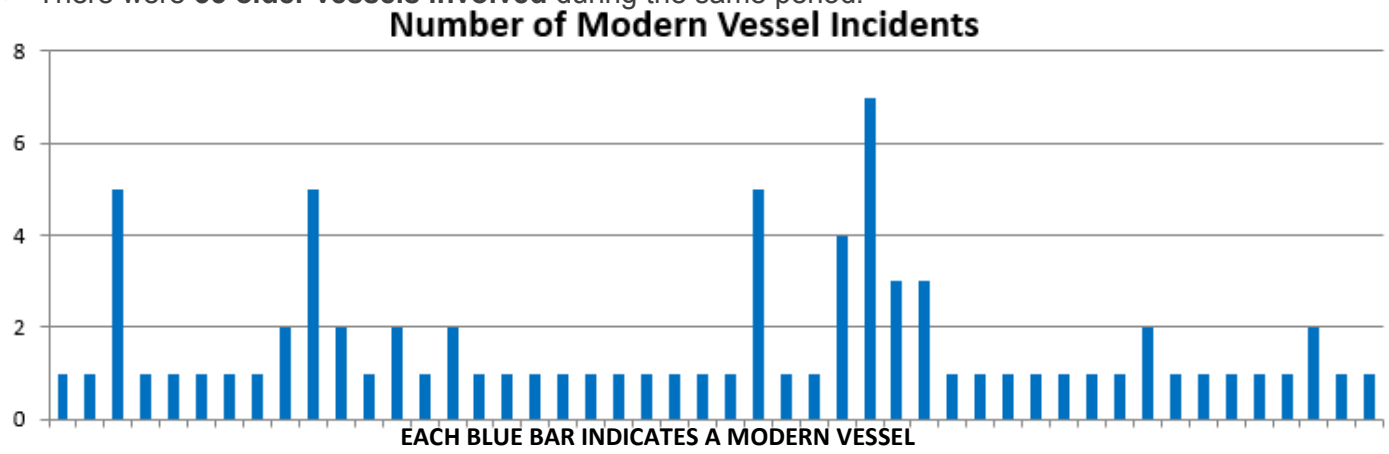
Kings Reach:

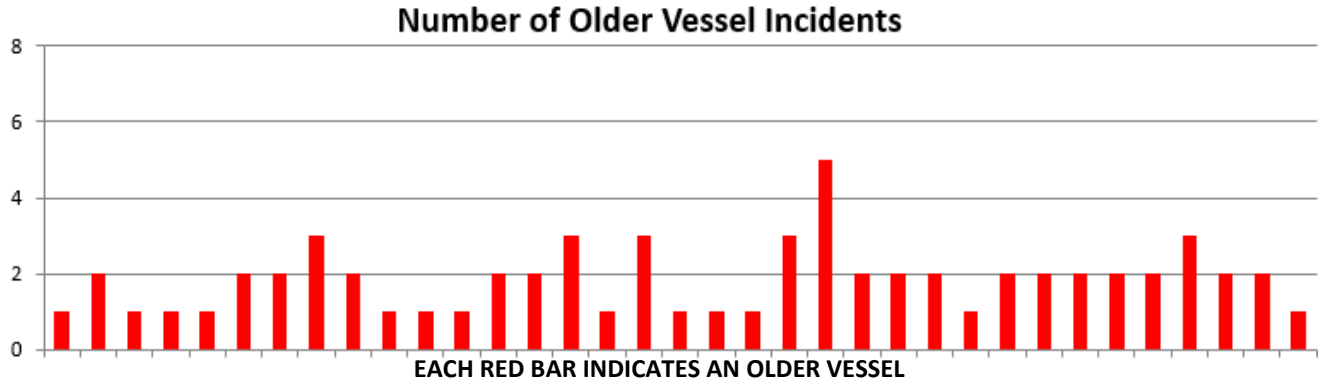
The area of the Thames running between London Bridge and Waterloo Bridge. One of the Tidal Thames' busiest stretches of waterway.

Comparison—Collision/Contact

Comparing Older Class V's against Modern.

- Older Vessels have slightly fewer collision/contacts than modern vessels per year **however…**
- There were **49 modern vessels involved** in incidents during that period.
- There were **35 older vessels involved** during the same period.





Comparing Older Class V's against Modern Class V's
Incident Rates Per Vessel

- There were a total of **79 incidents involving Modern Vessels**
- There were a total of **65 incidents involving Older Vessels** over the same period
- This puts the incident rate per vessel for modern vessels at **1.6 incidents**
- The incident rate for older vessels is **1.9 incidents per vessel**.
- The above graphs clearly demonstrate that despite operating over longer periods and across the main tourist routes, only **27% of modern vessels** involved in incidents, were involved in more than one over the period in question.
- **63% of Older Vessels** involved in incidents have been involved in more than one over the period in question.

Case Studies — 2 incidents selected from history demonstrating the importance of Safety features in Modern Vessels.

- In 2014 an outbound Class V Passenger Vessel veered into the path of an inbound tug, making contact with a rank of barges behind the tug. The closing speed was in excess of 15 knots and resulted in substantial damage to the Class V Vessel; including a hole below the waterline. As a result of the construction of the vessel, the water ingress was contained by the collision bulkhead and injuries to passengers were all minor.

The collision bulkhead here was critical in limiting the damage of the vessel and absorbing a substantial amount of the shock of impact. The MAIB incident investigation report on the occurrence states "the damage sustained by [The Vessel] after its collision with [The Tug] at a closing speed of about 16 knots was limited by its design and construction."

- In 2008 another Class V Passenger Vessel made contact with the 'starlings' of Westminster Bridge. This resulted in an eight foot gash in the starboard side of the vessel. The vessel began flooding in the starboard engine room, but watertight subdivision contained the flooding to the single compartment and it managed to proceed back to a pier where passengers were disembarked safely.

Watertight subdivision almost certainly saved the vessel from rapidly sinking here. The ability to prevent the water from spreading across the entire length and breadth of the vessel ensured the vessel could remain afloat and return passengers safely back to shore.