



## **Port Marine Safety Code-2019 Annual Performance Review**

### **Forth and Dundee Ports Authorities**

#### **Introduction**

The Forth and Dundee Port Authorities aim to undertake and regulate marine operations so as to safeguard the harbours, rivers, river users, the public and the environment. Forth Ports comply with the requirements of the Port Marine Safety Code when carrying out all marine operations as confirmed by the annual audit conducted by our independent Designated Person. Our compliance to the Port Marine Safety Code was confirmed to the Maritime and Coastguard Agency in January 2018 for a further 3 years.

The Annual Performance Review is prepared in order that the Forth and Tay Port Authorities can report on the performance of the Authorities to the Board of Forth Ports Limited as required by the Port Marine Safety Code. This report is a summary of the activities over the year and is prepared in addition to the annual report that the Designated Person presents to the Board. The review will report on the main activities of the marine operations under the following headings:

1. Vessel Activity Report
2. Forth and Tay Navigation Service
3. Pilotage
4. Conservancy
5. Towage
6. Marine Reports
7. PMSC Meetings
8. PMSC Audit and statement of compliance
9. Pollution Report
10. Review of Marine Safety Plan
11. Summary

#### **1. Vessel Activity Report**

During 2019 there were 2,256 vessel calls to the Forth and 310 vessel calls to the Tay consisting of a range of size and type of vessels from coasters to tankers, including VLCC's, gas carriers, container vessels, general cargo vessels, ferries, cruise liners, naval vessels, oil rigs and North Sea support craft.

Vessels calling at the Forth were destined for a number of locations including Grangemouth, Leith, Rosyth, Hound Point, Braefoot Bay, Methil, Burntisland, Kirkcaldy and Inverkeithing. Vessels handled on the River Tay were destined for either Dundee or Perth. The table below records the number of vessel calls per location together with a comparison for the previous 10 years.

The number of semi-submersible rigs on the Forth for cold stacking (long term layup) remained at two.

### Vessel Sailings Per Port 2010-2019

Number of Voyages	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Variance 18-19	%
BABCOCK	61	84	94	86	118	91	36	49	38	30	-8	-21%
BRAEFOOT	217	178	185	199	216	242	286	270	284	194	-90	-32%
BURNTISLAND	69	58	66	45	56	39	41	72	67	38	-29	-43%
CONSERVANCY*	137	113	128	113	144	107	102	130	169	64	-105	-62%
CROMBIE	23	13	8	15	10	10	0	2	5	11	6	120%
DUNDEE	330	316	313	339	408	286	231	338	373	310	-63	-17%
GRANGEMOUTH	1721	1585	1480	1202	1196	1174	1165	1097	1180	1165	-15	-1%
HOUND POINT	226	178	138	150	136	124	111	89	78	76	-2	-3%
INVERKEITHING	67	55	64	67	69	104	82	64	61	57	-4	-7%
KIRKCALDY	0	10	29	35	48	45	45	43	41	42	1	2%
LEITH	487	571	597	456	481	415	356	347	345	359	14	4%
METHIL	37	29	25	43	63	34	34	36	33	34	1	3%
METHIL ENERGY PARK	19	7	12	25	22	6	2	38	18	20	2	11%
NEWHAVEN	0	0	0	0	0	0	0	0	0	30	30	100%
PERTH	72	61	44	48	52	55	27	20	14	22	8	57%
ROSYTH	281	285	276	271	255	226	249	256	136	92	-44	-32%
SOUTH QUEENSFERRY	0	0	0	0	0	0	0	0	0	22	22	100%
<b>Terminal</b>	<b>3747</b>	<b>3543</b>	<b>3459</b>	<b>3094</b>	<b>3274</b>	<b>2958</b>	<b>2767</b>	<b>2851</b>	<b>2842</b>	<b>2566</b>	<b>-276</b>	<b>-10%</b>

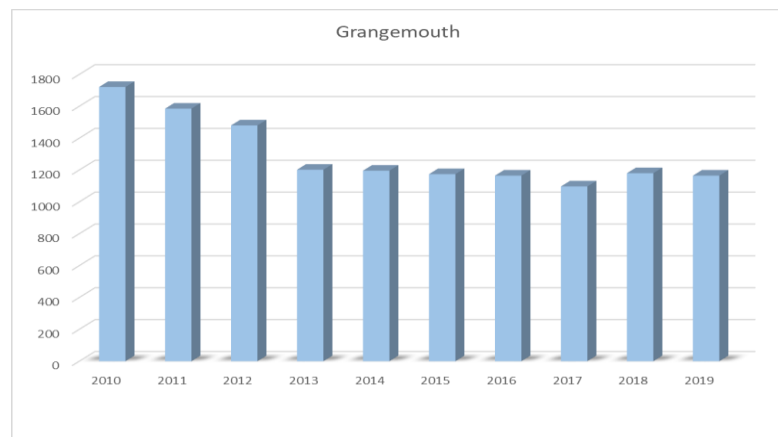
\* Cruise ships that go to anchor taken from Conservancy and put in Newhaven and South Queensferry

There was a decrease in the number of vessels handled during 2019. The biggest variations were the loss of the Rosyth Ferry service, countered by increases at Grangemouth, Dundee and Conservancy (Cruise).

Total Vessel sailings Forth and Tay

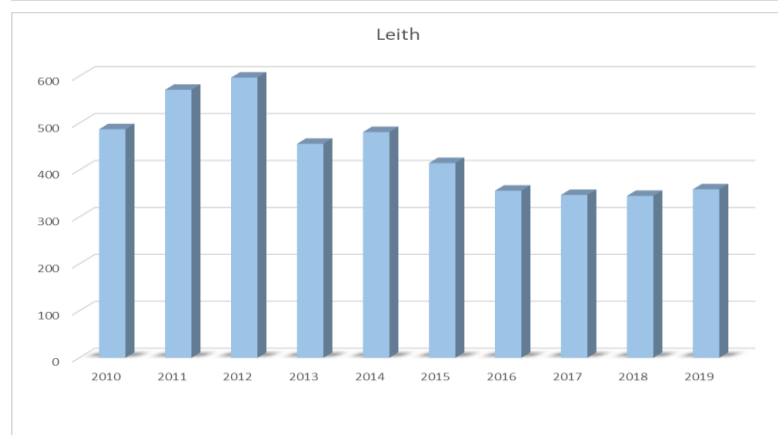


The following graphs provide a trend for vessel movements on a port-by-port basis:

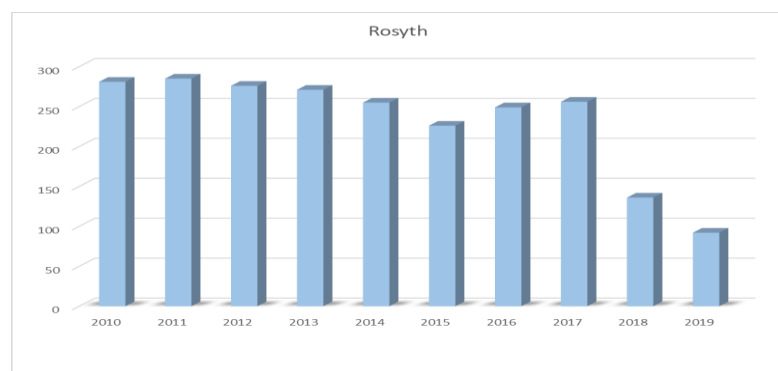


### *Main Ports*

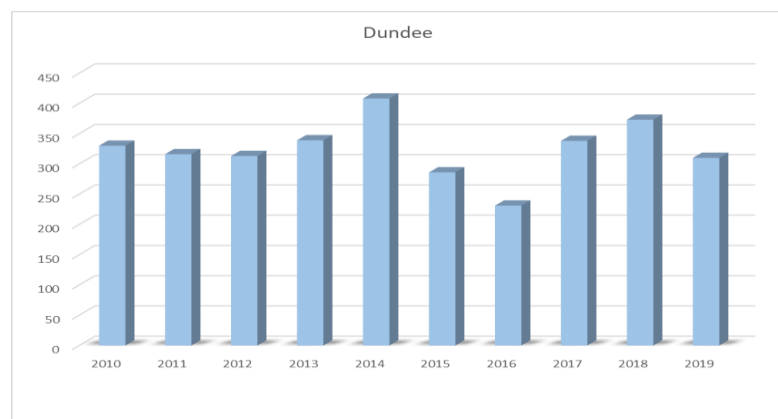
Grangemouth has remained steady over the last 6 years



Leith has remained level for the last 4 years



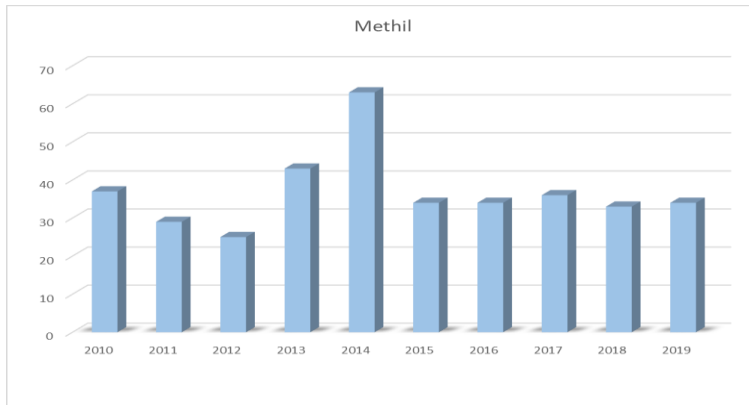
Rosyth traffic was dramatically hit by the loss of the ferry service.



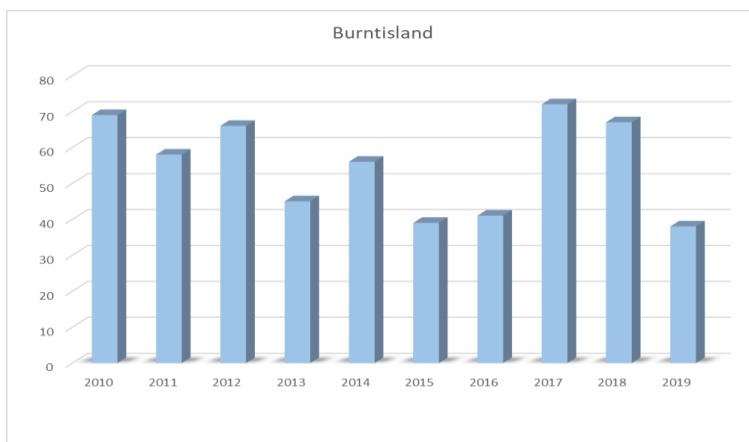
Dundee fell back slightly after 2 years of growth

## *Fife Ports*

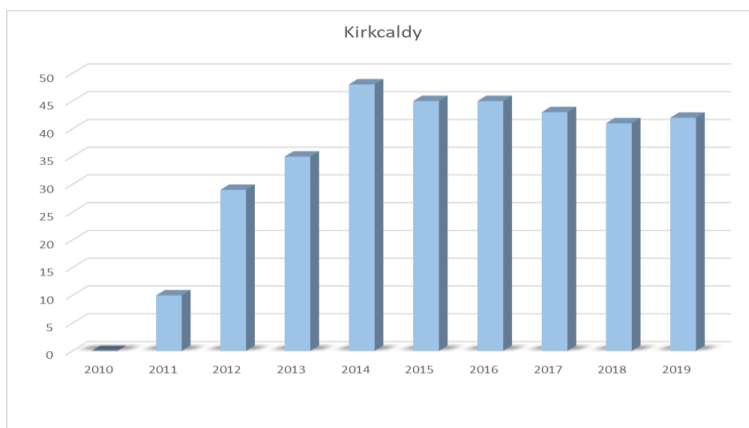
The smaller Fife ports account for around 7% of the total traffic on the river.



Methil has remained steady

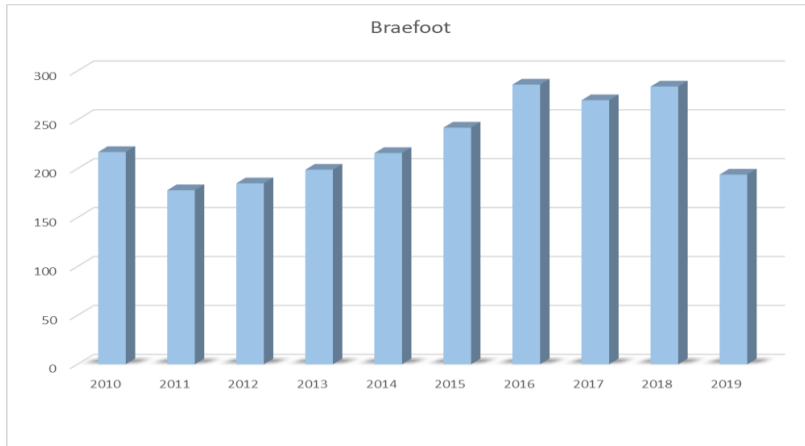


Burntisland dropped significantly due to no work at BiFab

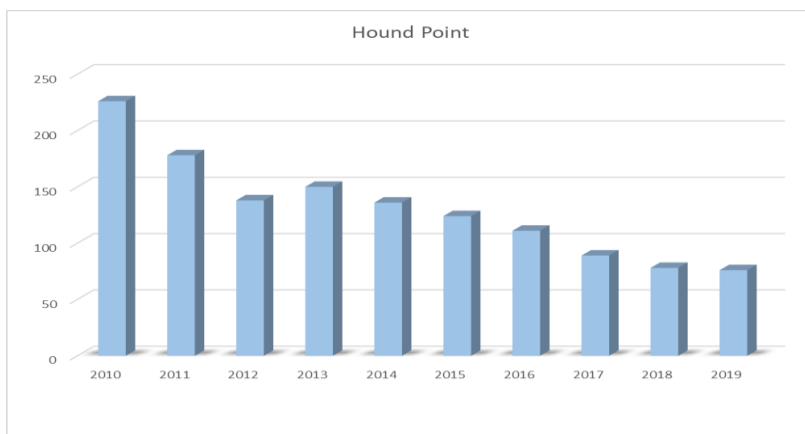


Kirkcaldy has remained relatively steady, slight increase in 2019

## Terminals



Braefoot dropped off in 2019 due to the Mossmorran shutdown affecting Exxon volumes

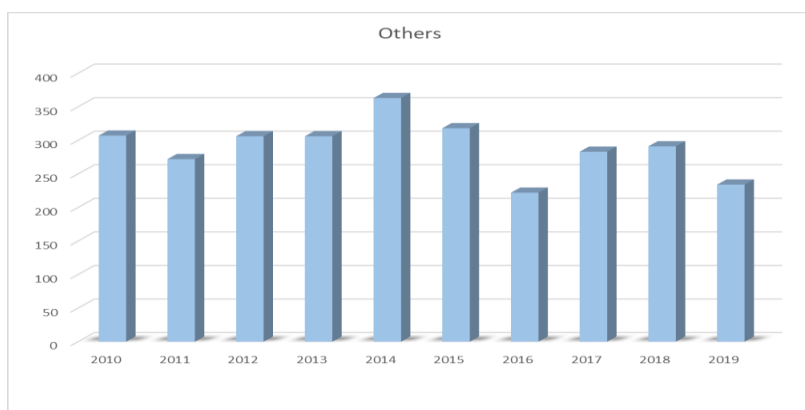


Hound Point has now levelled out, volumes remaining steady

## Others and Perth



Perth increased on 2018 with now around 2 ships per month



This includes anchorages and Babcock and Methil Energy Park. Numbers decreased, mainly due to less cruise and Babcock's

## **2. Forth and Tay Navigation Service (FTNS)**

The marine team has continued to conduct internal audits on all elements of the marine operations on both rivers from pilotage, towage, FTNS, boatmen etc. No significant issues were identified. Where observations for improvement were made an action plan was instigated and all items were re-audited and closed out.

The Marine Management Team meet weekly to discuss marine issues, with one of these weekly meetings each month being focused on marine issues, incidents, progressing action points and a general review of the Forth Ports Marine Safety Management System.

The UK Harbour Masters Association (UKHMA) and Ports Skills and Safety (PSS) have developed an MCA endorsed Harbour Master Certificate. This is administered through John Moore's University. All but one of the Harbour Masters in the Marine Management Team have been awarded this certificate.

FTNS is manned 24/7 to provide a VTS service for both the Forth and the Tay, as such they plan, schedule and oversee all vessel movements. FTNS is manned by Assistant Harbour Masters who are all either Class 1 Master Mariners or have obtained Harbour Master certification and VTS Operators who all hold the MCA V103 certificate.

To carry out its function of regulating and scheduling vessel movements, together with safeguarding vessels, personnel and the environment FTNS have at their disposal a range of state of the art equipment. This includes Kongsberg radar and tracking systems, VHF coverage, Automatic Identification System (AIS), CCTV and meteorological and tide monitoring equipment. The radar, AIS and VHF coverage not only allows for real time information to be provided to FTNS but also provides redundancy cover in the event of a malfunction of any of the systems, all of which enhances the safety of navigation on the river. VHF transmissions of all the main marine VHF channels operated in both rivers are recorded together with telephone conversations in the Operations Room and the Marine Emergency Centre. CCTV at the entrances to the four main ports is also recorded along with a radar picture playback facility.

Regular meetings are held with all stakeholders throughout the year, from Pilots and berth operators to leisure users on the Forth and Tay.

Forth Ports continues to engage with organisations, which have an interest in marine issues, and has continued to conduct presentations to such bodies. Presentations have been made to local authorities, yacht clubs and environmental bodies.

Notices to Mariners are issued when required to promulgate information to interested parties. These notices are e-mailed direct to an established list of known river users, in addition the Notice to Mariners which are in force are displayed on the Forth Ports website.

Meteorological and tidal data for both the Forth and the Tay is available on the Forth Ports website.

The new website was launched in 2019, with a facility for reporting Marine Incidents and Near Misses.

### 3. Pilotage

#### *Forth Pilotage*

The number of Authorised Pilots on the Forth at the end of the year was 27 (this includes two part time Senior pilots classed as one Full time), of which 22 were Senior 1<sup>st</sup> Class Pilots and the remaining being junior pilots. Pilotage services are provided to vessels utilising 3 pilot vessels, operating out of Granton.

Training refresher courses for senior pilots continued throughout the year and Forth Pilots utilising a simulator at South Tyneside College. Pilots also attended South Tyneside College as part of the Aircraft Carrier build along with various tug operators. The Association of Forth Pilots is accredited by Lloyds for the ISPO (International Standard for Maritime Pilot Organisation) certification. This provides a safety management system specific to pilotage operations which supplements Forth Ports PMSC safety management system.

The Port Authority, Pilots and tug operators met formally on a regular basis to ensure the highest levels of safety are maintained, full minutes of these meetings are kept.

*Pilotage Management Committee (PMC)* – Chief Harbour Master, Marine Manager, and three Senior 1<sup>st</sup> Class Pilots met 6 times to discuss operational matters.

There were 4,388 acts of pilotage carried out on the Forth during 2019 compared with 4,825 in 2018, a decrease of 9%. The average number of pilotage acts carried out per pilot was 163 compared to 178 for 2018.

A formal procedure is in place to ensure pilots maintain their expertise, this includes not only an Authorisation re-validation process but also an annual review of the number of individual pilotage acts completed at each location, training, incidents and overall performance.

#### *3.2 Forth Pilotage Exemption Certificates (PEC's)*

There was 1 valid PEC's on the Forth at the end of the year all of which was active.

There were 18 vessel movements carried out during 2019 under the authority of a pilotage exemption certificate, a decrease of 80% from 2018.

#### *Tay Pilotage*

The number of authorised pilots on the Tay at the end of 2019 was three, two of which were 1<sup>st</sup> Class Pilots. Pilotage services are provided utilising 2 pilot vessels.

There were 4 Pilotage Management Committee meetings held during 2019.

There were 549 acts of pilotage carried out on the Tay for Dundee in 2019 compared with 644 in 2018 an decrease of 15%. Perth vessels have their own authorised pilots.

#### *Tay Pilotage Exemption Certificates*

At the end of 2019 there were not any valid PEC's on the Tay no acts were conducted during the year under the authority of a PEC.

## 4. Conservancy

Forth Ports mark and maintain appropriate navigational channels to all ports within their jurisdiction on both the Forth and Tay. Depths of channels and navigational marks are agreed through consultation following risk assessment to ensure that the channels provide a safe passage to all the ports and berths.

Dredging in all ports continued to be carried out under a five year contract by UK Dredging, all ports and channels continue to be maintained to their published depths.

A total of 66 days were utilised by the trailer suction dredger and 49 days for grab dredging in areas that fall under the responsibility of Forth Ports, with a total of 1,076,970 m<sup>3</sup> being dredged. This is a decrease in volume of 15% on 2018.

Surveys continued to be conducted using Forth Ports in-house hydrographic survey facilities. This was enhanced by the addition of GIS in 2019.

The maintenance of Aids to Navigation was conducted under contract by Briggs Marine who follow a routine maintenance programme as well as responding to emergency call outs.

In 2019 the availability of the navigation lights and aids has been as follows:

### *River Forth and Tay*

IALA Category	No Of Aids	Total Hours	No Of Failures	OOS Hours	MTTR	MTBF	Availability	Target Availability
<b>Forth Ports Limited</b>								
CAT 1	16	140,160	3	164:53	54:58	46665:02	99.88 %	99.80 %
CAT 2	83	727,080	2	429:08	214:34	363325:26	99.94 %	99.00 %
CAT 3	20	171,408	2	739:35	369:47	85334:13	99.58 %	97.00 %
No Category	0	0	0	0:00	0:00	0:00	0.00 %	0.00 %
Totals	119							
<b>Port of Dundee Ltd</b>								
CAT 1	4	35,040	0	0:00	0:00	0:00	100.00 %	99.80 %
CAT 2	26	181,680	2	42:25	21:13	90818:47	99.98 %	99.00 %
CAT 3	6	52,560	0	0:00	0:00	0:00	100.00 %	97.00 %
No Category	0	0	0	0:00	0:00	0:00	0.00 %	0.00 %
Totals	36							

All navigation lights and navigation aids met the availability criteria for 2019



## 5. Towage

Towage services on the Forth are provided by three main operators with a total of 10 tugs licensed by Forth Ports providing coverage for all areas of the Forth as well as emergency cover. Details of these tugs are provided below. Guidelines for tug requirements are in place for all the main ports and terminals.

Targe Towing who utilise a number of tugs on the Tay provides towage operations at Dundee. Targe purchased a new tug, Kittiwake which came into service in spring.

Visiting tugs engaged in one off projects were audited and licensed as required on a case by case basis.

Company	Tug Name	Bollard Pull	Type	LOA	Beam	Draft
<b>Forth Estuary Towage - Leith</b>	Craigleith	70t	ASD	28.0m	13.0m	5.0m
	Fidra	50t	Voith	30.0m	11.0m	5.3m
	Oxcar	30t	Voith	30.0m	9.0m	4.6m
	Seal Carr	19t	Voith	28.8m	8.6m	4.0m
<b>INEOS/Targe Towing – Hound Point</b>	Hopetoun	124t	ASD	43.5m	13.5m	6.7m
	Crammond	62t	ASD	34.3m	10.5m	4.6m
	Dalmeny	62t	ASD	34.3m	10.5m	4.6m
	Corringham	67t	ASD	32.2m	11.6m	4.3m
<b>Svitzer Towage - Grangemouth</b>	Rosebery Cross	37t	Voith	30.6m	9.8m	4.5m
	Svitzer Lyndhurst	42t	Voith	33.0m	10.0m	5.0m
<b>Targe Towing - Dundee</b>	Kittiwake	60t	ASD	24m	11m	4.5m
	Collie T	20t	Twin screw	28.7m	7.4m	2.8m

## 6. Marine Reports

### Marine Reports

#### Marine Reports-Primary Cause

MAIB Report Category	Current Year					Previous Year		
<i>Does not include Pollution Reports</i>	Month	YTD	Vessels	Rate per 1,000 Vessels	Rate per 1,000 Vessels YTD	YTD	Vessels	Rate per 1,000 Vessels
Very Serious Marine Casualty	0	0	2566	0.00		0	2842	0.00
Serious Marine Casualty	0	0		0.00		0		0.00
Marine Casualty	0	0		0.00		0		0.00
Marine Incident	8	106		3.12	41.31	83		29.20
<b>Total Marine Reports</b>	<b>8</b>	<b>106</b>	<b>2566</b>	<b>3.12</b>	<b>41.31</b>	<b>83</b>	<b>2842</b>	<b>29.20</b>
<b>POLREP's</b>	<b>0</b>	<b>5</b>	<b>2566</b>	<b>0.00</b>	<b>1.95</b>	<b>11</b>	<b>2842</b>	<b>3.87</b>
<b>Total Incidents</b>	<b>8</b>	<b>111</b>	<b>2566</b>	<b>43.26</b>	<b>43.26</b>	<b>94</b>	<b>2842</b>	<b>33.08</b>

Incident Primary Cause	Current Year					Previous Year		
	Month	YTD	Vessels	Rate per 1000 vessels month	Rate per 1,000 Vessels YTD	YTD	Vessels	Rate per 1,000 Vessels
Weather/Environmental conditions	3	19	2566	1.17	7.40	11	2842	29.20
Mechanical/Technical failure	2	34		0.78	13.25	43		
Failure to follow procedures/regulations 3rd party	2	14		0.78	5.46	14		
Failure to follow procedures/regulations FP	0	5				1		
Failure of Seamanship/Good Practice	0	18		0.00	7.01	14		
To be determined	1	16		0.39	6.24	0		
<b>TOTAL INCIDENTS</b>	<b>8</b>	<b>106</b>	<b>2566</b>	<b>3.12</b>	<b>41.31</b>	<b>83</b>	<b>2842</b>	<b>29.20</b>

Reported incidents fell compared to 2018, and there was a greater percentage of Near Miss reporting. Mechanical/Technical failure continues to be the greatest cause of incidents, followed by weather and environmental conditions.

### Marine Reports by Consequence

Incident Consequence	Current Year					Previous Year		
	Month	YTD	Vessels	Rate per 1000 vessels month	Rate per 1,000 Vessels YTD	YTD	Vessels	Rate per 1,000 Vessels
Pollution	0	5	2566	0.00	1.95	11	2842	29.20
Damage	2	21		0.78	8.18	16		
Injury	1	1		0.39	0.39	7		
Near Miss	5	84		1.95	32.74	60		
<b>TOTAL (excluding pollution reports *)</b>	<b>8</b>	<b>106</b>	<b>2566</b>	<b>3.12</b>	<b>41.31</b>	<b>83</b>	<b>2842</b>	<b>29.20</b>
Near Miss Ratio*	63%	79%				72%		

The greatest consequence of incidents resulted in a near miss. Near miss reporting increased compared to 2018. The next biggest consequence was damage. This was all fairly minor damage such as damage to quays, vessel hulls and fenders resulting in relatively low cost repairs.

The one injury was a minor slip, which did not result in any lost time.

## **7. Port Marine Safety Code Meetings**

Regular marine safety meetings were held covering both policy and operational matters, full minutes of all meetings were maintained.

*Leith PMSC Liaison Meeting* - Port Authority, Pilots, Tug Operators, Boatmen and agents met three times to discuss safety and operational matters.

*Grangemouth PMSC Liaison Meeting* - Port Authority, Pilots, Tug Operators, Boatmen, DM Crombie, BP, Ineos and agents met three times to discuss safety and operational matters.

*Fife Ports PMSC Liaison Meeting* - Port Authority, Pilots, agents, DFDS Ferries, Babcock's, Briggs Marine, FCBC, FETA, Inverkeithing Berth Operators, Forth Rail Bridge Authority met three times to discuss safety and operational matters.

*Dundee PMSC Liaison Meeting* - Dundee Port Authority, Dundee Pilots, Perth Port Authority, Tug Operators, Boatmen and agents met four times to discuss safety and operational matters.

*Braefoot Marine Panel and Hound Point Liaison* - Shell, BP, Port Authority, Pilots, tug operator and boatmen met four times to discuss safety and operational matters.

*Boat Clubs and Leisure Craft Liaison* – stakeholders from the boat clubs and leisure craft met with Forth Ports met once to discuss a variety of matters relating to the leisure industry.

*Forth to Borders and Tayside/North Fife Sub Committee* – This meeting, which is chaired by the MCA, was again cancelled, a decision taken by the MCA due to a lack of agenda items.

## **8. PMSC Audit and Statement of Compliance**

The independent Designated Person conducted the annual audit of Forth Port's Safety Management System and Port Marine Safety Code. From the audit a number of mainly administrative observations were made without any non-conformances being identified. The audit report confirmed our compliance with the PMSC, this was again confirmed by the Designated Person at his annual report to the Duty Holder (the Forth Ports Board).

A letter of PMSC compliance was sent to the MCA in January 2018.

## **9. Pollution Report**

This year's Tier 2 oil pollution exercise (Clearwater Forth) was completed in conjunction with Edinburgh City Council with further input from the MCA, Marine Scotland, media and our oil spill responders. The exercise involved a collision between a tanker coming into contact with another vessel with resultant pollution. The exercise was completed successfully with no major issues identified.

There were 4 pollution reports recorded during 2019. The most serious event occurred at Limkilns but unfortunately no source was identified.

## 10. Review of 2019 Marine Safety Plan

The following targets had been set for completion in 2019:

### *Permanent targets*

	Activity	Target
1.	Vessel Traffic Service	Maintain an effective VTS in accordance with UK National, IALA and IMO standards. Ensure infrastructure is properly maintained and upgrade to ensure continued operation.
2.	Navigational and Marine Incidents	Through reporting, investigation and analysis ensure all risk assessments, procedures and guidelines are appropriate to prevent any major navigation or pollution incident.
3.	Provide trained and qualified pilots to ensure an effective 24/7 pilotage service.	24/7 pilotage services maintained (subject to weather) without any serious or very serious incidents.
4.	Conservancy and Hydrographic Service	Ensure survey programme is maintained and survey charts are published and relevant data sent to UKHO within 8 weeks of survey. Through appropriate maintenance and response ensure ATON availability meets NLB targets.
5.	Liaison and Consultation with river users	Routine PMSC meetings held with stakeholders at least 3 times a year.

All the above listed targets were met in 2019.

### *Temporary targets*

	Activity	Target
1.	Near Miss Reporting through the website	Greater reporting of Near Misses from 3 <sup>rd</sup> party and leisure users
2.	Development of new technology in Conservancy	Using new technology to improve safety and efficiencies
3.	Integration of new Survey Launch into the department	Survey boat in use
4.	Working with 3 <sup>rd</sup> parties to develop new technology on Marine Craft	Working with external organisation on the development of new systems to improve safety and efficiency
5.	Partnership working	Supporting partners in emergency planning and exercises
6.	Upgrade VTS	Update radar systems at Leith

All the above targets were largely met in 2019, with number 6 partially met (equipment was delivered late 2019 but not yet installed due to delays and subsequently COVID-19 restrictions)

### *2020 Targets*

	<b>Activity</b>	<b>Target</b>
1.	Near Miss Reporting through the website	Greater reporting of Near Misses from 3 <sup>rd</sup> party and leisure users
2.	Development of new technology	Using new technology to improve environment
3.	Integration of new tug	New tug in operation
4.	Scope new workboat	Working with external companies, scope and develop new workboat
5.	Partnership working	Supporting partners in emergency planning and exercises

## **11. Summary**

2019 saw a year on consolidation within the department, with key staff established into existing posts. The main change was to separate out the commercial function of the Marine department from the Statutory one.

All permanent targets have been met, and all temporary targets planned for 2019 were also largely met. These all contributed to the continuous improvement of marine safety required by the Port Marine Safety Code.

2020 will see the continued development of Forth Estuary Towage, and a greater use of technology in all areas within Marine. The use of technology in improving safety and the environment, with a focus on decarbonisation is one of our key aims in 2020.



Alan McPherson

Chief Harbour Master.

April 2020