

IMMINGHAM EASTERN RO-RO TERMINAL



Applicant's Response to ISH5 Action Point 5 – Part 1

Document 10.2.73

APFP Regulations 2009 – Regulation 5(2)(q)

PINS Reference – TR030007

December 2023

Document Information

Document Information	
Project	Immingham Eastern Ro-Ro Terminal
Document title	Applicant's Response to ISH5 Action Point 5 – Part 1
Commissioned by	Associated British Ports
Document ref	10.2.73
APFP Regs	5(2)(q)
Prepared by	ABP Project Team

Date	Version	Revision Details
12/2023	01	Deadline 7

ISH5 Action Point 5 - Challenging Day Scenario

Action Point 5

Provide, with commentary including temporal and spatial information, graphic representations of the arrival and departure of vessels throughout a day with challenging met-ocean conditions for:

- the existing Port of Immingham; and
- the existing port plus projected vessel movements to and from the Proposed Development.

Case Study Explanation

Historical data was analysed between the periods 1st November 2022 and 1st November 2023 to find a factual challenging day scenario that occurred on the Humber Estuary. From the analysis the following was determined:

Vessel Movements During Period 1st Nov 22 to 1st Nov 23		
Description	Vessel Movements	Comments
Highest recorded	85	Post suspension of Pilotage. Extraordinary circumstances
Mean range	41 – 79	In a 24hr period
Average	60	In a 24hr period
Case study day	72	In a 24hr period

The case study day was selected as a factual representation of a busier than average day, on a spring tide, where the high-water Immingham time coincides with the arrival and departure time of the vessels for the proposed IERRT terminal. For context, the periods with the highest observed traffic in the Immingham area are approximately between two hours before high water to two hours after high water.

The graphic representations in Annex I are screen captures from the Vessel Traffic Services traffic monitoring system database. The Harbour Authority do not normally make this data available to the public therefore the case study date and time, and the vessels names have been removed to maintain confidentiality however a list of vessel movements has been included below including the vessel type, origin and destination.

The Graphic representations in Annex II are the same screen captures from the Vessel Traffic Services traffic monitoring system database as in Annex I, with the IERRT infrastructure and the projected vessel movements to and from the proposed development superimposed. The time frame of these screen captures are focused on the arrival and departure times for the vessels calling the proposed terminal.

Tide Timings & Screen Capture Timings

AM High Water Immingham time = 0700 Hrs

PM High Water Immingham time = 1930 Hrs

Screen capture times in Annexes I & II are in 15-minute time frames relative to before and after each high-water period.

Vessel Movements

Vessels included in this table are all vessel movements to ports and berths in the inland direction, and inclusive of, Immingham totalling 59 movements. The remaining 13 movements would have been to the Seaward direction, not inclusive, of Immingham therefore did not interact with the Immingham area.

Also not included in this number and table are registered river craft and pleasure craft e.g. tugs, barges, fishing vessels and yachts. These vessels are however visible on the screen captures.

Vessel Movements from 0001 – 1200 Hrs in order relative to time of arrival at destination				
Voyage Type	Origin	Destination	Vessel Type	LOA
Departure	Immingham Dock 8 Qy	Sea	Container Carrier	101.11
Departure	South Killingholme Oil Jetty	Sea	Lpg	95.00
Arrival	Sea	Immingham Oil Terminal 8	Tank	85.32
Arrival	Sea	Immingham Container Terminal 1	Ro/Ro	187.06
Arrival	Sea	Humber Sea Terminal 1	Ro/Ro	212.00
Arrival	Sea	Immingham Outer Harbour 2	Ro/Ro	232.00
Arrival	Sea	Hull King George Dock No.3 Shed	Tank	149.61
Arrival	Sea	Hull River Terminal 1	Passenger Ro/Ro	215.00
Arrival	Sea	Grove LE1	General Cargo	82.23
Departure	Immingham Outer Harbour 2	Sea	Ro/Ro	229.80
Departure	Immingham Oil Terminal 8	Sea	Tank	85.32
Arrival	Sea	Immingham Gas Terminal	Lpg	88.40
Departure	Hull Albert Dock 34 Qy	Sea	General Cargo	84.98
Arrival	Sea	Humber Sea Terminal 5	Ro/Ro	195.40
Arrival	Sea	New Holland Dock North	General Cargo	88.60
Departure	Immingham Bulk Terminal	Sea	Bulk	229.00
Arrival	Sea	Flixborough	General Cargo	87.84
Arrival	Sea	Goole	General Cargo	94.70
Arrival	Sea	Humber Sea Terminal 3	Ro/Ro	203.00
Departure	Immingham Dock 4 Qy	Sea	Bulk	89.95
Departure	Immingham Gas Terminal	Sea	Tank	95.15
Arrival	Sea	Hull Queen Elizabeth Dock 9 Qy East	Container Carrier	99.95

Vessel Movements from 1201 – 2359 Hrs in order relative to time of arrival at destination				
Voyage Type	Origin	Destination	Vessel Type	LOA
Arrival	Sea	Immingham Dock 7 Qy	General Cargo	88.00
Arrival	Sea	Immingham Oil Terminal 2	Tank	183.20
Arrival	Sea	Immingham Outer Harbour 1	Ro/Ro	195.20
Arrival	Sea	Immingham Dock 11 Qy Nordic	General Cargo	162.57
Arrival	Sea	Immingham Dock 8 Qy	Container Carrier	101.12
Arrival	Sea	Hull Queen Elizabeth Dock 9 Qy East	Container Carrier	140.64
Departure	Humber Sea Terminal 3	Sea	Ro/Ro	203.00
Departure	Hull King George Dock 3 Qy East	Sea	General Cargo	97.51
Arrival	Sea	Immingham Dock 3 Qy extn	Bulk	157.00
Arrival	Sea	Saltend Jetty 3	Chemical Tank	99.40
Arrival	Tilbury	Immingham HIT 1	Vehicle	227.95
Departure	Hull Queen Elizabeth Dock 9 Qy East	Sea	Container Carrier	99.95
Arrival	Sea	Hull King George Dock No.16 Shed	General Cargo	115.23
Arrival	Sea	Immingham Oil Terminal 3	Chemical Tank	99.40
Departure	Humber Sea Terminal 5	Sea	Ro/Ro	195.40
Arrival	Sea	New Holland East Outer	General Cargo	99.90
Departure	Immingham Outer Harbour 2	Sea	Ro/Ro	232.00
Arrival	Sea	Immingham Dock 12 Qy Nordic	Ro/Ro	199.80
Departure	Immingham HIT 1	Sea	Bulk (BBU)	179.99
Departure	Immingham Oil Terminal 3	Sea	Tank (TTA)	128.60
Departure	Humber Sea Terminal 1	Sea	Ro/Ro	212.00
Departure	Immingham Oil Terminal 6	Sea	Tank (TTA)	95.14
Departure	Immingham Outer Harbour 1	Sea	Ro/Ro (URR)	195.20
Arrival	Sea	Immingham Outer Harbour 2	Ro/Ro (URR)	230.00
Departure	Hull River Terminal 1	Sea	Passenger Ro/Ro (PRR)	215.00

Arrival	Sea	Goole	General Cargo (GGC)	82.50	
Arrival	Sea	Goole	General Cargo (GGC)	89.99	
Departure	Immingham Dock 1 Qy	Sea	Pontoon (OPO)	18.30	
Departure	Immingham Dock	Sea	Ro/Ro (URR)	187.06	
Departure	New Holland Dock North	Sea	General Cargo (GGC)	88.60	
Departure	Hull King George Dock No.2 Shed	Sea	General Cargo (GGC)	118.40	
Departure	New Holland East Outer	Sea	General Cargo (GGC)	82.40	
Departure	Grove LE1	Sea	General Cargo (GGC)	82.23	
Departure	Immingham Dock	Sea	Container	141.58	
Departure	Goole	Sea	General Cargo (GGC)	81.40	
Departure	Goole	Sea	General Cargo (GGC)	98.05	
Departure	Immingham Dock	Sea	Ro/RO (URR)	162.57	

Vessel Movements

As evidenced in Annex II, with the proposed IERRT infrastructure in place minimal deconfliction of the factual traffic situations presented would be required. A minor adjustment (less than 5 minutes) to a vessel's departure time from the proposed IERRT infrastructure was required to allow a vessel to depart from Immingham lock ahead of the IERRT vessel.

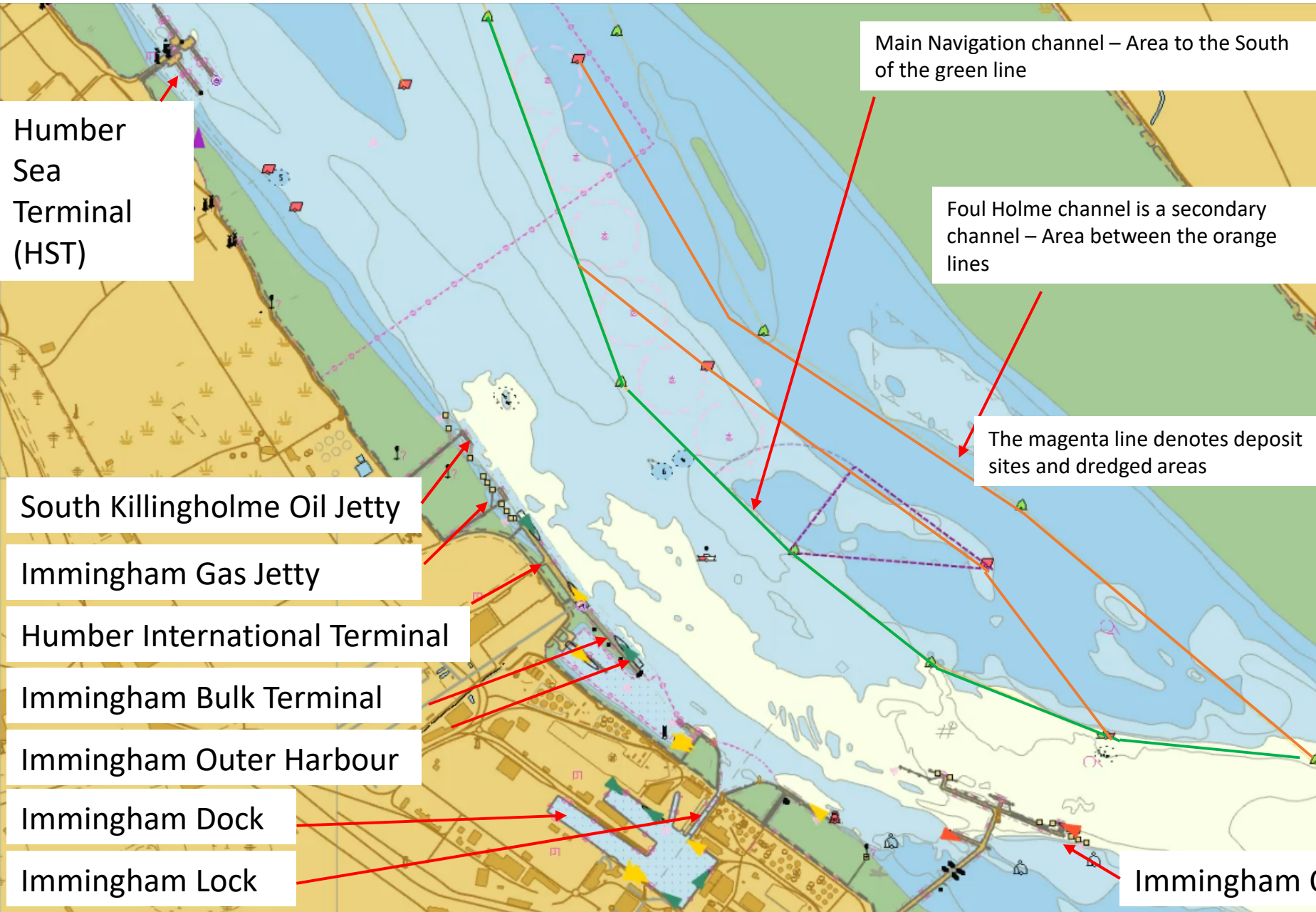
ISH5 Action 5

Annex I

A replay of the VTS traffic monitoring system

Part 1 of 2

Explanatory Note



Main Navigation channel – Area to the South of the green line

Foul Holme channel is a secondary channel – Area between the orange lines

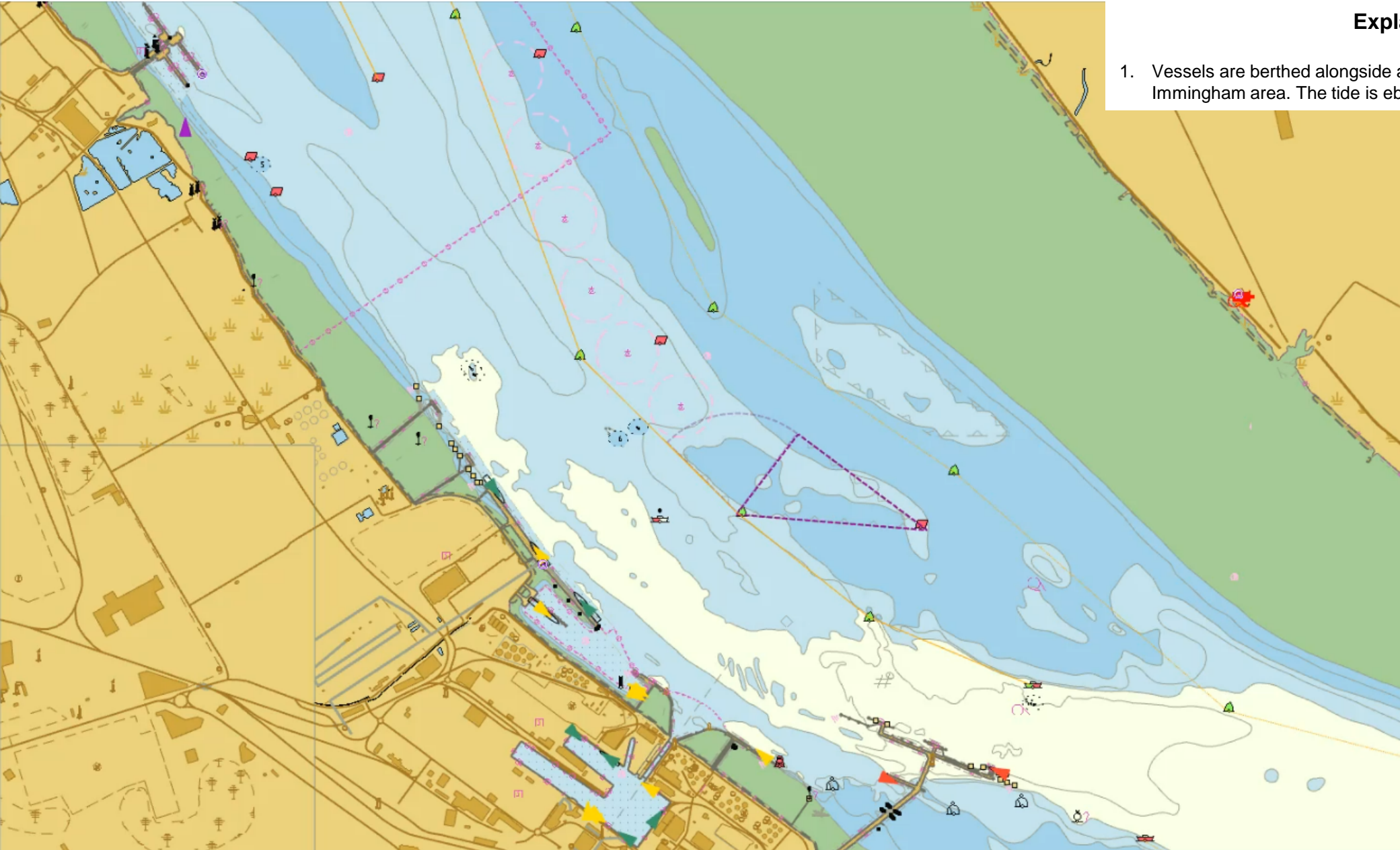
The magenta line denotes deposit sites and dredged areas

This annex depicts the geographical area of Immingham over a 24hr period. The screen captures are taken from a replay VTS Humber’s traffic monitoring system. Each page is 15 minutes apart for the 24hr period.

Each page has an explanation. Only significant vessel movements i.e. commercial ships are detailed. Other movements, such as tugs and pleasure craft, are not provided with explanatory notes but can be seen within the replay.

Immingham Oil Terminal

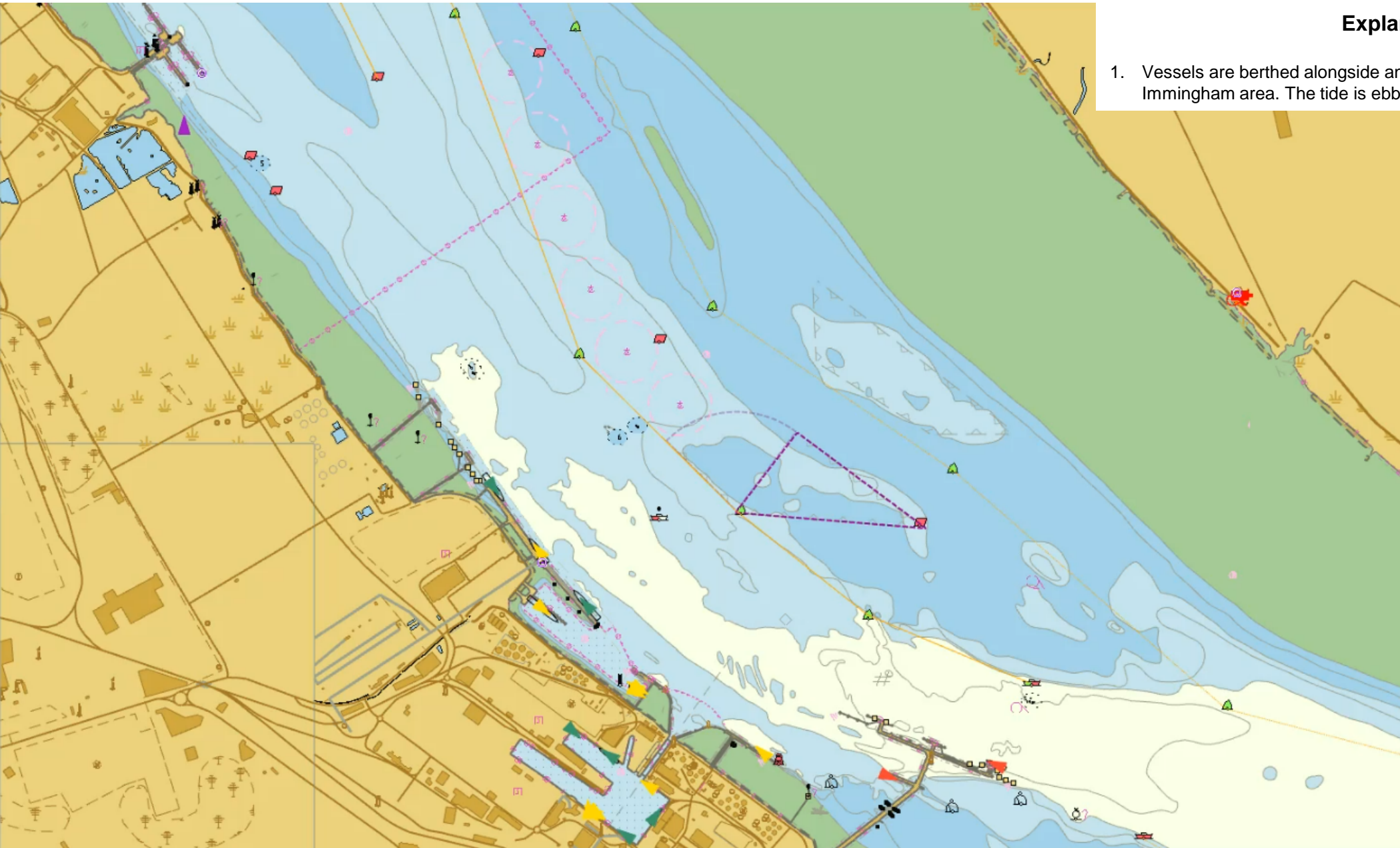
AM HW -7Hrs (Midnight 24hr Period Commence)



Explanation

1. Vessels are berthed alongside and currently no movements in the Immingham area. The tide is ebbing from the previous high water.

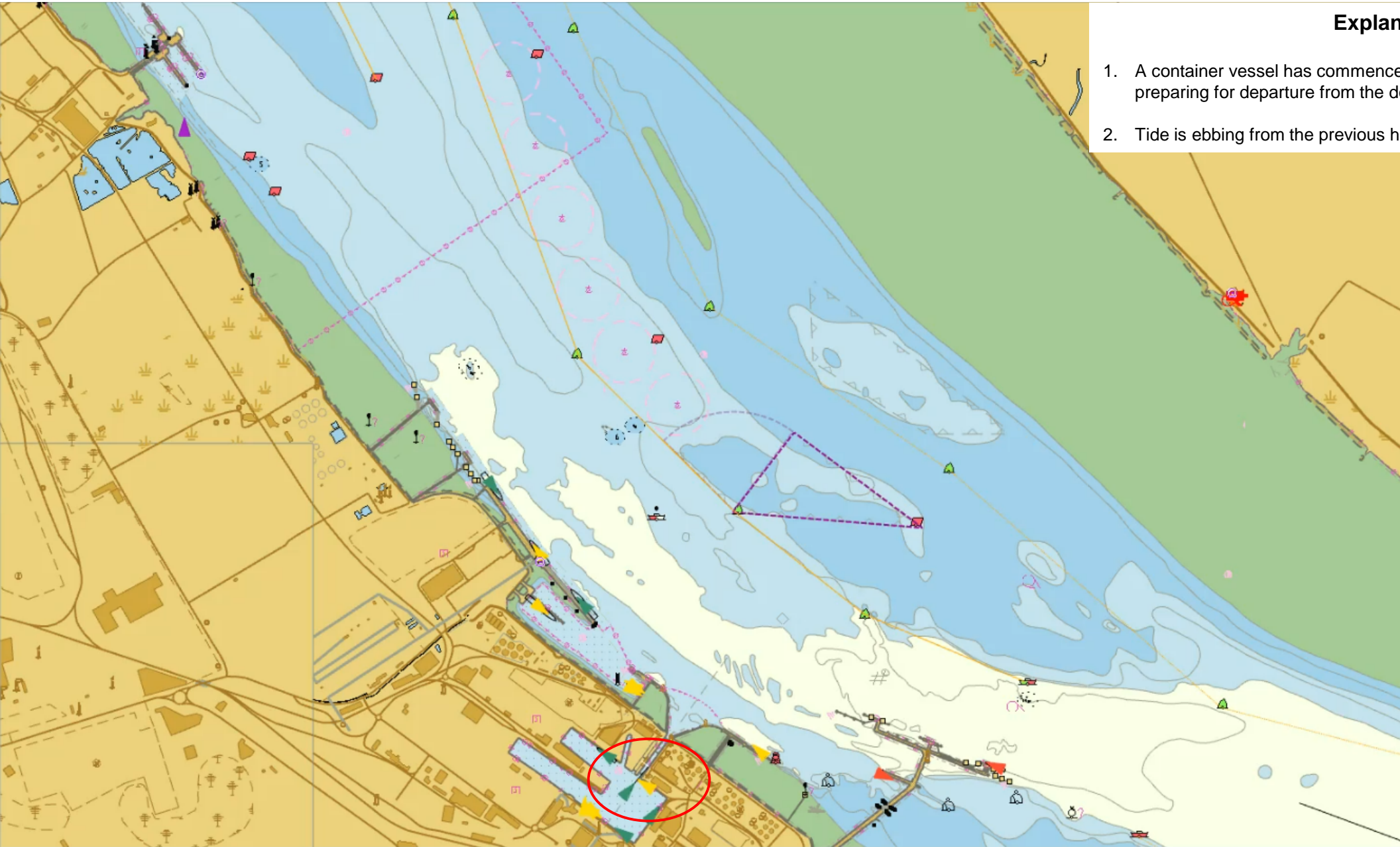
AM HW -6.75Hrs



Explanation

1. Vessels are berthed alongside and currently no movements in the Immingham area. The tide is ebbing from the previous high water.

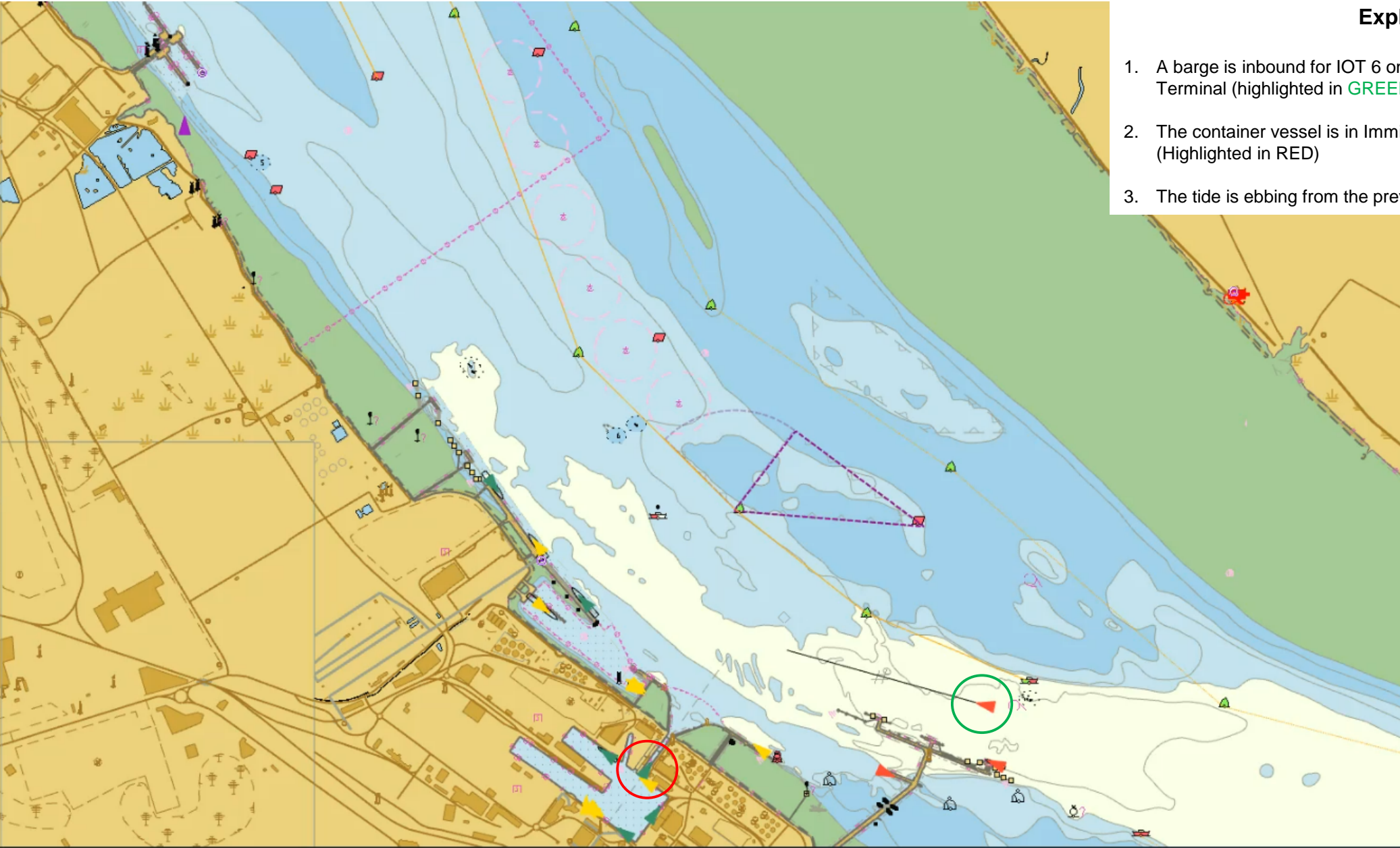
AM HW -6.5Hrs



Explanation

1. A container vessel has commenced moving in Immingham Dock preparing for departure from the dock. (highlighted in RED)
2. Tide is ebbing from the previous high water.

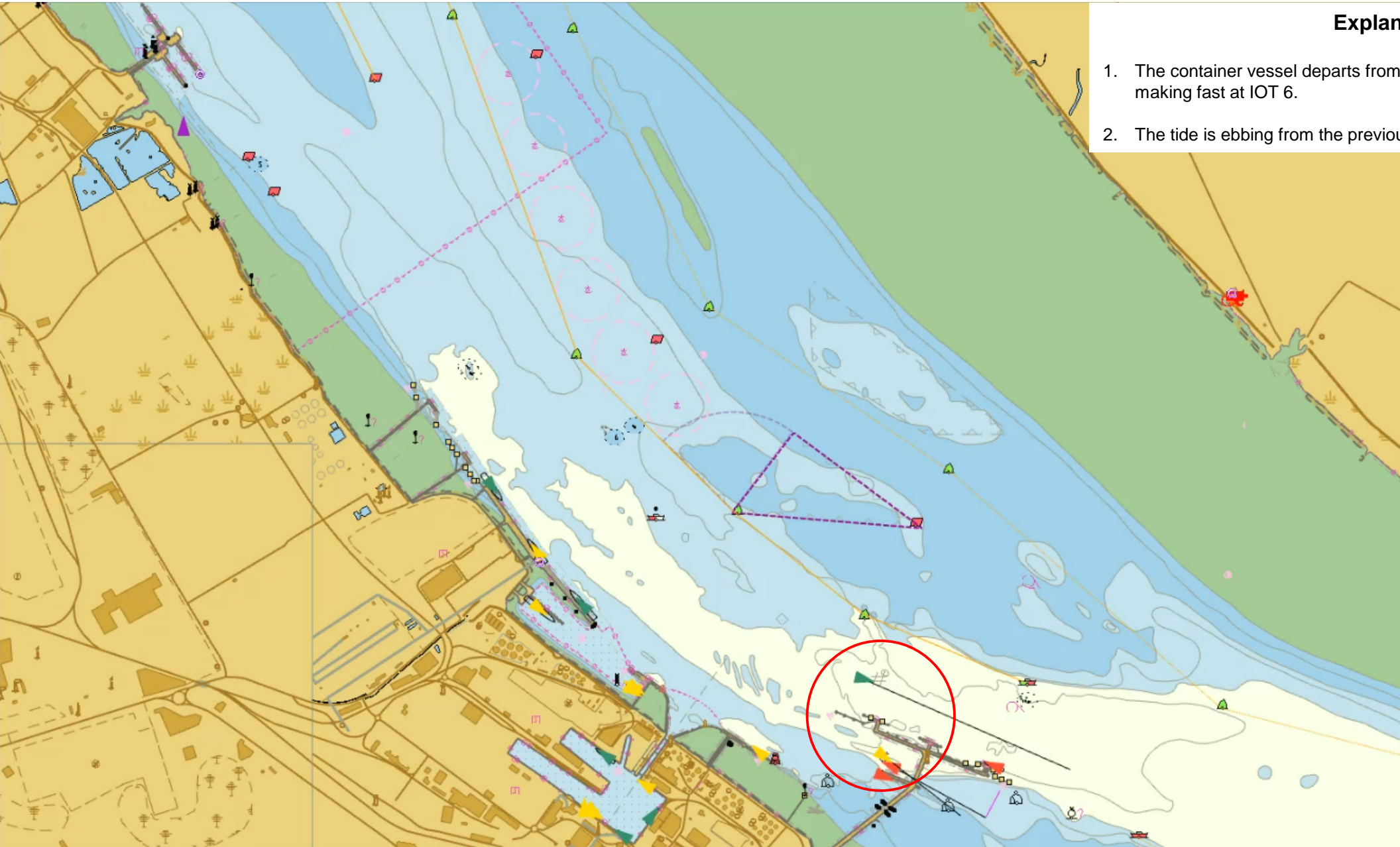
AM HW -6.25Hrs



Explanation

1. A barge is inbound for IOT 6 on ebb tide passing the Immingham Oil Terminal (highlighted in GREEN)
2. The container vessel is in Immingham lock awaiting departure. (Highlighted in RED)
3. The tide is ebbing from the previous high water

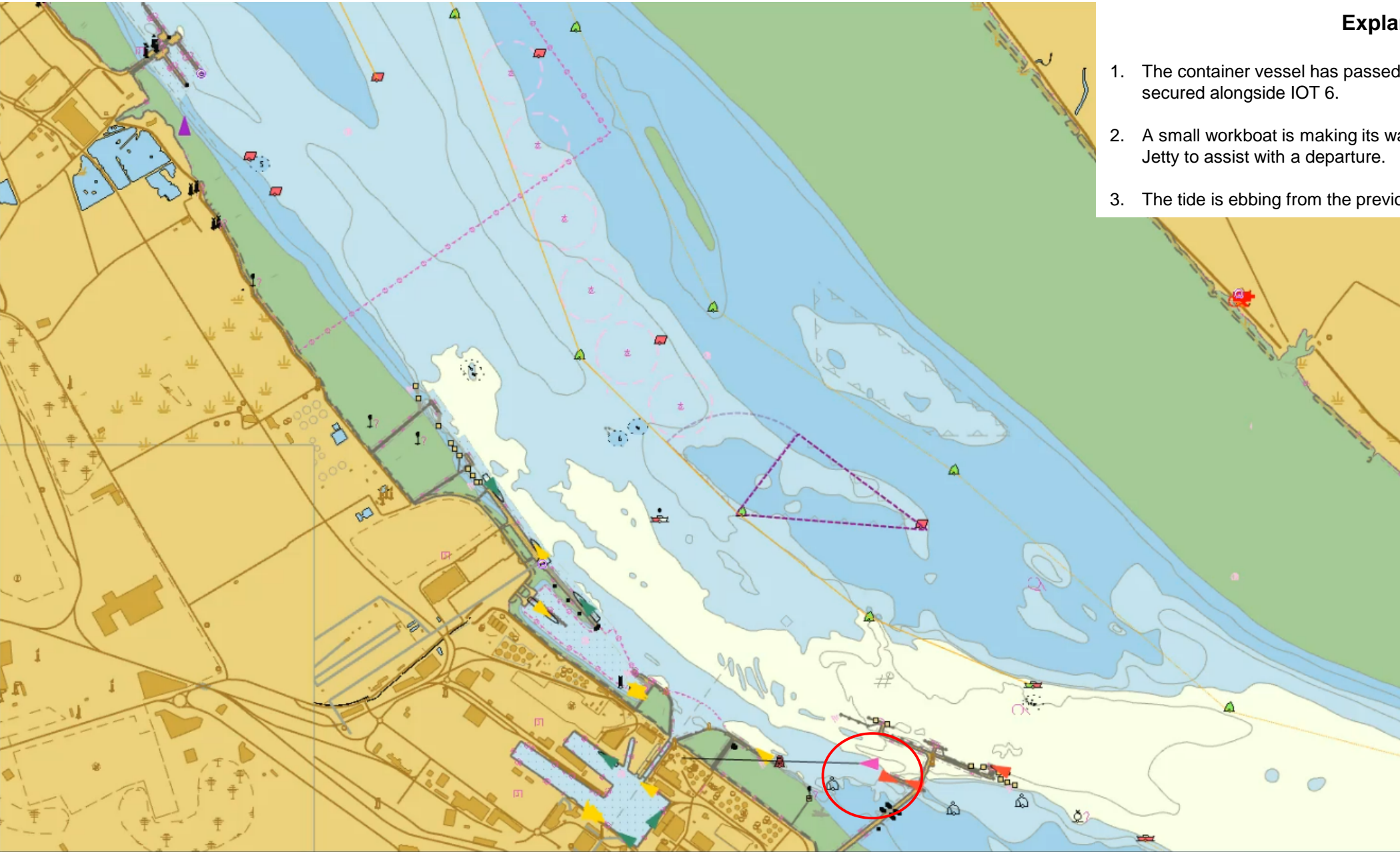
AM HW -6Hrs



Explanation

1. The container vessel departs from Immingham lock and the barge is making fast at IOT 6.
2. The tide is ebbing from the previous high water

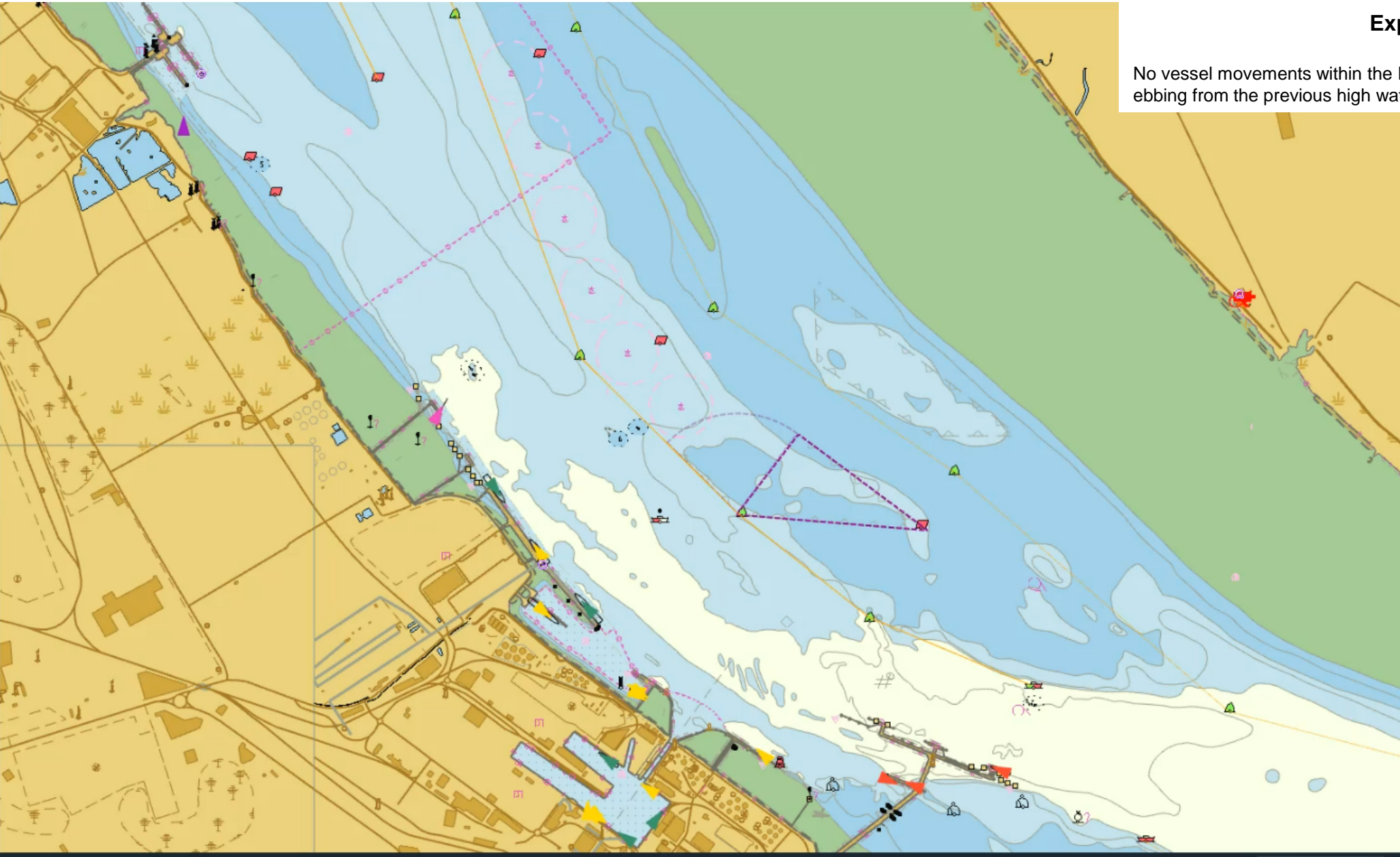
AM HW -5.75Hrs



Explanation

1. The container vessel has passed Immingham area and the barge is secured alongside IOT 6.
2. A small workboat is making its way upriver to South Killingholme Oil Jetty to assist with a departure.
3. The tide is ebbing from the previous high water.

AM HW -5.5Hrs



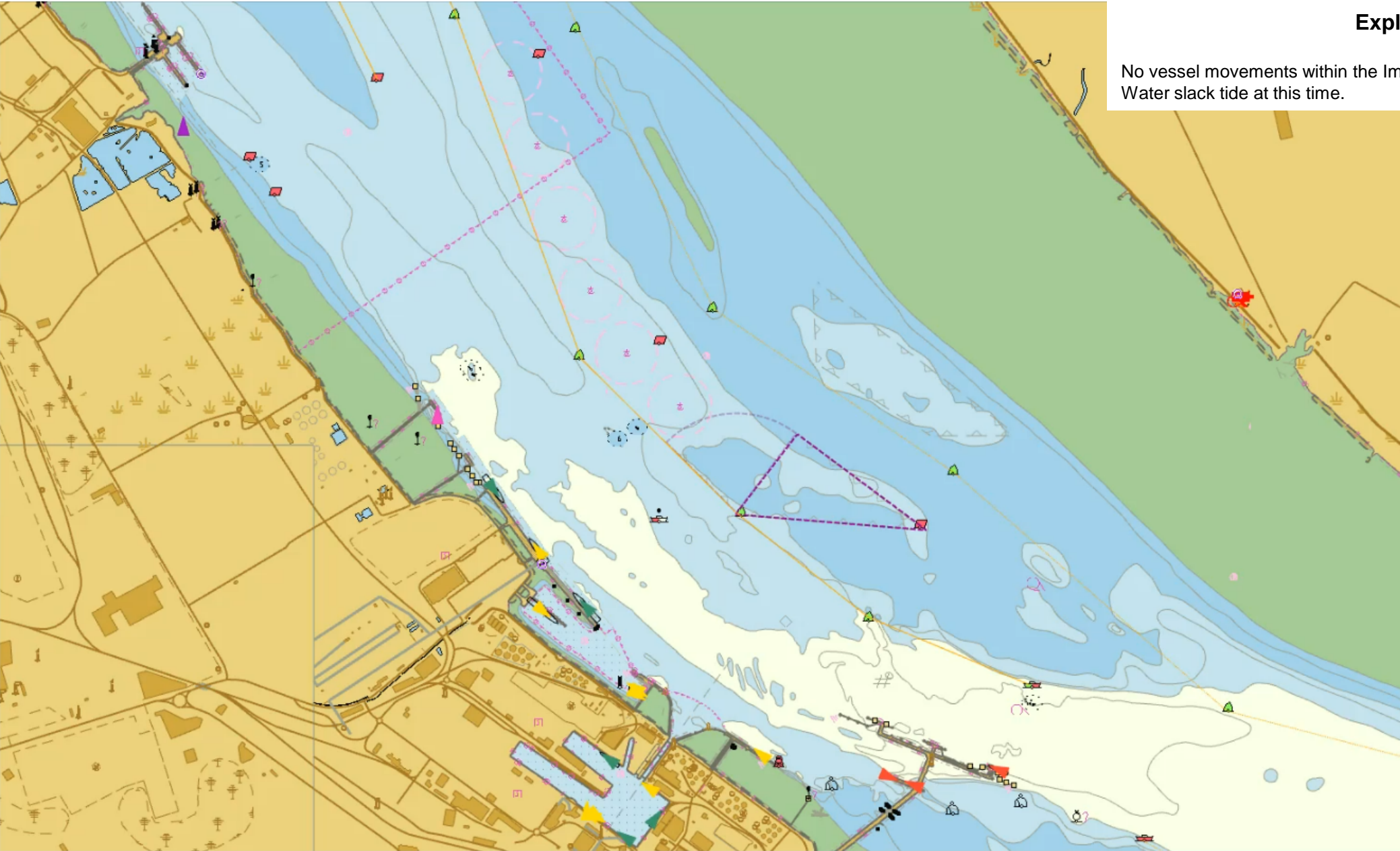
Explanation

No vessel movements within the Immingham area at this time. The tide is ebbing from the previous high water.

AM HW -5.25 LW Slack

Explanation

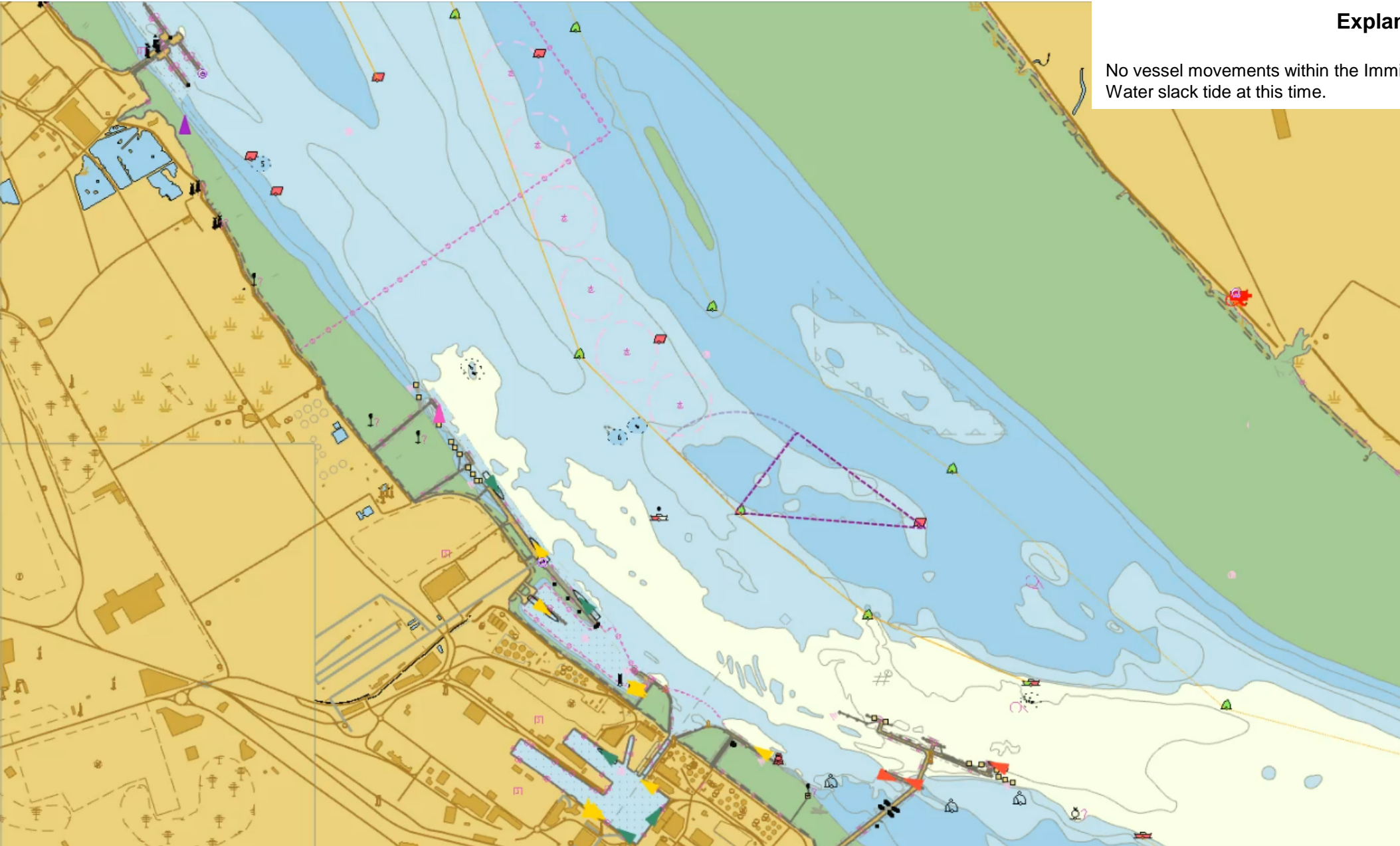
No vessel movements within the Immingham area at this time. It is Low Water slack tide at this time.



AM HW -5Hrs LW Slack

Explanation

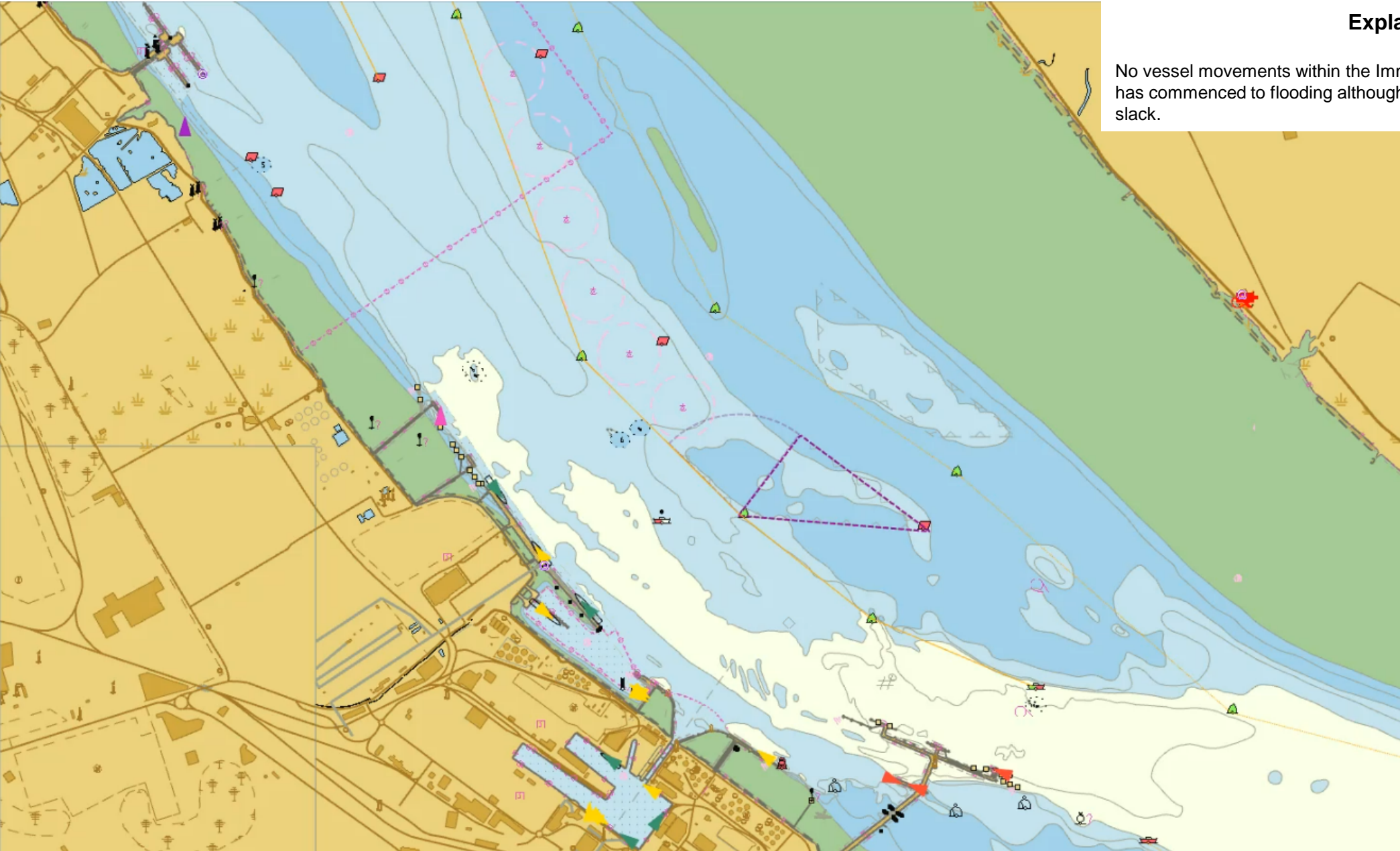
No vessel movements within the Immingham area at this time. It is Low Water slack tide at this time.



AM HW -4.75Hrs

Explanation

No vessel movements within the Immingham area at this time. The tide has commenced to flooding although the current will remain relatively slack.



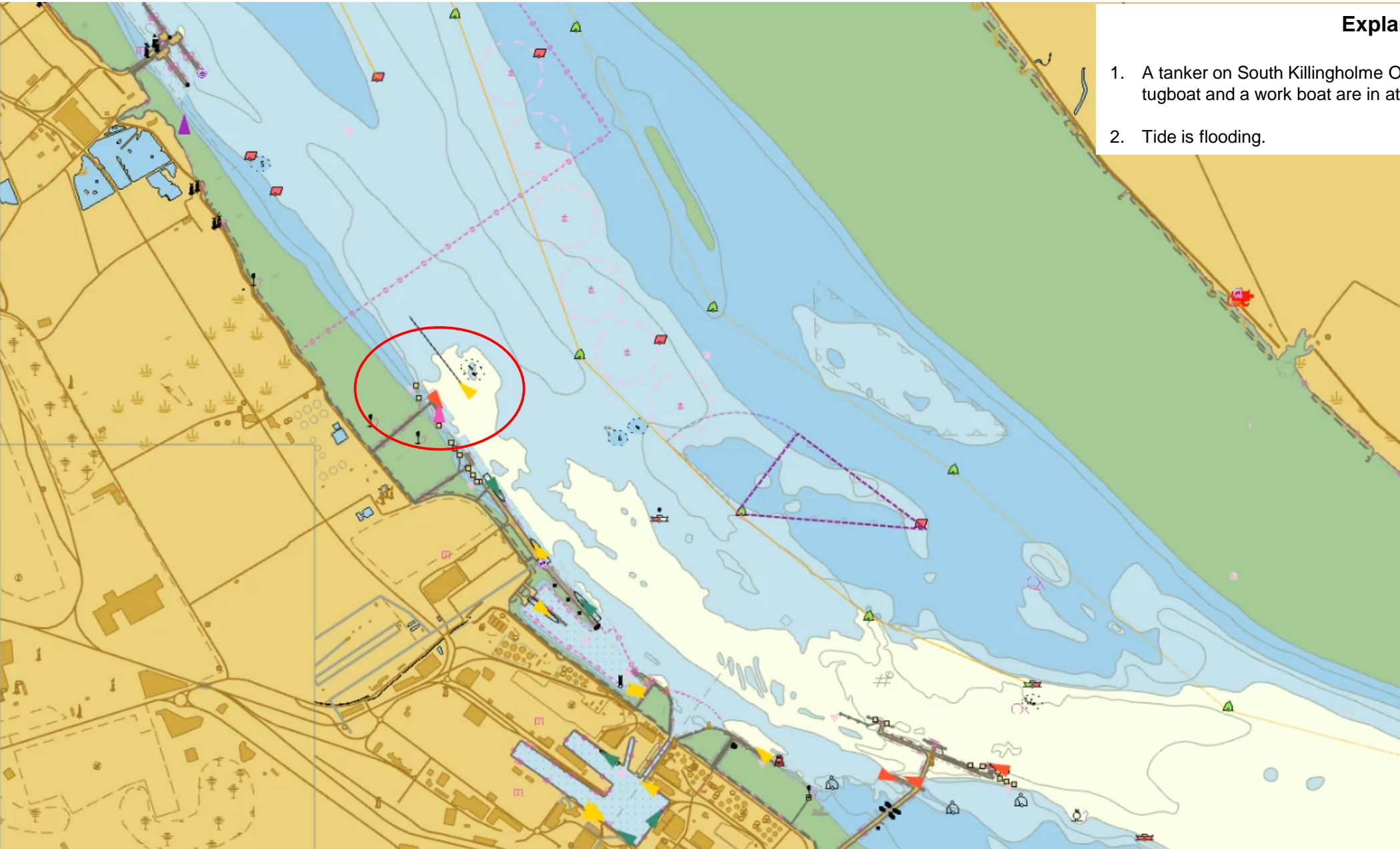
AM HW -4.5Hrs



Explanation

1. A tanker on South Killingholme Oil Jetty is preparing to depart. No other vessel movements at the time.
2. The tide is flooding

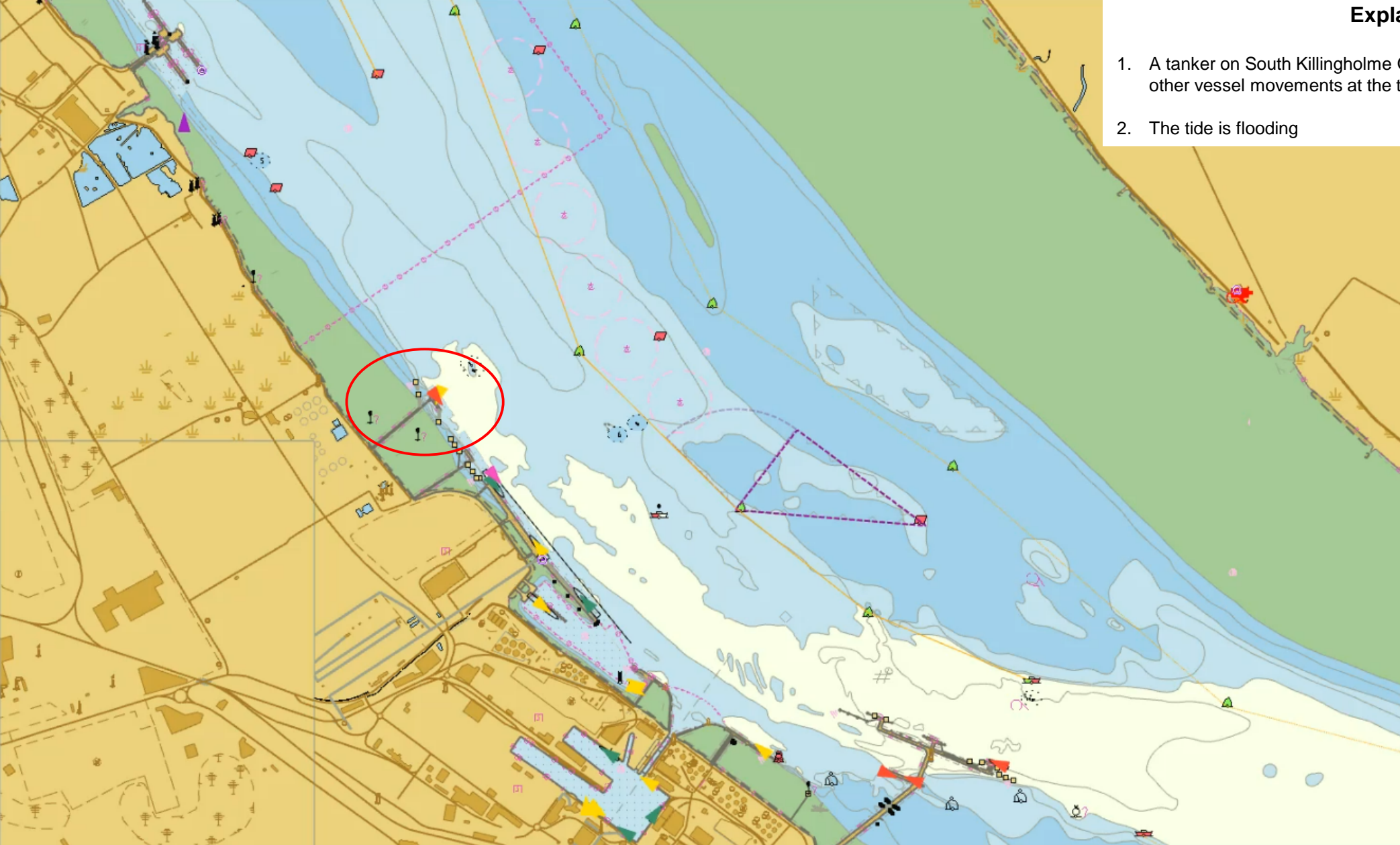
AM HW -4.25 Hrs



Explanation

1. A tanker on South Killingholme Oil Jetty is preparing to depart now a tugboat and a work boat are in attendance to assist.
2. Tide is flooding.

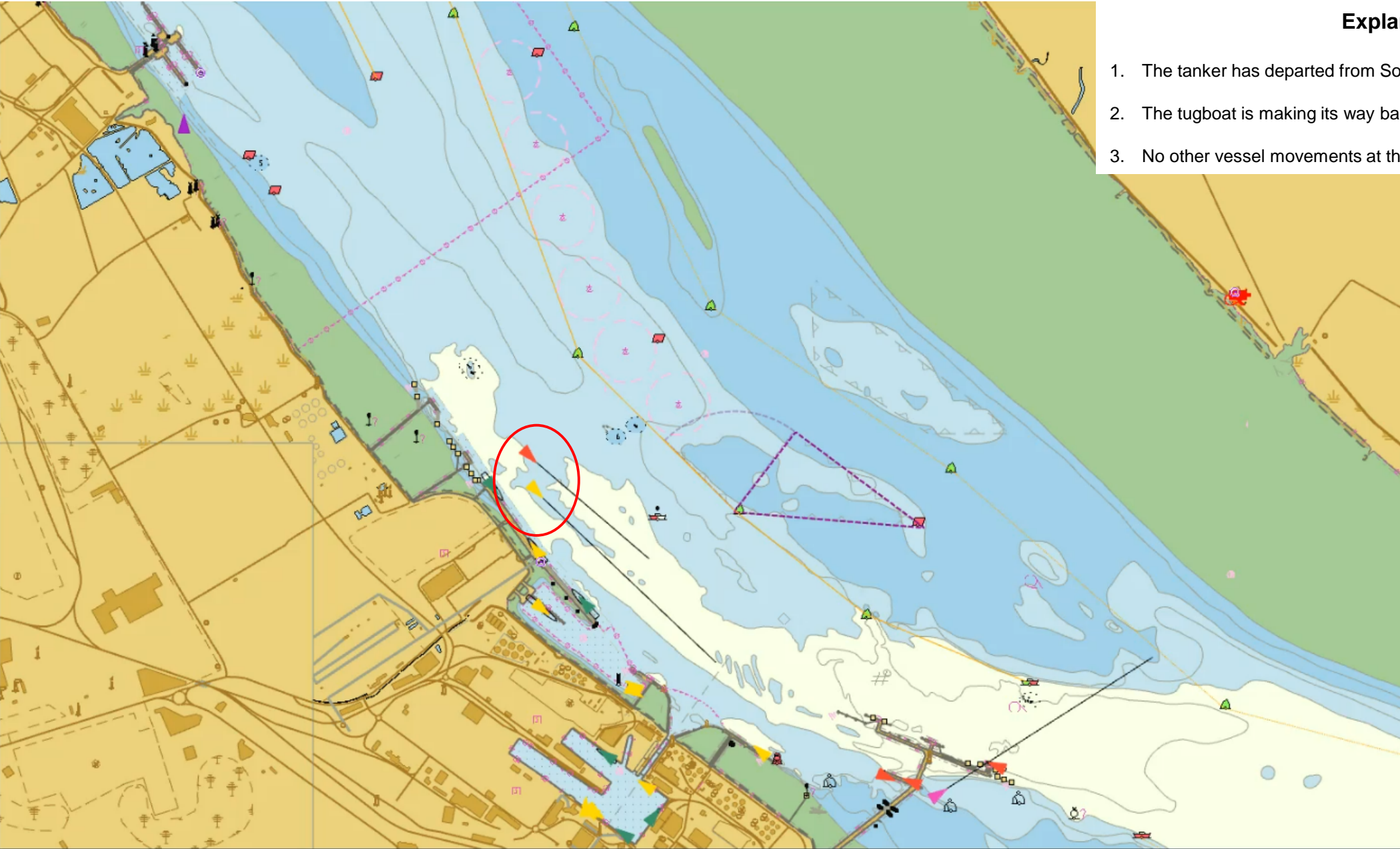
AM HW -4Hrs



Explanation

1. A tanker on South Killingholme Oil Jetty is preparing to depart. No other vessel movements at the time.
2. The tide is flooding

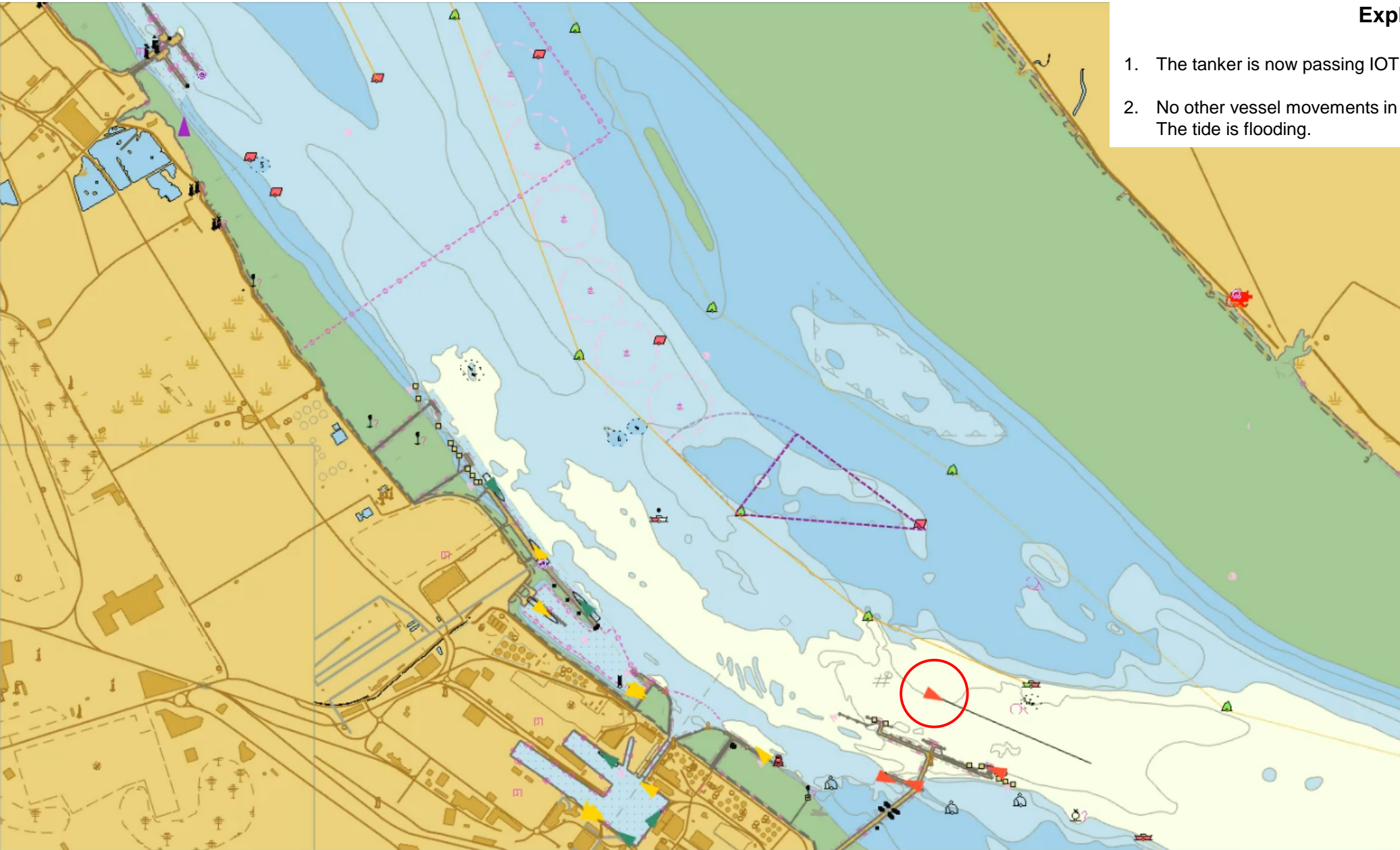
AM HW -3.75Hrs



Explanation

1. The tanker has departed from South Killingholme Oil Jetty.
2. The tugboat is making its way back to port.
3. No other vessel movements at the time. The tide is flooding

AM HW -3.5Hrs



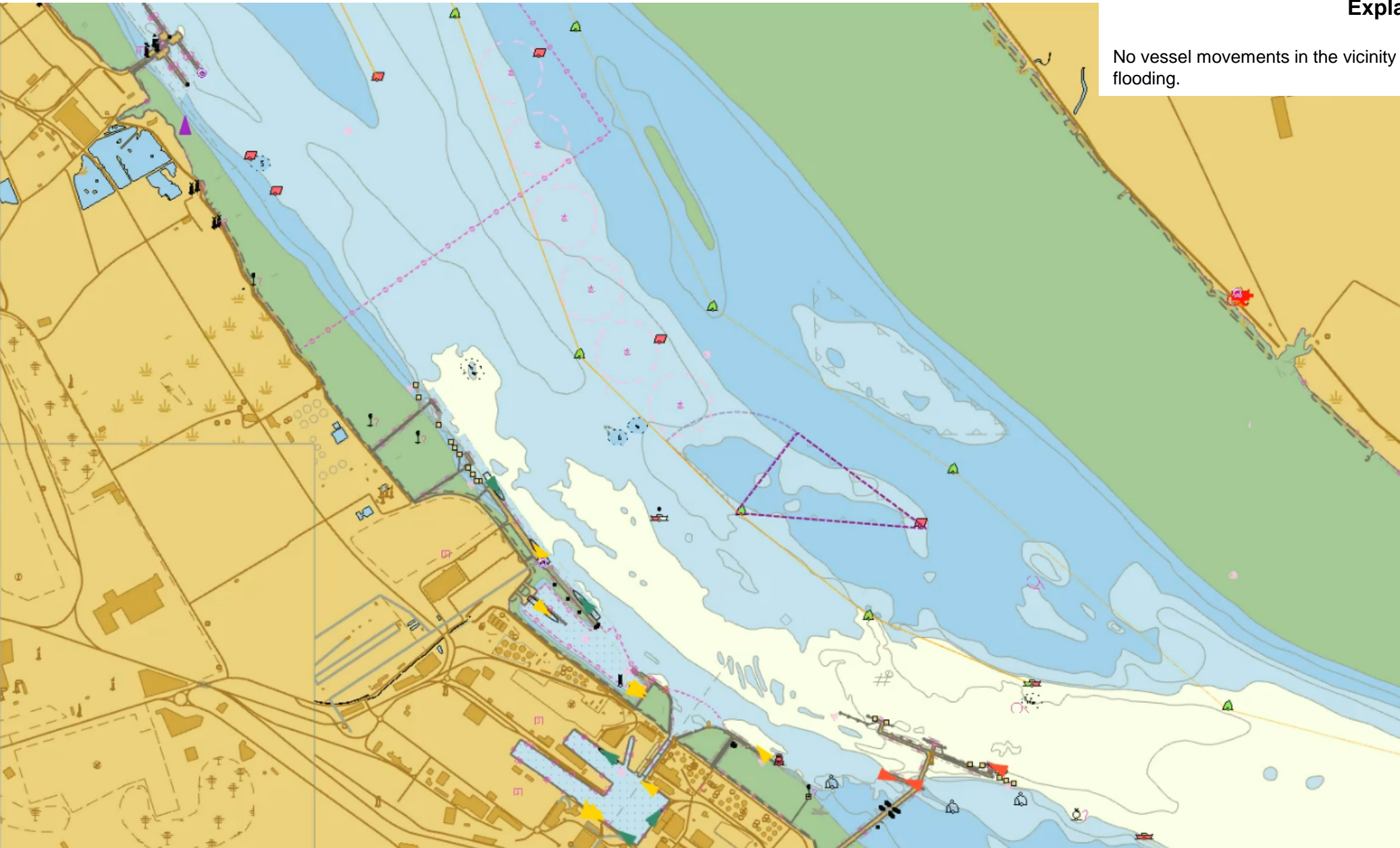
Explanation

1. The tanker is now passing IOT in the main navigational channel.
2. No other vessel movements in the vicinity of Immingham at this time. The tide is flooding.

AM HW -3.25Hrs

Explanation

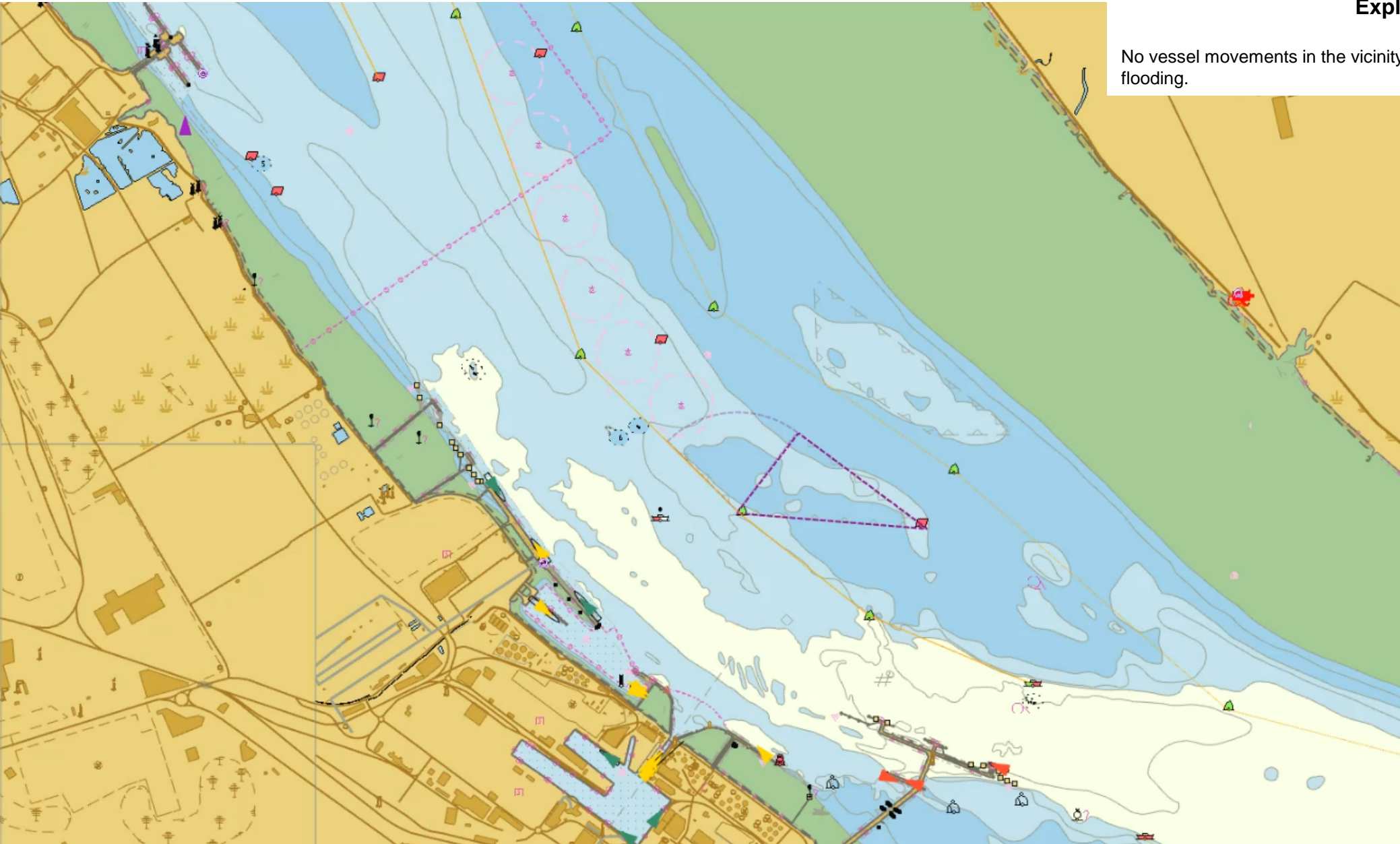
No vessel movements in the vicinity of Immingham at this time. The tide is flooding.



AM HW -3Hrs

Explanation

No vessel movements in the vicinity of Immingham at this time. The tide is flooding.



AM HW -2.75Hrs

Explanation

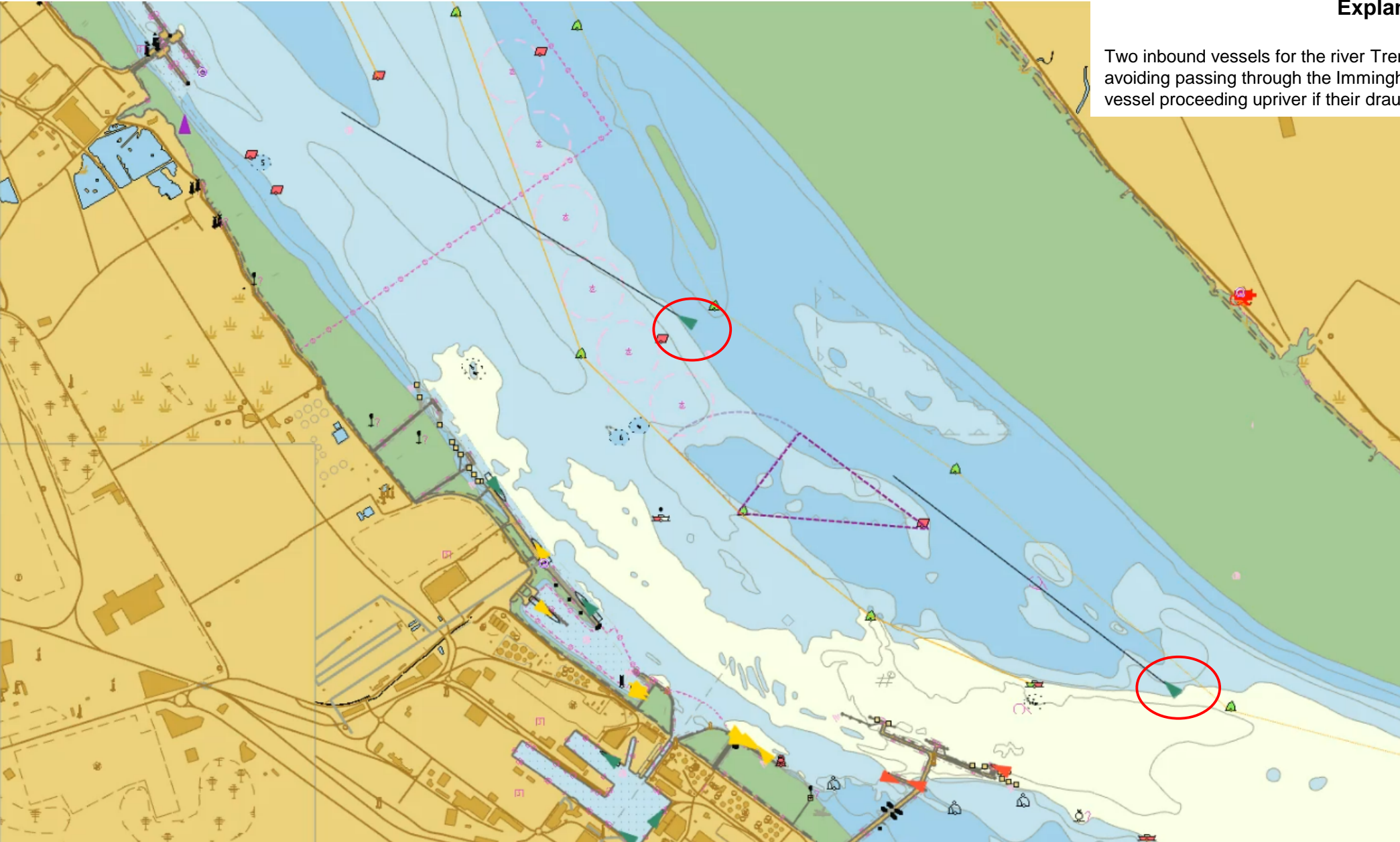
1. Tugboats begin to depart Immingham dock and moor alongside Immingham East Jetty waiting to service the arriving vessels for this high-water period.
2. The tide is flooding.



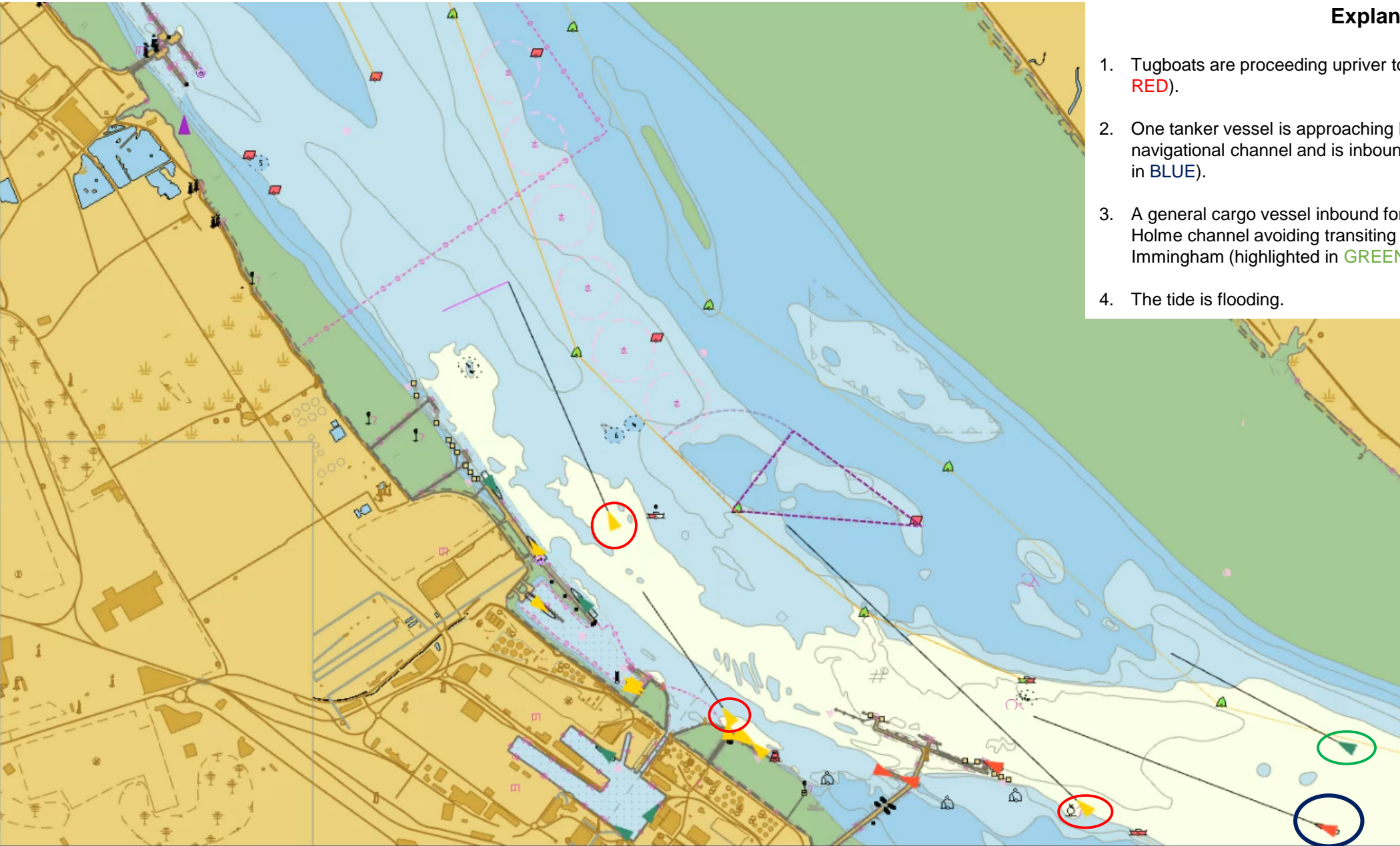
AM HW -2.5Hrs

Explanation

Two inbound vessels for the river Trent transit the Foul Holme channel avoiding passing through the Immingham area as is standard practice for vessel proceeding upriver if their draught permits. The tide is flooding.



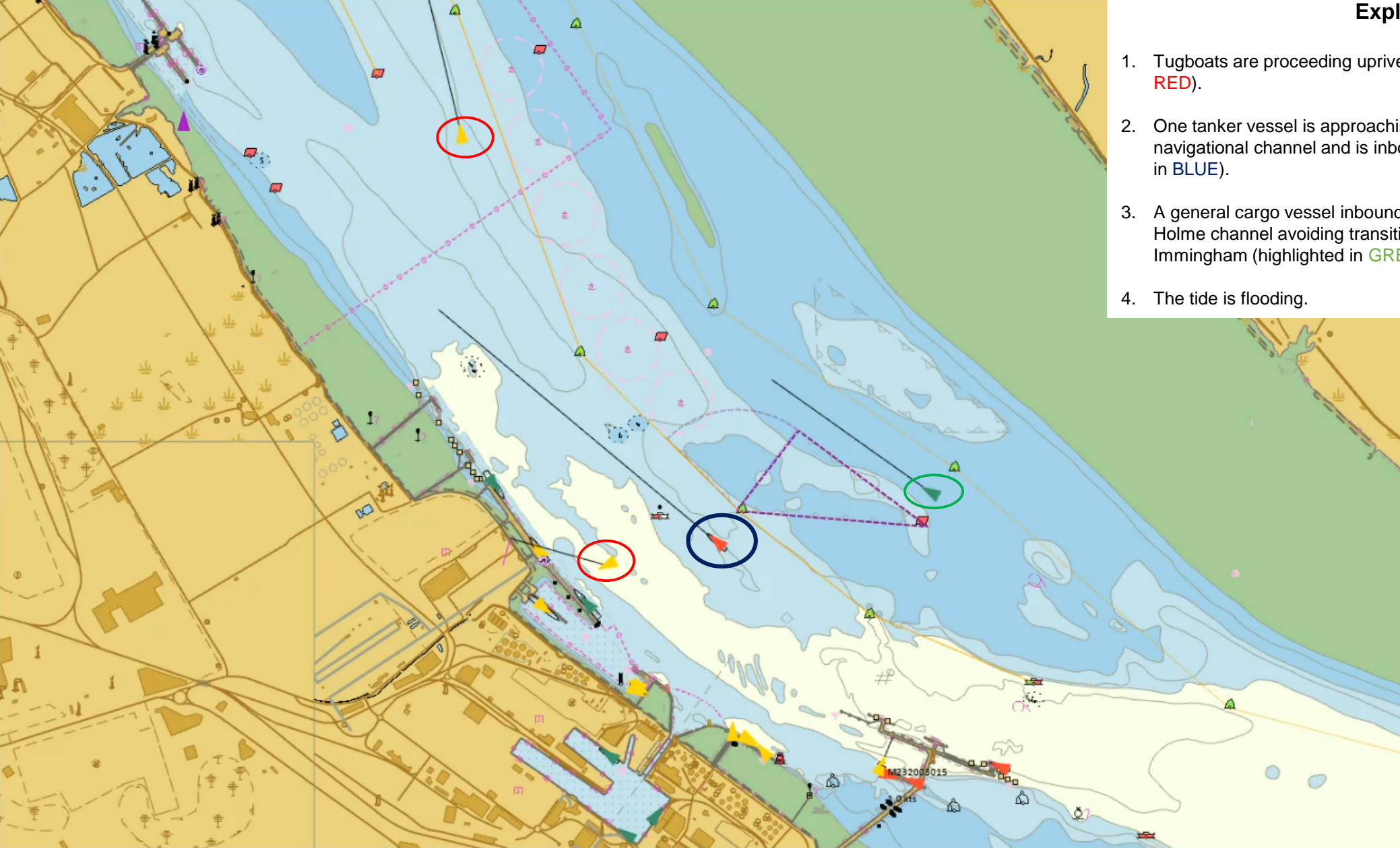
AM HW -2.25Hrs



Explanation

1. Tugboats are proceeding upriver to service vessels (highlighted in RED).
2. One tanker vessel is approaching Immingham via the main navigational channel and is inbound for King George Dock (highlighted in BLUE).
3. A general cargo vessel inbound for Goole is approaching the Foul Holme channel avoiding transiting the main navigational channel at Immingham (highlighted in GREEN).
4. The tide is flooding.

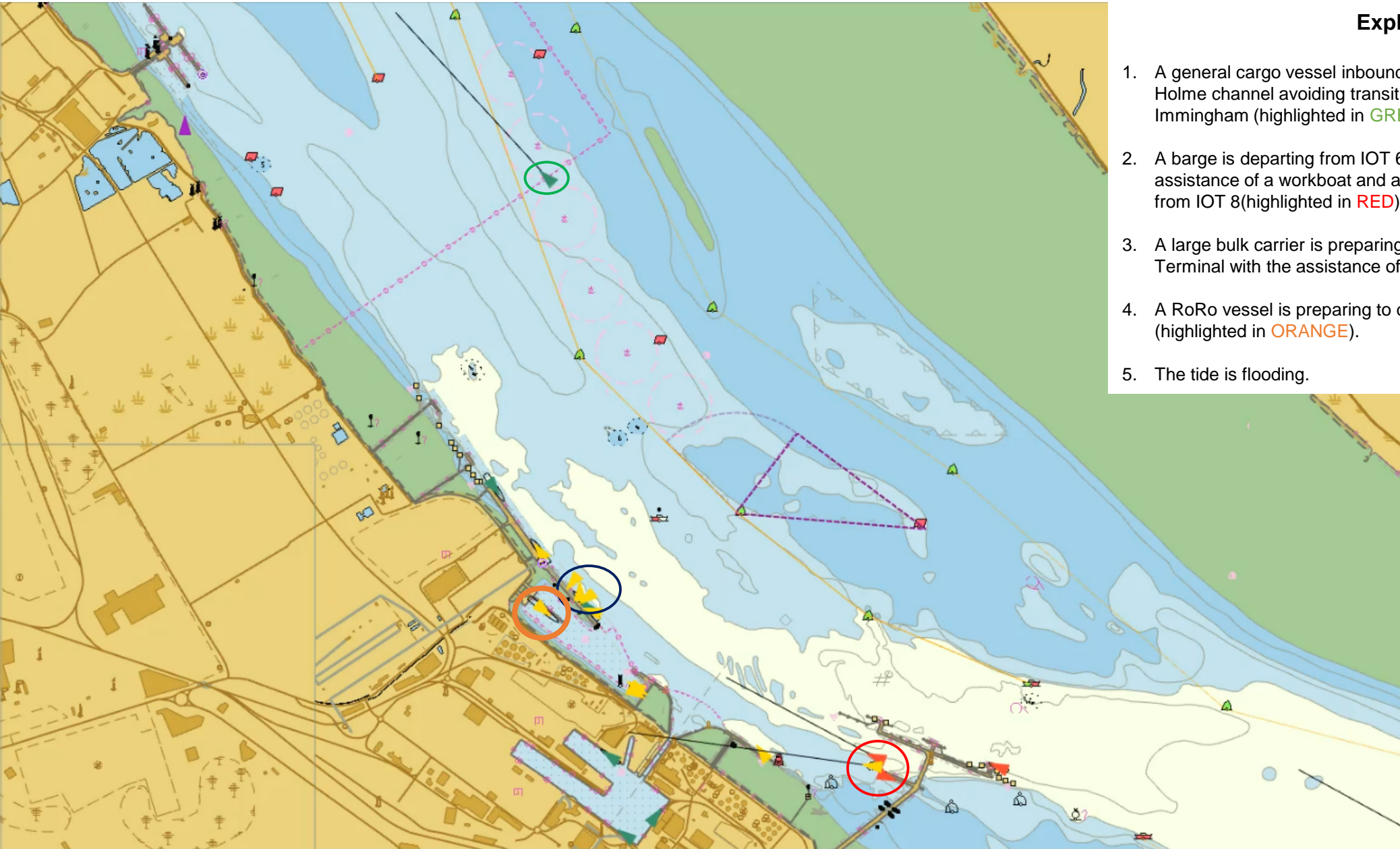
AM HW -2Hrs



Explanation

1. Tugboats are proceeding upriver to service vessels (highlighted in **RED**).
2. One tanker vessel is approaching Immingham via the main navigational channel and is inbound for King George Dock (highlighted in **BLUE**).
3. A general cargo vessel inbound for Goole is approaching the Foul Holme channel avoiding transiting the main navigational channel at Immingham (highlighted in **GREEN**).
4. The tide is flooding.

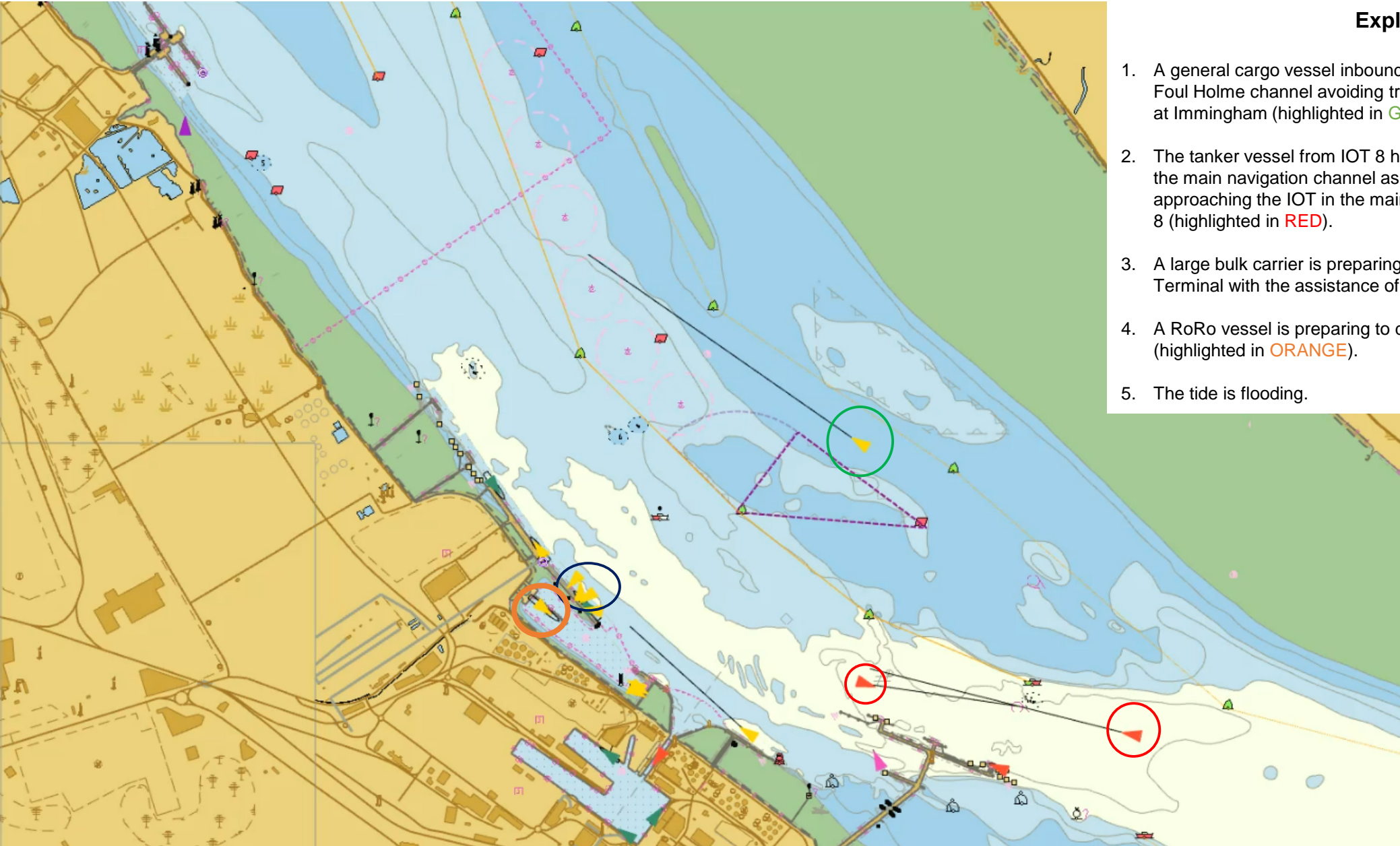
AM HW -1.75Hrs



Explanation

1. A general cargo vessel inbound for Goole is approaching the Foul Holme channel avoiding transiting the main navigational channel at Immingham (highlighted in GREEN).
2. A barge is departing from IOT 6 inbound for Immingham Dock with the assistance of a workboat and a Tanker vessel is preparing to depart from IOT 8 (highlighted in RED).
3. A large bulk carrier is preparing to depart from Immingham Bulk Terminal with the assistance of four tugboats (highlighted in BLUE).
4. A RoRo vessel is preparing to depart from Immingham Outer Harbour (highlighted in ORANGE).
5. The tide is flooding.

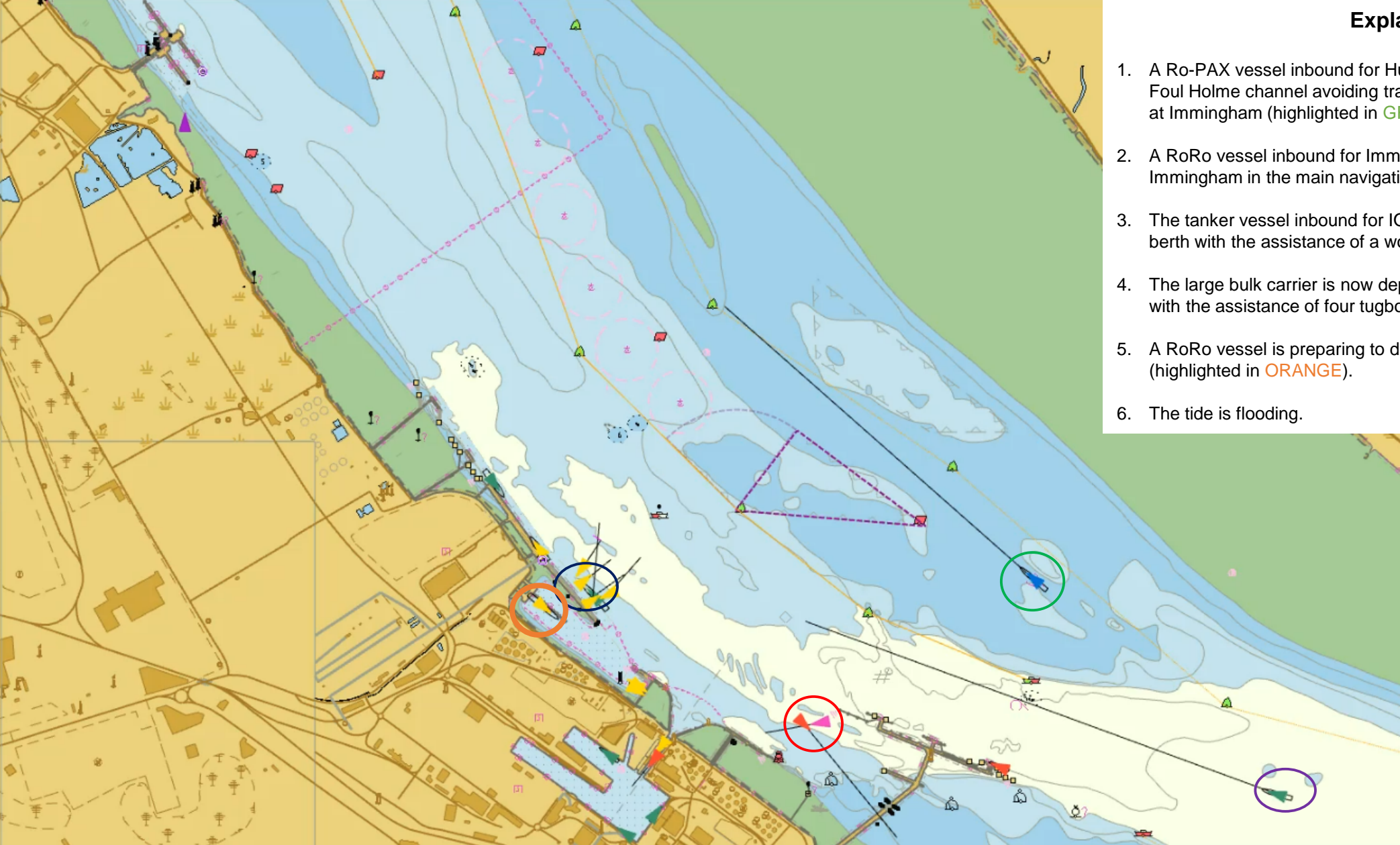
AM HW -1.5Hrs



Explanation

1. A general cargo vessel inbound for New Holland Dock is transiting the Foul Holme channel avoiding transiting the main navigational channel at Immingham (highlighted in GREEN).
2. The tanker vessel from IOT 8 has departed and is now passing IOT in the main navigational channel as an inbound tanker vessel is approaching the IOT in the main navigational channel destined for IOT 8 (highlighted in RED).
3. A large bulk carrier is preparing to depart from Immingham Bulk Terminal with the assistance of four tugboats (highlighted in BLUE).
4. A RoRo vessel is preparing to depart from Immingham Outer Harbour (highlighted in ORANGE).
5. The tide is flooding.

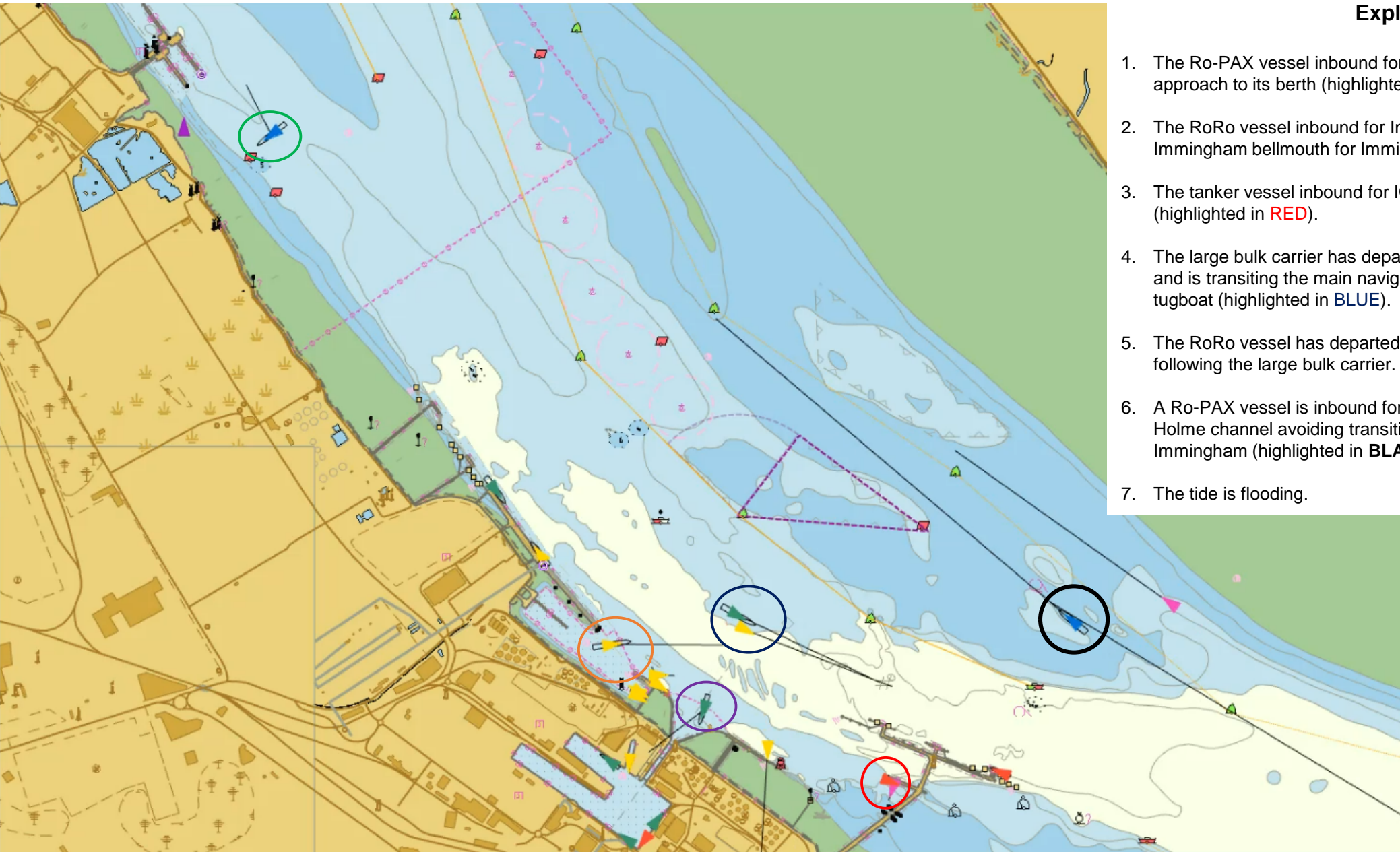
AM HW -1.25Hrs



Explanation

1. A Ro-PAX vessel inbound for Humber Sea Terminal is transiting the Foul Holme channel avoiding transiting the main navigational channel at Immingham (highlighted in GREEN).
2. A RoRo vessel inbound for Immingham Dock is approaching Immingham in the main navigational channel (highlighted in PURPLE)
3. The tanker vessel inbound for IOT 8 is now on its final approach to the berth with the assistance of a workboat (highlighted in RED).
4. The large bulk carrier is now departing from Immingham Bulk Terminal with the assistance of four tugboats (highlighted in BLUE).
5. A RoRo vessel is preparing to depart from Immingham Outer Harbour (highlighted in ORANGE).
6. The tide is flooding.

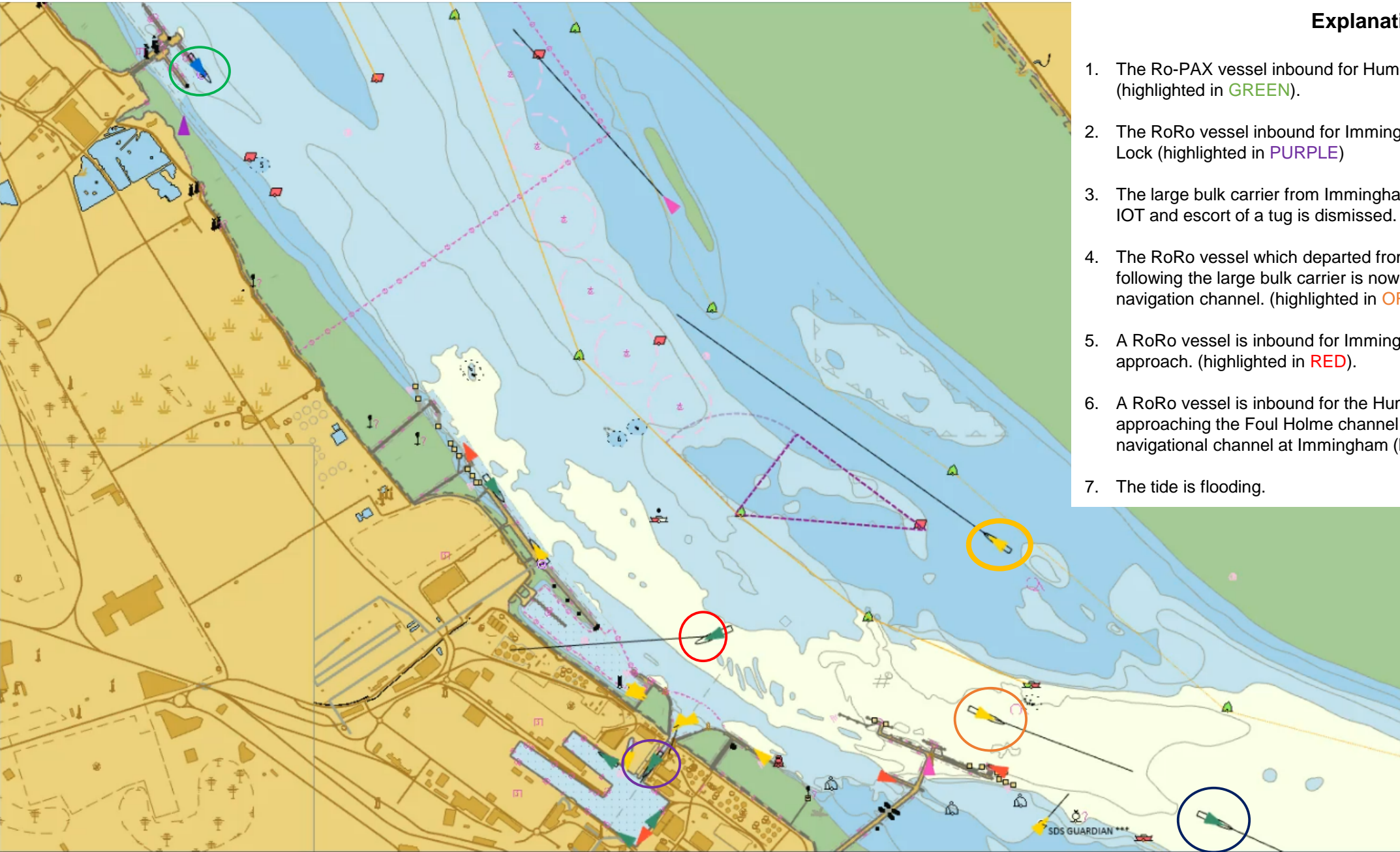
AM HW -1Hr



Explanation

1. The Ro-PAX vessel inbound for Humber Sea Terminal is on final approach to its berth (highlighted in **GREEN**).
2. The RoRo vessel inbound for Immingham Dock is manoeuvring in the Immingham bellmouth for Immingham Lock (highlighted in **PURPLE**).
3. The tanker vessel inbound for IOT 8 is now berthed alongside (highlighted in **RED**).
4. The large bulk carrier has departed from Immingham Bulk Terminal and is transiting the main navigation channel with an escort of a tugboat (highlighted in **BLUE**).
5. The RoRo vessel has departed from Immingham Outer Harbour following the large bulk carrier. (highlighted in **ORANGE**).
6. A Ro-PAX vessel is inbound for Hull River Terminal 1 via the Foul Holme channel avoiding transiting the main navigational channel at Immingham (highlighted in **BLACK**).
7. The tide is flooding.

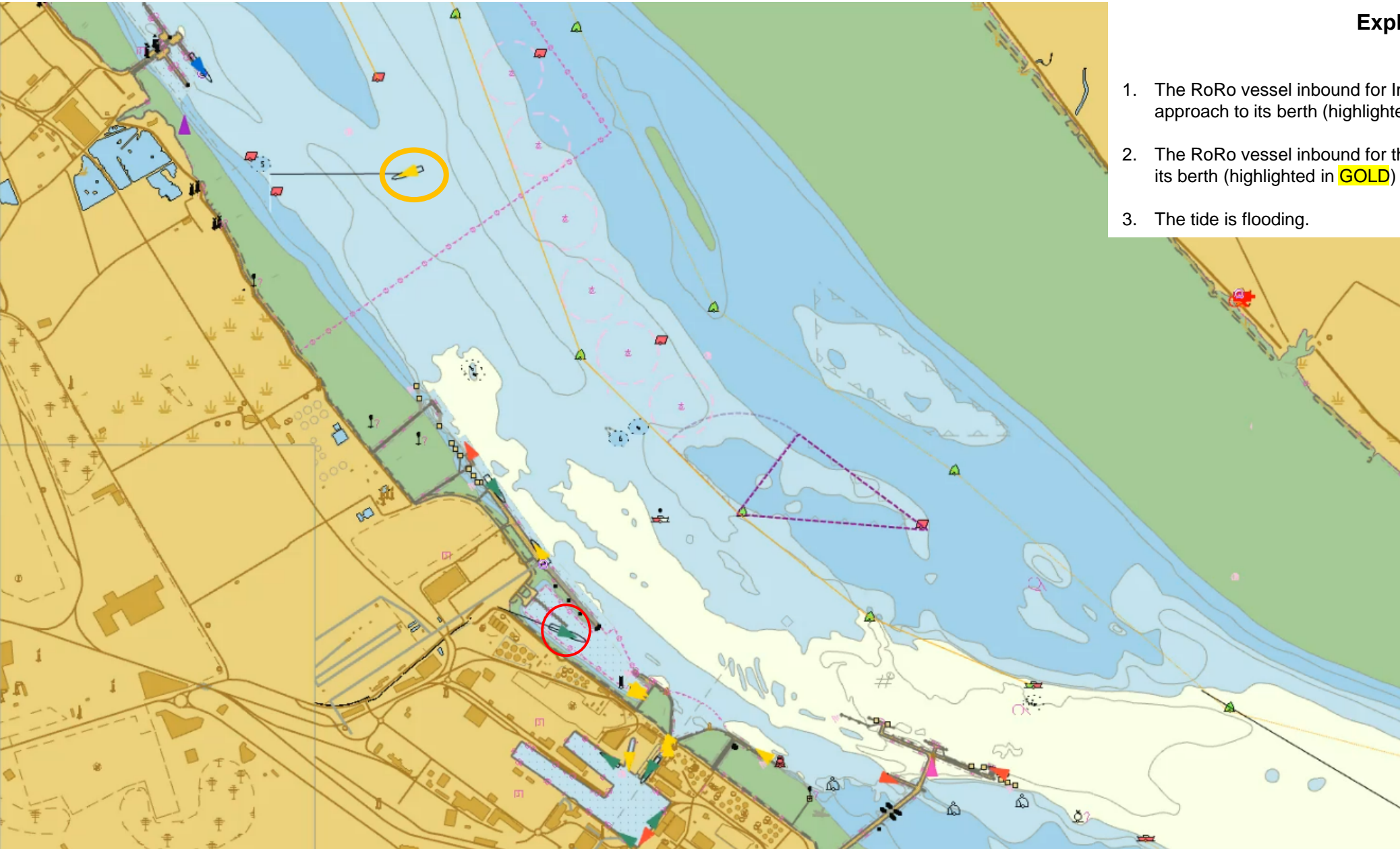
AM HW -0.75Hrs



Explanation

1. The Ro-PAX vessel inbound for Humber Sea Terminal has berthed (highlighted in GREEN).
2. The RoRo vessel inbound for Immingham Dock is inside Immingham Lock (highlighted in PURPLE)
3. The large bulk carrier from Immingham Bulk Terminal has passed the IOT and escort of a tug is dismissed. (highlighted in BLUE).
4. The RoRo vessel which departed from Immingham Outer Harbour following the large bulk carrier is now passing the IOT in the main navigation channel. (highlighted in ORANGE).
5. A RoRo vessel is inbound for Immingham Outer Harbour is on final approach. (highlighted in RED).
6. A RoRo vessel is inbound for the Humber Sea Terminal is approaching the Foul Holme channel avoiding transiting the main navigational channel at Immingham (highlighted in GOLD)
7. The tide is flooding.

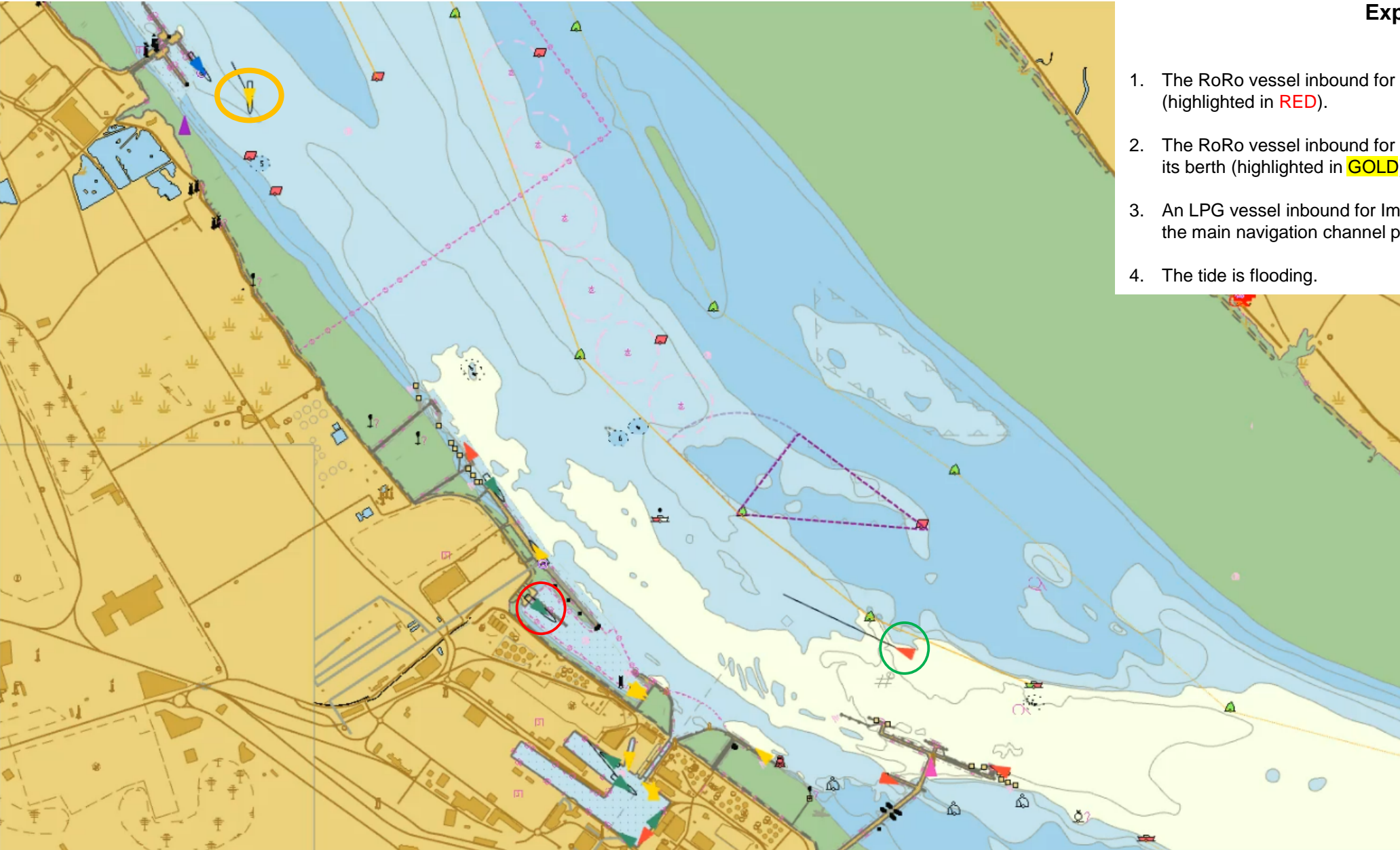
AM HW -0.5Hrs



Explanation

1. The RoRo vessel inbound for Immingham Outer Harbour is on final approach to its berth (highlighted in **RED**).
2. The RoRo vessel inbound for the Humber Sea is on final approach to its berth (highlighted in **GOLD**).
3. The tide is flooding.

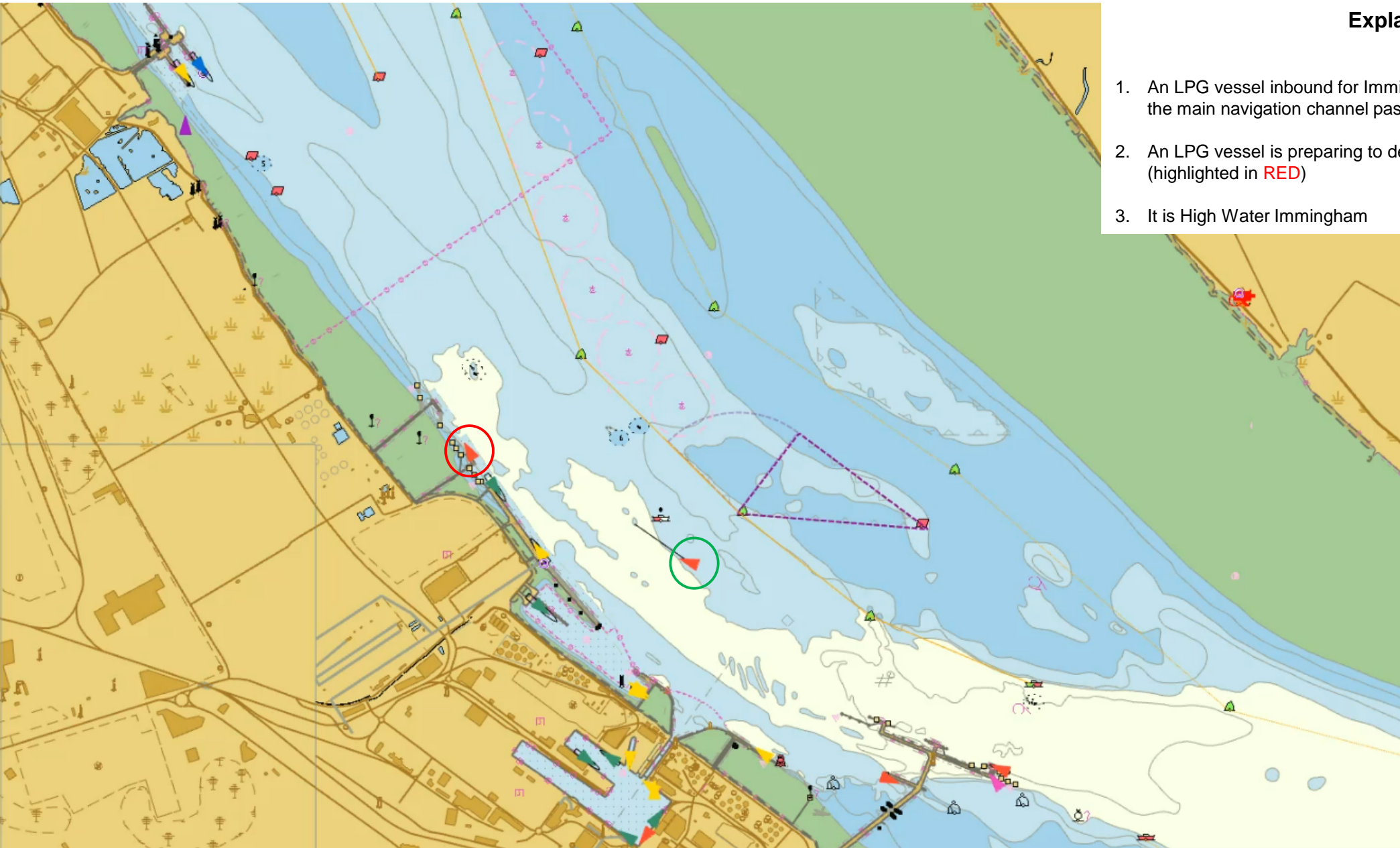
AM HW -0.25Hrs



Explanation

1. The RoRo vessel inbound for Immingham Outer Harbour is berthed (highlighted in **RED**).
2. The RoRo vessel inbound for the Humber Sea is on final approach to its berth (highlighted in **GOLD**).
3. An LPG vessel inbound for Immingham Gas Terminal is inbound via the main navigation channel passing IOT (highlighted in **GREEN**).
4. The tide is flooding.

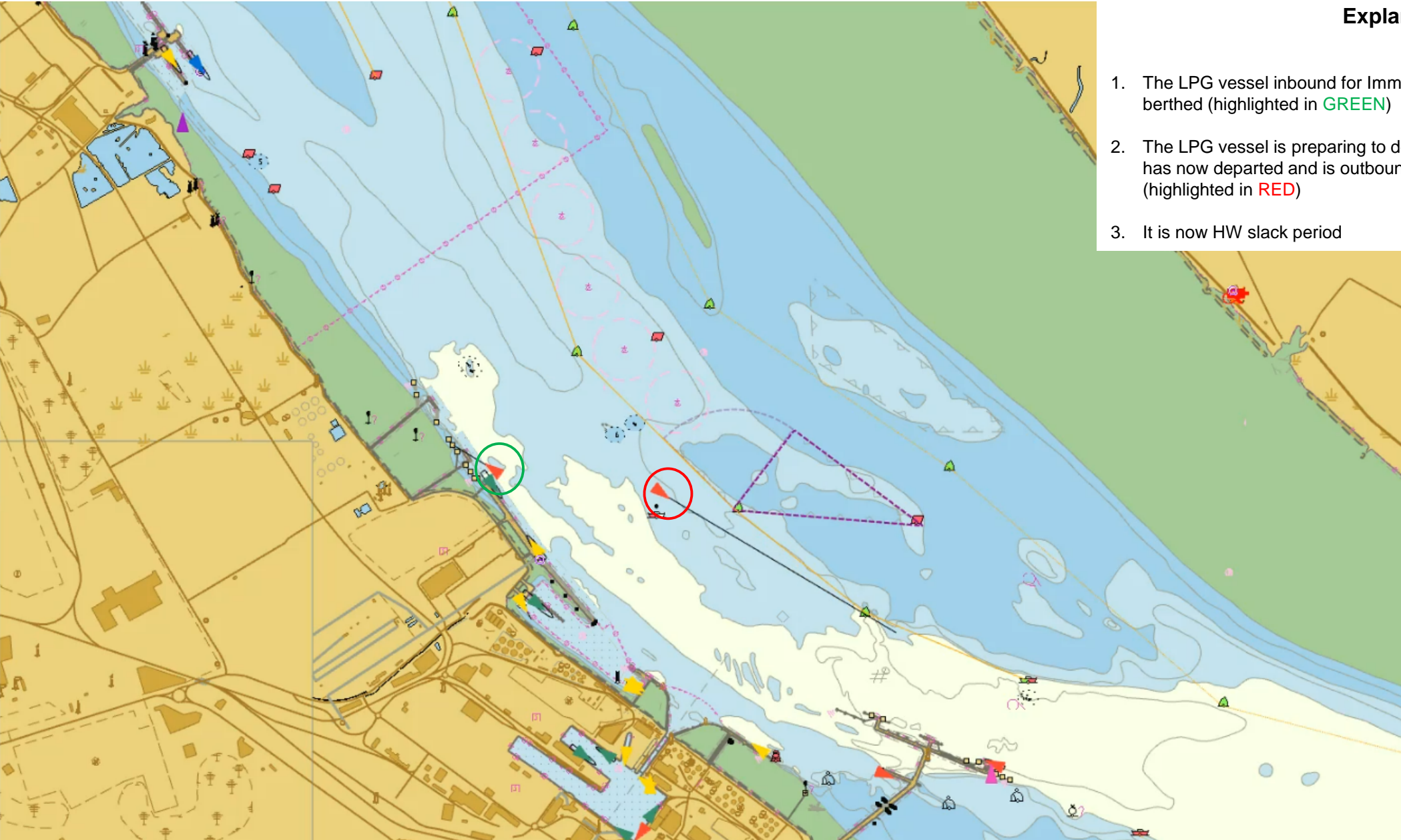
High Water Immingham



Explanation

1. An LPG vessel inbound for Immingham Gas Terminal is inbound via the main navigation channel passing IOT (highlighted in GREEN)
2. An LPG vessel is preparing to depart the Immingham Gas Terminal (highlighted in RED)
3. It is High Water Immingham

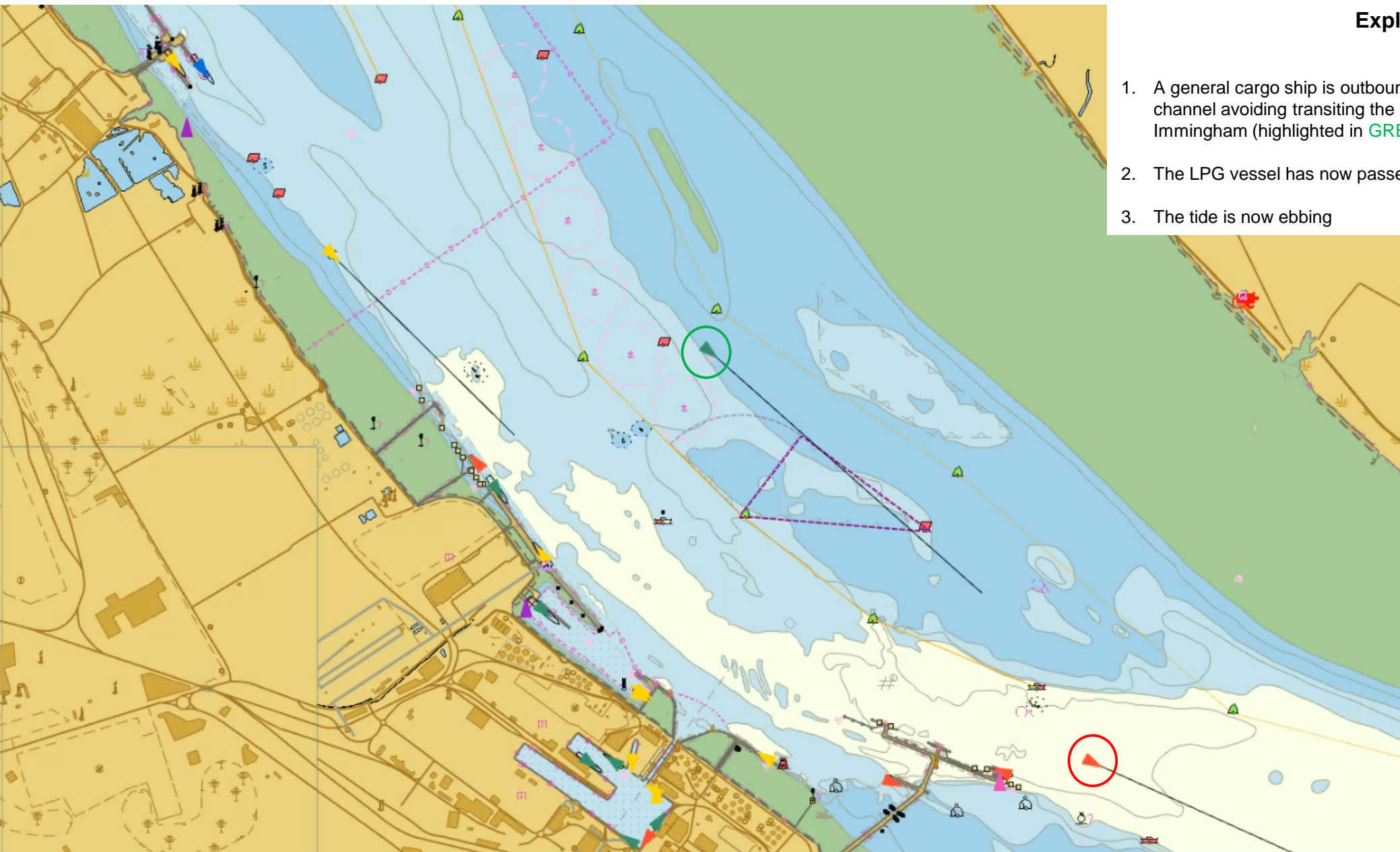
AM HW +0.25Hrs



Explanation

1. The LPG vessel inbound for Immingham Gas Terminal has now berthed (highlighted in GREEN)
2. The LPG vessel is preparing to depart the Immingham Gas Terminal has now departed and is outbound via the main navigational channel (highlighted in RED)
3. It is now HW slack period

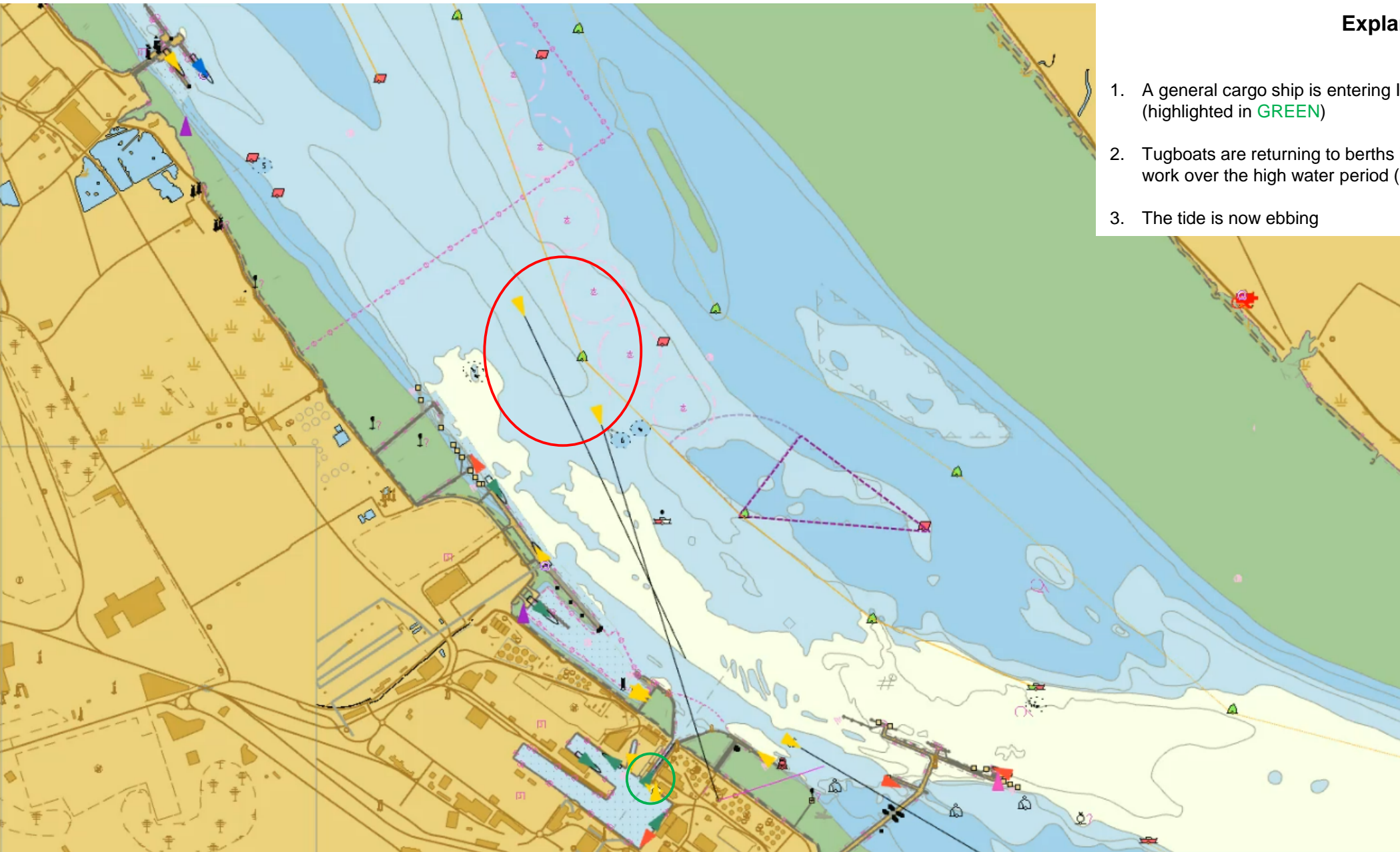
AM HW +0.5Hrs



Explanation

1. A general cargo ship is outbound from Albert dock in the Foul Holme channel avoiding transiting the main navigational channel at Immingham (highlighted in GREEN)
2. The LPG vessel has now passed the IOT (highlighted in RED)
3. The tide is now ebbing

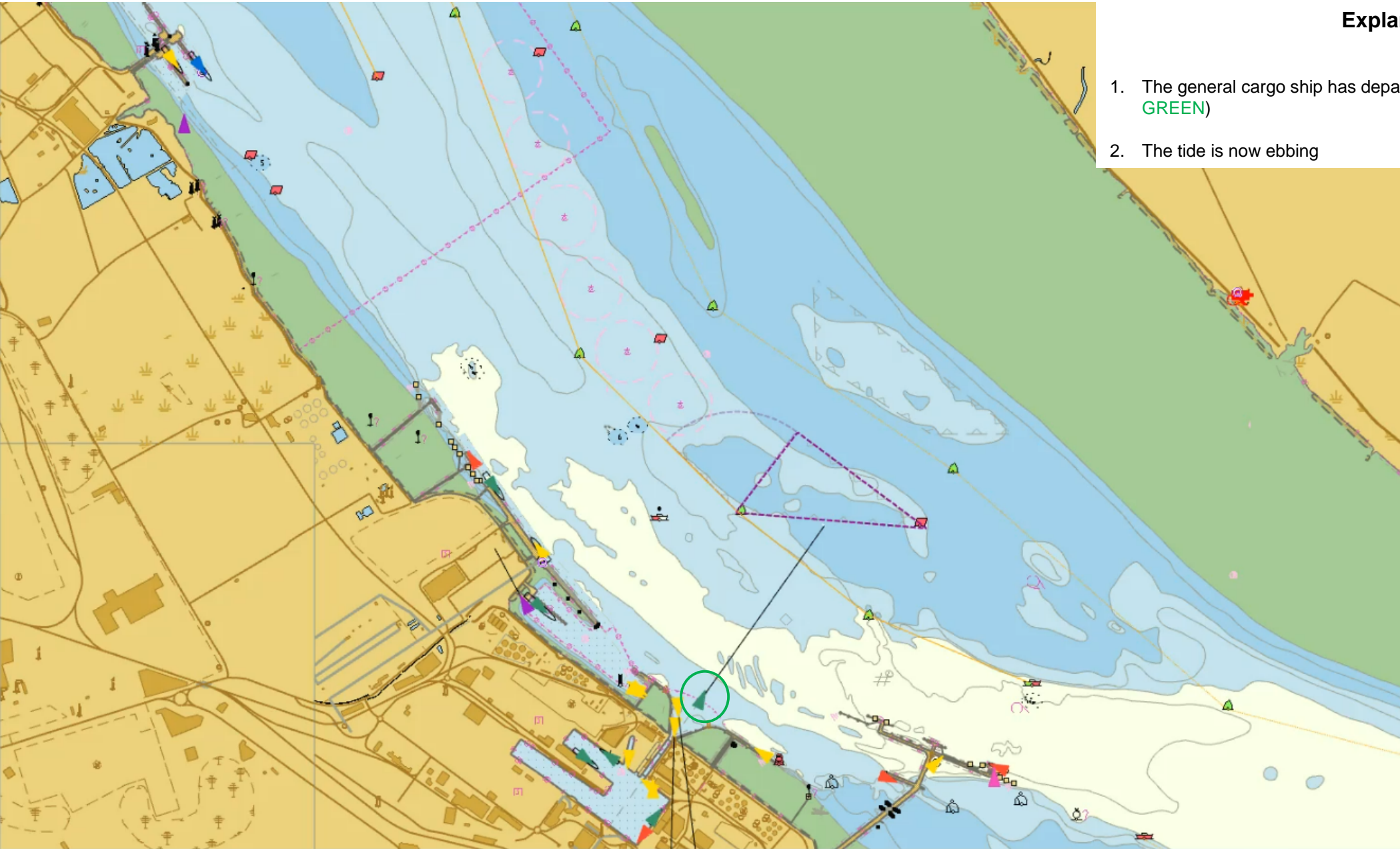
AM HW +0.75Hrs



Explanation

1. A general cargo ship is entering Immingham lock preparing to depart (highlighted in GREEN)
2. Tugboats are returning to berths in Immingham after completion of work over the high water period (highlighted in RED)
3. The tide is now ebbing

AM HW +1Hr



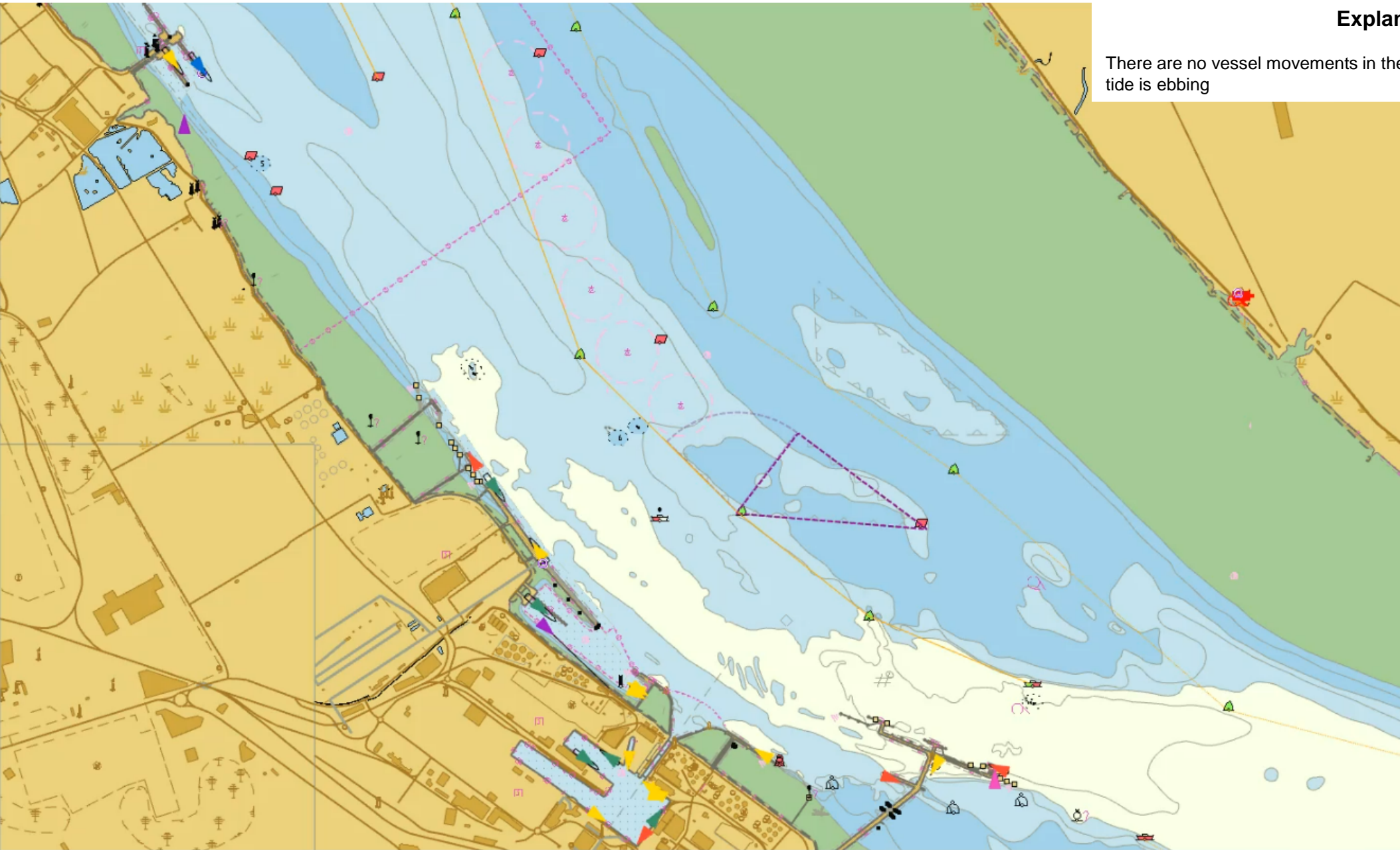
Explanation

1. The general cargo ship has departed Immingham Lock (highlighted in GREEN)
2. The tide is now ebbing

AM HW +1.25Hrs

Explanation

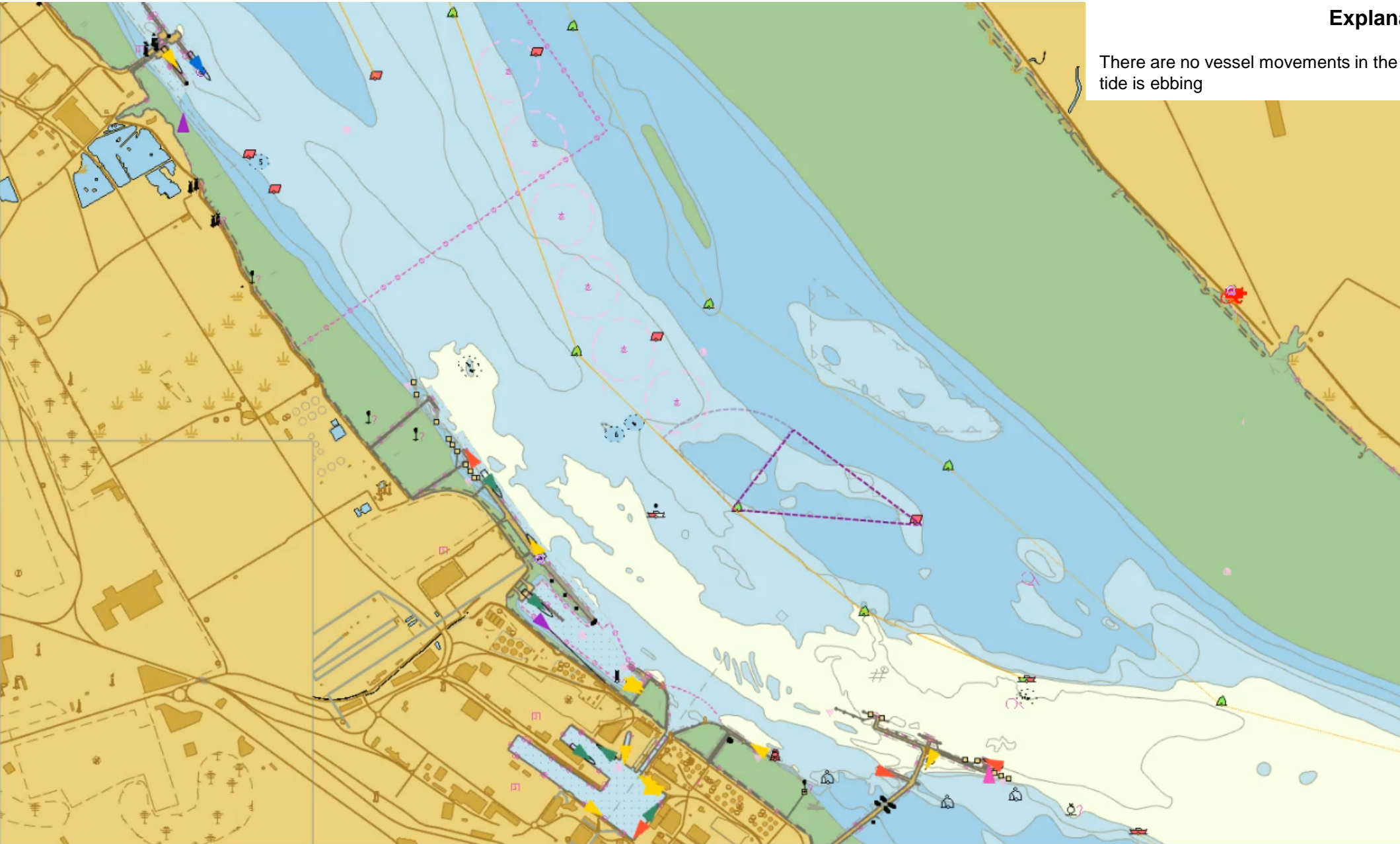
There are no vessel movements in the Immingham area at this time. The tide is ebbing



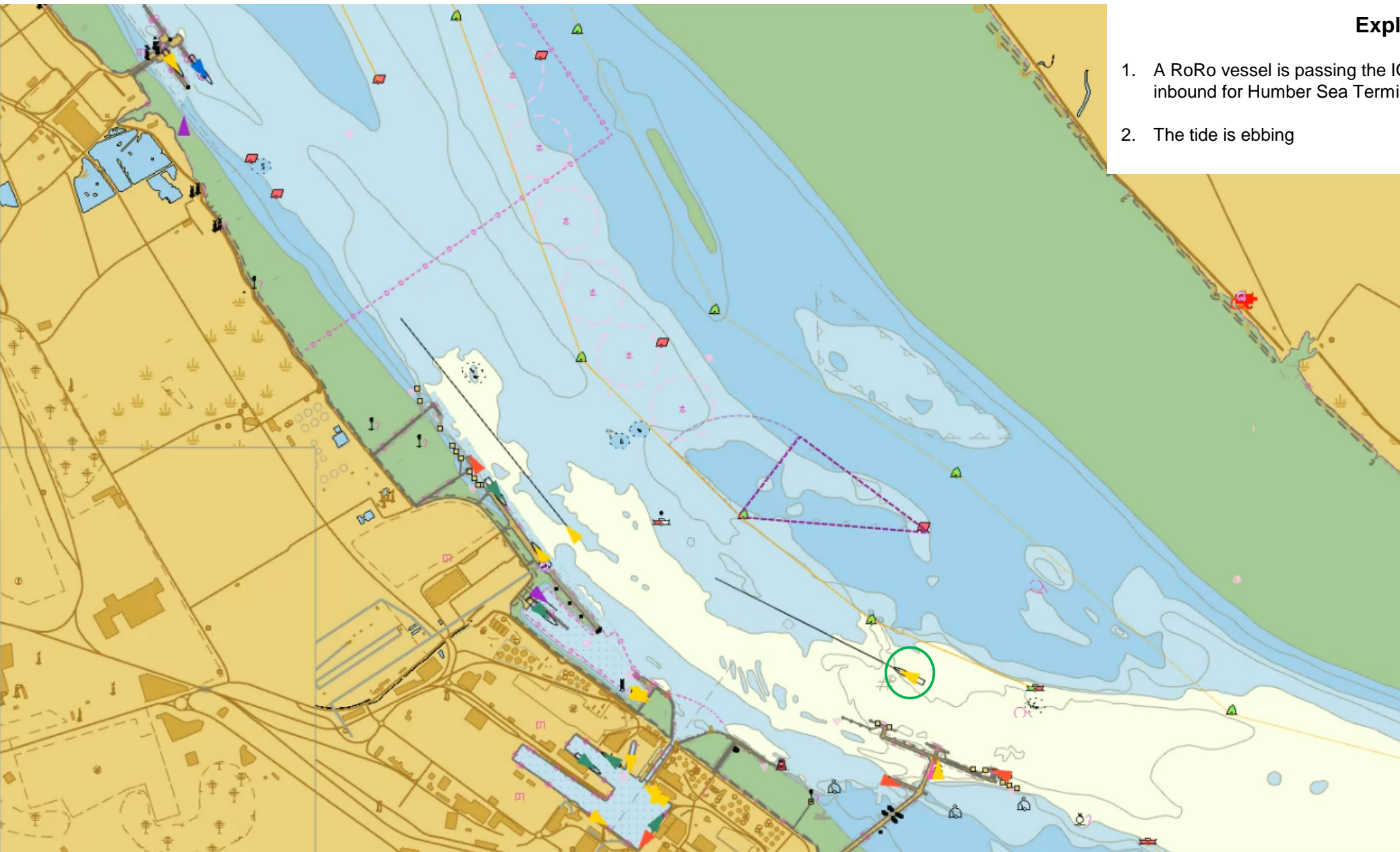
AM HW +1.5Hrs

Explanation

There are no vessel movements in the Immingham area at this time. The tide is ebbing



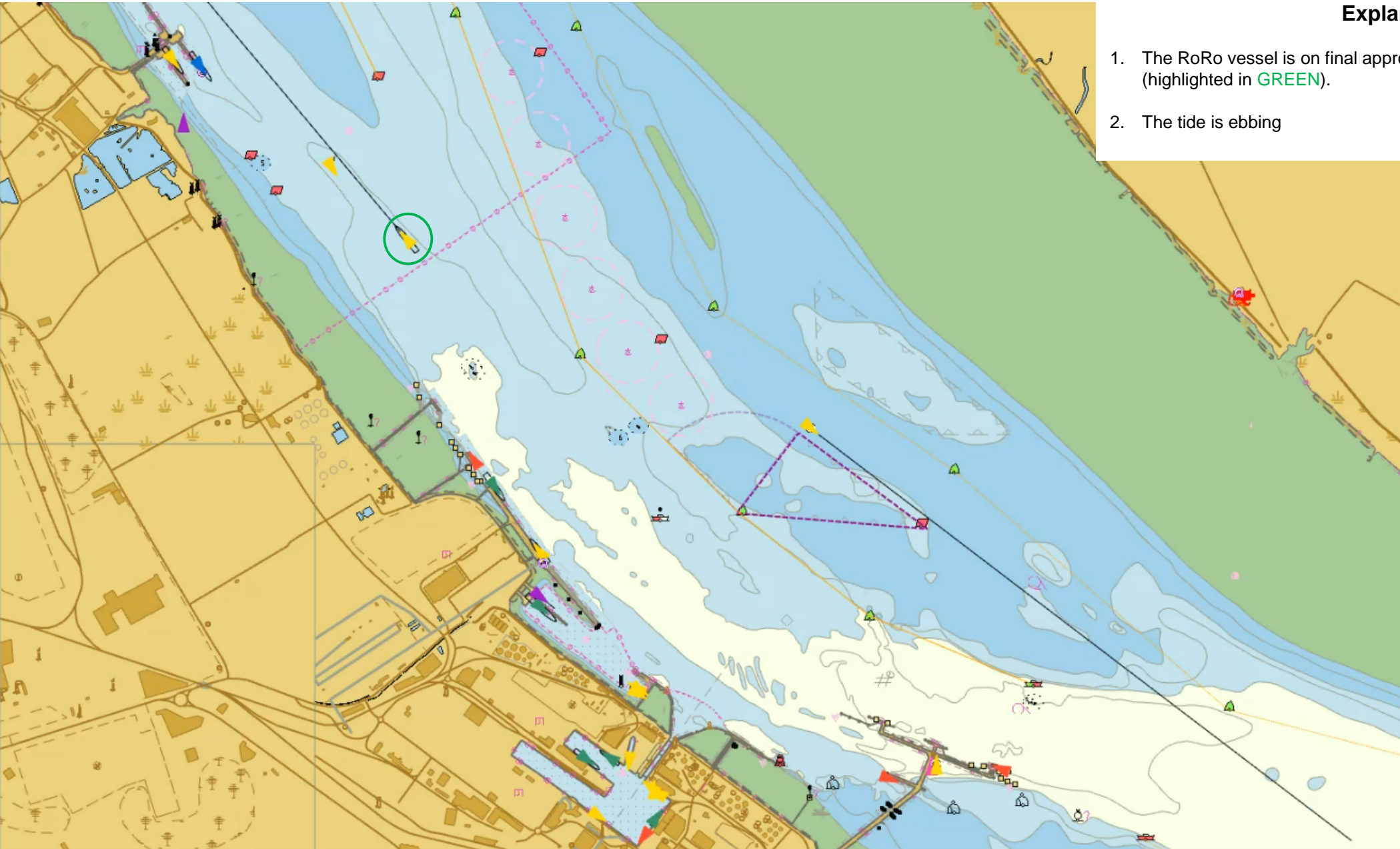
AM HW +1.75Hrs



Explanation

1. A RoRo vessel is passing the IOT in the main navigational channel inbound for Humber Sea Terminal (highlighted in GREEN).
2. The tide is ebbing

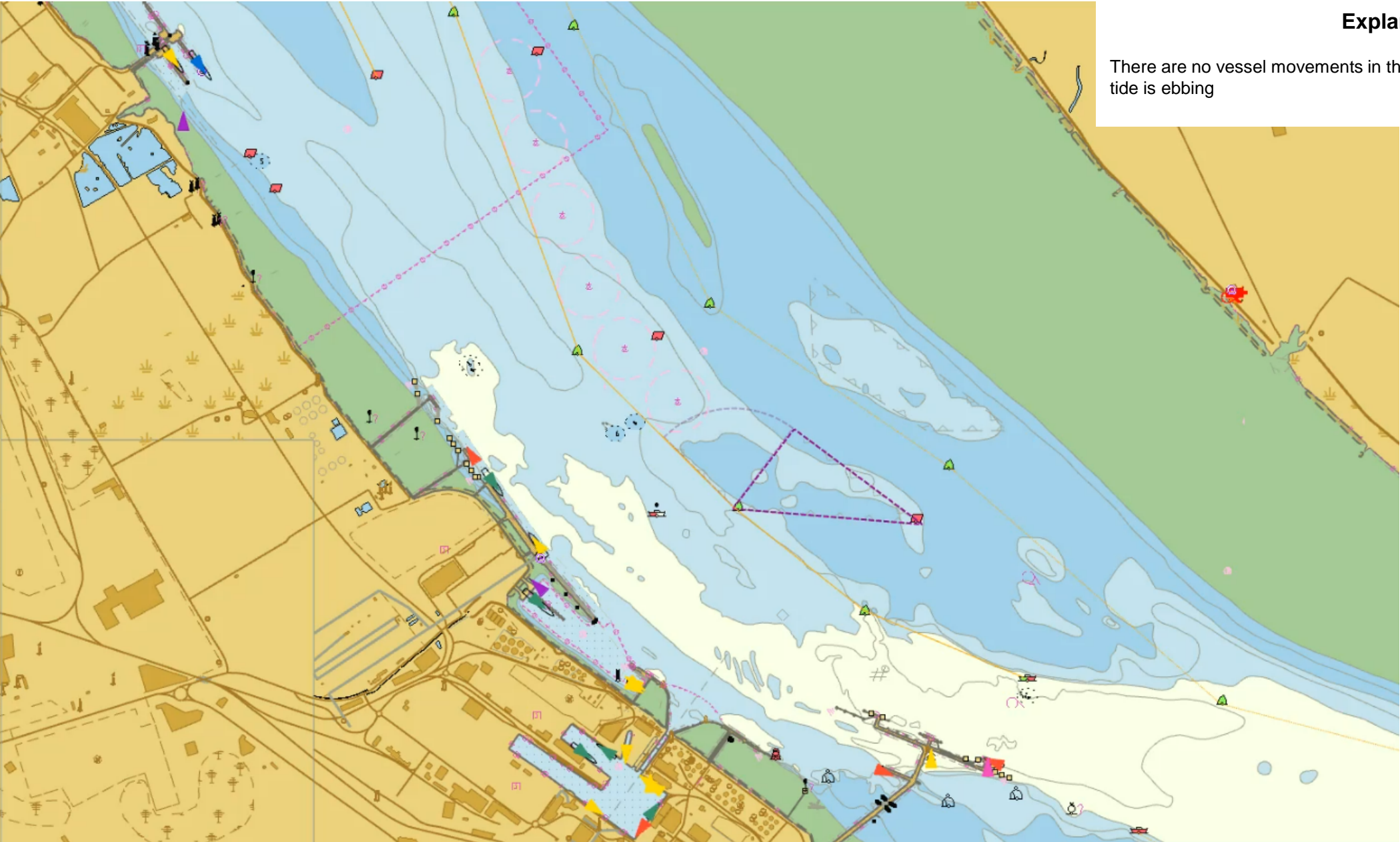
AM HW +2Hrs



Explanation

1. The RoRo vessel is on final approach for Humber Sea Terminal (highlighted in GREEN).
2. The tide is ebbing

AM HW +2.25Hrs



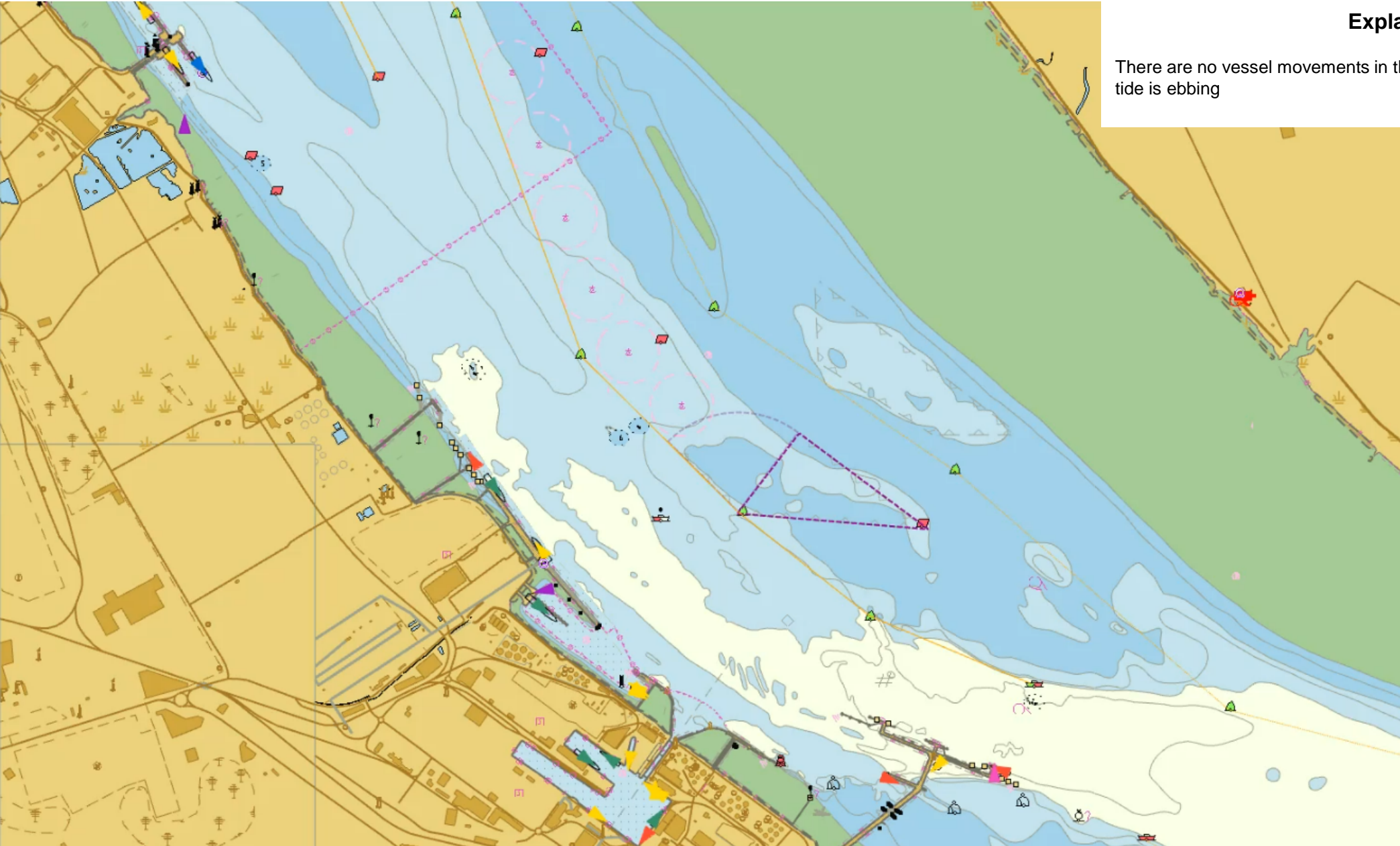
Explanation

There are no vessel movements in the Immingham area at this time. The tide is ebbing

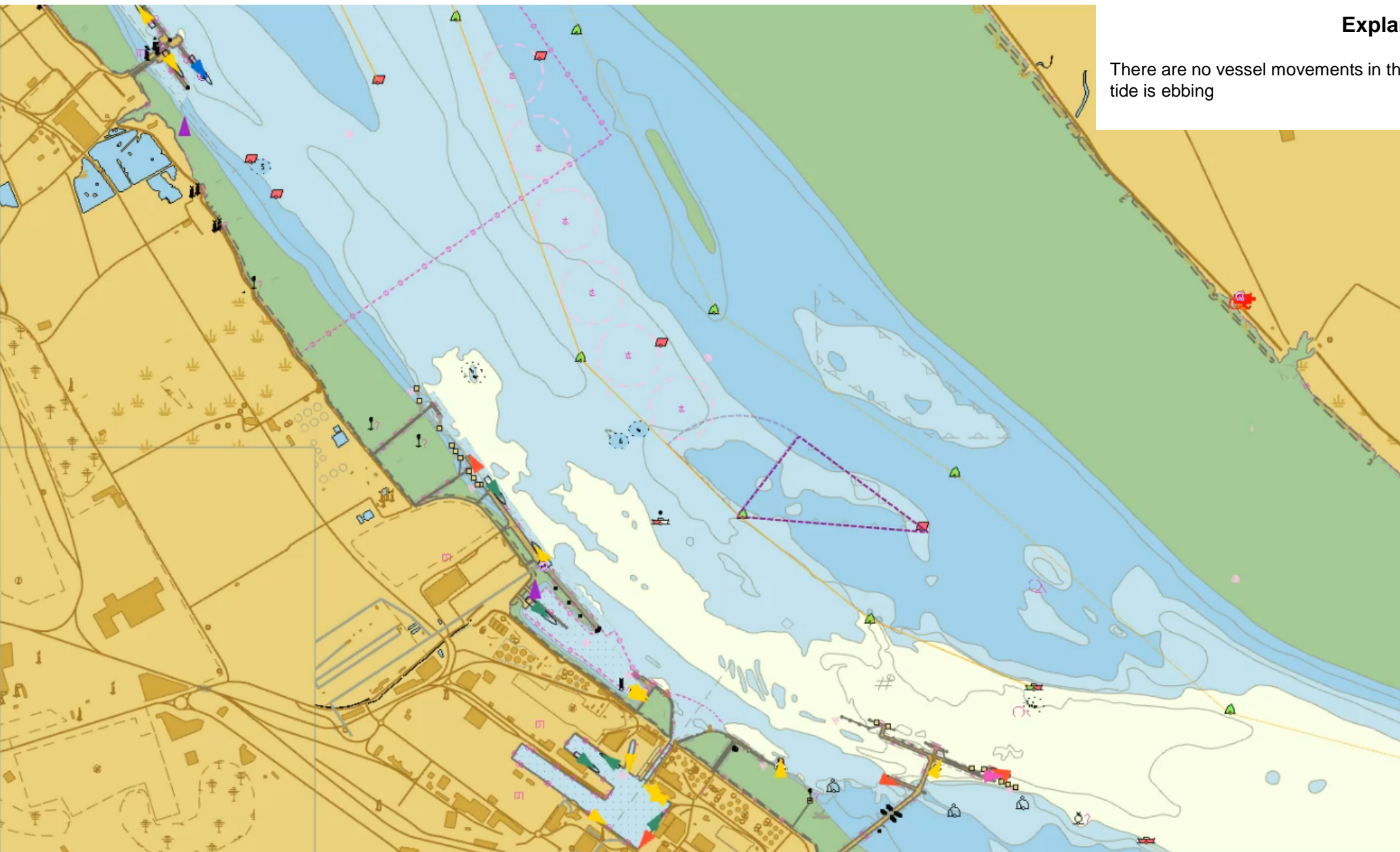
AM HW +2.5Hrs

Explanation

There are no vessel movements in the Immingham area at this time. The tide is ebbing



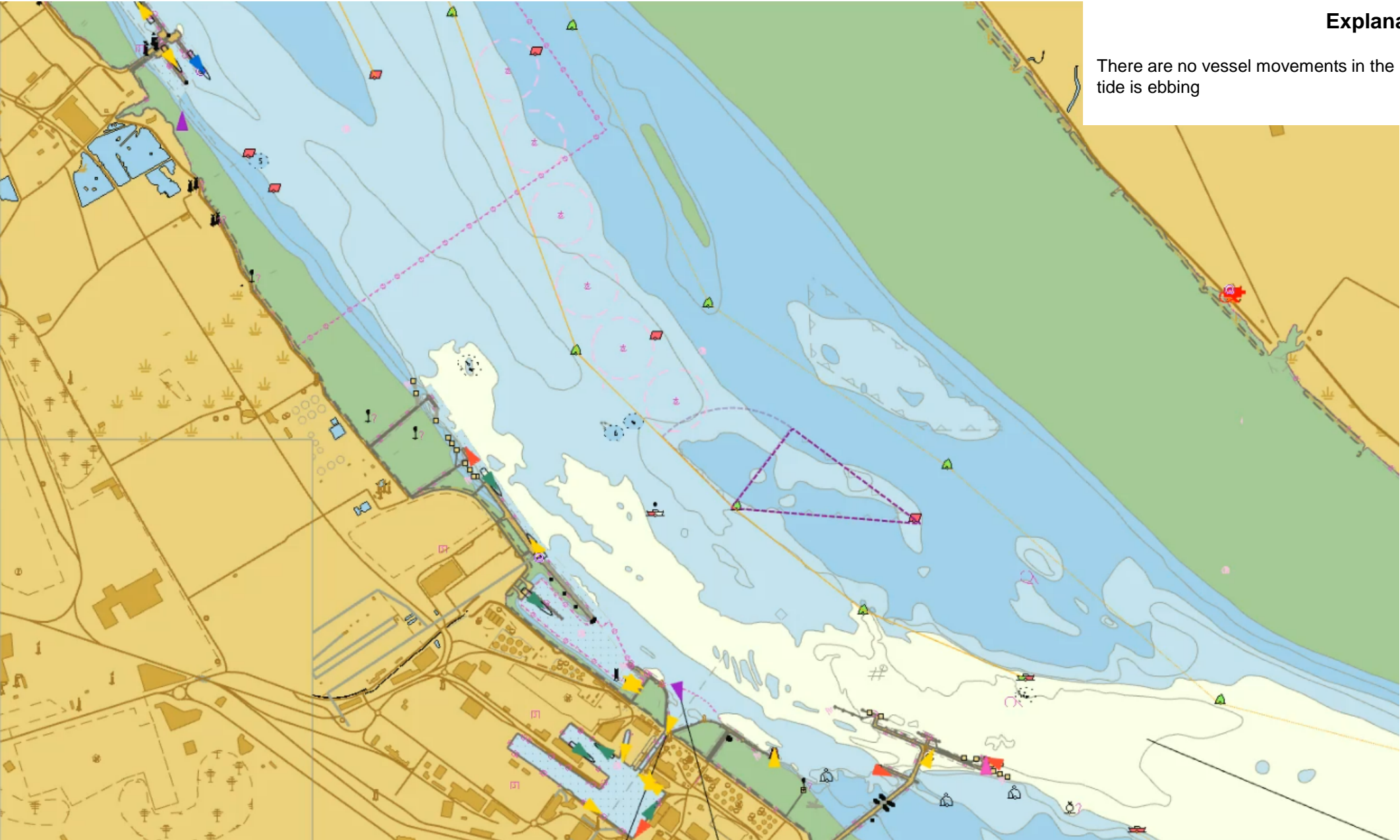
AM HW +2.75Hrs



Explanation

There are no vessel movements in the Immingham area at this time. The tide is ebbing

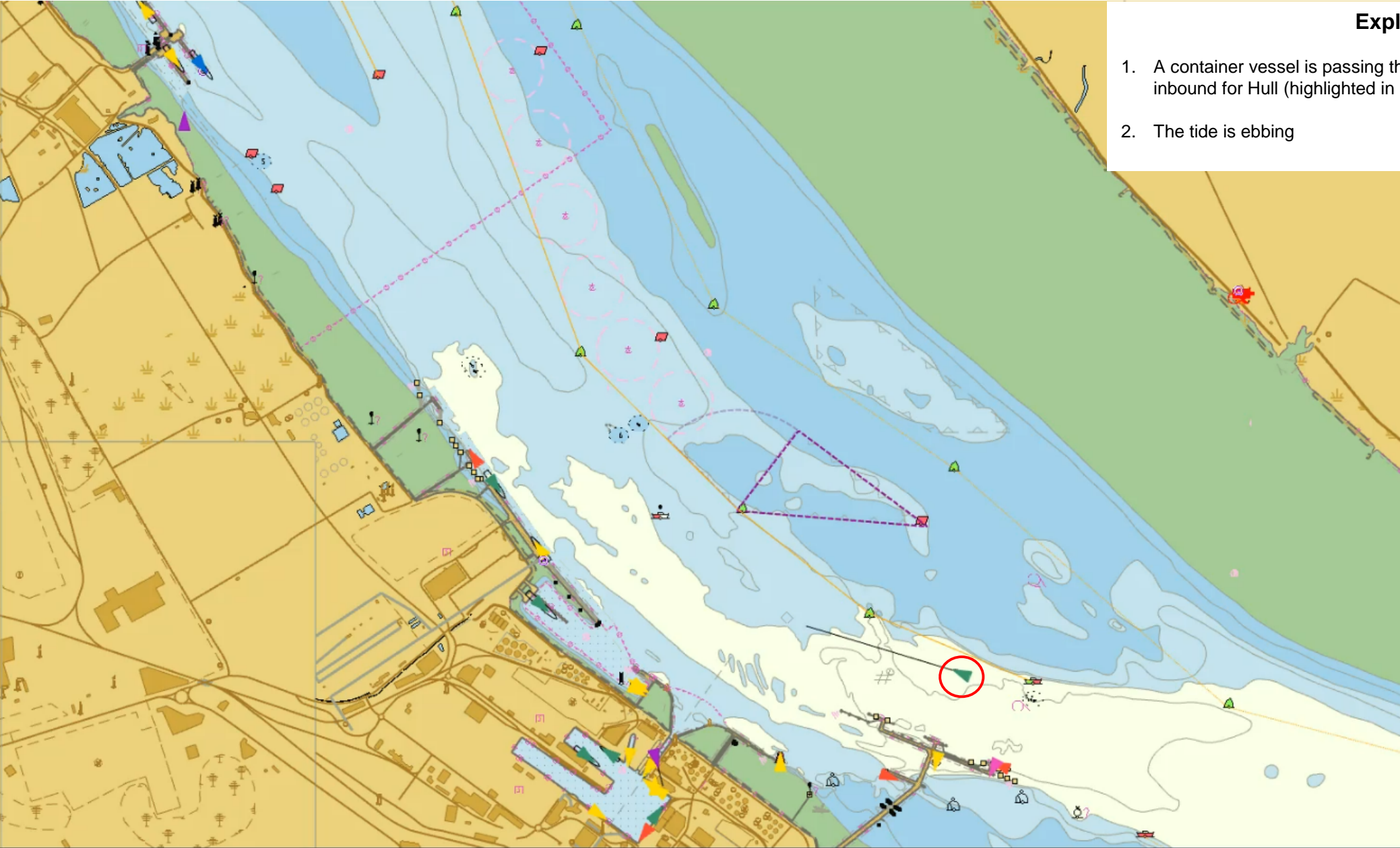
AM HW +3Hrs



Explanation

There are no vessel movements in the Immingham area at this time. The tide is ebbing

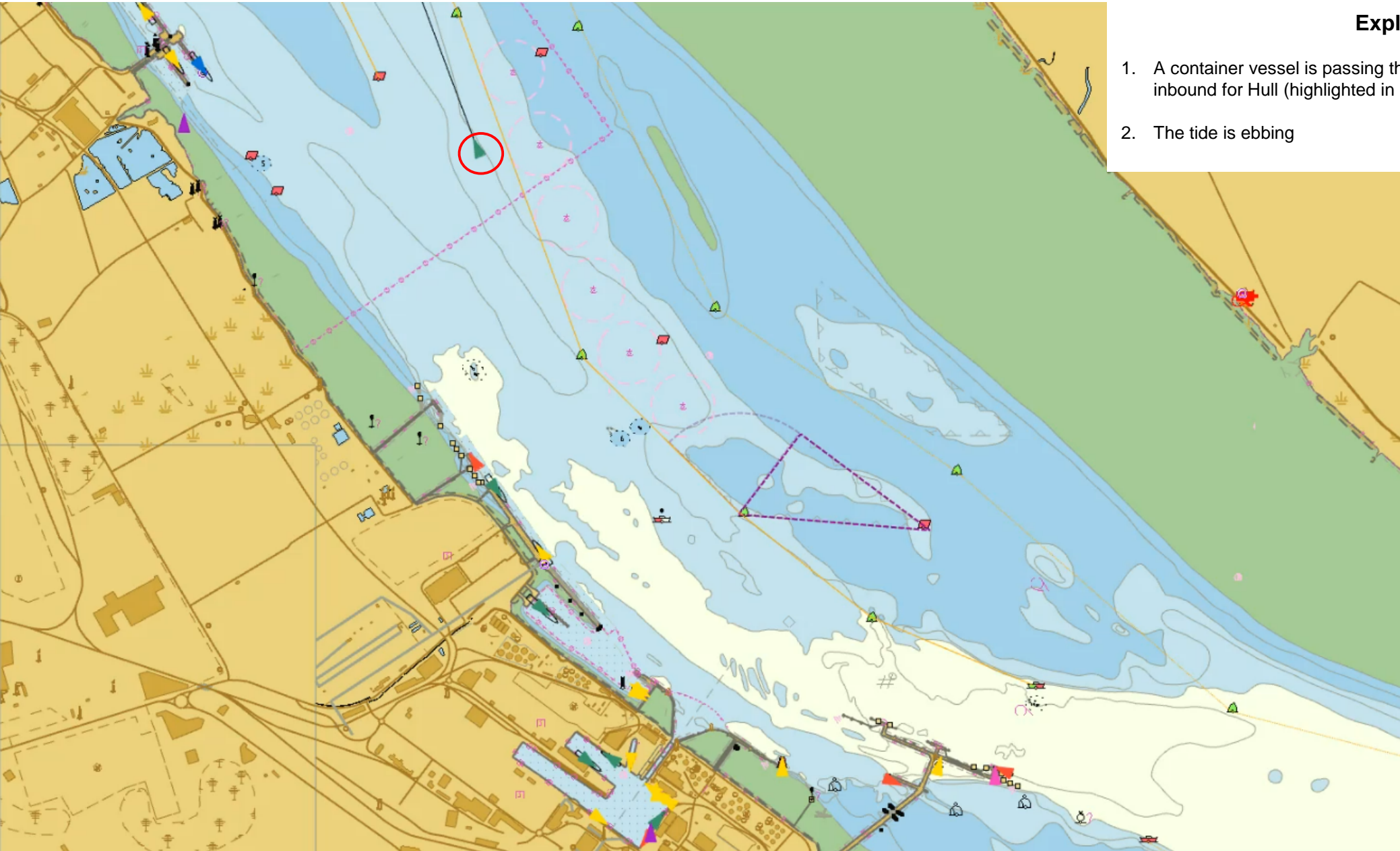
AM HW +3.25Hrs



Explanation

1. A container vessel is passing the IOT in the main navigational channel inbound for Hull (highlighted in RED)
2. The tide is ebbing

AM HW +3.5Hrs



Explanation

1. A container vessel is passing the IOT in the main navigational channel inbound for Hull (highlighted in RED)
2. The tide is ebbing

AM HW +3.75Hrs

Explanation

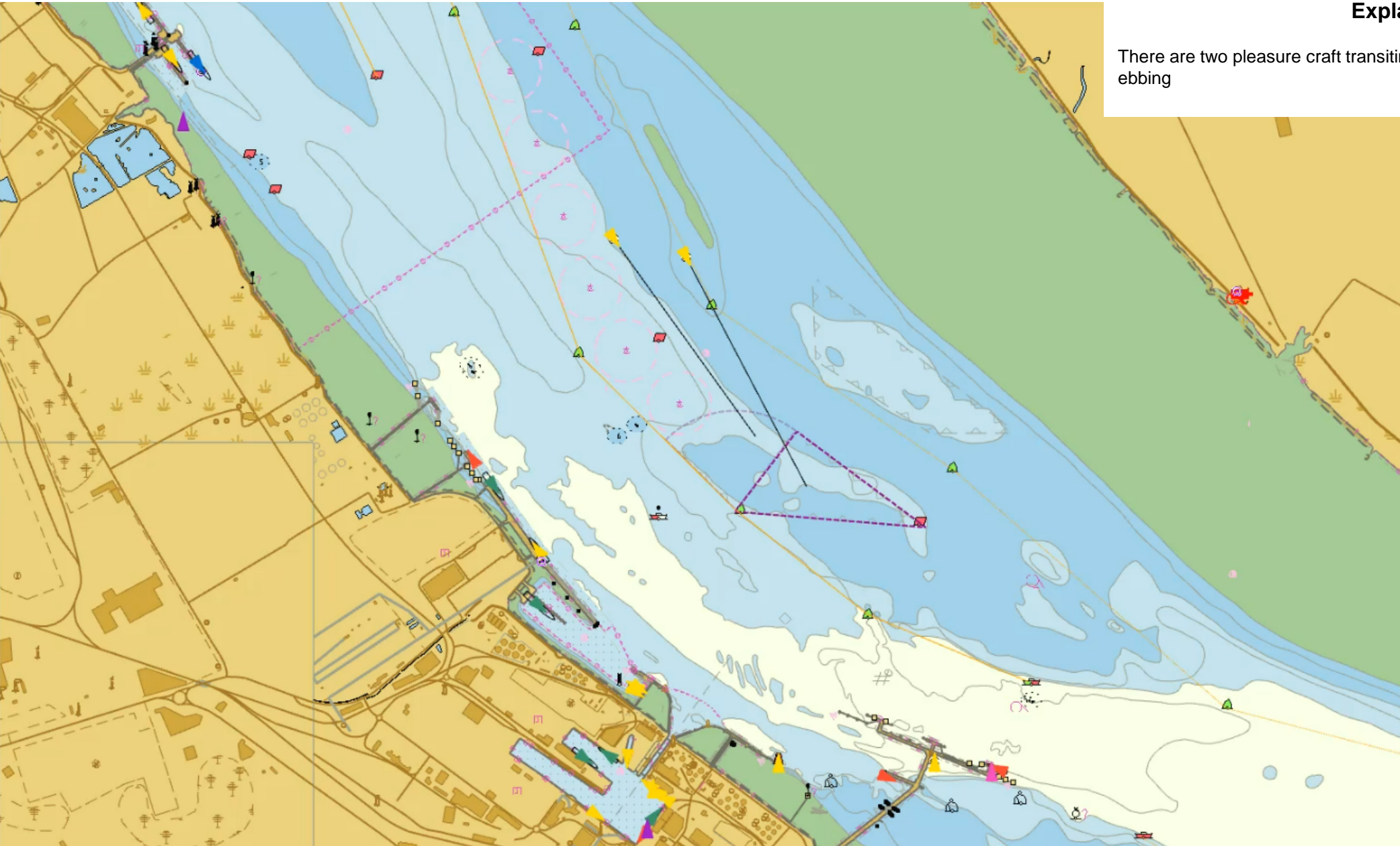
There are no vessel movements in the Immingham area at this time. The tide is ebbing



AM HW +4Hrs

Explanation

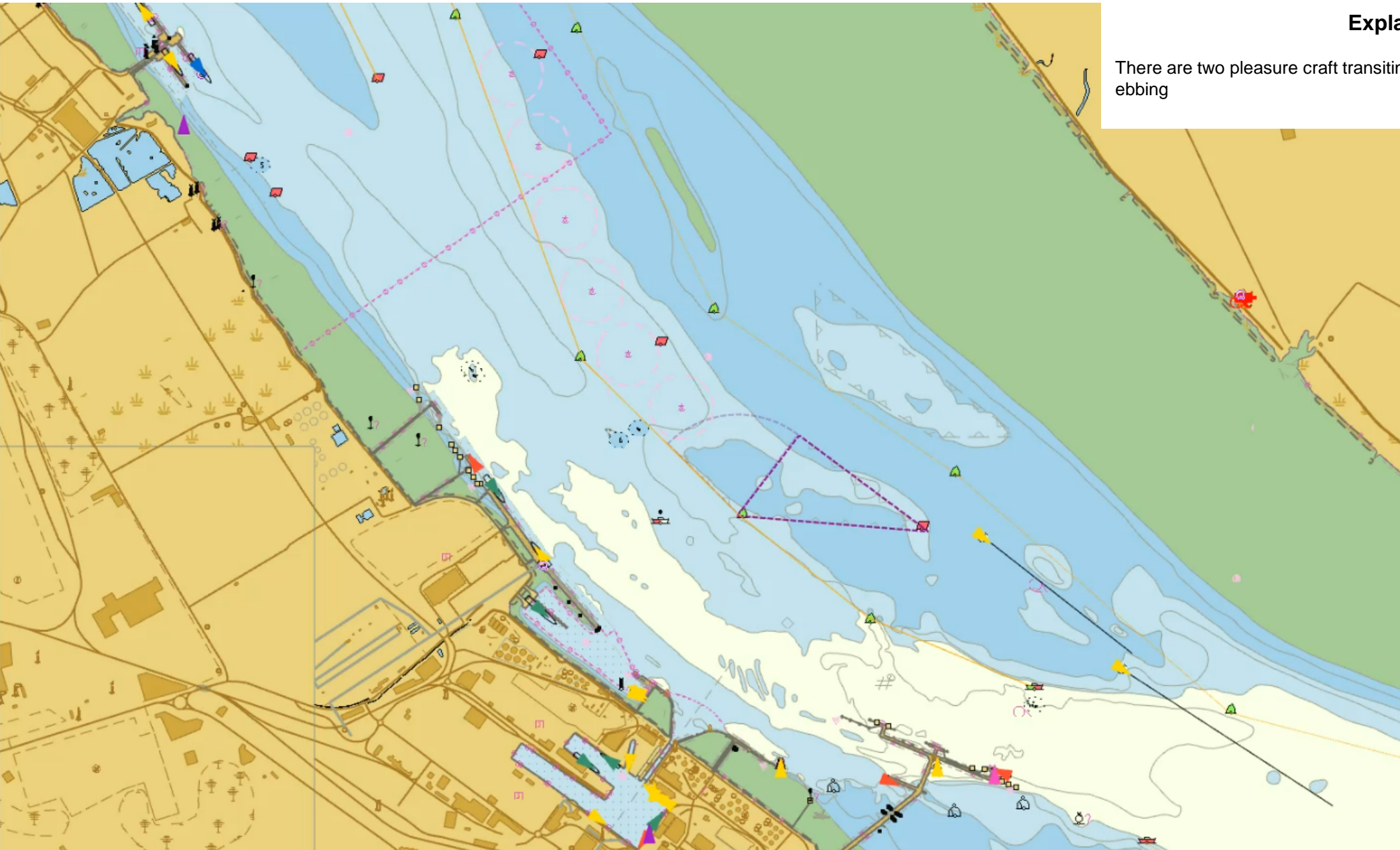
There are two pleasure craft transiting the Foul Holme channel. The tide is ebbing



AM HW +4.25Hrs

Explanation

There are two pleasure craft transiting the Foul Holme channel. The tide is ebbing



AM HW +4.5Hrs

Explanation

There is a pleasure craft transiting the Foul Holme channel and tugboats departing Immingham to service an inbound vessel. The tide is ebbing

