



## **Port Marine Safety Code-2020 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 2021 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 2020 there were 2,207 vessel calls to the Forth and 276 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 2011-2020

Number of Voyages	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Variance 19-20	%
BABCOCK	84	94	86	118	91	36	49	38	30	45	15	50%
BRAEFOOT	178	185	199	216	242	286	270	284	194	217	23	12%
BURNTISLAND	58	66	45	56	39	41	72	67	38	50	12	32%
CONSERVANCY*	113	128	113	144	107	102	130	169	64	148	84	131%
CROMBIE	13	8	15	10	10	0	2	5	11	10	-1	-9%
DUNDEE	316	313	339	408	286	231	338	373	310	276	-34	-11%
GRANGEMOUTH	1585	1480	1202	1196	1174	1165	1097	1180	1165	1000	-165	-14%
HOUD POINT	178	138	150	136	124	111	89	78	76	87	11	14%
INVERKEITHING	55	64	67	69	104	82	64	61	57	48	-9	-16%
KIRKCALDY	10	29	35	48	45	45	43	41	42	45	3	7%
LEITH	571	597	456	481	415	356	347	345	360	444	84	23%
METHIL	29	25	43	63	34	34	36	33	34	17	-17	-50%
METHIL ENERGY PARK	7	12	25	22	6	2	38	18	20	8	-12	-60%
NEWHAVEN	0	0	0	0	0	0	0	0	30	0	-30	100%
PERTH	61	44	48	52	55	27	20	14	22	17	-5	-23%
ROSYTH	285	276	271	255	226	249	256	136	92	88	-4	-4%
SOUTH QUEENSFERRY	0	0	0	0	0	0	0	0	22	0	-22	100%
<b>Terminal</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>2567</b>	<b>2500</b>	<b>-67</b>	<b>-3%</b>

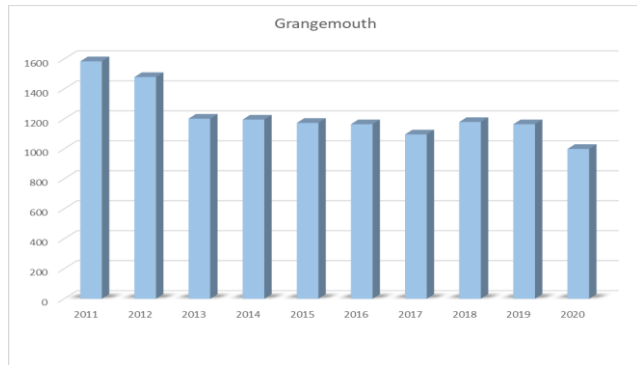
\* Cruise ships that go to anchor taken from Conservancy and put in Newhaven and South Queensferry

There was a decrease in the number of vessels handled during 2020. The biggest variations were Cruise vessels (not vessels in for layby) and reductions across most ports. This was due to the Covid 19 pandemic.

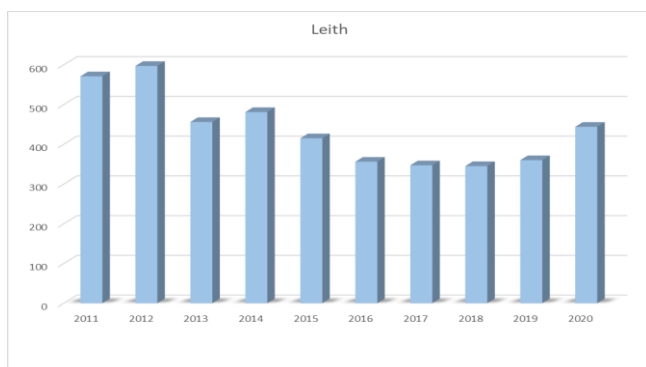


The following graphs provide a trend for vessel movements on a port-by-port basis:

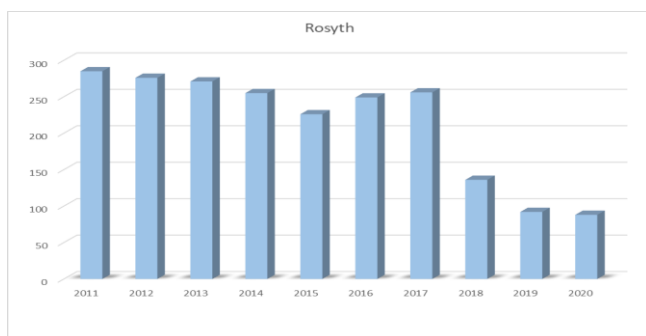
### *Main Ports*



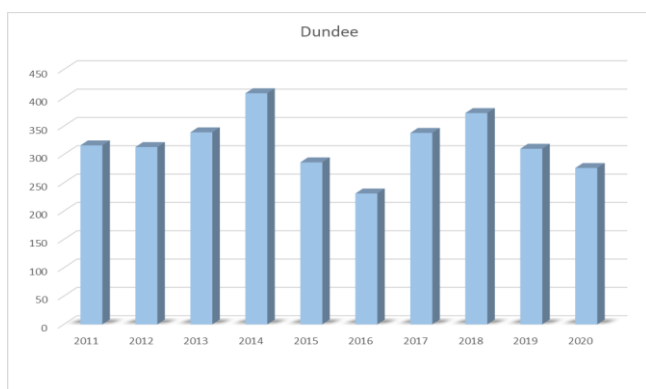
Grangemouth has remained steady over the last 6 years, reduction in 2020 due to Covid 19.



Leith should an increase in 2020 due to layby and project work



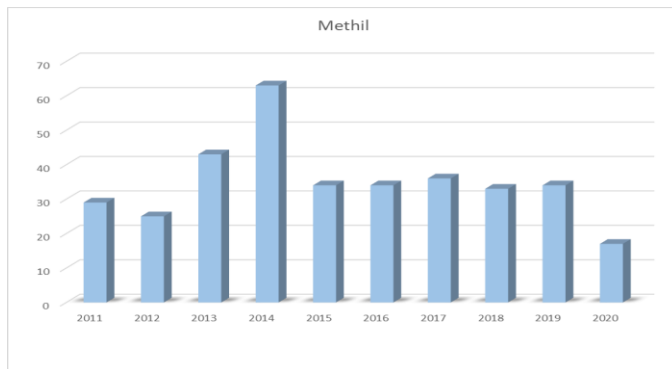
Rosyth traffic was dramatically hit by the loss of the ferry service a few years ago but has now stabilised



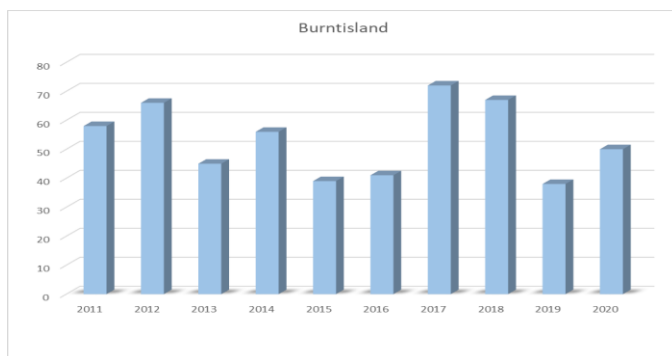
Dundee vessels fell back again due to Covid

## *Fife Ports*

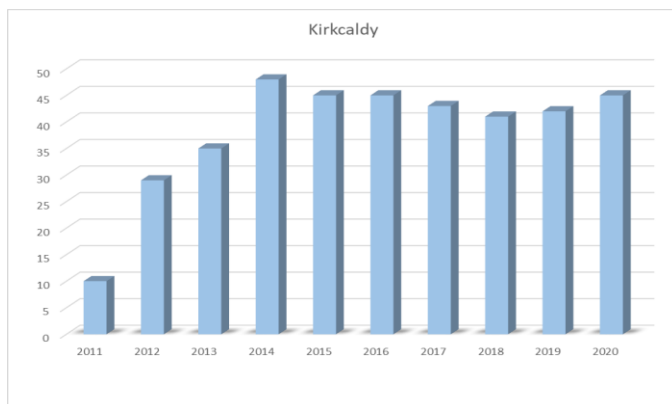
The smaller Fife ports account for around 7% of the total traffic on the river.



Methil numbers fell back sharply

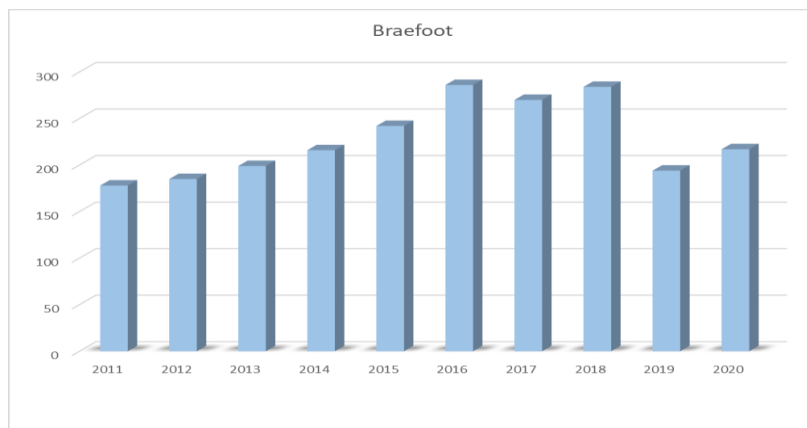


Burntisland increased despite no BiFab work

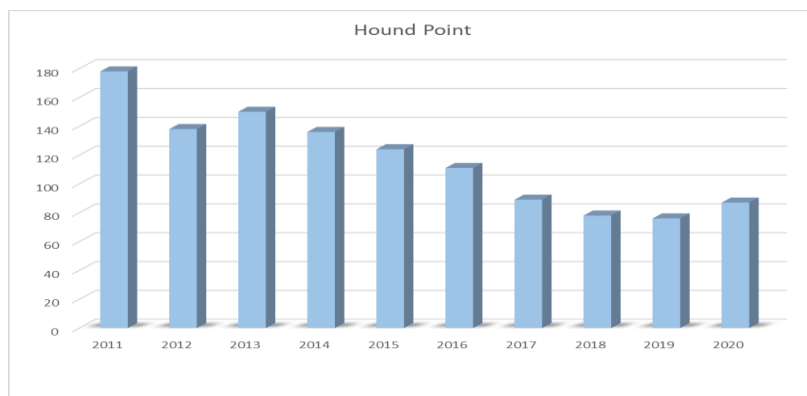


Kirkcaldy increased slightly on 2019

## Terminals

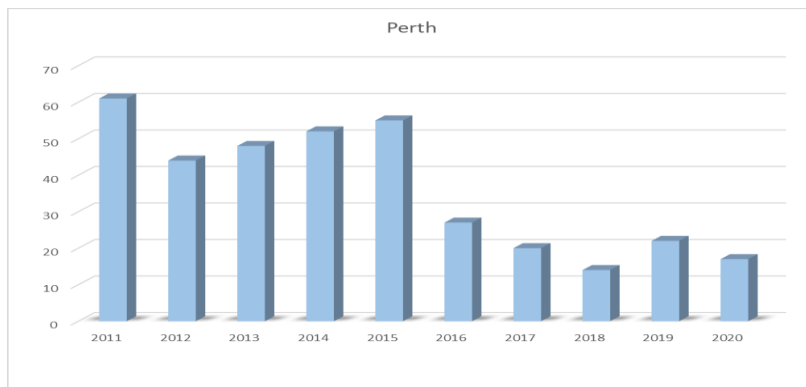


Braefoot dropped off in 2019 due to the Mossmorran shutdown affecting Exxon volumes but has recouped slightly in 2020 despite reduction in vessels due to Covid

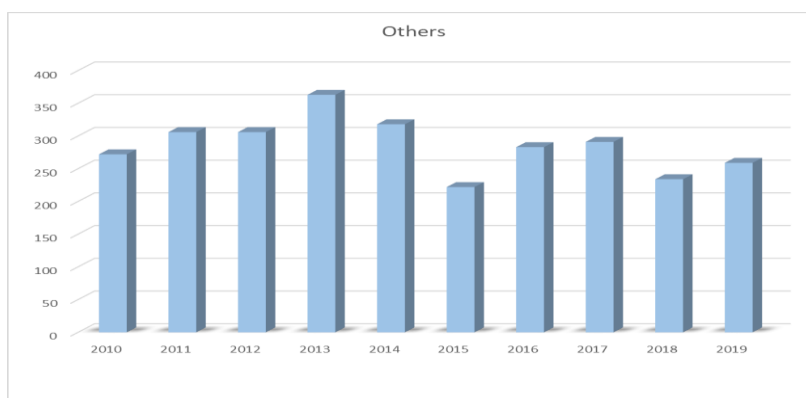


Hound Point increased in traffic but not volume with more Aframax vessels

## Others and Perth



Perth down on 2019



This includes anchorages and Babcock and Methil Energy Park. Numbers increased, mainly due to laybys at anchorages

## **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.

### 3. Pilotage

#### *Forth Pilotage*

The number of Authorised Pilots on the Forth at the end of the year was 25 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 were suspended due to Covid 19 restrictions, but hoped to return in 2021. 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 4,181 acts of pilotage carried out on the Forth during 2020 compared with 4,388 in 2019, a decrease of 5%. The average number of pilotage acts carried out per pilot was 167 compared to 163 for 2019.

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 were no valid PEC's on the Forth at the end of the year.

There were 4 vessel movements carried out during 2020 under the authority of a pilotage exemption certificate, a decrease of 78% from 2019.

#### *Tay Pilotage*

The number of authorised pilots on the Tay at the end of 2020 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 2020.

There were 451 acts of pilotage carried out on the Tay for Dundee in 2020 compared with 549 in 2018 an decrease of 18%. Perth vessels have their own authorised pilots.

#### *Tay Pilotage Exemption Certificates*

At the end of 2020 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 84.3 days were utilised by the trailer suction dredger and 72 days for grab dredging in areas that fall under the responsibility of Forth Ports, with a total of 1,113,339 m<sup>3</sup> being dredged. This is an increase in volume of 3.27% on 2019.

Surveys continued to be conducted using Forth Ports in-house hydrographic survey facilities, with support from the GIS function.

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 2020 the availability of the navigation lights and aids has been as follows:

### *River Forth and Tay*



#### Aton Availability By Category

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	140,544	0	0:00	0:00	0:00	100.00 %	99.80 %
CAT 2	83	729,072	5	188:45	37:45	145776:39	99.97 %	99.00 %
CAT 3	24	199,488	1	202:00	202:00	199286:00	99.90 %	97.00 %
No Category	0	0	0	0:00	0:00	0:00	0.00 %	0.00 %
Totals	123							
<b>Port of Dundee Ltd</b>								
CAT 1	4	35,136	1	34:40	34:40	35101:20	99.90 %	99.80 %
CAT 2	26	228,384	0	0:00	0:00	0:00	100.00 %	99.00 %
CAT 3	6	52,704	2	555:00	277:30	26074:30	98.95 %	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 2020



## 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. FET purchased a new tug Inchcolm, which came into service late 2020.

Targe Towing who utilise a number of tugs on the Tay provides towage operations at Dundee. Targe purchased a new tug, Peterel which came into service in spring. INEOS also replaced Crammond with a new tug Queensferry. Seal Carr was sold, and Oxcarr taken out of service to be sold.

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
	Inchcolm	70t	ASD	24.0m	11.0m	5.0m
<b>INEOS/Targe Towing – Hound Point</b>	Hopetoun	124t	ASD	43.5m	13.5m	6.7m
	Queensferry	70t	ASD	24.0m	11m	5.0m
	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

In early 2021 Targe towing were purchased by Forth Ports and FET and Targe will be merged in 2021 to combine one company called Targe Towing.

## 6. Marine Reports

### Marine Reports

MAIB Report Category	Current Year					Previous Year		
<i>Does not include Pollution Reports</i>	Month	YTD	Vessels YTD	Rate per 1,000 Vessels month	Rate per 1,000 Vessels YTD	YTD	Vessels	Rate per 1,000 Vessels
Very Serious Marine Casualty	0	0	2498	0.00	0.00	0	2566	0.00
Serious Marine Casualty	0	0		0.00	0.00	0		0.00
Marine Casualty	0	0		0.00	0.00	0		0.00
Marine Incident	5	81		24.04	32.43	106		41.31
<b>Total Marine Reports</b>	<b>5</b>	<b>81</b>	<b>2498</b>	<b>24.04</b>	<b>32.43</b>	<b>106</b>	<b>2566</b>	<b>41.31</b>
POLREP's	1	7	2498	4.81	2.80	5	2566	1.95
<b>Total Incidents</b>	<b>6</b>	<b>88</b>	<b>2498</b>	<b>28.85</b>	<b>35.23</b>	<b>111</b>	<b>2566</b>	<b>43.26</b>

### Marine Reports-Primary Cause

Incident Primary Cause	Current Year					Previous Year		
	Month	YTD	Vessels YTD	Rate per 1000 vessels month	Rate per 1,000 Vessels YTD	YTD	Vessels	Rate per 1,000 Vessels
Weather/Environmental conditions	1	11	2498	4.81	4.40	19	2566	41.31
Mechanical/Technical failure	3	26		14.42	10.41	34		
Failure to follow procedures/regulations 3rd party	1	9		4.81	3.60	14		
Failure to follow procedures/regulations FP	0	1				5		
Failure of Seamanship/Good Practice	0	10		0.00	4.00	18		
To be determined	0	24		0.00	9.61	16		
<b>TOTAL INCIDENTS</b>	<b>5</b>	<b>81</b>	<b>2498</b>	<b>24.04</b>	<b>32.43</b>	<b>106</b>	<b>2566</b>	<b>41.31</b>

Reported incidents fell compared to 2019, 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 YTD	Rate per 1000 vessels month	Rate per 1,000 Vessels YTD	YTD	Vessels	Rate per 1,000 Vessels
Pollution	1	7	2498	4.81	2.80	5	2566	41.31
Damage	0	18		0.00	7.21	21		
Injury	1	2		4.81	0.80	1		
Near Miss	4	61		19.23	24.42	84		
<b>TOTAL (excluding pollution reports*)</b>	<b>5</b>	<b>81</b>	<b>2498</b>	<b>24.04</b>	<b>32.43</b>	<b>106</b>	<b>2566</b>	<b>41.31</b>
Near Miss Ratio*	80%	75%				79%		

The greatest consequence of incidents resulted in a near miss. Near miss reporting increased compared to 2019. 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 two injuries were both to 3<sup>rd</sup> parties and not related to Forth Ports.

## **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. Reports were held remotely by Teams due to the restrictions.

*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 2021.

## **9. Pollution Report**

This year's Tier 2 oil pollution exercise (Clearwater Forth) was postponed due to Covid 19. A desktop was held remotely and call out protocols tested. Clearwater Forth will return in 2021

There were 7 pollution reports recorded during 2020. The most serious event occurred at Grangemouth with a spill of soot from an inert gas system.

## 10. Review of 2020 Marine Safety Plan

The following targets had been set for completion in 2020:

### *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 2020.

### *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	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

All the above targets were met in 2020 despite Covid 19 restrictions.

## 2021 Targets

	Activity	Target
1.	Restructure of marine department talking on a Group Role	Integrated systems in place and audited
2.	Development of PPU's	In place and in use
3.	Integration of FET and Targe	Working as one company
4.	Plough dredger in operation	Reduction in dredging days and improved response
5.	Partnership working	Supporting partners in emergency planning and exercises especially around COP 26

## 11. Summary

2020 was a challenging year with restrictions due to Covid 19 affecting all parts of the Marine Operation. Thankfully, with the use of technology such as Teams, and the regular cleaning and safety protocols put in place, the department continued to work largely unaffected by the pandemic. Things like remote meetings will continue post pandemic as it has allowed greater communications to exist between Marine team groups.

2021 will also see a change in structure in the Marine team, moving towards a team of Marine managers, managing day-to-day marine operations with three Harbour Masters covering all aspects of the Statutory function.



Alan McPherson

Chief Harbour Master.

August 2021