

APPENDIX 2

TECHNICAL  
CHARACTERISTICS  
OF THE PORT



# 2.1. GENERAL CONDITIONS - PORT OF FERROL

## 2.1.1. LOCATION

	Inner harbour	Outer harbour
Longitude	8° 14' 54" W	8° 19' 32" W
Latitude	43° 28' 34" N	43° 27' 46" N

Data updated as of 31/12/2022

## 2.1.2. WIND CONDITIONS

	Port of Ferrol
Prevailing	ENE
Dominant	S

Data updated as of 31/12/2022

## 2.1.3. STORM CONDITIONS

	Port of Ferrol
Maximum significant wave height (Hs max)	4.42
Peak period (Tp) associated to Hs max	13.3
Average direction of waves associated to Hs max	279

Data collected from network point SIMAR 211055023. Year. 2022

## 2.1.4. SEA LEVEL AND TIDES

	Inner harbour	Outer harbour
Maximum tide in the year	4.04	4.04
Minimum low tide registered in the year with respect to the zero of the port	0.27	0.27
Maximum high tide registered in the year with respect zero of the port	4.31	4.31

Data updated as of 31/12/2022

## 2.1.5 ENTRANCE

### 2.1.5.1. ENTRANCE CHANNEL

	Inner harbour
Position	SW
Width	160m
Length	2,994m
Water depth in LLW	11.30m
Sea bottom characteristics	Sand, gravel and rock

Data updated as of 31/12/2022

### 2.1.5.2. ENTRANCE MOUTH

	Inner harbour	Outer harbour
Position	SW	SW
Width	546m	546m
Water depth in LLW	20m	20m
Maximum recorded current	-	-

Data updated as of 31/12/2022

### 2.1.5.3. USE OF ENTRY AND OUTPUT TUGS

LENGTH	TUGBOATS #
<100 m	0 (1)
100-130 m	0-1
130-165 m	1-2
165-250 m	2-3
>250 m (2)	2-4

For state-of-the-art ships, in specific cases, the Maritime Captainty can authorize the use of fewer tugboats.

(1) Except dangerous goods

(2) And GNL ships of any length.

Data updated as of 31/12/2022

# 2.1. GENERAL CONDITIONS - PORT OF SAN CIBRAO

## 2.1.1. LOCATION

Longitude	7° 27' 42" W
Latitude	43° 42' 29" N

Data updated as of 31/12/2022

## 2.1.2. WIND CONDITIONS

Prevailing	E
Dominant	W

Data updated as of 31/12/2022

## 2.1.3. STORM CONDITIONS

Maximum significant wave height (Hs max)	4.26
Peak period (Tp) associated to Hs max	21.5
Average direction of waves associated to Hs max	0

Data collected from network point SIMAR 211055023. Year: 2022

## 2.1.4. SEA LEVEL AND TIDES

Maximum significant wave height (Hs max)	4.17
Minimum low tide registered in the year with respect to the zero of the port	0.28
Maximum high tide registered in the year with respect zero of the port	4.45

Data updated as of 31/12/2022

## 2.1.5 ENTRANCE

### 2.1.5.1. ENTRANCE CHANNEL

	NORTH-EAST CHANNEL	EAST CHANNEL
Position	NE	E
Width	546m	191m
Length	2,160m	2,160m
Water depth in LLW	16.7m	17.9m
Sea bottom characteristics	sand	sand

Data updated as of 31/12/2022

### 2.1.5.2. ENTRANCE MOUTH

Position	E
Width	305m
Water depth in LLW	20m
Maximum recorded current	-

Data updated as of 31/12/2022

### 2.1.5.3. USE OF ENTRY AND OUTPUT TUGS

VESSEL LENGTH	TUGBOATS #
<100 m	0 (*)
100-165 m	2
>165 m	3

(1) Except dangerous goods

Data updated as of 31/12/2022

**2.1.5.4. LAST YEAR'S BIGGEST SHIP - PORT OF FERROL**

Characteristics	By length		By draught	
	Zone 1	Zone 2	Zone 1	Zone 2
<b>Name</b>	MSC GRANDIOSA/ MSC VIRTUOSA	MAHARAJ	MARIJEANNIE	MAHARAJ
<b>Nationality</b>	MALTA	LIBERIA	GRENADA	LIBERIA
<b>G.T.</b>	181.541	107.761	94.538	107.761
<b>T.P.M.</b>				
<b>Length</b>	331	300	292	300
<b>Draught</b>	8.8	12	18.2	12
<b>Type</b>	CRUISE PASSENGERS	BULK CARRIER	BULK CARRIER	BULK CARRIER
<b>Draught at entrance or departure</b>	7.85/8	13.00	17.00	13.00

Data updated as of 31/12/2022

**2.1.5.4. LAST YEAR'S BIGGEST SHIP - PORT OF SAN CIBRAO**

Characteristics	By length		By draught	
	Zone 1	Zone 2	Zone 1	Zone 2
<b>Name</b>	STELLA NAVIS	GEULBORG	STELLA NAVIS	GEULBORG
<b>Nationality</b>	MARSHALL ISLANDS	NETHERLANDS	MARSHALL ISLANDS	NETHERLANDS
<b>G.T.</b>	43.987	3.739	43.987	3.739
<b>T.P.M.</b>				
<b>Length</b>	236	100	236	100
<b>Draught</b>	14.52	6.15	14.52	6.15
<b>Type</b>	BULK CARRIER	GENERAL CARGO	BULK CARRIER	GENERAL CARGO
<b>Draught at entrance or departure</b>	12.00	5.00	12.00	5.00

Data updated as of 31/12/2022

## 2.1.6. WATERLINE

### 2.1.6.1. ZONE I

Location	Outer harbour (Ha)	Docks			Total (Ha)
		Commercial (Ha)	Fishing (Ha)	Others (Ha)	
Port of Ferrol	-	126.72	-	1,856.45	1,983.17
Port of San Cibrao	-	181.33	-	-	181.33
<b>TOTAL Zone I</b>	<b>-</b>	<b>308.05</b>	<b>-</b>	<b>1,856.45</b>	<b>2,164.50</b>

Data updated as of 31/12/2022

### 2.1.6.2. ZONE II

Location	Outer harbour (Ha)	Anchorage (Ha)	Others (Ha)	Total (Ha)
Port of Ferrol	290,54	1.699,29	466,79	2.456,62
Port of San Cibrao	-	-	-	-
<b>TOTAL Zone II</b>	<b>290,54</b>	<b>1.699,29</b>	<b>466,79</b>	<b>2.456,62</b>

Data updated as of 31/12/2022

## 2.2. FACILITIES FOR MARITIME TRAFFIC

### 2.2.1. QUAYS AND BERTHS

#### 2.2.1.1. CLASSIFICATION BY DOCKS

Name	Length (m)	Depth (m)	Width (m)	Uses
<b>FERROL - OUTER HARBOUR</b>				
<b>Public</b>				
<b>Commercial docks</b>				
Virgen de Chamorro T-dock	107.00	15.00	11.15	Port services
Concepción Arenal Quay	173.00	20.00	60	Cargo
Concepción Arenal Quay	414.00	20.00	27 - 60	Solid bulks
Concepción Arenal Quay	922.00	20.00	60	Multipurpose
José Canalejas Quay	148.00	10 - 17.5	60	Multipurpose
<b>Total Public</b>	<b>1,764.00</b>			
<b>Private</b>				
<b>Commercial docks</b>				
Liquid bulks	384.00	16.00	27	Liquid bulks
<b>Total Private</b>	<b>384.00</b>			
<b>TOTAL FERROL-OUTER HARBOUR</b>	<b>2,148.00</b>			



Name	Length (m)	Depth (m)	Width (m)	Uses
<b>FERROL - INNER HARBOUR</b>				
<b>Public</b>				
<b>Commercial docks</b>				
Breakwater head	47.00	6.50	12.5	Port services
North curtain wall	253.00	10.00	40	Multipurpose
Outer breakwater	244.00	9.00	77.65	Multipurpose
Inner breakwater	106.00	6.50	4	Multipurpose
Fernández Ladreda	811.00	6 - 12.50	20 - 40	Multipurpose
New quay	271.00	14.00	23.5	Multipurpose
New secondary quay	68.00	14.00	10	Multipurpose
North curtain wall Ro-Ro ramp	216.00	10.00	20.4	Ro-Ro traffic
Outer breakwater Ro-Ro ramp	229.00	9.00	15	Ro-Ro traffic
<b>Total</b>	<b>2,245.00</b>			
<b>Leisure docks</b>				
A Graña Quay	70.00	<4	2	Leisure-Sports
Curuxeiras Quay	547.00	<6	2	Leisure-Sports
San Felipe quay	45.00	<4	3	Leisure-Sports
A Graña floating jetties	831.00	<4	6 - 12	Leisure-Sports
Caranza floating jetties	418.00	<4	6 - 8	Leisure-Sports
Curuxeiras floating jetties	1.014.00	<6	6 - 12	Leisure-Sports
<b>Total</b>	<b>2,925.00</b>			
<b>Fishing docks</b>				
Curuxeiras Quay	197.00	<6	2	Fishing
A Gándara floating jetties	84.00	<4	2	Fishing
Curuxeiras floating jetties	536.00	<6	6	Fishing
<b>Total</b>	<b>817.00</b>			
<b>Other docks</b>				
Curuxeiras Quay	27.00	<6	2.00	Port services
Curuxeiras Quay	80.00	<8	2.00	Multipurpose
Curuxeiras Quay	96.00	2,50	2.00	Multipurpose
Curuxeiras floating jetties	62.00	<8	6 - 12	Port services
<b>Total</b>	<b>265.00</b>			
<b>TOTAL PUBLIC</b>	<b>6,252.00</b>			

Name	Length (m)	Depth (m)	Width (m)	Uses
<b>Private</b>				
<b>Commercial docks</b>				
Forestal del Atlántico	542.00	14.00	50	Liquid bulks
Navantia Fene	2,522.00	3-11.20	-	Repairs and outfitting
Navantia Ferrol	1,984.00	6-12.0	-	Repairs and outfitting
Reganosa	433.00	14.00	50	Liquid bulks
<b>Total Private</b>	<b>5,481.00</b>			
<b>TOTAL FERROL - INNER HARBOUR</b>	<b>11,733.00</b>			
<b>TOTAL PORT OF FERROL</b>	<b>13,881.00</b>			
<b>SAN CIBRAO PORT</b>				
<b>Private</b>				
<b>Commercial docks</b>				
Secondary quay	206.00	7.00	30.00	Multipurpose
Main dock	338.00	14.00	35.00	Multipurpose
Morás Port	194.00	3.00	30.00	Multipurpose
<b>TOTAL SAN CIBRAO PORT</b>	<b>738.00</b>			
<b>TOTAL PORT AUTHORITY</b>	<b>14,619.00</b>			

Data updated as of 31/12/2022

## 2.2.1.2. CLASIFICACION BY USES AND DEPTHS

USE	Linear meters with draught "C" (m)					Totals	C<4
	C>=12	12>C>=10	10>C>=8	8>C>=6	6>C>=4		
<b>FERROL - OUTER HARBOUR</b>							
<b>Public</b>							
<b>Commercial docks</b>							
Containers	173.00	-	-	-	-	173.00	-
Dry bulks	414.00	-	-	-	-	414.00	-
Multipurpose	996.00	74.00	-	-	-	1,070.00	-
Port services	107.00	-	-	-	-	107.00	-
<b>Private</b>							
<b>Commercial docks</b>							
Liquid bulks	384.00	-	-	-	-	384.00	-
<b>TOTAL FERROL - OUTER HARBOUR</b>	<b>2,074.00</b>	<b>74.00</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>2,148.00</b>	<b>-</b>
<b>FERROL - INNER HARBOUR</b>							
<b>Public</b>							
<b>Commercial docks</b>							
Multipurpose	793.00	253.00	513.00	194.00	-	1,753.00	-
Ro-Ro traffic	-	216.00	229.00	-	-	445.00	-
Port services	-	-	-	47.00	-	47.00	-
<b>Other docks</b>							
Fishing	-	-	-	-	733.00	733.00	84.00
Multipurpose	-	-	-	80.00	-	80.00	96.00
Leisure-Sports	-	-	-	-	1,561.00	1,561.00	1,364.00
Port services	-	-	-	62.00	27.00	89.00	-
<b>Private</b>							
<b>Commercial docks</b>							
Liquid bulks	975.00	-	-	-	-	975.00	-
Repairs and outfitting	-	811.00	1,317.00	1,760.00	468.00	4,356.00	150.00
<b>TOTAL FERROL - INNER HARBOUR</b>	<b>1,768.00</b>	<b>1,280.00</b>	<b>2,059.00</b>	<b>2,143.00</b>	<b>2,789.00</b>	<b>10,039.00</b>	<b>1,694.00</b>
<b>SAN CIBRAO PORT</b>							
<b>Private</b>							
Multipurpose	338.00	-	-	206.00	-	544.00	194.00
<b>TOTAL SAN CIBRAO PORT</b>	<b>338.00</b>	<b>-</b>	<b>-</b>	<b>206.00</b>	<b>-</b>	<b>544.00</b>	<b>194.00</b>
<b>TOTAL PORT AUTHORITY</b>	<b>4,180.00</b>	<b>1,354.00</b>	<b>2,059.00</b>	<b>2,349.00</b>	<b>2,789.00</b>	<b>12,731.00</b>	<b>1,888.00</b>

Data updated as of 31/12/2022

2.2.2. LAND SURFACE AND DEPOSIT AREAS (m<sup>2</sup>)

QUAY-ZONE	WAREHOUSES			ROADS	OTHERS	TOTAL
	OPEN	COVER-OPEN	CLOSED			
<b>PORT OF FERROL</b>						
<b>OUTER HARBOUR</b>						
<b>Public</b>						
Interior port area	377,054			85,968	316,522	779,544
Exterior port area					16,581	16,581
<b>Subtotal Public</b>	<b>377,054</b>	-	-	<b>85,968</b>	<b>333,103</b>	<b>796,125</b>
<b>Private</b>						
Dock	287,776				23,458	311,234
Dock	4,684				36	4,720
<b>Subtotal Private</b>	<b>292,460</b>	-	-	-	<b>23,494</b>	<b>315,954</b>
<b>TOTAL OUTER HARBOUR</b>	<b>669,514</b>	-	-	<b>85,968</b>	<b>356,597</b>	<b>1,112,079</b>
<b>INNER HARBOUR</b>						
<b>Public</b>						
Interior port area	167,036		4,374	57,763	52,332	281,505
Exterior port area					80,332	80,332
<b>Subtotal Public</b>	<b>167,036</b>	-	<b>4,374</b>	<b>57,763</b>	<b>132,664</b>	<b>361,837</b>
<b>Private</b>						
Interior port area			33,599	314	2,866	36,779
Exterior port area					2,095	2,095
<b>Subtotal Private</b>	-	-	<b>33,599</b>	<b>314</b>	<b>4,961</b>	<b>38,874</b>
<b>TOTAL INNER HARBOUR</b>	<b>167,036</b>	-	<b>37,973</b>	<b>58,077</b>	<b>137,625</b>	<b>400,711</b>

QUAY-ZONE	WAREHOUSES			ROADS	OTHERS	TOTAL
	OPEN	COVER-OPEN	CLOSED			
<b>FERROL ESTUARY</b>						
<b>Public</b>						
Tunnel infrastructure A Graña					80,654	80,654
A Cabana					8,364	8,364
A Malata					21,320	21,320
Caranza					42,311	42,311
Perlío-Fene					29,555	29,555
Xubia-Naron					47,485	47,485
Cariño					86,250	86,250
As Pias					9,646	9,646
<b>Subtotal Public</b>	-	-	-	-	<b>325,585</b>	<b>325,585</b>
<b>Private</b>						
A Cabana					221	221
A Malata					303	303
Caranza					696,550	696,550
Perlío-Fene					140,385	140,385
Mugardos					90,739	90,739
Narón					19	19
Prior	-	-	-	-	<b>928,217</b>	<b>928,217</b>
<b>Subtotal Private</b>	-	-	-	-	<b>1,253,802</b>	<b>1,253,802</b>
<b>TOTAL FERROL ESTUARY</b>	<b>836,550</b>		<b>37,973</b>	<b>144,045</b>	<b>1,748,024</b>	<b>2,766,592</b>
<b>PORT SAN CIBRAO</b>						
<b>Public</b>						
	-	-	-	-	<b>508</b>	<b>508</b>
<b>Private</b>						
San Cibrao					395,106	395,106
Isla Pancha					500	500
<b>Subtotal public</b>	-	-	-	-	<b>395,606</b>	<b>395,606</b>
<b>TOTAL SAN CIBRAO PORT</b>	-	-	-	-	<b>396,114</b>	<b>396,114</b>
<b>TOTAL PORT AUTHORITY</b>	<b>836,550</b>	-	<b>37,973</b>	<b>144,045</b>	<b>2,144,138</b>	<b>3,162,706</b>

Data updated as of 31/12/2022

### 2.2.3. COLD STORE AND ICE FACTORY

(no data)

### 2.2.4. PASSENGER TERMINALS

(no movement)

### 2.2.5. FISHING INSTALLATIONS

TYPE OF INSTALLATION	LOCATION	AREA (m <sup>2</sup> )
Fish warehouse	Spike quay	836
Multiple uses	Spike quay	321
Stands for fishing industry	Spike quay	281
<b>Total</b>		<b>1,438</b>

Data updated as of 31/12/2022

### 2.2.6. BUILDINGS FOR PUBLIC FACILITIES

LOCATION	OWNER	USE	CHARACTERISTICS
<b>FERROL OUTER HARBOUR</b>			
<b>Buildings</b>			
Access	APFSC	Gate house	1 floor. 179.90 m <sup>2</sup>
Cabo Prioriño	APFSC	Interpretive center and multipurpose building	2 floors. 571.47 m <sup>2</sup>
Seawall	APFSC	Service coordination center	4 floors. 920.85 m <sup>2</sup>
Esplanade	APFSC	Goods inspection center	1 floor. 717.51 m <sup>2</sup>
<b>Historic heritage</b>			
Cabo Prioriño	APFSC	Cabo Prioriño battery	1 floor. 1,109.41 m <sup>2</sup>
Cabo Prioriño	APFSC	Punta Viñas battery	1 floor. 2,393.86 m <sup>2</sup>
<b>Facilities</b>			
Cabo Prioriño	APFSC	Processing plant CT10	1 floor. 10.80 m <sup>2</sup>
Seawall	APFSC	Processing plant CT3	1 floor. 7.57 m <sup>2</sup>
Seawall	APFSC	Distribution center CD3	1 floor. 7.57 m <sup>2</sup>
Esplanade	APFSC	Distribution center CDPCF1	1 floor. 23.62 m <sup>2</sup>

LOCATION	OWNER	USE	CHARACTERISTICS
Esplanade	APFSC	Processing plant CT1	1 floor. 11.40 m <sup>2</sup>
Esplanade	APFSC	Processing plant CT2	1 floor. 9.36 m <sup>2</sup>
Esplanade	APFSC	Processing plant CT4	1 floor. 9.36 m <sup>2</sup>
Esplanade	APFSC	Processing plant CT5	1 floor. 10.80 m <sup>2</sup>
Esplanade	APFSC	Processing plant CT6	1 floor. 12.00 m <sup>2</sup>
Esplanade	APFSC	Processing plant CT7	1 floor. 12.00 m <sup>2</sup>
Esplanade	APFSC	Processing plant CT8	1 floor. 12.60 m <sup>2</sup>
Esplanade	APFSC	Distribution center CD1	1 floor. 7.92 m <sup>2</sup>
Esplanade	APFSC	Distribution center CD2	1 floor. 8.88 m <sup>2</sup>

## FERROL / INNER HARBOUR

### Buildings

Street #1	Directorate General of the Merchant Marine	Maritime Authority	2 plantas. 1,173 m <sup>2</sup>
Street #1	APFSC	Exhibition hall	1 planta. 392.00 m <sup>2</sup>
Street #3	APFSC	Offices and repair shops	1 planta. 247.01 m <sup>2</sup>
Street #3	APFSC	APFSC Staff social space	1 planta. 141.53 m <sup>2</sup>
Street #4	APFSC	Others and Spanish military police (Guardia Civil)	3 plantas. 953.61m <sup>2</sup>
Main street	APFSC	Border police/Offices/Classrooms	3 plantas. 556.48 m <sup>2</sup>
Curuxeiras quay	APFSC	Main offices	4 plantas. 839.16 m <sup>2</sup>
Curuxeiras quay	APFSC	Offices (Old Navy Command)	4 plantas. 611.08 m <sup>2</sup>
Port entrance	APFSC	Guard houses (2 u.)	1 planta. 2x16 m <sup>2</sup>
Spike quay	APFSC	Service coordination center	3 plantas. 763.37 m <sup>2</sup>
Street #3	APFSC	Repair shops	1 planta. 814.11 m <sup>2</sup>
Street #3	APFSC	Garage	1 planta. 195.13 m <sup>2</sup>
Main street	APFSC	Secondary repair shop warehouse	1 planta. 77.93 m <sup>2</sup>
Carretera Alta del Puerto	APFSC	Multipurpose building	2 plantas. 987.00 m <sup>2</sup>

LOCATION	OWNER	USE	CHARACTERISTICS
<b>Facilities</b>			
Transformation center #1	APFSC	Transformation center nº 1	1 floor. 62.94 m <sup>2</sup>
Transformation center #2	APFSC	Transformation center nº 2	1 floor. 26.21 m <sup>2</sup>
Transformation center #3	APFSC	Transformation center nº 3	1 floor. 22.90 m <sup>2</sup>
Transformation center #4	APFSC	Transformation center nº 4	1 floor. 37.70 m <sup>2</sup>
<b>Others</b>			
Parking lot	APFSC	Parking lot	585.66 m <sup>2</sup>

### SAN CIBRAO PORT

Port	Spanish Ministry of Finance	Customs	40 m <sup>2</sup>
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Data updated as of 31/12/2022

### 2.2.7. BREAKWATERS

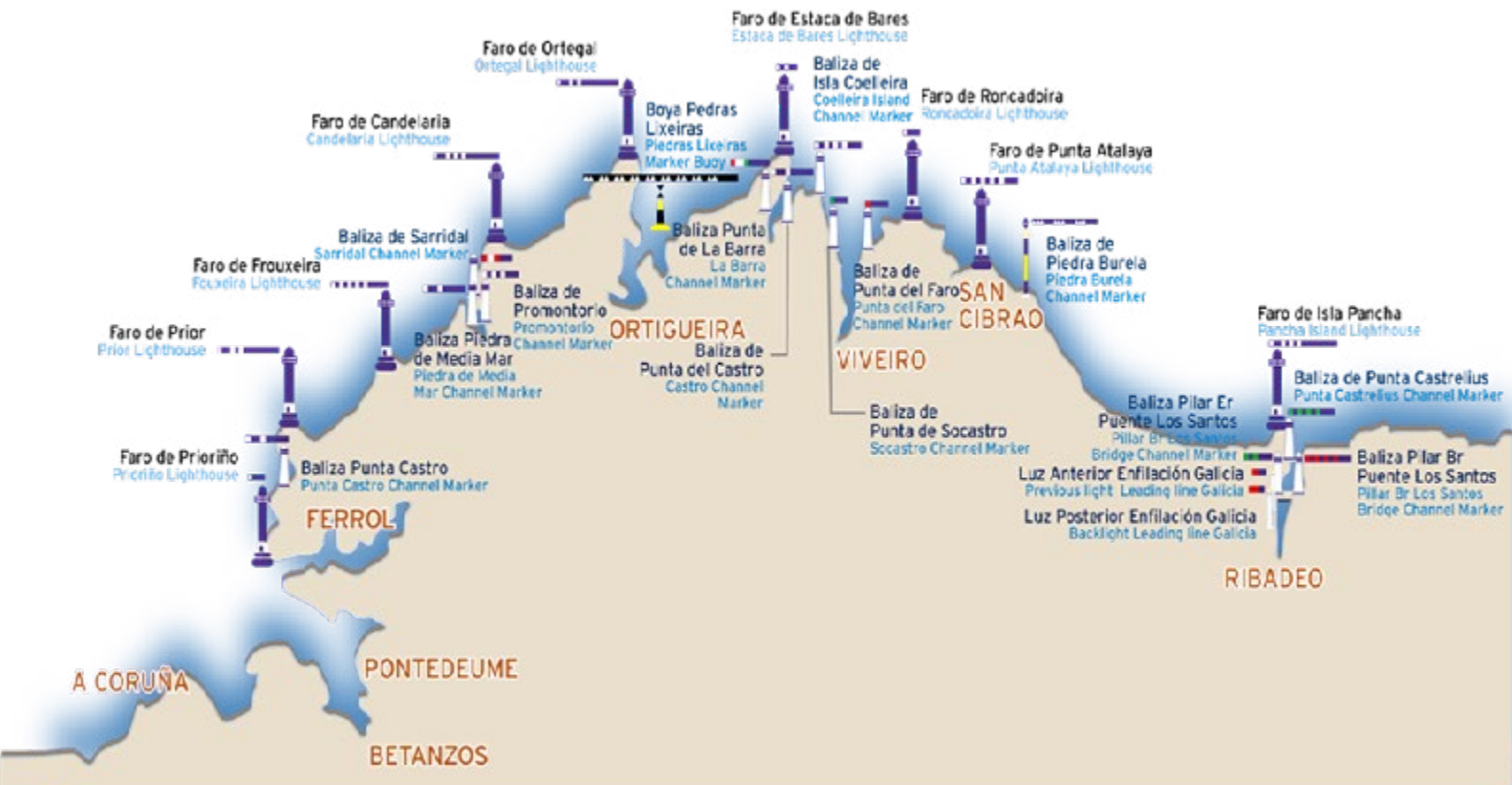
NAME	LENGTH (m)	CHARACTERISTICS
<b>FERROL PORT</b>		
Virgen de Chamorro Dock	1,067	Sloping Dock with block protection layer
<b>SAN CIBRAO PORT</b>		
North Dock	935	Dock with block and dolos protection layer
South Dock	1,130	Dock with block and dolos protection layer

Data updated as of 31/12/2022



## 2.2.8. LIGHTHOUSES AND BEACON PLAN

### MARITIME SIGNS OF THE COASTAL OF APFSC



### FERROL PORT AND ESTUARY BEACON MAP



Data updated as of 31/12/2022

## 2.2.9. LIGHTHOUSES AND BEACON LIST

N <sup>a</sup>	NAME AND LOCATION	TYPE	COMPETENCE	DESCRIPTION	COLOUR	CHARACT	SCOPE
<b>RIBADEO ESTUARY</b>							
2740	Isla Pancha.	Lighthouse	APFSC	White cylindrical tower, black stripes	White	GpD(3+1)B 20s	21
2742	2nd leading line 205ts ant.	Shore leading line	APFSC	White tower. Red diamond	Red	RpR 0,6s	3
2742.1	2nd leading line 205ts post.	Shore leading line	APFSC	White rectangular support	Red	OcR 2s	3
2741	Punta Castrelius	Shore beacon	APFSC	Green cylindrical tower	Green and white	GpD(4)BV 15s	5
2743	Los Santos Pilar de Br. Bridge	Shore beacon	APFSC	Bridge pillar. La Br	Red	GpD(4)R 11s	4
2743.1	Los Santos Pilar de Er. Bridge	Shore beacon	APFSC	Bridge pillar. La Er	Green	GpD(2)V 7s	4
<b>RIBADEO PORT</b>							
2745	Porcillan to Er. dock		Portos de Galicia	Green post on white and green column	Green	DV 5s	3
2747	Porcillan to Br. dock		Portos de Galicia	Red post on cylindrical W/R column	Red	DR 5s	1
2750	Mirasol to Er. dock		Portos de Galicia	Green post on G/W column	Green	GpD(2) V 7s	1
2752	Mirasol to Br. dock		Portos de Galicia	Red post on cylindrical W/R column	Red	GpD(2)R 7s	1
2760	Mirasol Ext. dock N.		Portos de Galicia	Green post on G/W column	Green	GpD(3)V 9s	1
<b>RINLO PORT</b>							
2775	Outer Dock		Portos de Galicia	Green cylindrical tower	Green	DV 5s	3
<b>FOZ ESTUARY-FISHING PORT</b>							
2810	Sand containment spike. Ext.		Portos de Galicia	Post	Green	Ct V 1s	3
2812	Portochico spike quay. Ext.		Portos de Galicia	White cylindrical turret	Green	GpD(2) V 7s	1
2814	Portochico Dock dock. Ext.		Portos de Galicia	White post	Red	GpD(2) R 7s	1
2820	Fishing Dock dock. Ext.		Portos de Galicia	White post	Red	GpD(3) R 9s	1

N <sup>a</sup>	NAME AND LOCATION	TYPE	COMPETENCE	DESCRIPTION	COLOUR	CHARACT	SCOPE
<b>BURELA PORT</b>							
2830	Piedra Burela	Shore beacon	APFSC	Black tower yellow stripe. Card. E	White	GpCt (3) B 10 s	10
2840	Seawall. Ext.		Portos de Galicia	Green column	Red and green	GpD(2) RV 7s	5
2850	T-dock. Ext.		Portos de Galicia	Green tower	Green	GpD(3)V 9s	3
2850.1	1 Buoy to port		Portos de Galicia	Perch. To port side	Red	GpD(3) R 9s	3
2852	Commercial dock. Spike. Ext.		Portos de Galicia	Green tower with central red stripe	Green	GpD(2+1)V 15s	1
2852.1	2 Buoy to port		Portos de Galicia	Perch. To port side	Red	GpD(4) R 11s	1
2855	CounterDock. Ext. SE		Portos de Galicia	White red post	Red	GpD(3)R 9s	1
2857	T-dock. Ang. Interior		Portos de Galicia	White red post	Red	GpD(4)R 11s	1
2859	Dock. Dock. Heel		Portos de Galicia	White green post	Green	DV 5s	1
<b>SAN CIBRAO-FISHING PORT</b>							
2865	Submarine emissary. buoy		Aquiferous	Pillar. Special mark	Yellow	DA 2s	3
2870	Punta Atalaya	Lighthouse	APFSC	White black stripe cylindrical tower	White	GpD(5)B 20s	20
2880	Direction light		Portos de Galicia	White turret. Red diamond	Red and white	DirCtRB 1s	5
2890	Anxuela islet. Outer Dock		Portos de Galicia	White column with green stripe	Green	DV 3s	3
2900	Angulo dock		Portos de Galicia	Red column	Red	GpD(2)R 7s	3
<b>ALUMINIA ESPAÑOLA PORT</b>							
2910	Canal leading line N203°55' front		ALCOA	White cylindrical tower red stripes	White	GpD(2)B 6s	7
2911	Canal lead. line N203°55'. P.A 475 front		ALCOA	White cylindrical tower red stripes	White	OcB 6s	7
2920	Buoy under la Baixa		ALCOA	Card. S	White	GpCt (6)B+DL 15s	3
2925	Buoy to NW		ALCOA	Card. W.	White	GpCt(9)B15s	3
2930	Canal leading line E273°14'. Front		ALCOA	White cylindrical tower red stripes	White	GpD(2)B 6s	7
2931	Canal lead. line E273° 14' Back. A275m. front		ALCOA	White cylindrical tower red stripes	White	OcB 6s	7
2940	Outer northern Dock		ALCOA	Pyramid shaped pillar on octagonal prism	Green and white	GpD(2)VB 8s	3

N <sup>a</sup>	NAME AND LOCATION	TYPE	COMPETENCE	DESCRIPTION	COLOUR	CHARACT	SCOPE
2942	Er. Inlet buoy		ALCOA	Outer side conical	Green and white	DV 4s	5
2945	South end Dock		ALCOA	Metallic pillar on grey column	Red	GpD(3)R 8s	3
2947	Br. Inlet buoy		ALCOA	To port side cylindrical	Red	DR 4s	5
2955	L-1 buoy		ALCOA	Mc Esp. perch	Yellow	DA	1
2960	Submarine emissary buoy		ALCOA	Mc Esp. pillar	Yellow	Ct A	1
2965	L-5 buoy		ALCOA	Mc Esp. perch	Yellow	DA	1
2970	Sea farm buoy		ALCOA	Mc Esp. perch	Yellow	Ct A	1
2975	Submarine emissary buoy		ALCOA	Mc Esp. pillar	Yellow	DA 10s	2
2990	Punta Roncadoira	Lighthouse	APFSC	White cylindrical tower	White	D8 7,5s	21
<b>VIVERO ESTUARY</b>							
3010	Punta de Faro	Shore beacon	APFSC	Red turret	Red	DR 5s	7
3020	Punta Socastro	Shore beacon	APFSC	Green turret	Green	DV 5s	7
<b>CELEIRO PORT</b>							
3030	Punta del Puntal. Seawall. Ext.		Portos de Galicia	Red column to port side	Red	GpD(2)R 7s	5
3032	T-dock. Ext.		Portos de Galicia	Red column to port side	Red	GpD(3)R 9s	1
3034	South dock. Ext.		Portos de Galicia	Cylindrical la Er. Ppal Br.	Green	GpD(2+1)V 15s	1
3036	Landrove river channeling		Portos de Galicia	Green column starboard side	Green	GpD(2)V 7s	1
<b>VIVEIRO PORT</b>							
3038	Seawall Dock Ext.		Portos de Galicia	Green column. La Er.	Green	GpD(2+1)V 15s	1
03038.5	Estuary. Port side		Portos de Galicia	Red post	Red	GpD(4)R 11s	1
3040	ODAS 7003 buoy		EPPE	Yellow lenticular with superstructure	Yellow	Gp Ct (5) A 20s	3
<b>RIA DEL BARQUERO</b>							
3060	Isla Coelleira	Shore beacon	APFSC	Grey masonry conical tower	White	GpD(4)B 16s	7
3065	Bares Port. Ext. Dock		Portos de Galicia	Green end	Green	GpD(2)V 7s	3
3070	Punta del Castro	Shore beacon	APFSC	White conical tower	White	GpD(2)B 7s	5
3080	Punta de la Barra	Shore beacon	APFSC	White conical tower	W/R/G	DBRV 3s	5

N <sup>a</sup>	NAME AND LOCATION	TYPE	COMPETENCE	DESCRIPTION	COLOUR	CHARACT	SCOPE
<b>O VICEDO PORT</b>							
3085	Ext. North Dock		Portos de Galicia	Red post on W/R turret	Red	GpD(4)R11 s	5
3087	Ext. South Dock		Portos de Galicia	Green post on W/G column	Green	GpD(4)V 11 s	3
03087.5	Ext. Floating Dock		Portos de Galicia	Red metallic post	Red	DR 5 s	1
<b>PUERTO DEL BARQUERO</b>							
3088	Ext. Seawall		Portos de Galicia	Red metallic post	Red	GpD(3)R 9s	5
3089	CounterDock. E		Portos de Galicia	Green metallic post	Green	GpD(3)V 9s	3
3090	CounterDock. W		Portos de Galicia	Green metallic post	Green	GpD(4)V 11s	1
3100	Punta Estaca de Bares	Lighthouse	APFSC	House and octagonal tower	White	GpD(2)B 7,5 s	25
<b>ESPASANTE PORT</b>							
3125	Piedras Lixeiras buoy	Coastal buoy	APFSC	Pillar Card. W	White	GpCt(9)B 15 s	5
3130	Seawall. Ext.		Portos de Galicia	Red turret	Red	DR 5 s	3
3135	CounterDock. Ext.		Portos de Galicia	Green turret	Green	DV 5 s	1
<b>SANTA MARIA DE ORTIGUEIRA PORT</b>							
3136	Buoy		Portos de Galicia	Perch. Card. N	White	Ct 1s	3
3138	Fishing dock. S End		Portos de Galicia	Red turret	Red	CtR 1s	1
3140	Seawall. End		Portos de Galicia	Red cylindrical tower	Red	GpD(4)R 11s	1
3142	CounterDock. End		Portos de Galicia	Green cylindrical tower	Green	GpD(4)V 11s	3
<b>CARIÑO PORT</b>							
3150	Breakwater. Ext.		Portos de Galicia	Green and white cylindrical tower	Green	GpD(3)V 9 s	5
3151	Ext. SW Dock		Portos de Galicia	Green metallic post	Green	GpD(3)V 9s	3
3153	Ang. N. Dock attached to the Dock		Portos de Galicia	Green metallic post	Green	GpD(4)V 11s	1
3160	Cabo Ortegal	Lighthouse	APFSC	White and red cylindrical tower	White	GpD(2+1)B 15s	18
3170	Punta Candelaria	Lighthouse	APFSC	Building and octagonal tower	White	GpD(3+1)B 24s	21

N <sup>a</sup>	NAME AND LOCATION	TYPE	COMPETENCE	DESCRIPTION	COLOUR	CHARACT	SCOPE
<b>CEDEIRA ESTUARY</b>							
3190	Punta Promontorio	Shore beacon	APFSC	White hexagonal tower	White	GpOc(4)B 10s	10
3192	Punta Sarridal	Shore beacon	APFSC	Red cylindrical tower	White and red	OcBR 6s	10
3195	Piedra de Media Mar	Shore beacon	APFSC	White conical tower	White	GpD(2)B 7s	4
<b>CEDEIRA PORT</b>							
3200	Seawall Dock Ext.		Portos de Galicia	Red cylindrical tower	Red	GpD(2)R 7s	5
3201	Dock attached to Dock		Portos de Galicia	Post	Red	GpD(3)R 9s	1
3210	Punta de la Frouxeira	Lighthouse	APFSC	Concrete prism tower	White	GpD(5)B 15s	20
3220	Cabo Prior	Lighthouse	APFSC	House and ashlar hexagonal tower	White	GpD(1+2)B 15s	22
3225	ODAS buoy		EPPE	Yellow buoy	Yellow	GpCt(5)A 20 s	--
3235	Punta del Castro	Shore beacon	APFSC	White hexagonal tower	White	GpD(2)B 7s	8
3240	Cabo Prioriño Chico	Lighthouse	APFSC	House and white octagonal tower	White	DB 5s	23
03241.5	ODAS buoy		EPPE	Yellow buoy	Yellow	GpD(5)A 20s	3
3242	Punta Coitelada buoy	Coastal buoy	APFSC	Pillar Cardinal W	Black and yellow	GpCt(9)B 15s	5
<b>FERROL OUTER HARBOUR</b>							
3245	Ext. Seawall	Inner beacon	APFSC	Red tower with house	Red	DR 5s	7
03245.1	Ext. Dock T-dock	Inner beacon	APFSC	Red tower with house	Red	GpD(2)R 7s	3
<b>FERROL ESTUARY-ENTRANCE CHANNEL</b>							
3250	San Cristóbal battery	Shore beacon	APFSC	Quadrangular tower/ Green, white	White and red	FVBR	5
3260	Lead ch. 085° 25' front at Punta S.Martín	Shore leading line	APFSC	White tower	White	DB 1,5 s	3
3261	Lead ch. 085° 25' back to 701 from previous one	Shore leading line	APFSC	White tower	White	OcB 4 s	3
3270	Muela del Segaña buoy	Coastal buoy	APFSC	Pillar La. Er.	Green	DV 2 s	5
3272	San Carlos buoy	Coastal buoy	APFSC	Pillar La. Br.	Red	GpD(3)R 9s	3
3273	Punta Louridal buoy	Coastal buoy	APFSC	Pillar La. Br.	Red	GpD(4)R 12s	3

Nº	NAME AND LOCATION	TYPE	COMPETENCE	DESCRIPTION	COLOUR	CHARACT	SCOPE
3274	San Martín buoy	Coastal buoy	APFSC	Pillar La. Er.	Green	GpD(2)V 7s	3
3280	San Felipe buoy	Coastal buoy	APFSC	Pillar La. Br.	Red	DR 5s	3
3290	La Palma buoy	Coastal buoy	APFSC	Pillar La. Er.	Green	GpD(3)V 9s	3
3300	La Palma castle	Shore beacon	APFSC	House and ashlar tower	White	GpOc(1+2)B 7s	5
3303	Cetárea buoy	Coastal buoy	APFSC	Pillar La Br.	Red	GpD(3)R9s	3
3305	Punta Redonda buoy	Coastal buoy	APFSC	Pillar La. Er.	Green	GpD(4)V 12s	3
3310	Pereiro buoy	Coastal buoy	APFSC	Pillar La. Br.	Red	GpD(2)R 7s	3
3320	Vispón buoy	Coastal buoy	APFSC	Pillar La. Br.	Red	GpD(4)R 12s	3
3330	Punta Piteira breakwater buoy	Coastal buoy	APFSC	Perch La. Er.	Green	DV 5s	3
<b>MUGARDOS PORT</b>							
3335	Seawall Dock dock Ext. E		Portos de Galicia	Green and white turret	Green	CtV 1s	3
03335.5	Floating Dock. End		Portos de Galicia	Red and white post	Red	CtR 1s	1
3337	East dock Ext.		Portos de Galicia	Red and white turret	Red	CtR 1s	1
3338	Floating Dock. E end		Portos de Galicia	Green and white post	Green	CtV 1s	1
<b>LA GRAÑA NAVY BASE</b>							
3340	NE mooring petrol dock		Defense	Metallic post	Red	GpD(2)R 7s	1
3345	SW mooring petrol dock		Defense	Metallic post	Red	DR 5s	1
3355	Ext. South spike		Defense	Red column	Red	GpD(4)R 12s	1
<b>INNER HARBOUR-MILITARY ARSENAL-NAVANTIA FERROL-FORESTAL-REGANOSA</b>							
3359	New quay, SW angle	Inner beacon	APFSC	Cylindrical La. Br. Ppal. Er.	Red	GpD(2+1)R 12s	3
3360	New quay, SE angle	Inner beacon	APFSC	Red column	Red	DR 5s	1
3363	F. Ladreda. dock Ext.	Inner beacon	APFSC	Green column	Green	DV 5s	3
3364	Punta Leiras buoy	Coastal buoy	APFSC	Pillar La. Er.	Green	CtV 1s	3
3365	Duque de Alba		Defense	Black and red pyramid	White	GpD(2)B 7s	1
3375	Deaerat. station dock End. W		Reganosa	Green post	Green	GpD(2)V 7s	1
3385	Pant. Deaerat. station End. E		Forestal del Atlantico	Green post	Green	GpD(3)V 7s	1

N <sup>a</sup>	NAME AND LOCATION	TYPE	COMPETENCE	DESCRIPTION	COLOUR	CHARACT	SCOPE
3395	Concepción Arenal Quay	Inner beacon	APFSC	Red column	Red	GpD(2)R 7s	3
3397	Curuxeiras quay. Er estuary	Inner beacon	APFSC	Green/white column	Green	CtV 1s	1
3398	Curuxeiras quay. Br estuary	Inner beacon	APFSC	Red/white column	Red	CtR 1s	1
3400	Arsenal at Asta del Parque		Defense	Cylindrical La. Br. Ppal. Er.	Red	GpD(2+1)R 12s	3
3410	Arsenal at Punta del Martillo		Defense	Red column	Red	DR 5s	1
3420	End of spike #1 dock		Defense	Green column	Green	GpD(2)V 7s	1
3425	Outer dock. NW end		Defense	Metallic column	Green	DV 1s	1
3430	End of dock #2 dock		Defense	Red/green stripe conical tower	Red	GpD(2+1)R 12s	3
3450	Commercial dock. Ext.		Defense	Green/red stripe conical tower	Green	GpD(2+1)V 10s	1
3452	Ext. spike Caranza	Inner beacon	APFSC	Green cylindrical tower	Green	CtV 1s	1
<b>MANIÑOS-BARALLOBRE PORT</b>							
03454.5	Safety screen		Portos de Galicia	Green post	Green	CtV 1s	1
03454.6	Outer floating Dock		Portos de Galicia	Green post	Green	CtV 1s	1
<b>NAVANTIA FENE ACCESS</b>							
3455	Izar Fene shipyards buoy #1		Navantia	Perch La. Er.	Green	GpD(4)V 10s	1
3457	Izar Fene shipyards buoy #2		Navantia	Perch La. Br.	Red	GpD(2)R 7s	1
3459	Caranza beach spike buoy	Inner buoy	APFSC	Perch Car.S	White	GpCt(6) DL 10s	1
3460	Izar Fene shipyards buoy #3		Navantia	Perch Mc. Esp.	Yellow	GpD(4)A 11s	1
3462	Izar Fene shipyards buoy #4		Navantia	Perch La. Br.	Red	GpD(3)R 9s	1
3470	#7 dock (T-dock) Extr		Navantia	Grey truss tower	Green	GpD(2)V 7 s	3
3475	#10 dock		Navantia	Grey truss tower	Green	GpD(2+1)V 12s	3
3485	#11 dock (Penedo) Ang. N		Navantia	Grey truss tower	Green	DV 5s	3
<b>ARES BETANZOS ESTUARY</b>							



N <sup>a</sup>	NAME AND LOCATION	TYPE	COMPETENCE	DESCRIPTION	COLOUR	CHARACT	SCOPE
3486	ODAS buoy		EPPE	Yellow buoy	Yellow	GpD(5) A 20s	-
03487.2	Marine cultures Ferrol D. W buoy		Portos de Galicia	Yellow buoy	Yellow	GpD(4)A 11s	3
03487.3	Marine cultures Ferrol D. E buoy		Portos de Galicia	Yellow buoy	Yellow	GpD(4)A 11s	3
<b>ARES PORT</b>							
3488	Seawall. Ext.		Portos de Galicia	Red and white cylindrical tower	Red	GpD(4)R 11s	5
03488.1	Spike quay. Ext.		Portos de Galicia	Red and white post	Red	GpD(4)R 11s	3
03488.2	Floating Dock. E end		Portos de Galicia	Green post with red stripe	Green	GpD(2+1)V 15s	3
03488.21	Floating Dock. W end		Portos de Galicia	Red and white post	Red	DR 5s	1
03488.3	Dredged channel limit. E buoy		Portos de Galicia	Green conical buoy	Green	GpD(4)R 11s	1
03488.4	Dredged channel limit. W buoy		Portos de Galicia	Green conical buoy	Green	DV 5s	1
03488.8	Concrete jetty. Ext.		Portos de Galicia	Yellow post	Yellow	DA 5s	1
<b>FERROL MOURON HATCHERY</b>							
3489	C corner buoy		Proinsa	Yellow buoy	Yellow	DA 5s	3
03489.1	D corner buoy		Proinsa	Yellow buoy	Yellow	DA 5s	3
<b>PONTEDEUME PORT</b>							
3528	Cabañas beach breakwall		Portos de Galicia	Red and white octagonal turret	Red	GpD(3)R 9s	3

Data updated as of 31/12/2022

## **2.3. PORT SERVICES (TECHNICAL-NAUTICAL)**

### **2.3.1. SHIP TOWING**

### **2.3.2. MOORING AND UNMOORING OF SHIPS**

### **2.3.3. PILOTAGE OF SHIPS**

(no content)

## 2.4. SHIPPING FACILITIES

### 2.4.1. DOCKS

#### 2.4.1.1. DRY DOCKS

LOCATION	OWNER	LENGTH (m)	BEAM (m)	DRAUGHT (m)	CAPACITY <sup>TM</sup>
Ferrol	Navantia, S.A.- Ferrol	205.00	27.00	10.99	36,000
Ferrol	Navantia, S.A.- Ferrol	330.00	51.00	13.87	230,000
Perlío-Fene	Navantia, S.A. - Fene	160.00	26.00	7.50	20,000
Perlío-Fene	Navantia, S.A. - Fene	274.00	36.00	10.50	80,000

Data updated as of 31/12/2022

#### 2.4.1.2. FLOATING DOCKS

(without movement)

### 2.4.2. DRY DOCKS

LOCATION	OWNER	RAMP #	LONG. RAMPA	WIDTH (m)	SLOPE (%)	DRAUGHT (m)	MAX. ADMISSIBLE
Port of Ferrol							
La Graña	Port Authority	2.00	85.00	11.50			

Data updated as of 31/12/2022

### 2.4.3. SHIPYARDS (SLIPWAYS)

LOCATION	OWNER	SLIPWAYS #	LENGTH SLIPWAYS	WIDTH
Ferrol	Navantia, S.A.- Ferrol	1	200	34
Ferrol	Navantia, S.A.- Ferrol	1	228	43
Ferrol	Navantia, S.A.- Ferrol	1	287	53
Perlío-Fene	Navantia, S.A. - Fene	1	338	58
Perlío-Fene	Navantia, S.A. - Fene	1	338	50

Data updated as of 31/12/2022

## 2.4.4. SUPPLY VESSELS SERVICE

SUPPLY TYPE	LOCATION	POINTS	POINT HOURLY CAP	QUAY HOURLY CAP	SUPPLIER
<b>FERROL PORT</b>					
<b>Outer harbour</b>					
<b>Public</b>					
Water	Outer harbour	37	25,000 l/h	50,000 l/h	APFSC
Elec. power	Outer harbour	16	75,2kW*h	1,203.2kW*h	APFSC
<b>Private</b>					
Water	Infinita quay	1	23 t/hora	23 t/hora	Masol Iberia Biofuel, S.L.
<b>Inner harbour</b>					
<b>Public</b>					
Water	F. Ladreda quay	29			APFSC
Water	New quay	6			APFSC
Water	M.C.N.F. Ladreda	8			APFSC
Water	Outer breakwater	9			APFSC
Water	Spike head	1			APFSC
Water	Curuxeiras quay	16			APFSC
Electric power	Outer breakwater	3	160 kW*h	480 kW*h	APFSC
Electric power	F. Ladreda quay	1	160 kW*h	160 kW*h	APFSC
Electric power	F. Ladreda quay	27	252 kW*h	3,200 kW*h	APFSC
Electric power	M.C.N.F. Ladreda	6	252 kW*h	1,512 kW*h	APFSC
<b>Private</b>					
Water	Quays/Dock	2	12 t/hora	24 t/hora	Forestal del Atlántico S.A.
Fueloil	Quays/Dock	2	300 t/hora	600 t/hora	Forestal del Atlántico S.A.
Water	Reganosa quay	1	5 t/hora	10 t/hora	Regasificadora del Noroeste S.A.
Nitrogen	Reganosa quay	1	18 t/hora	18 t/hora	Regasificadora del Noroeste S.A.
<b>SAN CIBRAO PORT</b>					
Water	Quays	5	30t	100t	Alumina Española, S. A. (*)

(\*) Data updated as of 31/12/2022

## 2.5. DOCKSIDE CARGO EQUIPMENT

### 2.5.1. CRANES

#### 2.5.1.1. QUAYSIDE CRANES

NAME	OWNER	#	TYPE	MARCA	ENERGY	POWER TM	LENGTH (m)	CAPACITY (Tm/H)	YEAR
Outer harbour	Endesa (*)	2	Gantry	DFPI+ Konecranes	Electrical	54	45	1500	2008
Outer harbour	Ferrol Container Terminal, S.A.	2	Gantry	Konecranes	Electrical	60-70	51	NA	2003
Outer harbour	Ferrol Container Terminal, S.A.	4	Transtainer	Paceco	Diesel oil	70	NA	NA	2003
Inner harbour	Forestal del Atlántico, S.A.	1	Gantry	Liebherr	Electrical	Until 6	40	NA	2003
Inner harbour	Forestal del Atlántico, S.A.	1	Gantry	HMF	Electrical	Until 6	30	NA	2012
Inner harbour	Pérez Torres Marítima, S.L.	2	Gantry	Macosa	Electrical	12	25,6	40/150	1981
Inner harbour	Pérez Torres Marítima, S.L.	1	Gantry	Macosa	Electrical	16	28,6	40/250	1988
Inner harbour	Pérez Torres Marítima, S.L.	1	Gantry	Macosa	Electrical	16/30	28,6	40/250	1988
<b>Total</b>		<b>14</b>							

(\*) Data updated as of 31/12/2021  
Data updated as of 31/12/2022

## 2.5.1.2. SELF-PROPELLED CRANES

NAME	OWNER	#	TYPE	MARCA	ENERGY	POWER TM	LENGTH (m)	CAPACITY (Tm/H)	YEAR
Outer harbour	Galigrain, S.A.	1	Móvil	Mantsinen	Diesel oil	15		400	2014
Inner harbour	Perez Torres Marítima, S.L.	1	LHM550	Liebherr		144			
Inner harbour	Perez Torres Marítima, S.L.	1	LHM550	Liebherr		144			
Inner harbour	Perez Torres Marítima, S.L.	1	LHM500	Liebherr		140			
Outer harbour	Terminales Marítimos de Galicia S.L.	1	HMK 260 EG	Demag	Diesel oil	100		238	1999
Outer harbour	Terminales Marítimos de Galicia S.L.	1	HMK 4406	Demag	Diesel oil	100		238	2007
San Cibrao	Perez Torres Marítima, S.L.	1	HMK 6507B	Gottwald		125			
San Cibrao	Alúmina Española, S.A.	1	N/A	Elyma	Electrical	36		1350	1978
<b>Total Ferrol Port + San Cibrao</b>		<b>8</b>							

Data updated as of 31/12/2022

## 2.5.1.3. NUMBER OF CRANES

TYPE	SERVICE	PRIVATE	TOTAL
Containership	0	4	4
Gantry			
Up to 6 Tm	0	2	2
From 7 to 12 Tm	0	2	2
From 13 to 16 Tm	0	1	1
More than 16 Tm	0	5	5
<b>Gantry total</b>	<b>0</b>	<b>10</b>	<b>10</b>
Cars	0	8	8
Other cranes	0	0	0
<b>TOTAL</b>	<b>0</b>	<b>22</b>	<b>22</b>

Data updated as of 31/12/2022

## 2.5.2. SPECIAL LOADING AND UNLOADING FACILITIES

LOCATION	OWNER	YEAR	CHARACTERISTICS
<b>FERROL OUTER HARBOUR</b>			
Concepción Arenal	Endesa Generación, S.A.	2009	FORKLIFTS (*)
Virgen de Chamorro Dock	Masol Iberica Biofuel, S.L.	2008	Aerial rack
Concepción Arenal	Masol Iberica Biofuel, S.L.	2008	Underground rack
<b>FERROL / INNER HARBOUR</b>			
Pantalán (Manifold 1)	Forestal del Atlántico, S.A.	1980	Rac para combustibles líquidos
Quay (Manifold 2)	Forestal del Atlántico, S.A.	2012	Rac para combustibles líquidos
Pantalán	Regasificadora del Noroeste S.A.	2007	Tubería
<b>PUERTO SAN CIBRAO</b>			
Atraque principal	Alumina Española, S. A.		Descargador sólidos a granel (bauxita y coque)
Atraque principal	Alumina Española, S. A.		Manifold descargador de fuel
Atraque principal	Alumina Española, S. A.		Manifold descargador sosa caustica
Atraque auxiliar	Alumina Española, S. A.		Manifold descargador de sosa
Atraque auxiliar	Alumina Española, S. A.		Cinta cargadora de hidrato
Atraque principal	Alumina Española, S. A.		Cargador alúmina
Atraque auxiliar	Alumina Española, S. A.		Cargador alúmina

Data updated as of 31/12/2022

(\*) Data updated as of 31/12/2021

## 2.5.4. AUXILIAR CARGO HANDLING AND TRANSPORT EQUIPMENT

MATERIAL CLASS	OWNER	#	POWER	CHARACTERISTICS
STACKER	(*) Endesa Generación, S.A	1	Electrical	5400t/h
SCALES	Autoridad Portuaria Ferrol-San Cibrao	2		60 t
SCALES	Pérez Torres Marítima, S.L.	3	Electrical	
SCALES	(*) Endesa Generación, S.A	3	Electrical	60tn
FORKLIFT	Autoridad Portuaria Ferrol-San Cibrao	1	Diesel oil	Nissan FD02A25Q
FORKLIFT	Pérez Torres Marítima, S.L.	24		
FORKLIFT	Terminales Marítimas de Galicia S.L.	2	Diesel oil	Hyster 4XL/Hyster H50
FORKLIFT	(*) Endesa Generación, S.A	2	Diesel oil	2,5 t y 8 t
CONVEYOR BELT	(*) Endesa Generación, S.A	1	Electrical	5400t/h
ELECTRO HYDRAULIC GRAB	Terminales Marítimas de Galicia S.L.	1	Electrical	Demag 20 m <sup>3</sup>
GRABS	(*) Endesa Generación, S.A	4		
DUMPER	Autoridad Portuaria Ferrol-San Cibrao	1	Diesel oil	Ausa 200 RM
HANDLER	Greenalia Logistics, S.L.U.	3	Diesel oil	Sennenbogen 305/818/870
PALLET HANDLER	Pérez Torres Marítima, S.L.	1		Aplec
PALLET HANDLER	(*) Endesa Generación, S.A	1		
LOADER	Pérez Torres Marítima, S.L.	21	Mecánica	
PANTOGRAPH	Pérez Torres Marítima, S.L.	2		Auramo
PANTOGRAPH	Pérez Torres Marítima, S.L.	2		Cascade
LIFTING PLATFORM	Ferrol Container Terminal, S.A.	1	Diesel oil	AD107149
LIFTING PLATFORM	(*) Endesa Generación, S.A	1	Diesel oil	16 m
LIFTING PLATFORM	Pérez Torres Marítima, S.L.	7		
ELECTRO HYDRAULIC OCTOPUS	Terminales Marítimas de Galicia S.L.	1	Electrical	Verstegen 13 m <sup>3</sup>
MECHANICAL OCTOPUS	Terminales Marítimas de Galicia S.L.	1	Mechanical	Verstegen 11,5 m <sup>3</sup>
MECHANICAL OCTOPUS	(*) Endesa Generación, S.A	1		15 m <sup>3</sup>
REACH-STACKER	Ferrol Container Terminal, S.A.	1	Diesel oil	DRF450-65S5
REACH-STACKER	Pérez Torres Marítima, S.L.	4		
TRAILER RORO	Pérez Torres Marítima, S.L.	4		
TRACTOR + TRAILER	Ferrol Container Terminal, S.A.	6	NA	NA
HOPPER	Pérez Torres Marítima, S.L.	2		

Data updated as of 31/12/2022

(\*) Data updated as of 31/12/2021



## 2.5.5. OTHER AUXILIARY EQUIPMENT

MATERIAL CLASS	OWNER	#	POWER	CHARACTERISTICS
Vacuum cleaner	Pérez Torres Marítima, S.L.	2		
Sweeper	Autoridad Portuaria Ferrol-San Cibrao	1	Diesel oil	Applied 636HS
Sweeper / vacuum cleaner	Pérez Torres Marítima, S.L.	3	Electrical	Nilfisk
Sweeping drawer	Pérez Torres Marítima, S.L.	1	Hydraulic	
Water cannon btg	Pérez Torres Marítima, S.L.	3		60 t
Spreader containers	Terminales Marítimas de Galicia S.L.	1	Electrical	20-40-45 pies

Data updated as of 31/12/2022

## 2.6. FLOATING EQUIPMENT

### 2.6.1. DREDGERS

(without movement)

### 2.6.2. TUGBOATS

NAME	OWNER	ENERGY	POWER (HP)	LENGTH (m)	BEAM (m)	DRAUGHT (m)	YEAR
<b>FERROL PORT</b>							
<b>Ramon Casas</b>	Remolcadores Ferrolanos, S.L.	Diesel	5,073.0	27	15.25	3.30	2005
<b>Hocho</b>	Remolcadores Ferrolanos, S.L.	Diesel	3,300.0	25	8.5	4.70	1999
<b>F. Sulla</b>	Sertosa Norte, S.L.	Diesel	3,350.0	28.9	8.7	4.80	1993
<b>Ibaizabal Cinco</b>	Sertosa Norte, S.L.	Diesel	5,186.0	28.8	11	4.00	2003
<b>Punta Redonda Uno</b>	Remolcadores del Noroeste, S.A.	Diesel	3,526.0	26	10	4.85	2015
<b>Bizkor</b>	Remolcadores del Noroeste, S.A.	Diesel	2,030.0	25	7.9	3.95	1981
<b>SAN CIBRAO PORT</b>							
<b>Sertosa Diecinueve</b>	Sertosa Norte, S.L.	Diesel	2,030	27	7.9	3.95	1979
<b>Sertosa Veintitres</b>	Sertosa Norte, S.L.	Diesel	2,030	27	7.9	4.30	1981
<b>Sertosa Veintiseis</b>	Sertosa Norte, S.L.	Diesel	3.752	28	11	4.00	1993
<b>Sertosa Treinta</b>	Sertosa Norte, S.L.	Diesel	3.752	30	10	4.30	2001

Data updated as of 31/12/2022

## 2.6.3. HOPPERS, LIGTERS AND BARGES

NAME	OWNER	ENERGY	POWER (HP)	LENGTH (m)	BEAM (m)	DRAUGHT (m)	YEAR
<b>FERROL PORT</b>							
<b>Amarradores Doscientos</b>	Amarradores Puerto y Ría Ferrol	Diesel	458.8	43.2	9.04	3.7	1977
<b>Punta San Carlos</b>	Amarradores Puerto y Ría Ferrol	Diesel	227.94	25.2	6.42	2.43	1964
<b>Amarradores Mil</b>	Amarradores Puerto y Ría Ferrol	Diesel	425	36.7	10.98	3.9	2013
<b>Amarradores Ochenta</b>	Amarradores Puerto y Ría Ferrol	Diesel		19.9	12	1.8	2000
<b>Amarradores Quince</b>	Amarradores Puerto y Ría Ferrol	Diesel		10.0	9.4	2	2017
<b>Amarradores Cien</b>	Amarradores Puerto y Ría Ferrol	Diesel		23.9	15.05	2	2010
<b>Amarradores Trescientos</b>	Amarradores Puerto y Ría Ferrol	Diesel		24.0	20.12	2.5	2016
<b>Amarradores Cuatrocientos</b>	Amarradores Puerto y Ría Ferrol	Diesel		15.8	12.06	1.99	2020
<b>Amarradores Quinientos</b>	Amarradores Puerto y Ría Ferrol	Diesel		28.7	15.03	2.49	2018

Data updated as of 31/12/2022

## 2.6.4. FLOATING CRANES

NAME	OWNER	ENERGY	CHARACTERISTICS	FORCE (Tm)	ALCANCE REACH (M)	HEIGHT ABOVE SEA LEVEL (M)	YEAR
<b>FERROL PORT</b>							
<b>Toimil T-30000/3</b> (Installed in Punta San Carlos)	Amarradores Puerto y Ría Ferrol	Hidraulic	E: 25,20 M: 6,42 P: 2,43	30.0	15.10	13.8	2006

Data updated as of 31/12/2022

## 2.6.5. OTHER AUXILIARY FLOATING EQUIPMENT

NAME	OWNER	TYPE	CHARACTERISTICS	YEAR
<b>Amarradores Diez</b>	Amarradores Puerto y Ría Ferrol	Motor vessel	E: 14,83 M: 3,96 P:	1988
<b>Amarradores Once</b>	Amarradores Puerto y Ría Ferrol	Motor vessel	E: 5,80 M: 2 P: 0,90	2004
<b>Amarradores Doce</b>	Amarradores Puerto y Ría Ferrol	Motor vessel	E: 5,90 M: 2 P: 0,90	2004
<b>Amarradores Veinte</b>	Amarradores Puerto y Ría Ferrol	Tugboat power 257,35 CV	E: 11 M: 4 P: 1,55	2008
<b>Amarradores Cincuenta</b>	Amarradores Puerto y Ría Ferrol	Motor vessel	E: 14,50 M: 4 P: 1,70	1985
<b>Amarradores Sesenta</b>	Amarradores Puerto y Ría Ferrol	Motor vessel	E:6 M: 2,20 P: 1	2007
<b>Amarradores Setenta</b>	Amarradores Puerto y Ría Ferrol	Tugboat power 330,88 CV	E:10,6 M:4,9 P:1,85	2008
<b>Asunción Nieves</b>	Autoridad Portuaria Ferrol-San Cibrao	Motor vessel	E: 8,06 M: 2,80 P: 1,49	2004
<b>San Cibrao</b>	Sertosa Norte, S.L.	Pilot boat	E: 13,5 M: 5 P: 1,34	2020
<b>Parrulo</b>	Sertosa Norte, S.L.	Mooring boat	E: 10,68 M: 3,92 P: 1,90	1980

Data updated as of 31/12/2022

## 2.7. COMMUNICATIONS AND PLANS OF THE PORT

### 2.7.1. LAND ACCESSES AND INTERIOR COMMUNICATIONS

#### PORT OF FERROL

##### Land accesses by road and internal circulation

The access control of the Inner Harbour of Ferrol is located at the end of the branch to Ferrol of the AP-9 (Autopista del Atlántico), a motorway that connects with the A-6 (Autovía del Noroeste), from which, in turn, access the rest of the High Capacity network of the Spanish and European State.

The Outer Harbour of Ferrol is connected to the public road network through the N-655. Through the AP-9 and the N-655, there is a direct connection with the AG-64. The A-8 connects both ports with the north of the province and the Peninsula. It also allows the departure to Europe.

From the point of view of the internal road network of the port, and in the case of the Inner Harbour, access is from the roundabout where the AP-9 Motorway ends. The traffic is organized from the entrance roundabout from the access control, which distributes the traffic towards the New Quay and the Main Street. Main Street runs parallel to the Fernández Ladreda quay until it reaches the spike quay. From it, six perpendicular streets depart that give access to the area of deposits, warehouses, and Fernández Ladreda wharf; its end provides access to the spike quay.

In the case of the Outer Harbour, the traffic is distributed towards each of the different phases in which it is organized, 1st and 2nd phase, from the roundabout located at the end of the access viaduct, which is located in the center of the port facility.

##### Land access by rail and interior planning

Rail access to the Port of Ferrol is via an existing Iberian gauge railway line (1,668 mm), although there are also metric gauge infrastructures (1,000 mm) near the port, such as the Ferrol-Oviedo line.

In particular, the Inner Harbour of Ferrol has a direct Iberian gauge railway connection without electrification with the city's railway station. From this station, the Ferrol-Betanzos branch starts, an Iberian gauge line through which the port is connected to the rest of Spain by rail (Madrid-Coruña line through León), and the metric gauge line to Asturias.

The internal railway network is made up of two primary alignments; one parallel to the cliff of the Fernández Ladreda Pier and to the warehouses and warehouses of the Main Street that form a ring that provides service to the ro-ro ramp installed at the junction between the Exterior Breakwater, the service esplanade of the Fernández Ladreda Pier, to the ro-ro ramp entrance to the north end of the Fernández Ladreda Pier and the ships on the main street; the second of the alignments leads to a railway terminal located on the esplanade of the North Enclosure Quay, intended to serve the traffic of this quay and the New Quay.

#### SAN CIBRAO PORT

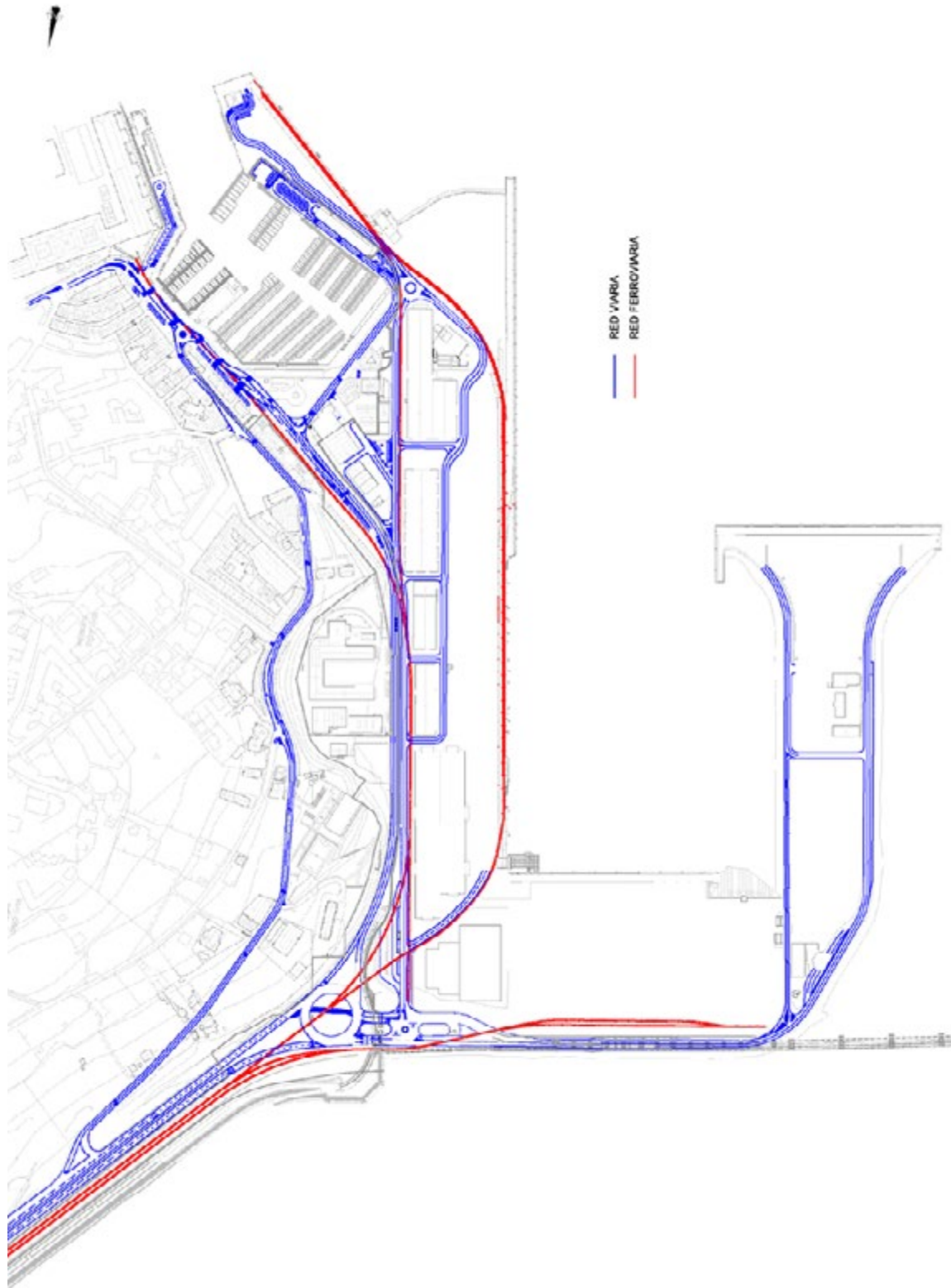
##### Land accesses by road

Road access to the Port of San Cibrao is from the N-642 that connects with the A-8 from which, and to the north, you access the north of the Peninsula, and to the south connects with the A-6 and the center of the peninsula.

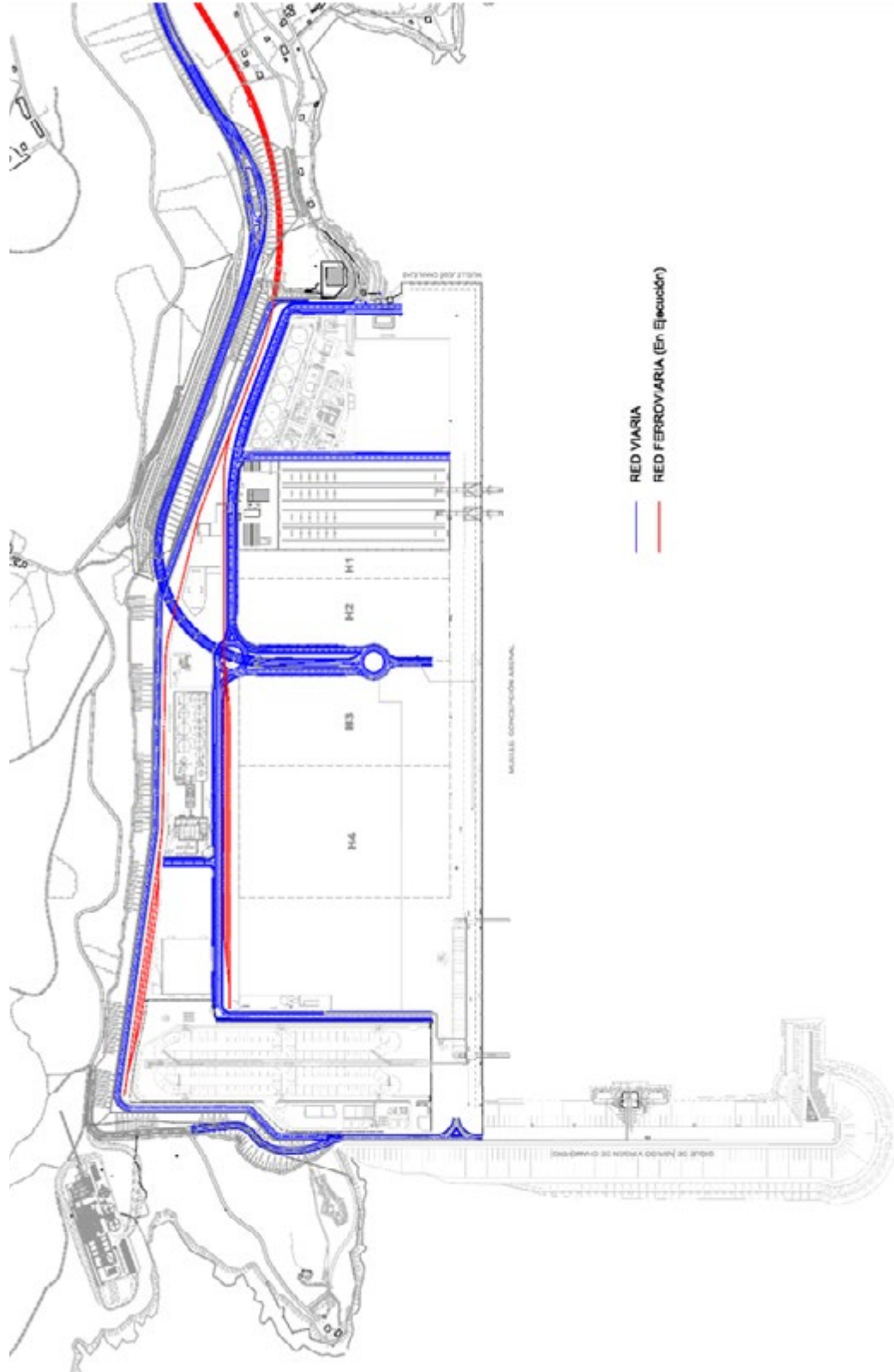
Data updated as of 31/12/2022

## 2.7.2. INNER COMMUNICATIONS MAP

### Ferrol Port. Inner harbour



### Ferrol Port. Outer harbour



### 2.7.3. LAND ACCES MAP



Fuentes: <http://www.adif.es> y <http://www.mitma.gob.es>

Data updated as of 31/12/2022



## 2.8. BRIEF DESCRIPTION OF FACILITIES FOR SPECIFIC TRAFFIC

### PORT OF FERROL

#### ENDESA

Endesa has a 100,000 m<sup>2</sup> Port Terminal suitable for loading/unloading and storing solid bulk and general cargo.

The facilities have an automated system for handling solid bulk unloading consisting of 2 reversible loading/unloading gantries, a conveyor system, and a stacker. It also has a 60,000 m<sup>2</sup> storage area, guarded 365 days a year.

The cranes are designed for ships with a loading/unloading capacity between 5,000 and 200,000 T.P.M. There are also three fully automated and reversible truck scales for trucks.

The storage area has an area of 60,000 m<sup>2</sup> and is suitable for accommodating both bulk and different types of goods, including large pieces and packages.

The terminal has been certified under UNE-EN-ISO 9001, 14001, 45001, EMAS regulation, Carbon Footprint, and Zero Residue standards.

Data updated as of 31/12/2021

#### MASOL IBERIA BIOFUEL, S.L.

Location: Ferrol Outer Port - Berth Name INFINITA FE01.

Liquid bulk terminal for loading and unloading consisting of the following main equipment:

- Two 10" ASA loading/unloading arms for connection to ships
- Two connection lines with the production plant for sending and receiving through "pig".

Handled materials: vegetable oils, UCO, methanol, biodiesel, and glycerin.

Data updated as of 31/12/2022

#### FERROL CONTAINER TERMINAL, S.A.

Specific machinery for the loading and unloading of containers to the ship, as well as their hauling and ordering between the dock edge and the concession terminal yard:

- 2 STS Post-Panamax quay cranes (51 m reach), electrically powered and with a maximum lifting capacity of 70 T; it is expected that, with the full development of the terminal, the number of STS cranes will increase to at least 5
- 4 RTG tire cranes for the concession terminal yard; with the full development of the terminal, the number of RTG cranes is expected to increase to at least 20
- other machinery for transits between dock and yard and internal transport: Six tractor+trailer sets (it is expected that, with the full development of the terminal, the number of tractor+trailer sets will increase to at least 53); and two reach-stacker trucks.

Data updated as of 31/12/2021

## FORESTAL DEL ATLÁNTICO, S.A.

The loading/unloading of chemical products and hydrocarbons is carried out for liquid bulk on the New Jetty and Dock. The connection between the ship and the pipeline on land are flexible hoses of different diameters placed in a three-ton tower crane located on the central platform on screen and another similar installation in the new quay, crane on metal structure.

The installation has the following pipes for loading/unloading products: Glues 6", Methanol 8", Gasoil 8"-10", Gasoline 8", Fuel Oil 24", Slops 8", Bunker Gasoil 6", Bunker Fuel-Oil 10", Air 3", Potable Water 2" and Water P.C.I.4". Caustic Soda B".

In the new quay, urea is unloaded (solid bulk, by crane/hopper to the truck).

Data updated as of 31/12/2022

## REGASIFICADORA DEL NOROESTE, S.A.

Three arms for unloading LNG, with a capacity of 4,000m<sup>3</sup>/h each; the three converge in a general collector towards the two storage tanks; each tank has a capacity of 150,000 m<sup>3</sup>.

One of the three unloading arms can also act for ship loading, with a capacity (limited by the terminal) of 2,000 m<sup>3</sup>/h.

There is a 4th arm for the ship's boil-off steam.

Data updated as of 31/12/2022

## SAN CIBRAO PORT

### ALUMINA ESPAÑOLA, S.A.

#### **Bauxite and petroleum coke discharge**

"It is carried out at the main berth through a mobile unloader with an unloading capacity of 1,350 t/hour and a conveyor belt to the bauxite warehouse or the coke silos. The lifting capacity is 36 t, and the work cycle is 55 seconds.

Bauxite is unloaded using a mobile crane to support the unloading gantry, with an unloading capacity of 600 t/hour."

#### **Liquid discharge**

The discharge of caustic soda in the main berth using a manifold and a hose with an 8" connection and an 8" pipe. There is also another manifold on the Auxiliary dock, with an 8 line. Both lines connect with another 16" line that goes to the storage tanks.

#### **Alumina charge**

It is carried out in both berths. In the main berth through a mobile loader with a load capacity of 1,200 t/hour and the auxiliary berth with a fixed loader with a capacity equal to 600 t/hour for special ships. The transport system is carried out with conveyor belts from the storage silos.

#### **Alumina hydrate charge**

It is carried out with trucks through a mobile conveyor belt, with an approximately 300 t/hour loading rate. Aluminum charge

It is carried out in the auxiliary berth using a mobile crane with a maximum lifting capacity of 10 tm and forklifts of various capacities.

Data updated as of 31/12/2022