



Forth Ports Limited

Ruling Depths & Under Keel Clearances - Forth

Vessels are scheduled into / out of ports on the Forth & Tay in accordance with the under keel clearance criteria specified in this section of the Marine Guidelines & Port Information.

Vessel operators who require increased under keel clearance margins, over and above those published in the Marine Guidelines & Port Information must ensure that these requirements are specified to FTNS at the time of booking the vessel's arrival / departure. This is to ensure that vessels are booked for the correct height of tide, and to ensure that delays / impacts to the shipping schedule are avoided.

Agents are advised to ascertain vessel specific under keel clear requirements prior to making arrival / departure bookings through FTNS.

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LIST OF AMENDMENTS

January 2018	Significant layout changes as well as changes to published depths shown in red
May 2018	Updates to published depths in Leith following recent surveys. Kirkcaldy depths returned to normal following dredge.
June 2018	Hound Point RD 18.6m following survey and review of Grange / Carron dock following first multi beam survey
July 2018	Update to Container Berth depths following Plough dredge.
July 2018	Berth dimensions for all berths in Leith added, changes to some ruling depths in Leith & Rosyth
November 2018	Methil depths updates (all depths now in relation to chart datum)
January 2019	Rosyth ruling depths updated and removal of reference to floating fenders on T Berth
February 2019	Burrtisland Key Information Grangemouth J3 & LPG berth depths updated.
May 2019	Leith approach channel remarks & ruling depths within the port Burrtisland key information and ruling depths North Imperial cut depth Grangemouth J3 & LPG berths. Methil approach. Rosyth approach
July 2019	Change of UKC for Imperial dock Leith Grangemouth LPG berth
July 2019	Grangemouth Grange Dock- North Grange, North & South Tongue

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GRANGEMOUTH - RULING DEPTHS AND UNDER KEEL CLEARANCE

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Original surveys should always be consulted especially for detailed operational planning.

The following Ruling Depths apply to the berths, ports and approach channels. The depths indicated are the least depth in the channel or on the berth. Deeper water may be available in certain parts of the channel and conversely shallower water may exist just outside of the channel. The depths given below are an indication of the least depth, which maybe encountered in the channel, however a close examination of the latest soundings should be made when preparing a passage plan.

For areas not included in the tables below an under keel clearance of 10% of the vessels maximum draft with a minimum under keel clearance of 0.5m should be used.

1. Average Grangemouth Dock Density: **1020**
2. Maximum Ship size normally accepted at Grangemouth: **187m * 27.4m.**
3. All berths in Grange and Carron Dock – average height of quay above waterline **1.0m**
4. Outreach of #4 & #5 transporter cranes **34.5m**, height from quay to gantry **30m.**

Grangemouth Lock Dimensions

	Overall length	Chamber Length	Max LOA	Width between fenders
Outer	108m	90m	82m	29.1m
Inner	129.6m	112m	104m	
Full	237.6m		187m	

Grangemouth Berth Dimensions

Berth	Length	Remarks
North Grange 1 - 2	170m	
North Grange 3 - 7	440m	Distance between #7 and #8 is 84m
Tongue N Grange 8 - 11	365m	
Tongue S Grange 12 - 15	365m	
South Grange	630m	
East Wall	215m	
East Cut Width	36m	
West Cut Width	18.3m	
Carron Dry Dock	105m x 16m	Cill 4.8m

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Location	UKC	RD	Remarks
<i>Grangemouth Approach Channel</i>	0.6m	6.3 m	In Bellmouth
<i>Grangemouth Cill</i>	0.6m	6.0 m	
EASTERN CHANNEL			
Common User Oil Jetty (Jetty 1 North)	0.3m	10.0 m	
Jetty E 1	0.3m	12.5 m	Daughter vessel operations – depth is 10.9m
Jetty E 2	0.3m	11.0 m	
Jetty J 2	0.3m	11.2 m	
Jetty J 3	0.3m	11.2 m	
Jetty J 4	0.3m	6.8 m	
EOL LPG Berth	0.3m	8.6 m	
<i>East Cut</i> Width = 36 metres	0.5m	8.2 m	NB maximum draft for Grange Dock determined by RD at East Cut and shallower patches N & S of Tongue and extending S from 3 Grange
GRANGE DOCK			
North			
2-5 Bollard (Grange 7 - 6)	0.3m	7.3m	
5-12 Bollard (Grange 6 - 4)	0.3m	7.3m	(Bollards 7 & 8 Missing/Out of Use)
12-15 Bollard (Grange 3)	0.3m	7.1m	
15-24 Bollard (Grange 3 – 1)	0.3m	6.5m	
Tongue North			
2-3 Bollard (Grange 8)	0.3m	6.1m	
3-4 Bollard (Grange 8)	0.3m	6.5m	
4-8 Bollard (Grange 9)	0.3m	7.0m	
8-14 Bollard (Grange 9 – 11)	0.3m	7.0m	
Tongue South			
2-8 Bollard (Grange 15 – 14)	0.3m	6.8m	(Bollard 7 Missing/Out of Use)
8-11 Bollard (Grange 14 – 13)	0.3m	7.0m	(Bollard 11 Missing/Out of Use)
11-14 Bollard (Grange 12)	0.3m	7.0m	
South			
2 – 3.5 Bollard	0.3m	5.5m	Max Draft – 5.2m
3.5 – 5 Bollard	0.3m	6.8m	Max Draft – 6.5m (Bollard 5 Missing)
5 – 8 Bollard	0.3m	7.4m	Max Draft – 7.1m (Bollard 5 Missing)
8 – 15 Bollard	0.3m	7.9m	Max Draft – 7.6m
15 – 20 Bollard	0.3m	8.2m	Max Draft – 7.7m (dictated by max draft able to pass through the East Cut)
East Wall			
1-8 Bollard	0.3m	7.2m	RD – Restricted by depth on approach to berth.
<i>Western Channel</i> Maximum ship normally 90m * 14m	0.5m	6.4 m	
<i>West Cut</i> Width = 18.3m	0.5m	6.2 m	For vessels which exceed max. ship dimensions and for dead ship movements detailed planning is required including consultation between Duty Assistant Harbourmaster and Duty Pilot
CARRON DOCK	0.3M	6.7 m	Max. Ruling depth dictated by Western Channel
North			
Rankins - no commercial traffic		N/A	Shallows at West End of Berth
Amsterdam - no commercial traffic		N/A	
Curries - no commercial traffic	0.3m	6.7 m	
Stevens	0.3m	6.6m	
Cross Berth	0.3m	6.2m	(Between West Cut and Drydock)
Carron Dry-dock			
South			
Conveyor & Old Hoist	0.3m	6.7 m	
Watsons Lower	0.3m	6.3 m	

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Watsons Middle	0.3m	5.6 m	
Watsons Upper	0.3m	4.8 m	Not in use
New Quay Wall Lower - Tug Berth	0.3m	5.8 m	
New Quay Wall Upper	0.3m	4.6 m	

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LEITH - RULING DEPTHS AND UNDER KEEL CLEARANCE

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3. All Depths quoted are in metres

Leith Key Information

- Average Dock Density: Leith **1015** (2006 : reported to be 1005)
- Maximum size ship normally accepted at Leith 210m x 30m. Vessels out with these dimensions will be dealt with on a case-by-case basis.
- Lockside is approximately 2m above MHWS.
- Quaysides are approximately 2.2m above dock level and 1.5m at OT the Cruise Liner Berth.

Leith Lock Dimensions

	Overall length	Max LOA	Width between fenders
Short Lock	92m	85m	31.6m
Intermediate	159m	150m	
Full	259m	210m	

Leith Dock General Dimensions

Berth	Length	Remarks
Imperial Cut		Entrance width 31.6m
Albert Cut		Entrance width 18.2m
Edinburgh Cut		Entrance width 18.2m
Cruise Liner Berth	375m	
Ocean Terminal	175m	Length of usable quayside ahead of Britannia
West Wall	220m	
Ranks	150m	
North Imperial	570m	
1-4 South Imperial	315m	
5-6 South Imperial	230m	
6 Harbour	150m	
8 – 12 Harbour	305m	
North Side Albert	300m	
4 Albert Cross Berth	85m	
North Edinburgh	440m	
10-13 Edinburgh	290m	
2 Edinburgh	130m	
1 Edinburgh	85m	
Imperial Dry Dock	167.6 x 21.3 x 7.3m	
Edinburgh Dry Dock	91.4 x 12.2 x 5.6m	

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Location	UKC	RD	Remarks
Port of Leith			Sill height 6.71m below ACD
<i>Leith Approach Channel</i>	1.0m	6.5m	Depths reduce to the west of lock approach. (6.2m R.D 550m North of the Lead in Jetty, known obstruction on the seabed)
All Berths except North Imperial	0.5m		
North Imperial	0.4m		With prior agreement from the vessel
Outer Harbour			
Common User Oil Jetty		9.4m	Alongside timber structure, otherwise 9.8m. Depths reduce to 8.2m towards Old Imperial Passage. Useable Quay 150m from East End. Max LOA – 120m
Western Harbour		9.8m to 11.6m	Area South east of West Wall to corner of Ranks and CLB
		6.5 to 7.2m	Area South of the two Red Buoys
West Wall		7.8m	8.4m 25m to west of berth
Cruise Liner Berth (Ocean Quay)		10.2m	Reduces 30m from east end
Ocean Terminal		6.5m	
Ranks Berth		8.3m	No vehicles allowed on wharf. Max Beam = 25m
Imperial Dock			
Imperial Passage		10.9m	
North Imperial Cut (Yellow Cranes/ Old Lock)		7.5m	Gantry Clearance 20m (boom down) Maximum length of vessel 110m. Width = 20.3m, Beam = 19m. NOTE: Gate protruding no exit into Western Harbour
Imperial Dock North		9.4m	Shallows of 9.2m 90m from dry dock
7 North Imperial		9.5m	
South Imperial (1-4)		9.4m	Shallows to 9.0m at SIP 1-2
South Imperial 5		9.0m	
South Imperial 6		8.4m	
Cross Berth		9.1m	8.5m patch at Southern End
Harbour Berths			Fenders required for deep draft vessels.
4 Harbour		4.6m	Depths reduce towards Water of Leith
6 Harbour		7.7m	Shallows to 7.3m 25m off berth
8 Harbour		9.7m	Shallows of 9.1m 50m off berth
10 Harbour		9.6m	
12 Harbour		8.3m	Last survey Oct 2015
Albert Dock			
Albert Cut		7.3m	7.4m on approach to cut
Albert Dock North – 0 – 50m (Measured from East to West) 50m – 180m 180m – 230m 230m – West end		7.3m 8.3m 7.8m unknown	Vessels on the berth
Albert Dock East Wall/Cross Berth		7.0m	
Edinburgh Dock			
1 Edinburgh (90m)		6.9m	
2 Edinburgh (145m)		7.7m	Max LOA = 100m
3 Edinburgh (80m)		7.1m	
Edinburgh Dock South Arm – 10 to 13 Edinburgh (280m)		7.6 – 8.0m	Max LOA = 100m
Edinburgh Dock North Arm (440m)		7.2m	

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ROSYTH & FIFE PORTS – RULING DEPTHS AND UNDER KEEL CLEARANCE

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Rosyth

Rosyth Key Information

- Height of quayside above CD is 7.522m
- Maximum length normally accepted at the North Wall is 250m. Vessels out with these dimensions, and for all other berths, will be dealt with on a case-by-case basis.
- Mean spring tide range is 5.0m and neap tide range 2.5m.
- Rosyth traffic is subject to aircraft restrictions due to the Forth Bridges. Ref: Marine Procedure, Guidelines and Information section 1.1

Berth	Length	Remarks
North Wall	540m	450m fendered at 15m intervals from the west end. White rectangle painted at 530m mark.
T Berth	220m	Ferry berth with Links-span 143m of quayside ahead of the linkspan Fixed Fenders – Protrude 3.7m to seaward and 2m above quayside.
S	160m	Requires fenders
R	180m	Leased to FCBC Forth Replacement Crossing.
Q	145m	
P East and West Fingers	160m	
O	170m	Scarp Berth, Dredged to 5.0m but approach is shallower.

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Location	UKC	RD	Remarks
Rosyth Approach Channel	0.5m	8.1m	Depths reduce to 7.9m between buoys No 3 & No 4.
Port of Rosyth			
North Wall	0.5m	9.2m	Berth Box = 35m wide. White rectangle at 530m. Some depths to 7.7m on approach to berth.
T Berth		8.1m	
S Berth		2.8m	
Approaches to PQR berths		3.4m	Shallows to 2.1m South East of No.5 Buoy
PQR		3.3m – 5.1m	R Berth has 100m x 40m Box, RD = 5.2m at South end (Consult latest survey)
O Berth		4.1m	

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Babcock

Babcock – consult H.M for latest information	0.6m		N.B. UKC for warships = 1.0m.
Non Tidal Basin		9.7m	Basin maintained CD + 4.2m.
Middle Jetty N		3.5m	Shallows to West
Middle Jetty S		5.0m	From East to West: 0 to 140m – 6m; 140m to 165m – reduces to 5.1m; 165m to 180m – 4.3m, shoals from 180m westwards.
South Arm		10.0m	Fenders required to find deepest water in dredged box
Approaches to Direct Entrance		5.4m	
Sills (Lock and Direct Entrance)		6.57m	

Burntisland

Burntisland Key Information

- Entrance to harbour between breakwaters is 76m wide.
- Maximum size ship normally accepted at the East Dock 100m x 16m. Vessels out with these dimensions will be dealt with on a case-by-case basis.
- Maximum size ship normally accepted at the West dock 100m x 27m.
- Mean spring tide range is 4.7m and neap tide range 2.3m.
- **An estimated water loss of up to 1m per tide can be experienced in the East dock while the West dock can lose up to 0.5m per tide.**
- **West dock based on an impounded dock height of 4.48m**

Berth	Width	Remarks
Entrance to East Dock	18.2m	Sill height 3.09m below CD – mitre gate.
Entrance to West Dock	29.5m	Sill height 0.81m below CD – folding gate

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Location	UKC	RD	Remarks
Burntisland	0.5m		
East Dock Approach (for vessels who need to manoeuvre in outer basin before entering the dock)		1.5m	
East Dock Approach (for vessels who can enter the dock in one manoeuvre)		2.4m	
East Dock		2.1m	
No1 Berth – West		2.7m	
No2 Berth - East		2.6m	
West Dock Approach		-0.3m	
West Dock west wall		4.88m	
North/East/South wall		2.88m to 5.18m	

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Methil

Methil Key Information

- Main Entrance to No.2 Dock is 15.2m wide
- Maximum size vessel normally accepted is 100m x 14.0m beam. Vessels out with these dimensions will be dealt with on a case-by-case basis.
- Dock gates normally open three hours before high water.
- Depth over the outer sill (No.2 dock) is 2.6m below chart datum (No.1 dock is 1.22m above the sill at No.2)

Berth	Length	Remarks
Number 2 Dock		15.2m wide, sill 2.6m below ACD
Cross berth	85m	
No.1 (Hard Pad)	130m	
No.2 (Central Farmers)*	82m	
NE Corner	213m	Travelling crane
No.6		
Distance across dock between Hard Pad and South side is 121m		
Distance across dock between Central Farmers and South side is 109m		
Number 1 Dock		
South side	173m	
North side	136 + 58m	
West (North)	43m	
West (South)	43m	
East side	82m	
Distance across dock North to South side is 103m		

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Location	UKC	RD	Remarks
Methil Approaches	1.0m	0.8m	Shallows along outer West pier end
Methil Berths (within No.2 dock)	0.5m		
Cross/Stone Berth		1.5m	
#1 (Hard Pad)		1.6m	Patch of 1.2m on approach
#2 (Central Farmers)		1.7m	
North East Corner		1.7m	
#6		1.4m	

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Methil Energy Park

Methil Energy Park Key Information

- Berths owned by Scottish Enterprise
- Maximum sized barges/vessels dictated by draft & mooring analysis carried out by tenant

For further information, please refer to latest edition of Energy Park Fife Quayside Regulations.

Berth	Length	Remarks
East Quay 1	184m	Mooring dolphins & offshore mooring buoys used
West Quay 2	160m	

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Location	UKC	RD	Remarks
Methil (Energy Park Fife)	0.5m		
East Berth (Quay 1) 0 to 55m 55 – 180m	0.5m	3.9m 4.5m	With stand-off fendering. Distance given from northern end of East Berth Quay 1.
West Berth (Quay 2) 0 to 135m 135 to 180m	0.5m	3.8m 2.0m	With stand-off fendering. Distance given from corner of Quay 1 and Quay 2. A patch of 3.4m exists 25m off the berth at the 30m mark.

Kirkcaldy

Kirkcaldy Key Information

- Main entrance is 15.2 wide.
- Maximum size vessel normally accepted is 85m x 14m. Vessels outwith these dimensions will be dealt with on a case by case basis.
- Port Side is the preferred side alongside at Carrs Milling.
- The berth is a NAABSA Berth (Not Always Afloat but Safely Aground).
- Pilot will board HW-1.
- Lock gates are no longer in use.
- Sill height 0.65m below Chart datum.

Berth	Length	Remarks
NE Berth	Max Vessel 85m	

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Location	UKC	RD	Remarks
Kirkcaldy			
Approaches	0.7 *	-0.0m	Area subject to siltation – latest sounding chart to be consulted.
Inner Harbour	0.4m*	-0.3m	
NE Berth	0.4m*	0.5m	NAABSA Berth – PST preferred alongside.

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* Vessels usually take bottom and stated to be “Not Always Afloat But Safe Aground” (NAABSA) by the berth operators – stated UKC are for berthing operations

Inverkeithing

Inverkeithing Key Information

- Berths in Inverkeithing are managed by either RM Recycling or Forth Bridge Stevedoring Limited.
- Max sized vessels accepted at Stone Berth LOA = 110m.
- All berths designated NAABSA by berth operators.
- All arrivals and sailing are calculated using Leith HW-1 hour, subject to vessels draft. If 2 ships on the tide consult HW -2

Berth	Length	Remarks
Deepwater Berth	130m	NAABSA – max vessel length 110m?
No 1 Berth	140m	NAABSA
No 2 + No 3 Berths		Berths not used for commercial traffic
Stone Berth	30m	Max LOA 110m
Old Sea Plane Berth		Berth not used for commercial traffic
East Ness Berth	20m	NAABSA, max vessel LOA = 100m
Preston Hill Quay		Berth not used for commercial traffic

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Location	UKC	RD	Remarks
Inverkeithing			
Inverkeithing Approaches	0.5m	0.4m	
Deep Water Berth	* 0.3m	1.1m	Restricted to 0.4m owing to approaches: consult sounding chart for depths alongside berth. Vessels ≤80m with a bowthrustrer may berth PST otherwise SST. To go in MG & PI doc
No 1	*0.3m	-1.0m	Shoals 20m north of berth, UKC sailing = 0.1m. No sounding past knuckle where depth = -1.4m
Stone Berth	*0.3m	0.5m	PST preferred.
East Ness Berth	*0.3m	-0.2m	Maximum LOA 100m.
* Vessels usually take bottom and stated to be “Not Always Afloat But Safe Aground” (NAABSA) by the berth operators – stated UKC are for berthing operations			

Hound Point

Location	UKC	RD	Remarks
HP 1 and HP2	2.1m	18.6m	See marine guidelines & Port Information for calculating maximum draft.

Braefoot

	UKC	RD	Remarks
East Out	2.0m	10.0m	
West Out	2.5m	10.5m	
			See Braefoot Tide tables.

Crombie

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Location	UKC	RD	Remarks
South Jetty	1.0m	12.0m	Reported by DM Crombie
North Jetty	1.0m	7.5m	

Newhaven

Location	UKC	RD	Remarks
Newhaven Anchorage	0.5m	8.0m	Depths increase to Eastern end of anchor area
Newhaven Approaches	0.3m	1.0m	Area subject to siltation, consult latest sounding chart
Newhaven Harbour	0.3m	1.0m	Area subject to siltation, consult latest sounding chart

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