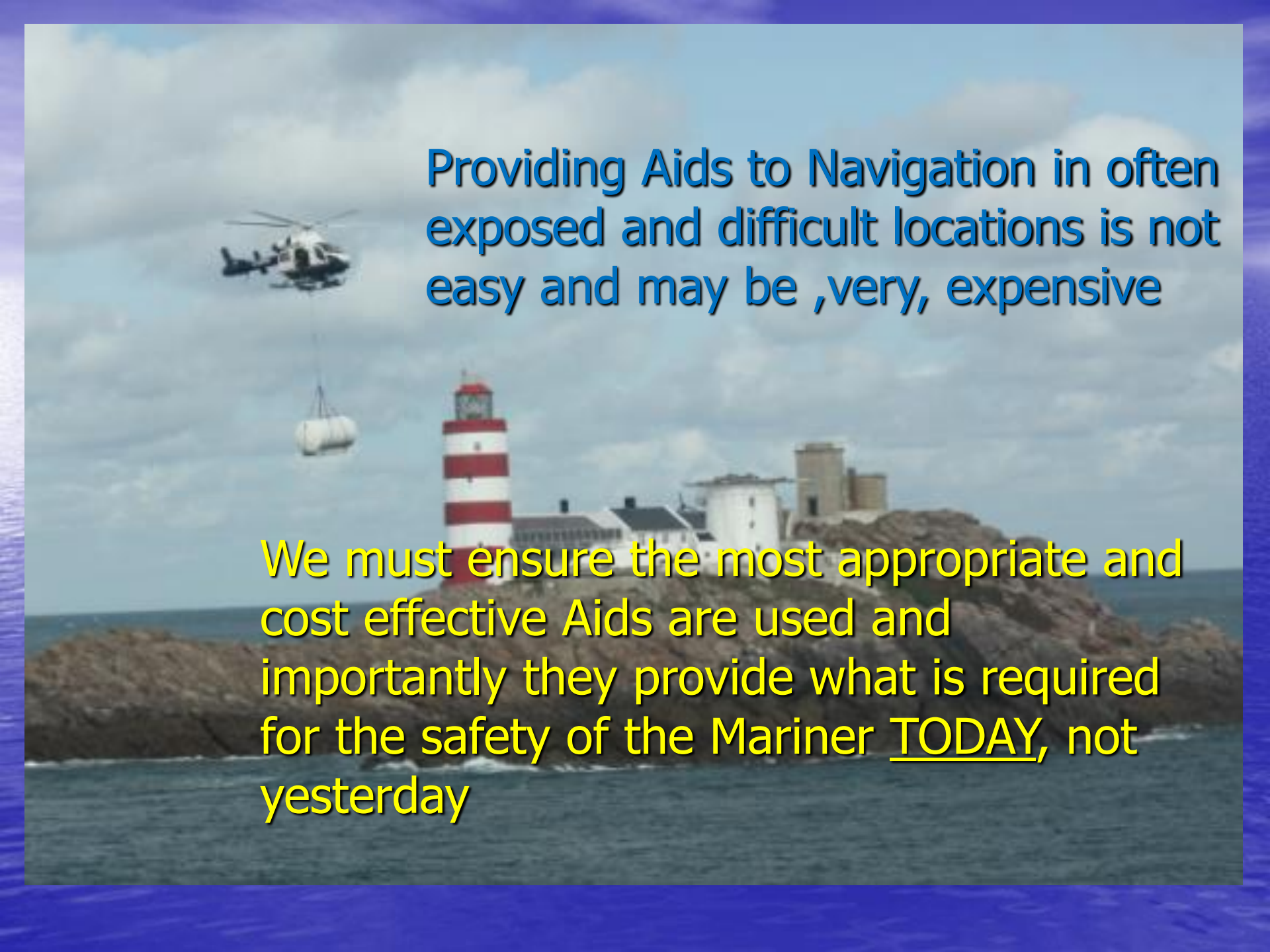


Regional Case Study of the use of IALA Risk Management Tools

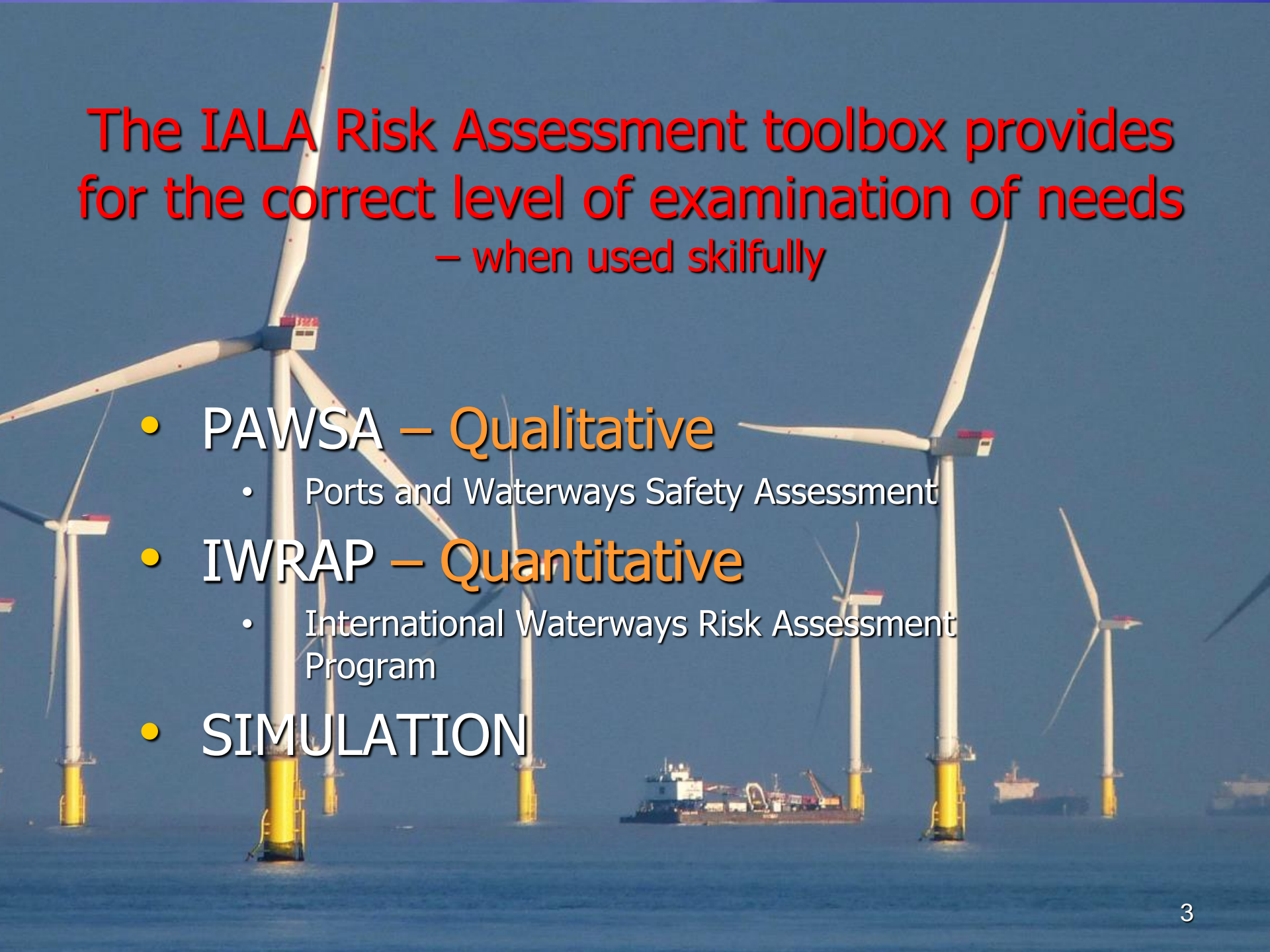
Roger Barker
Trinity House -London



A helicopter is shown in flight, lifting a large white buoy with a red stripe. In the background, a red and white striped lighthouse stands on a rocky island. The sky is blue with scattered white clouds. The text is overlaid on the upper right portion of the image.

Providing Aids to Navigation in often exposed and difficult locations is not easy and may be ,very, expensive

We must ensure the most appropriate and cost effective Aids are used and importantly they provide what is required for the safety of the Mariner TODAY, not yesterday



The IALA Risk Assessment toolbox provides
for the correct level of examination of needs
– when used skilfully

- PAWSA – Qualitative
 - Ports and Waterways Safety Assessment
- IWRAP – Quantitative
 - International Waterways Risk Assessment Program
- SIMULATION

The Risk Reading and Education

IALA Guidelines

On Risk Management

Editorial

May 2009
Edition 1 / Dec 2008



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E-mail: contact@iala-aism.org

IALA World Wide Academy

Model Course for Aids to Navigation

LEVEL 1 Aids to Navigation Manager Training

Use of IALA Risk Management Tools

(IALA WWA.L1.3)

Edition 1

May 2013



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e-mail: contact@iala-aism.org Internet: www.iala-aism.org

IALA Recommendation O-134

on the

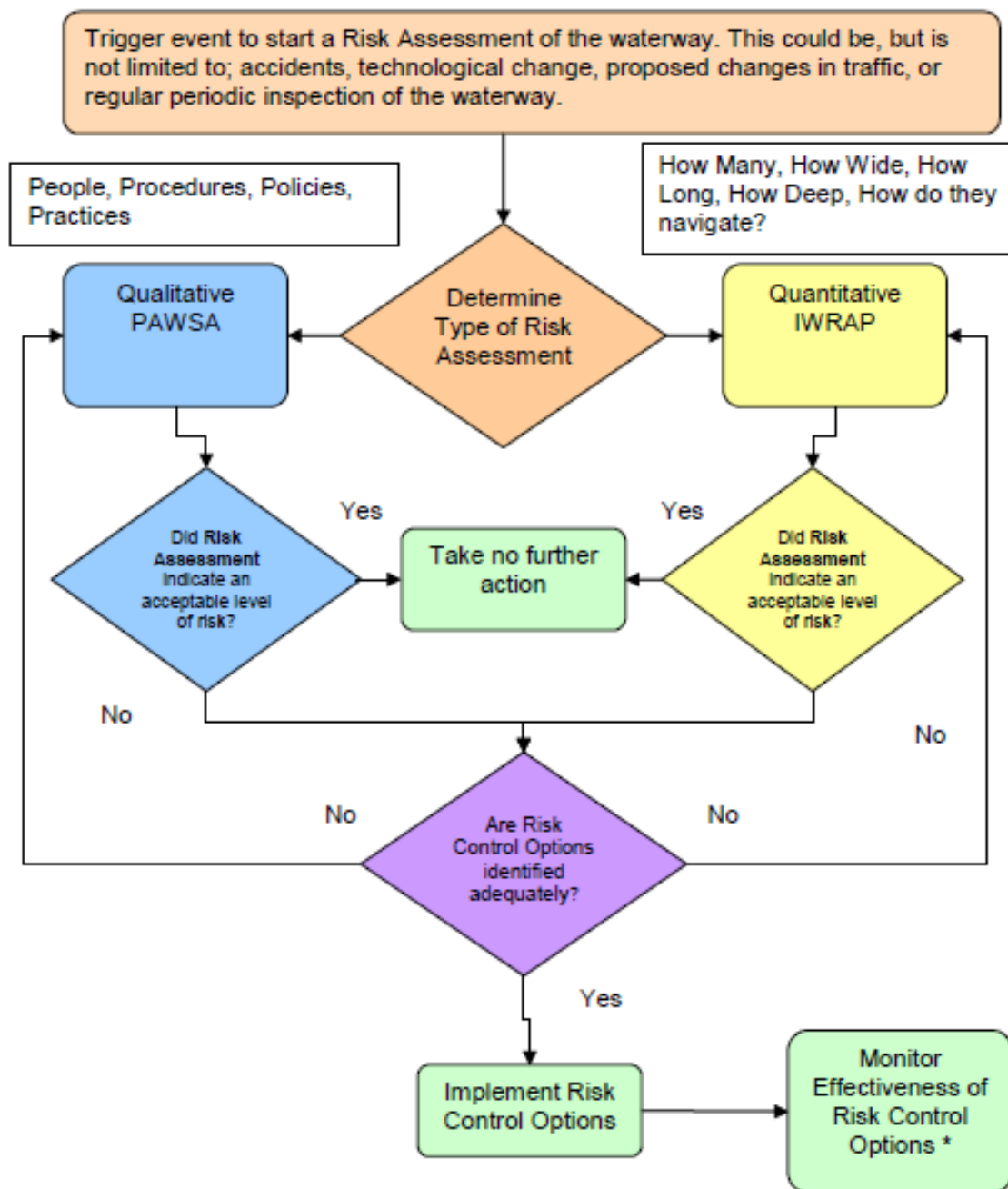
IALA Risk Management Tool for Ports and Restricted Waterways

Edition 2

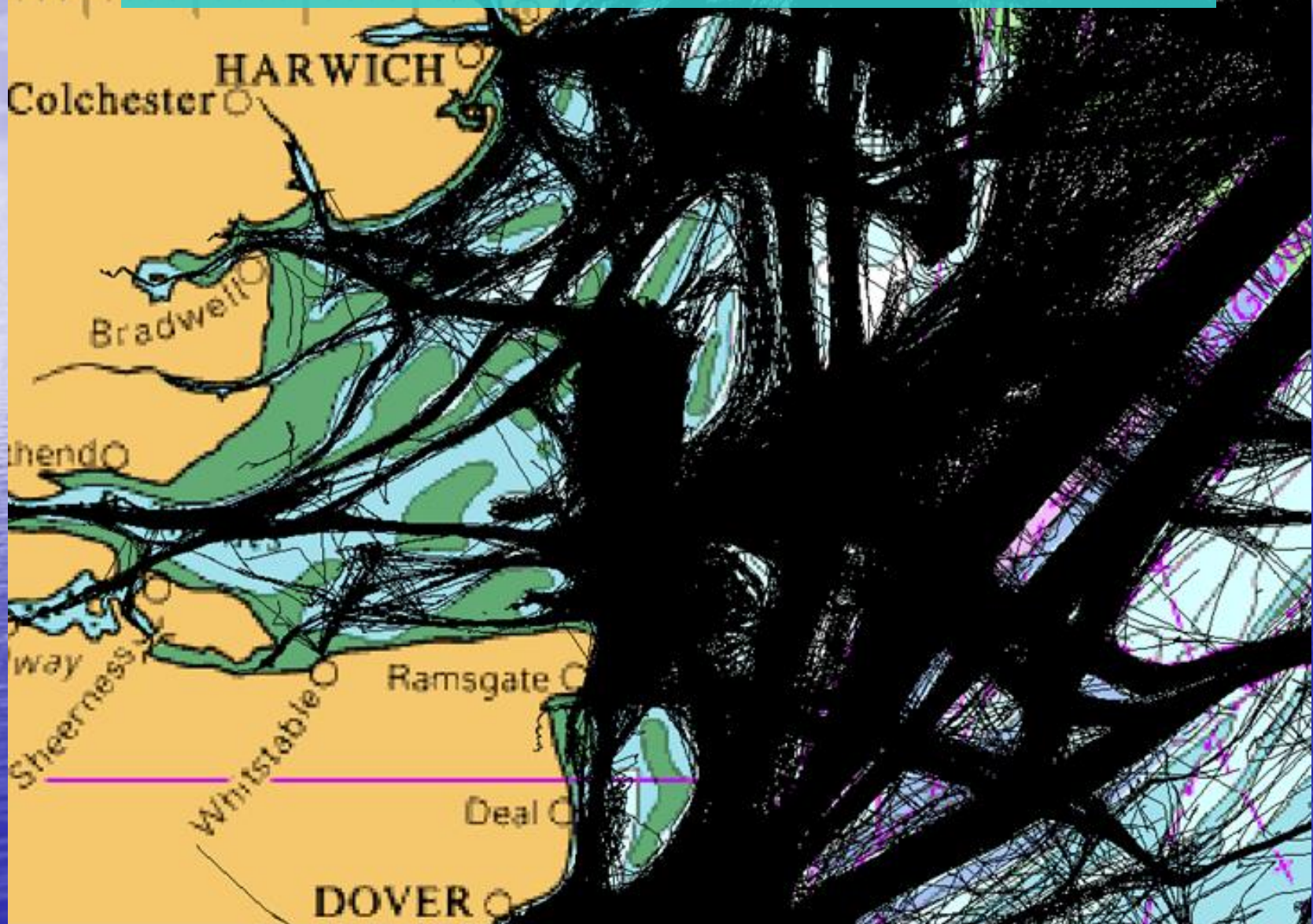
May 2009
Edition 1.1 / May 2008

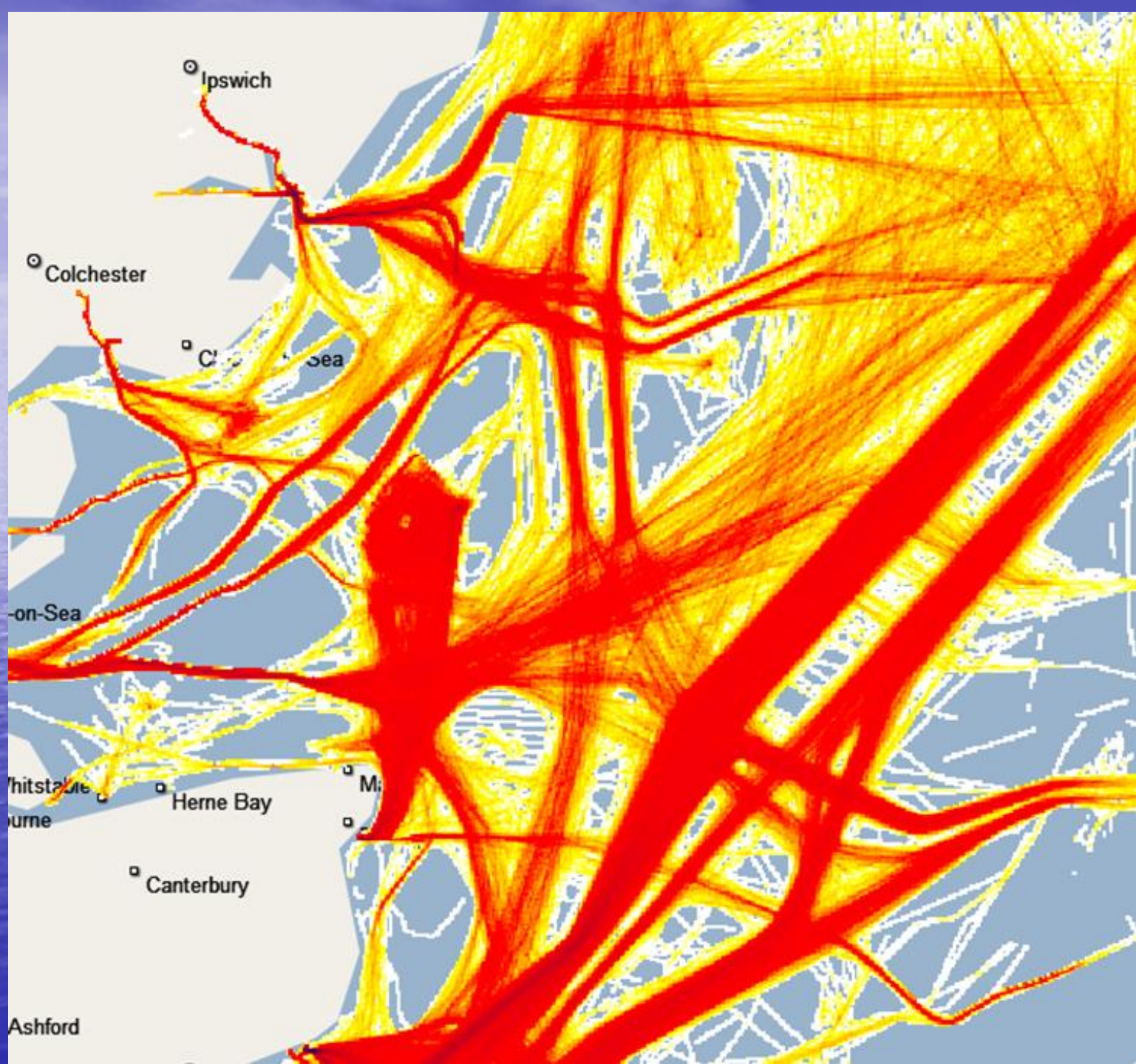


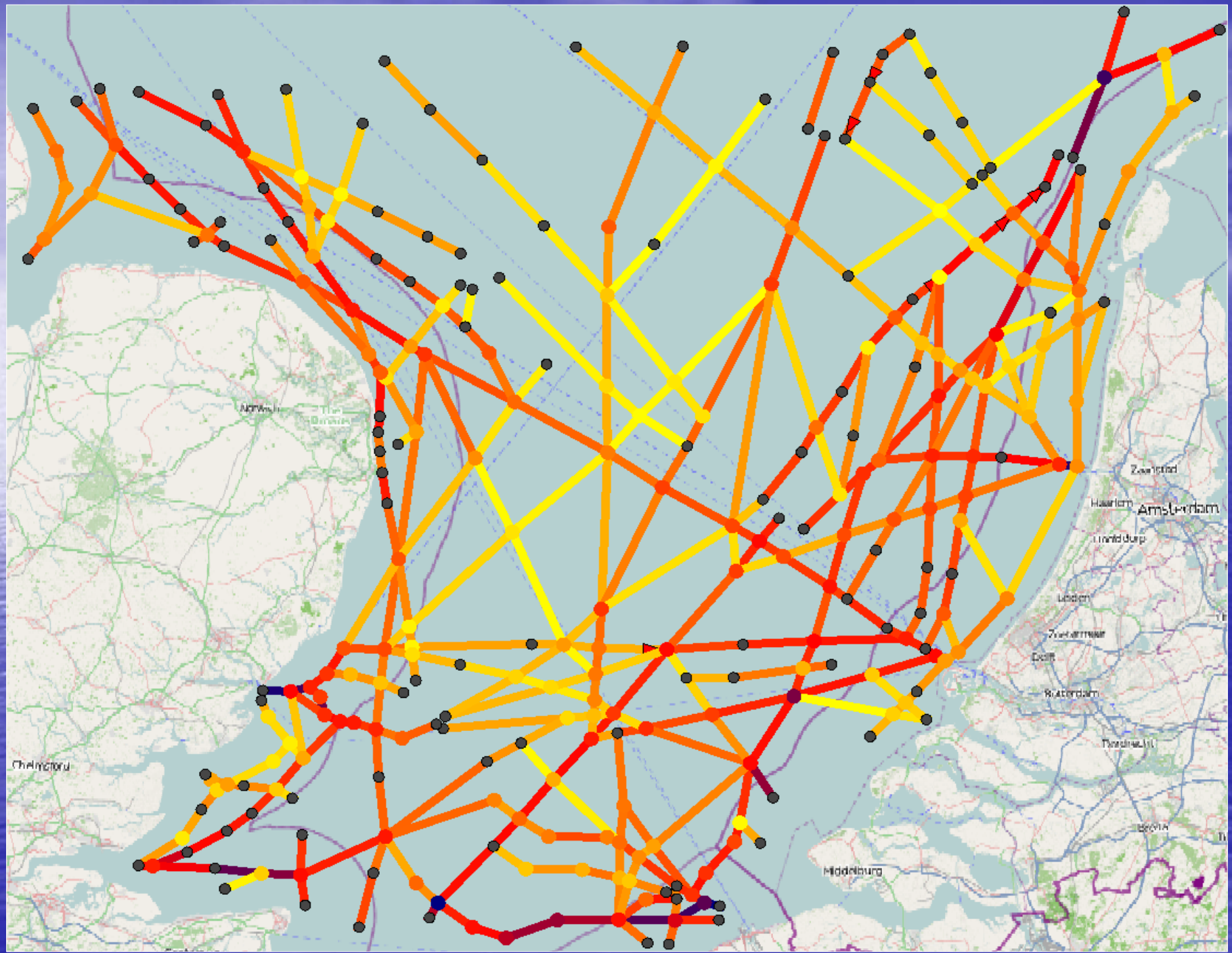
20ter, rue Schnapper, 78100
Saint Germain en Laye, France
Telephone: +33 1 34 51 70 01 Fax: +33 1 34 51 82 05
e-mail: iala-aism@wanadoo.fr Internet: www.iala-aism.org



IWRAP & the Density Plot

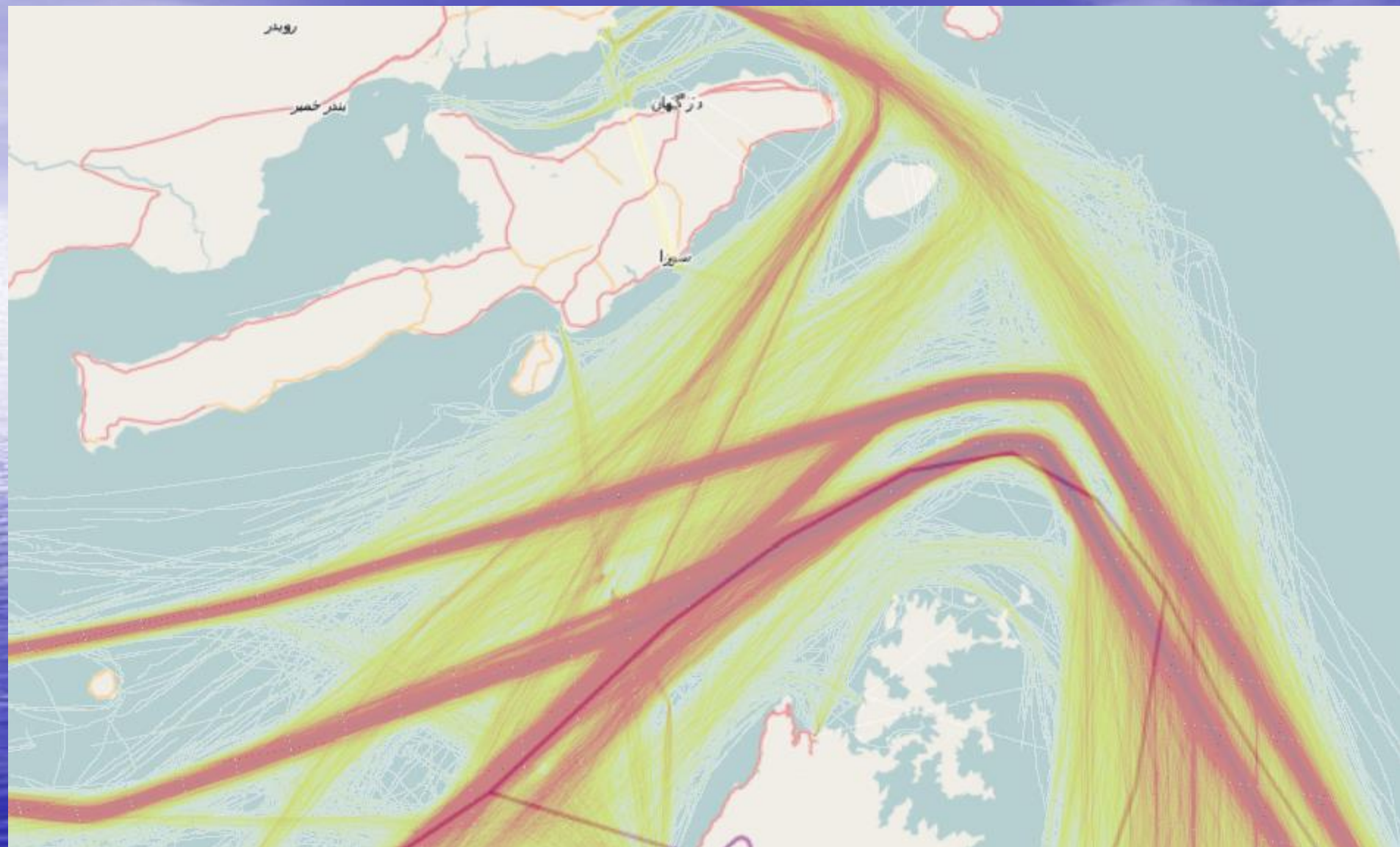


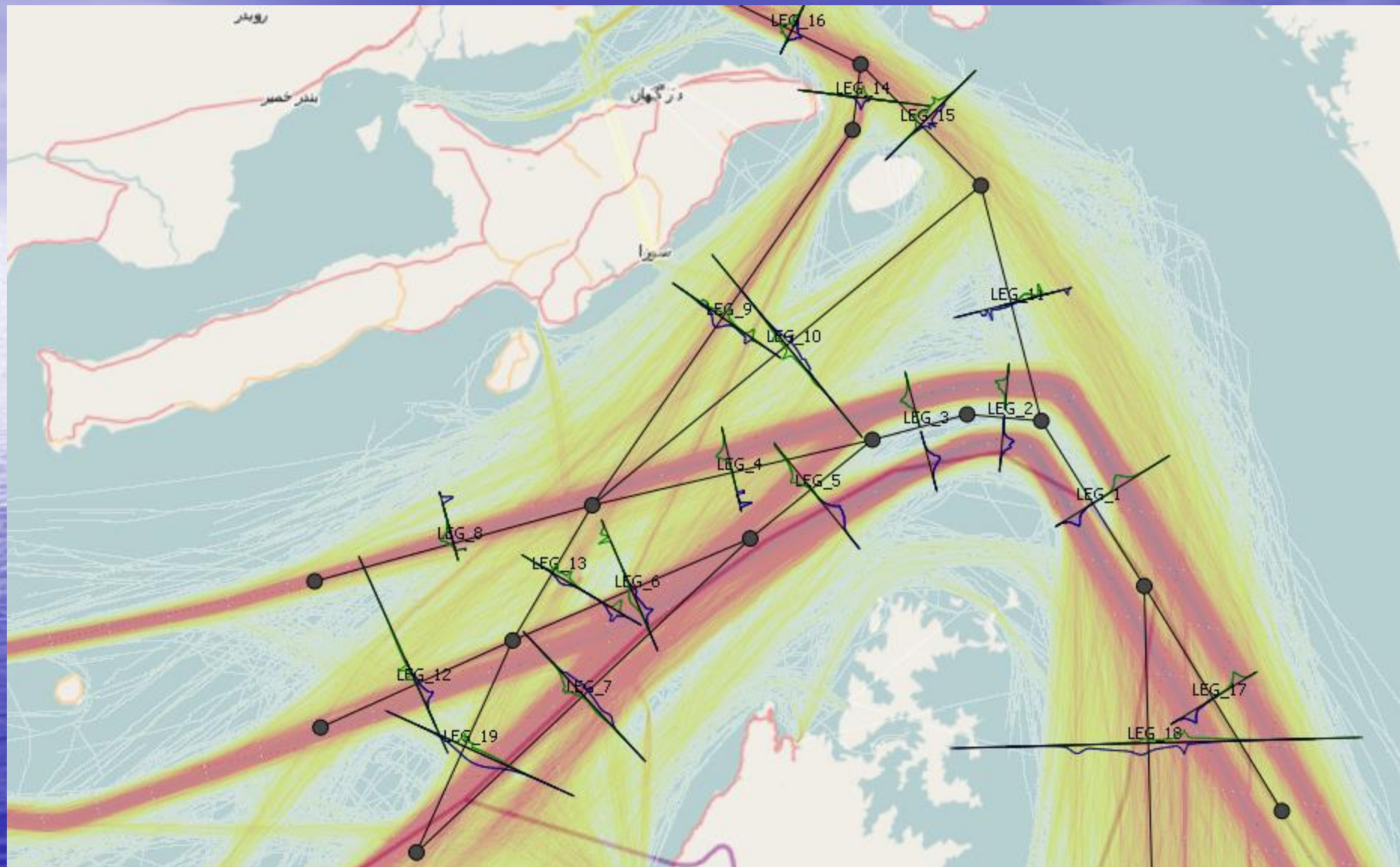


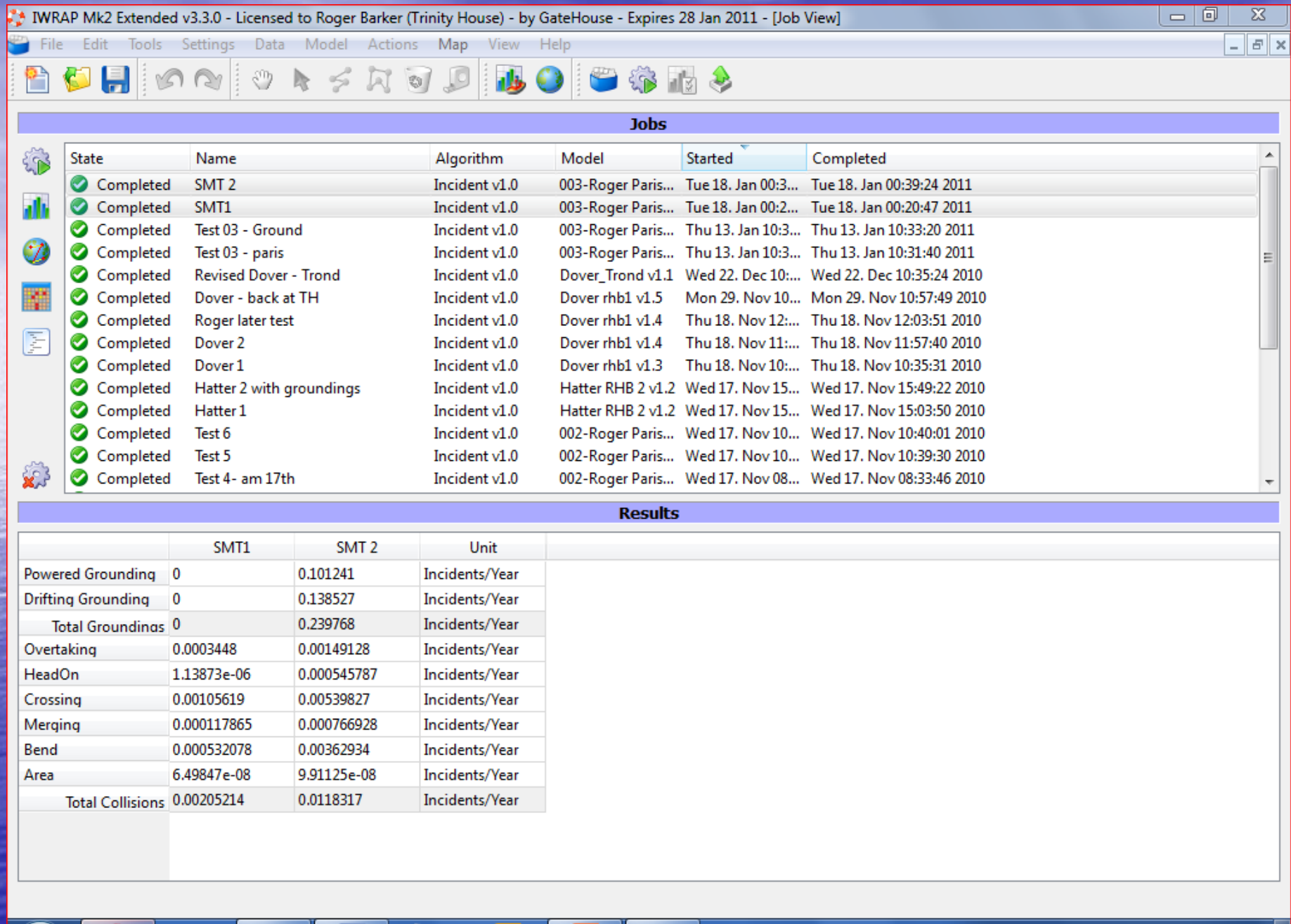


Data Item: Traffic Volume Distribution: Sum Adjusted Frequency:6353 Sum Frequency:6

	products tank	eneral cargo ship	Passenger ship	Fast ferry	Support ship	Pleasure boat	Other ship	Sum
0-25	0	0	0	517	474	4	108	1103
25-50	4	0	0	0	23	0	14	41
50-75	9	14	0	0	0	0	0	23
75-100	47	583	0	0	0	0	37	667
100-125	56	75	0	0	0	0	4	135
125-150	9	992	0	0	225	0	0	1226
150-175	4	568	18	0	0	0	14	604
175-200	0	272	4	0	0	0	0	276
200-225	0	0	178	0	0	0	0	178
225-250	0	37	719	0	0	0	0	756
250-275	0	202	4	0	0	0	0	206
275-300	0	366	70	0	0	0	0	436
300-325	0	169	0	0	0	0	9	178
325-350	0	343	0	0	0	0	14	357
350-375	0	159	0	0	0	0	4	163
375-400	0	4	0	0	0	0	0	4

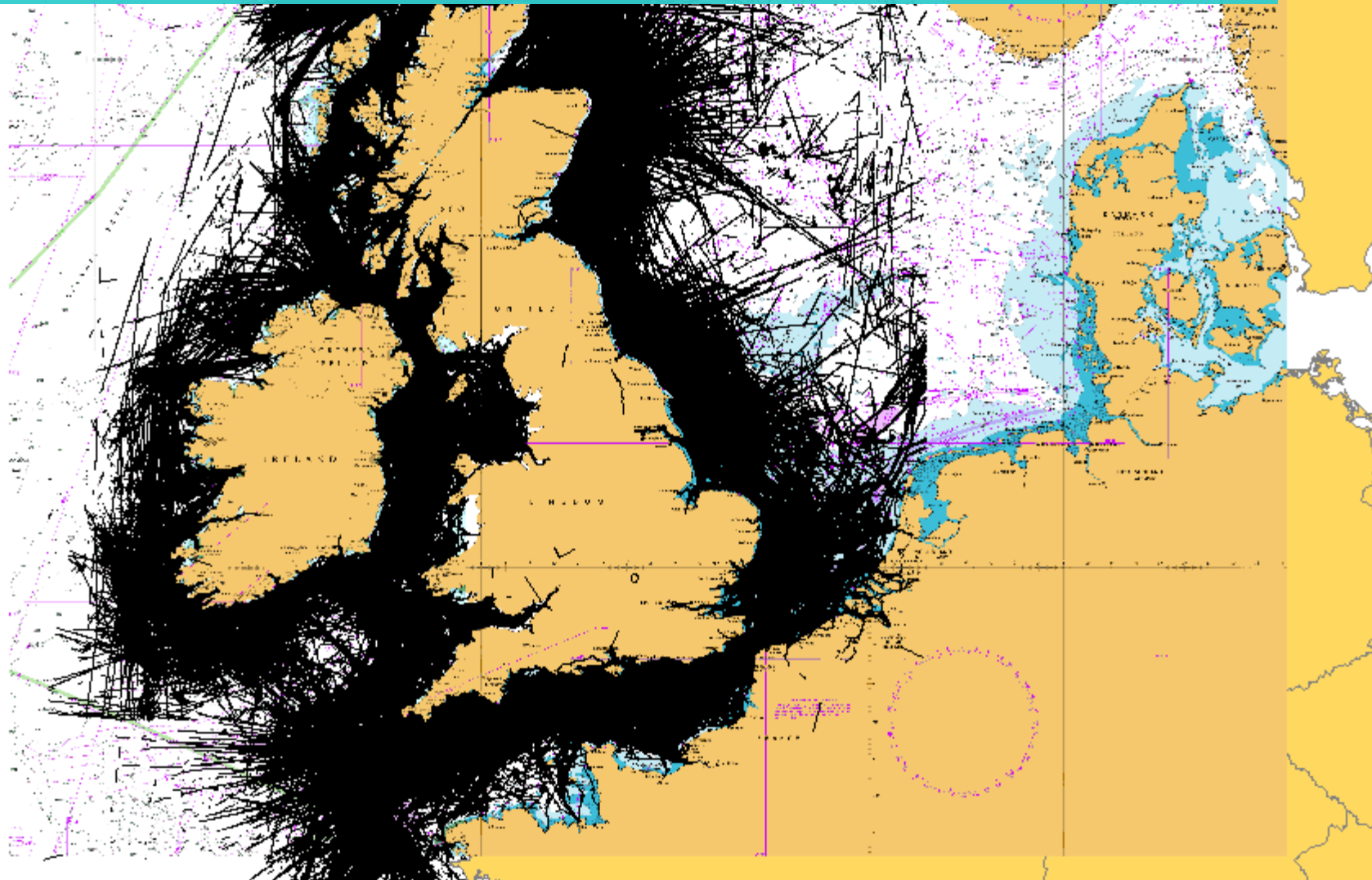




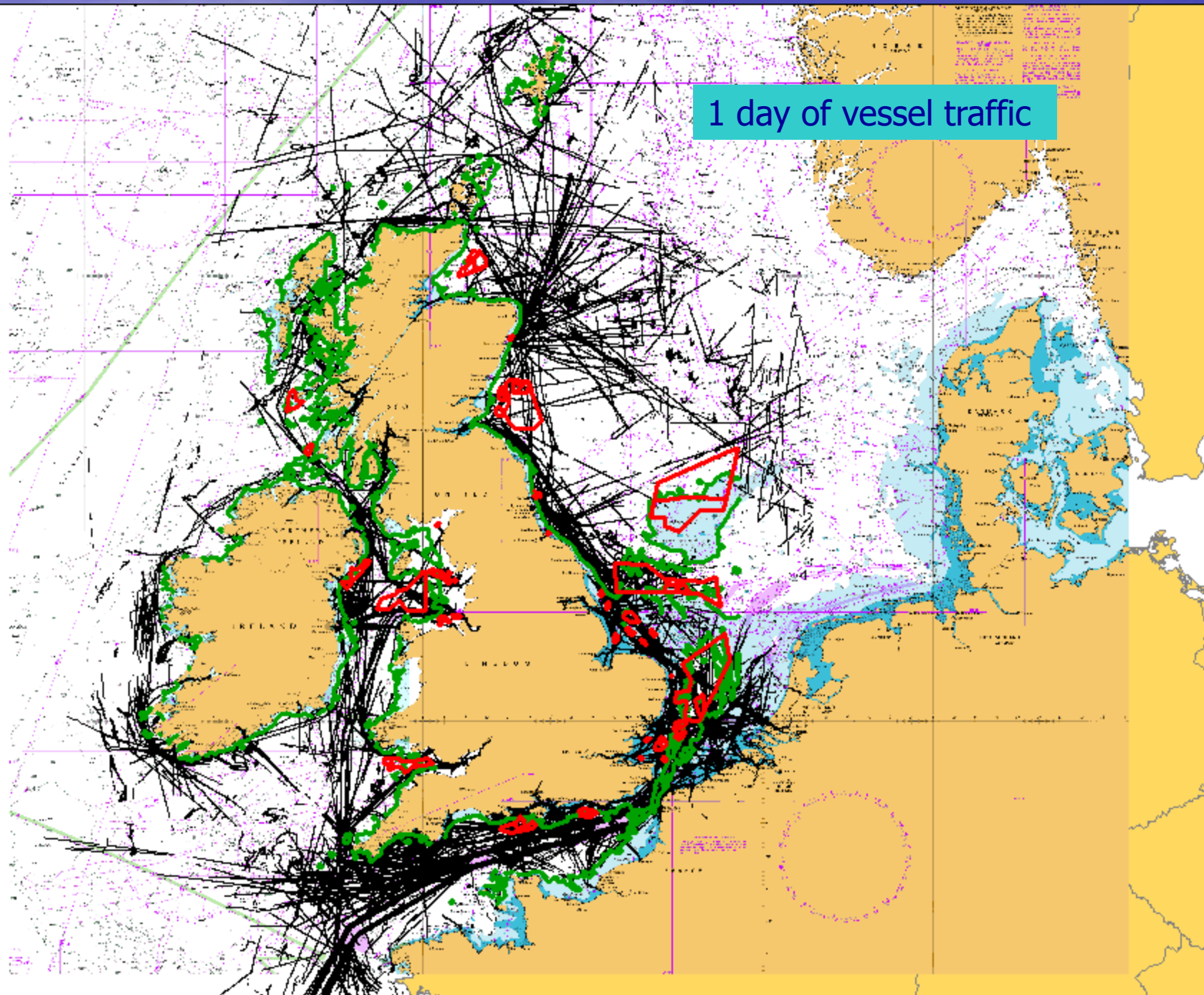


28 days - summer Practicalities

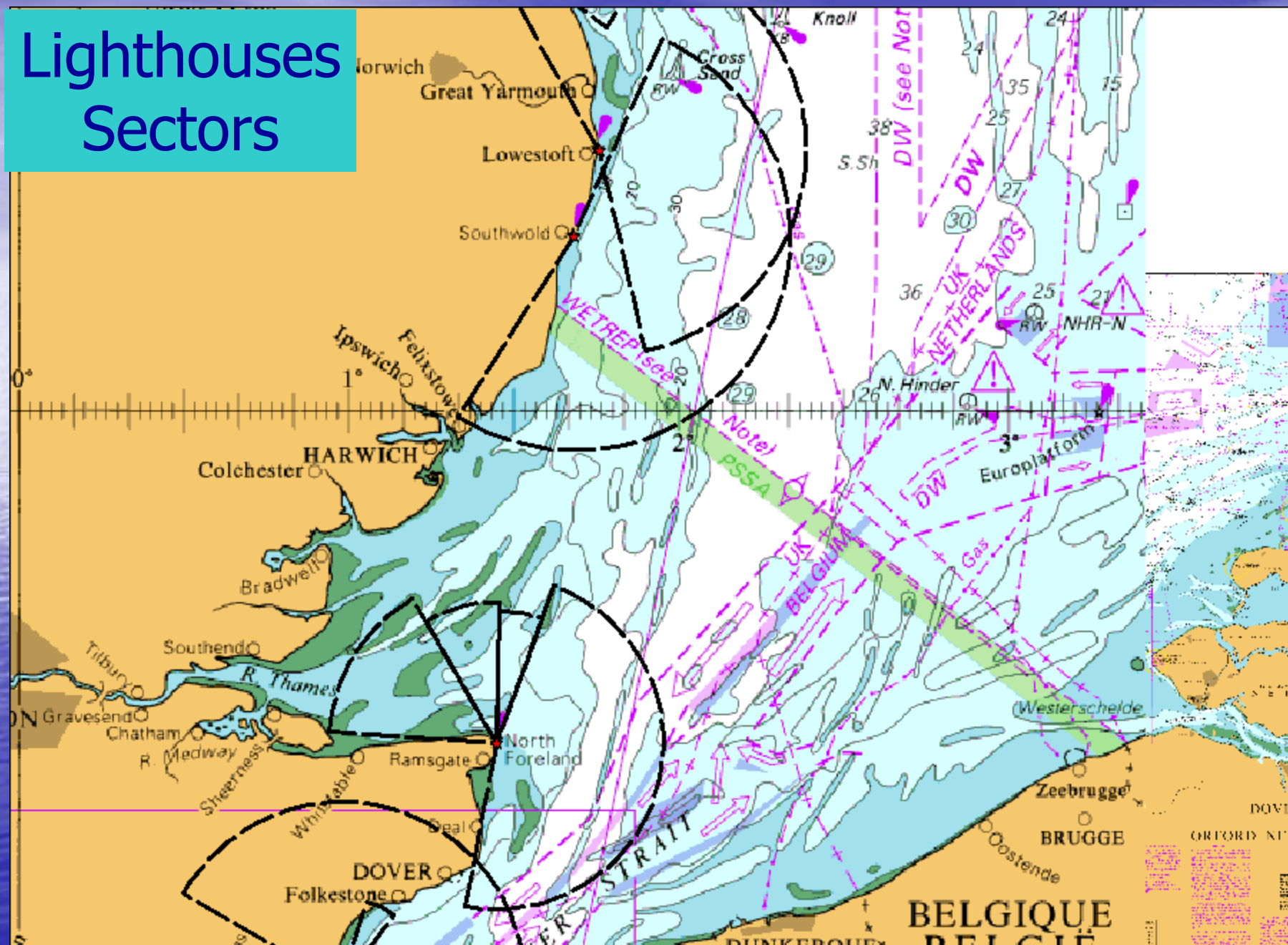
The qualitative assessment



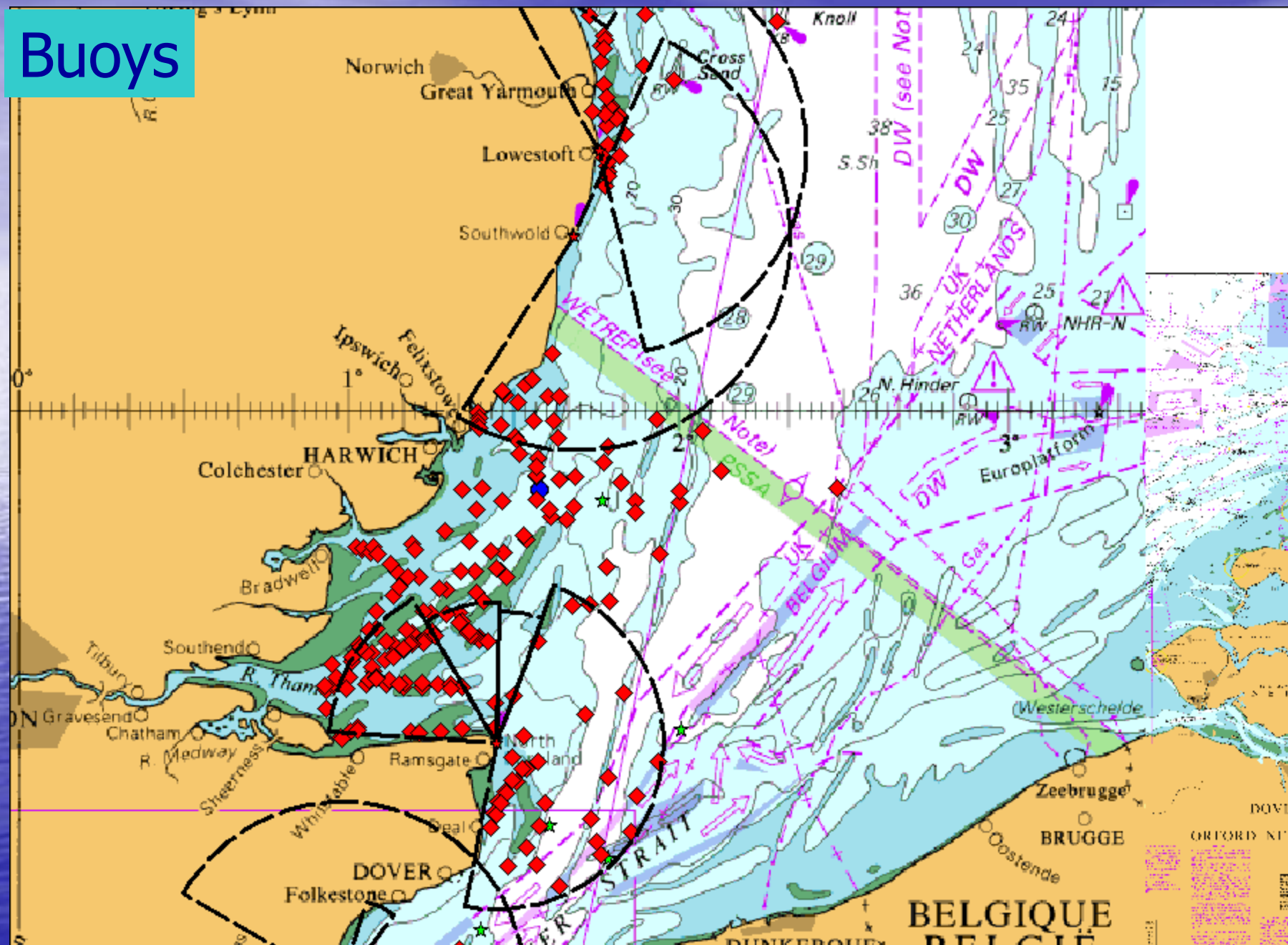
1 day of vessel traffic



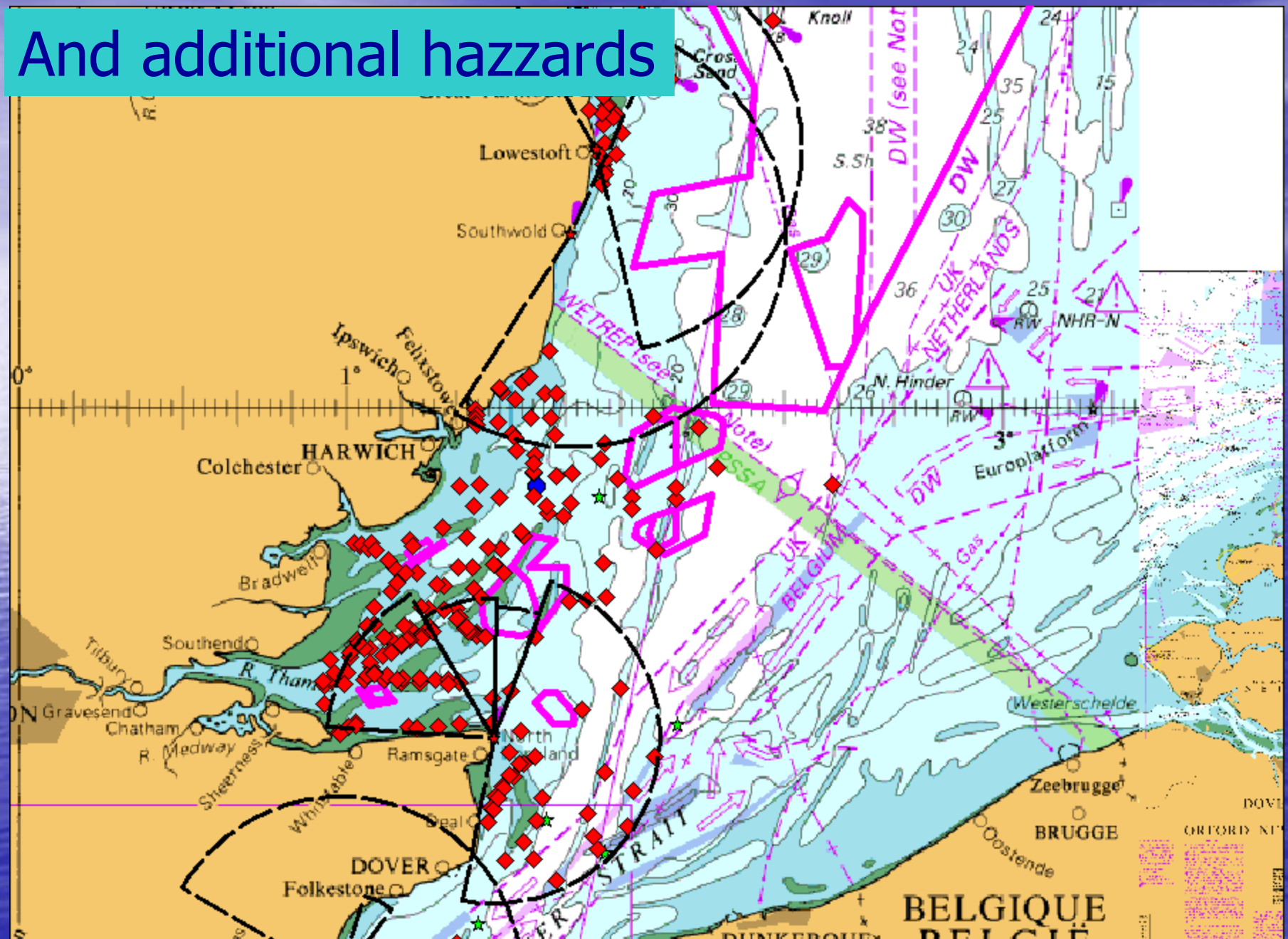
Lighthouses Sectors

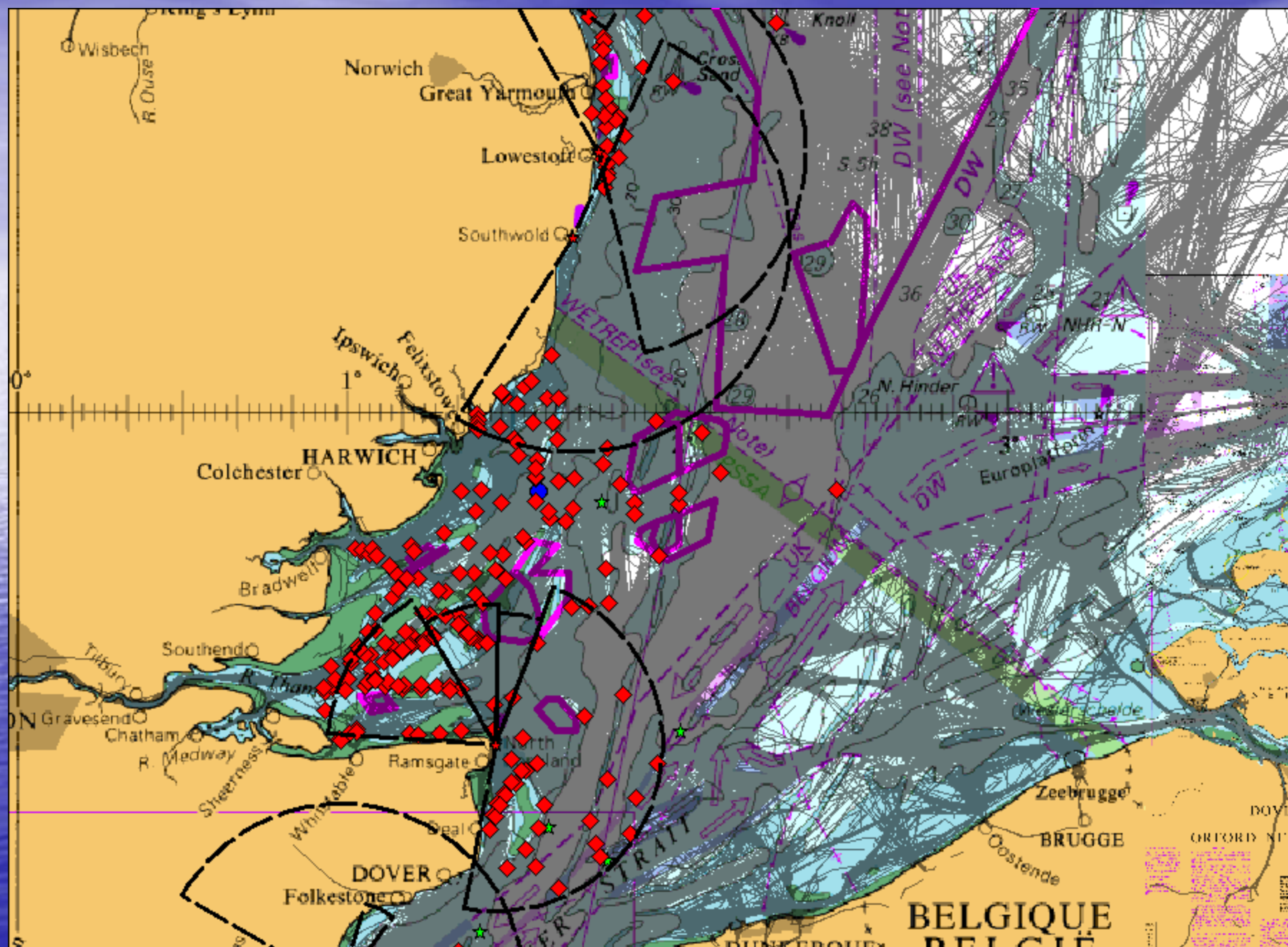


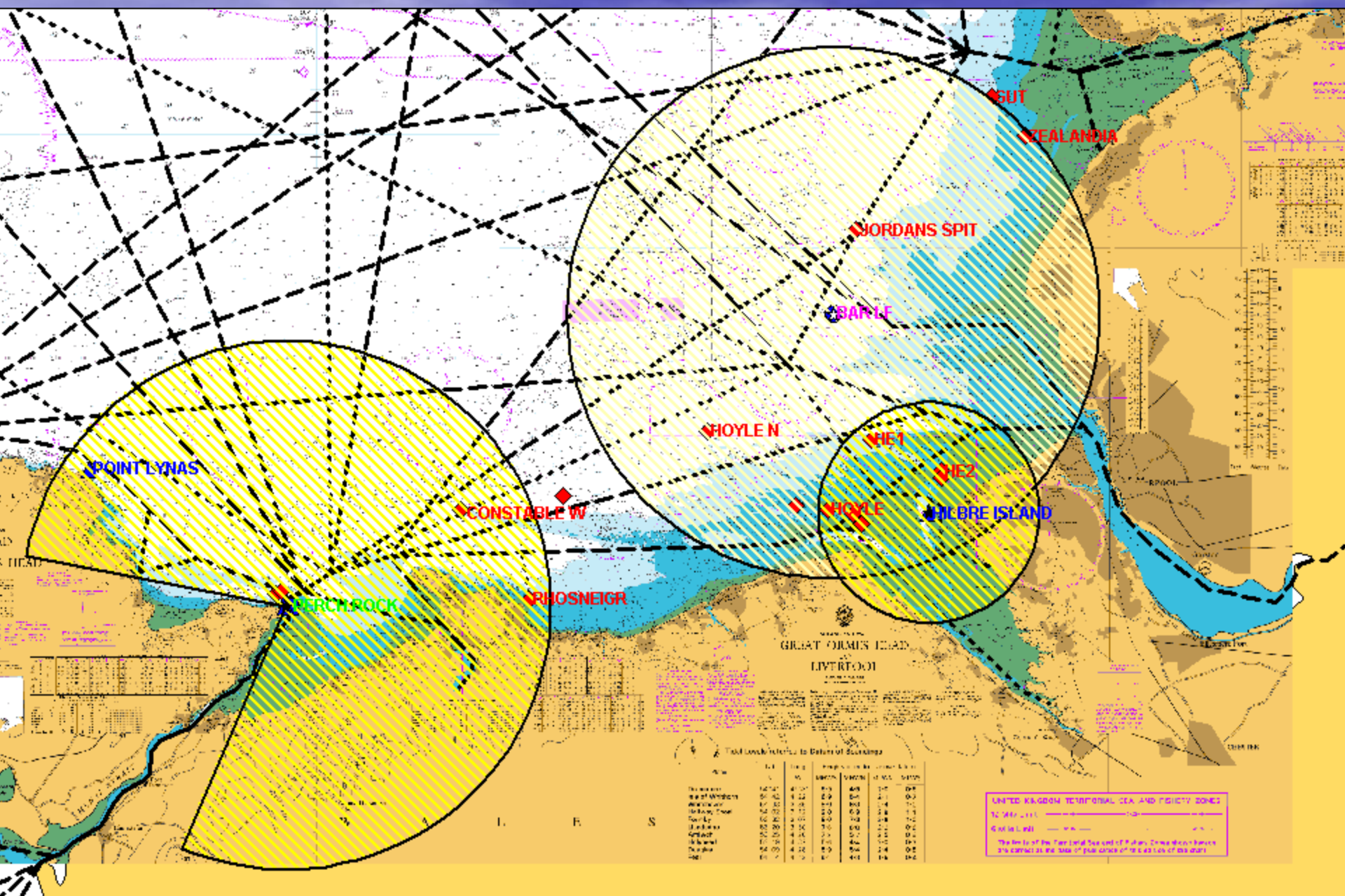
Buoys



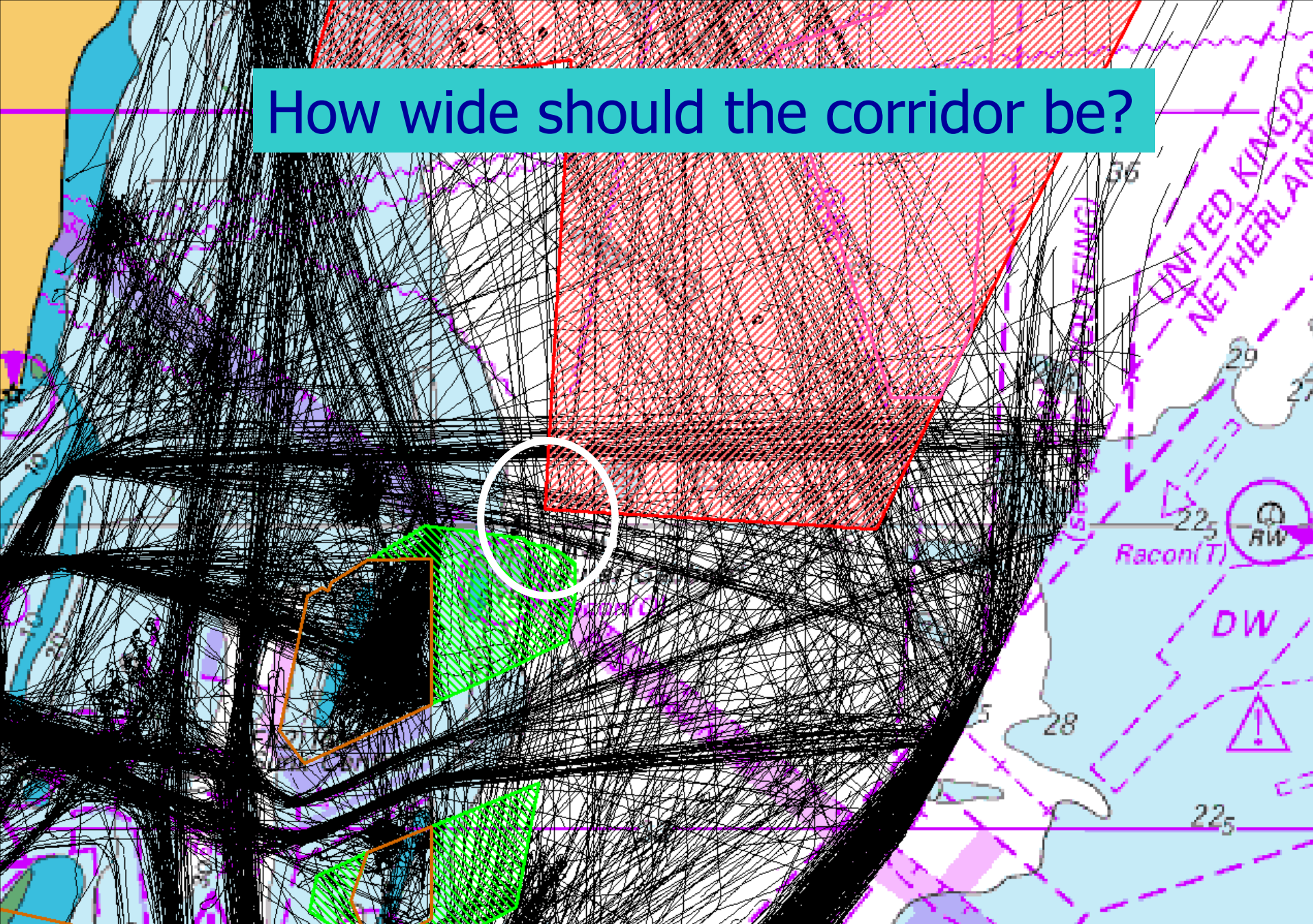
And additional hazzards



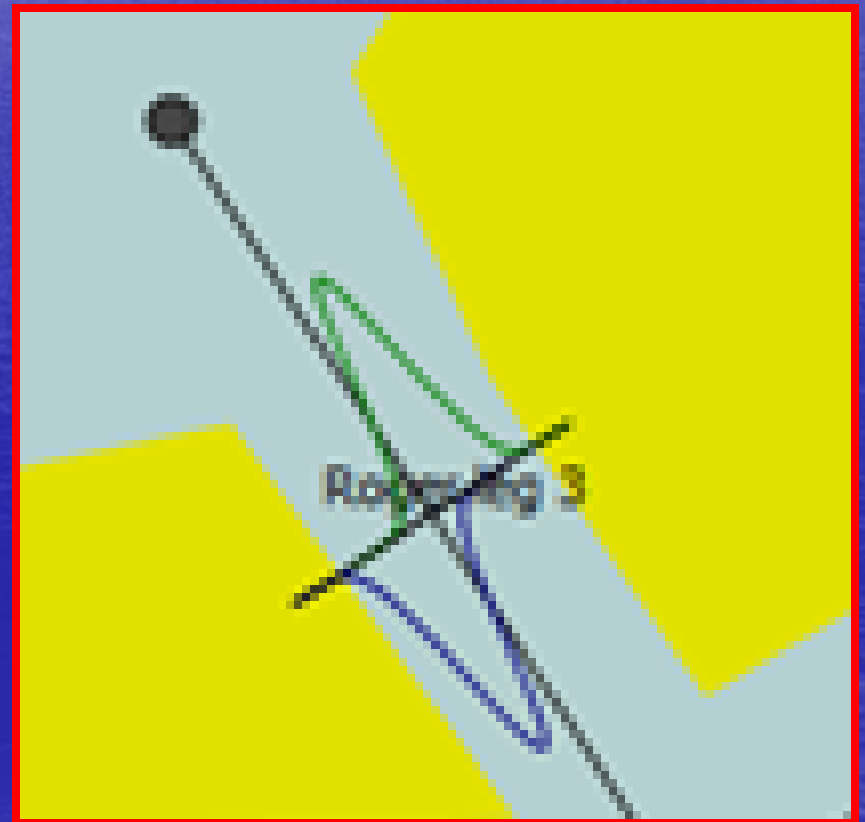
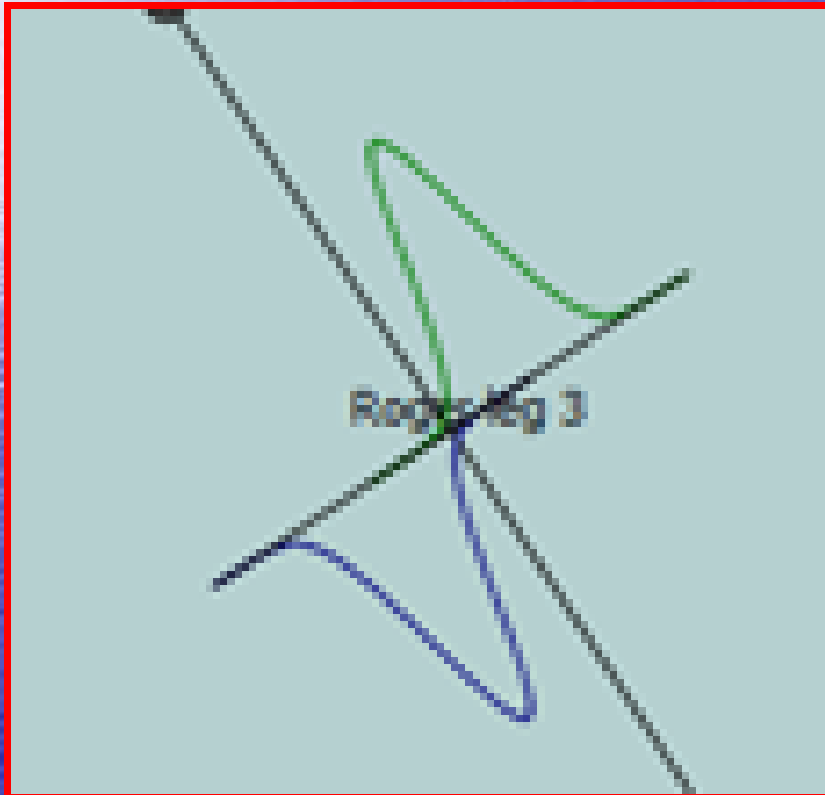
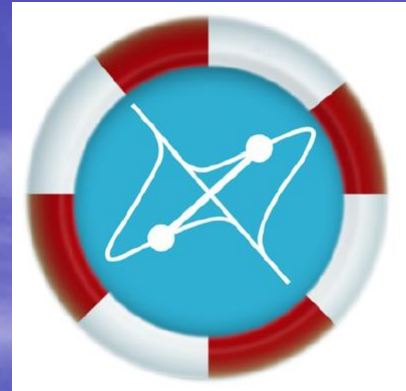


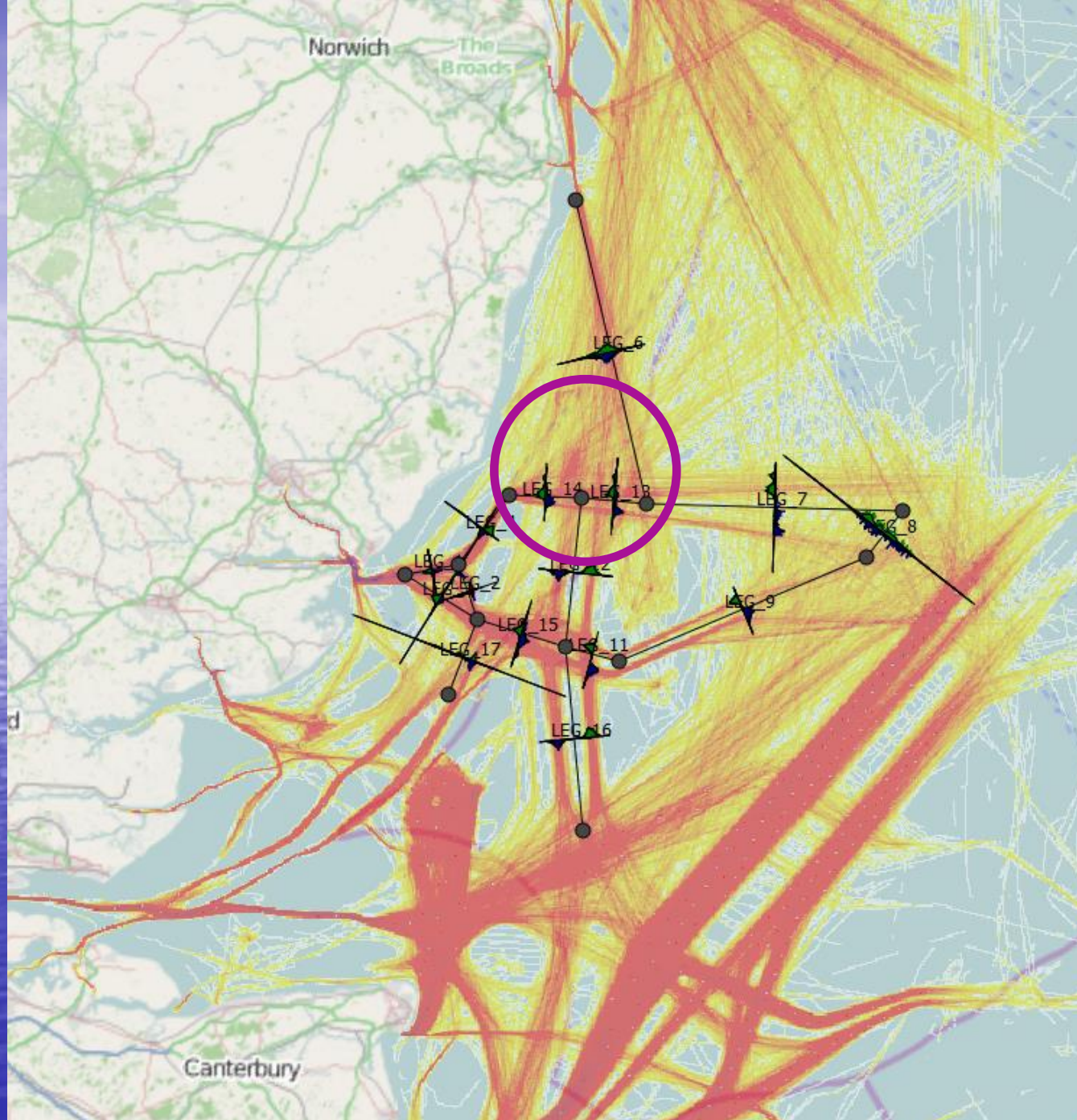


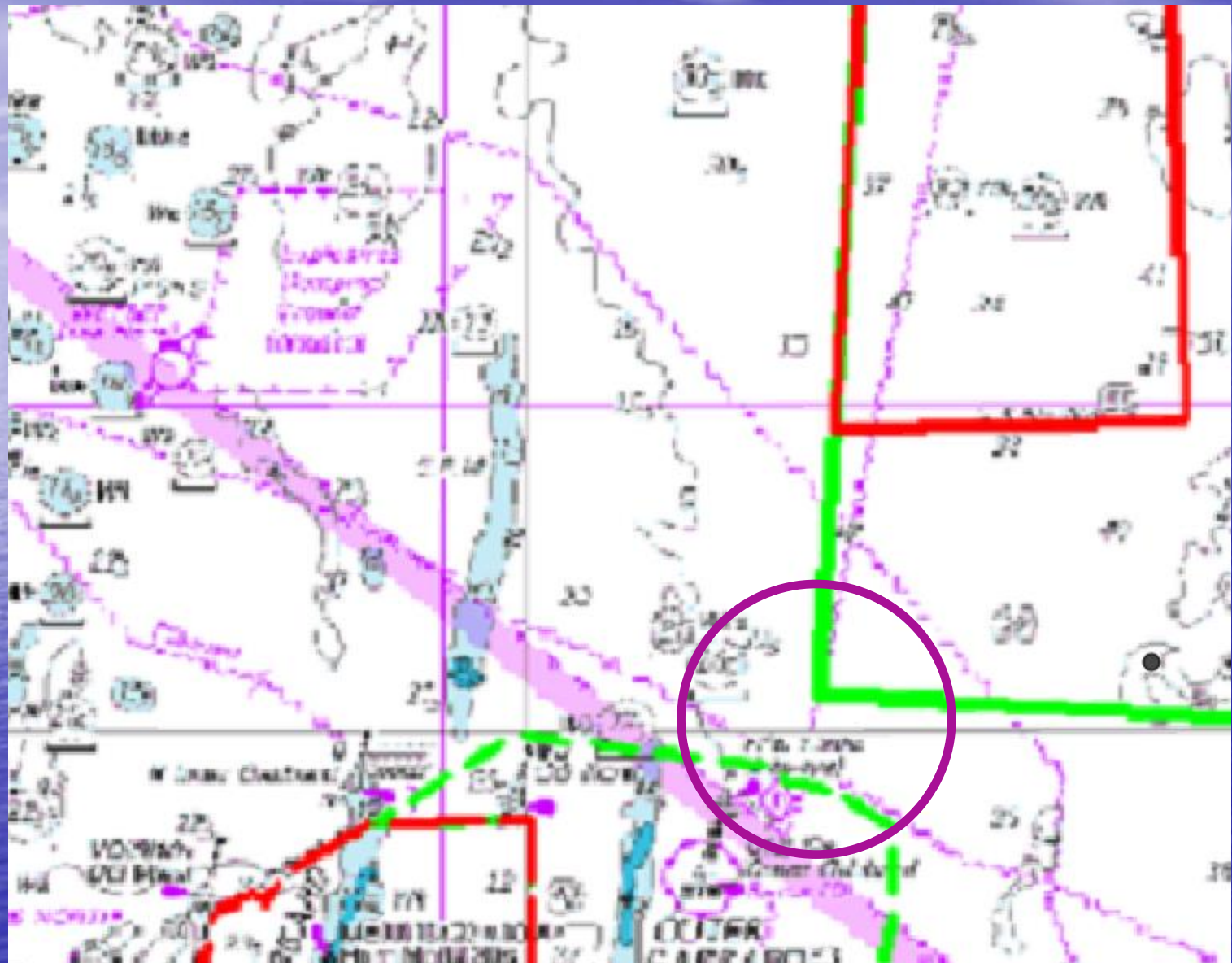
How wide should the corridor be?

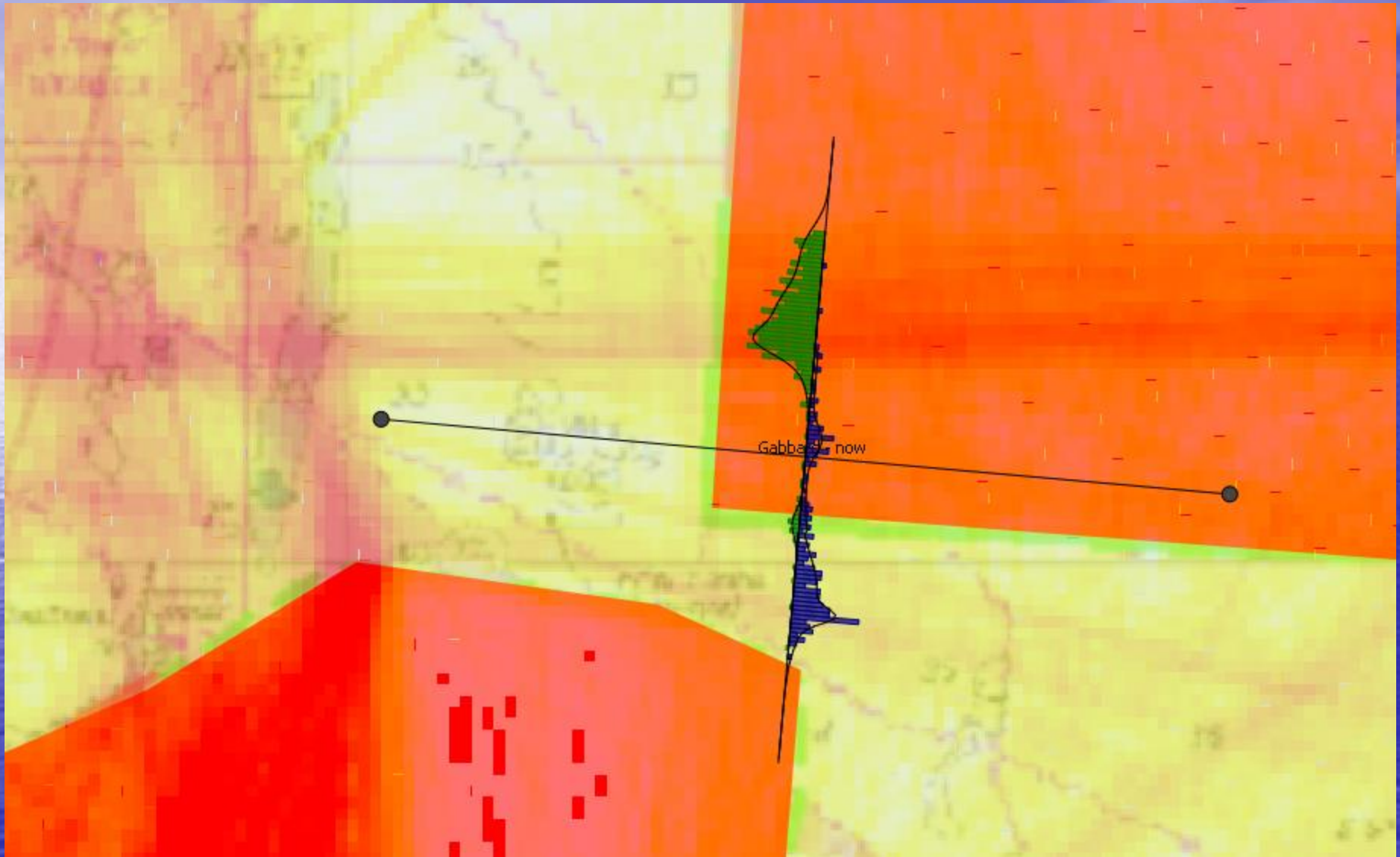


Developing the IWRAP Model

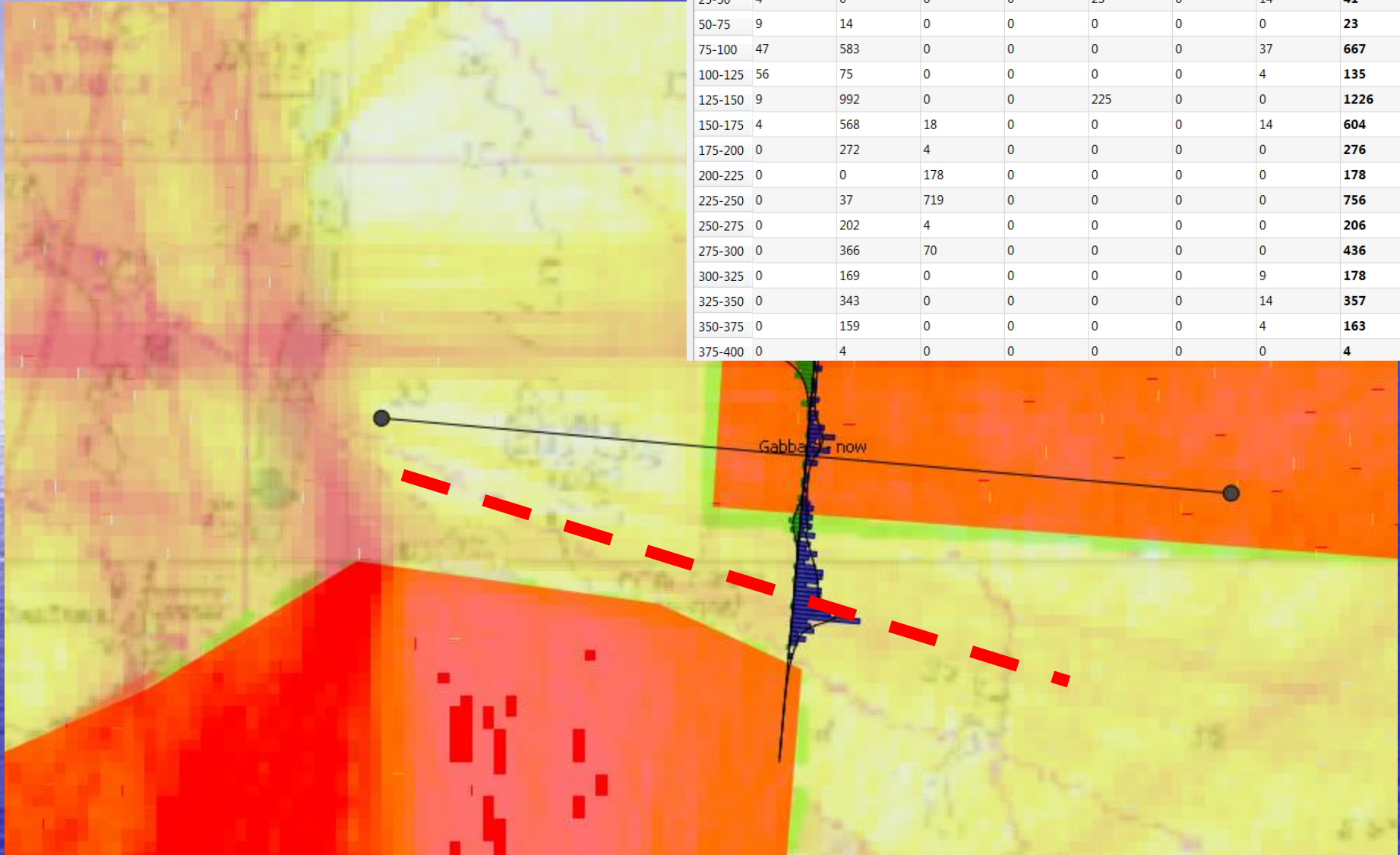


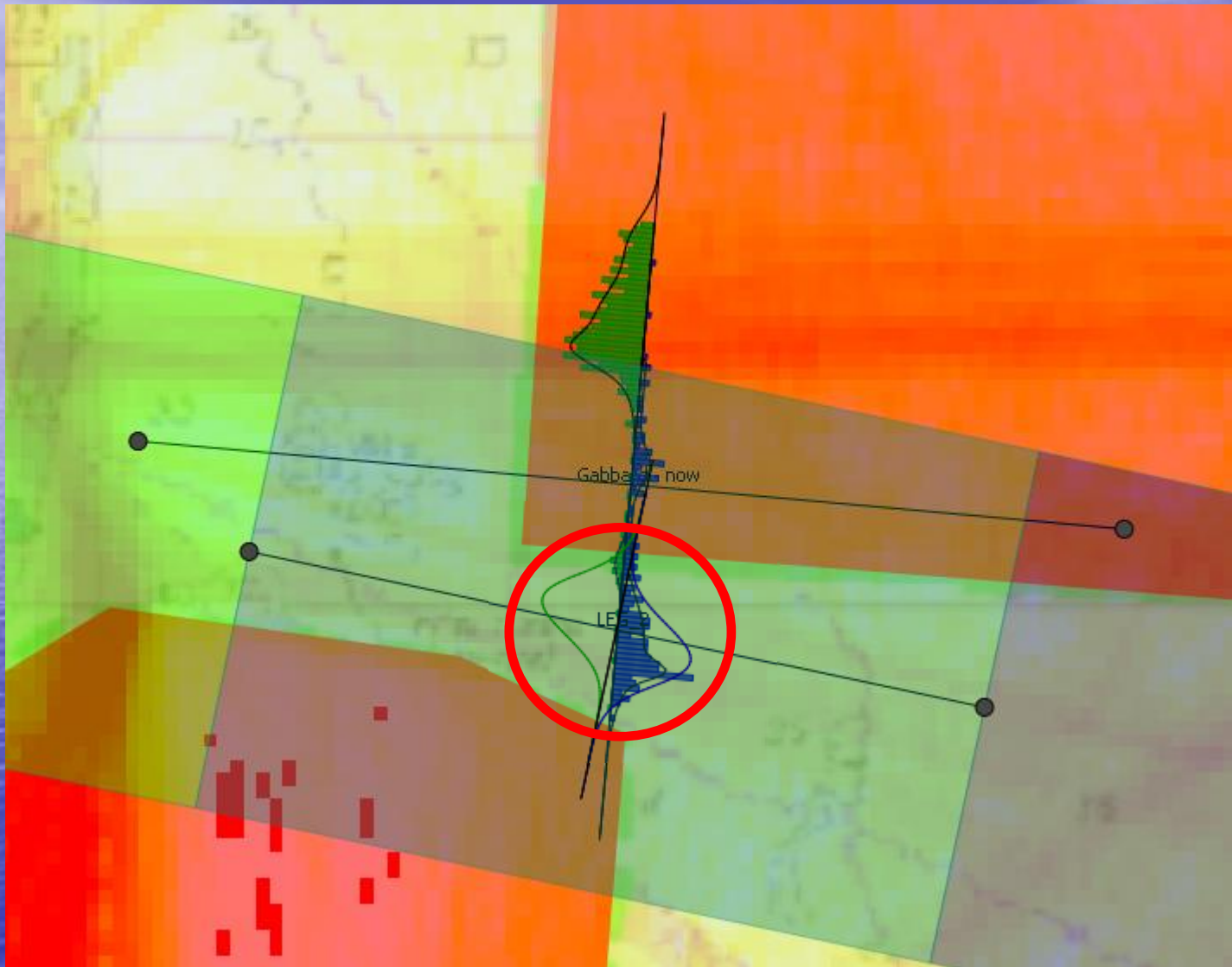






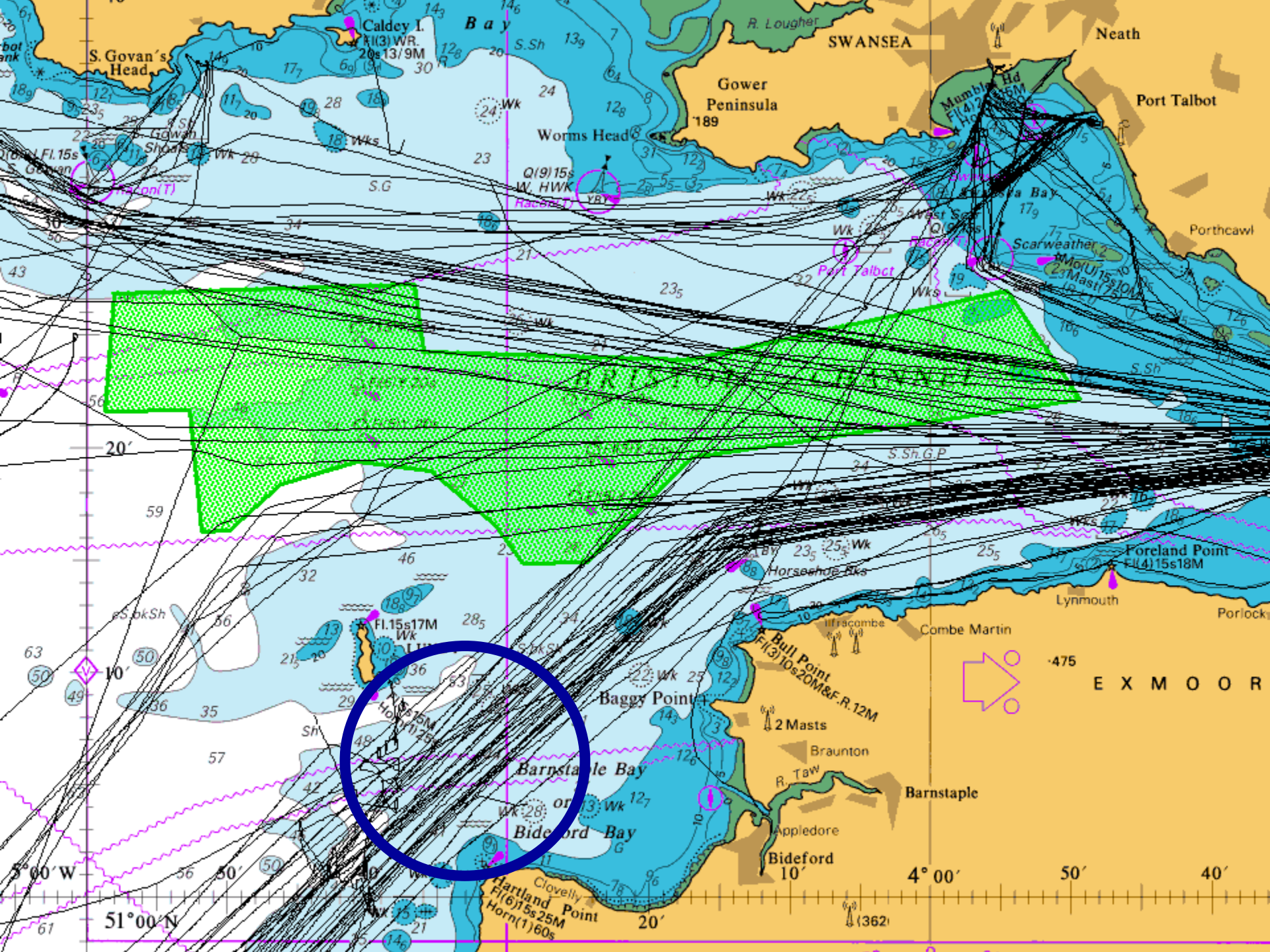
Data Item:	Frequency	Traffic Volume Distribution: TD_1						Sum Adjusted Frequency:6353	Sum Frequency:6353
	products tank	general cargo ship	passenger ship	Fast ferry	Support ship	Pleasure boat	Other ship	Sum	
0-25	0	0	0	517	474	4	108	1103	
25-50	4	0	0	0	23	0	14	41	
50-75	9	14	0	0	0	0	0	23	
75-100	47	583	0	0	0	0	37	667	
100-125	56	75	0	0	0	0	4	135	
125-150	9	992	0	0	225	0	0	1226	
150-175	4	568	18	0	0	0	14	604	
175-200	0	272	4	0	0	0	0	276	
200-225	0	0	178	0	0	0	0	178	
225-250	0	37	719	0	0	0	0	756	
250-275	0	202	4	0	0	0	0	206	
275-300	0	366	70	0	0	0	0	436	
300-325	0	169	0	0	0	0	9	178	
325-350	0	343	0	0	0	0	14	357	
350-375	0	159	0	0	0	0	4	163	
375-400	0	4	0	0	0	0	0	4	

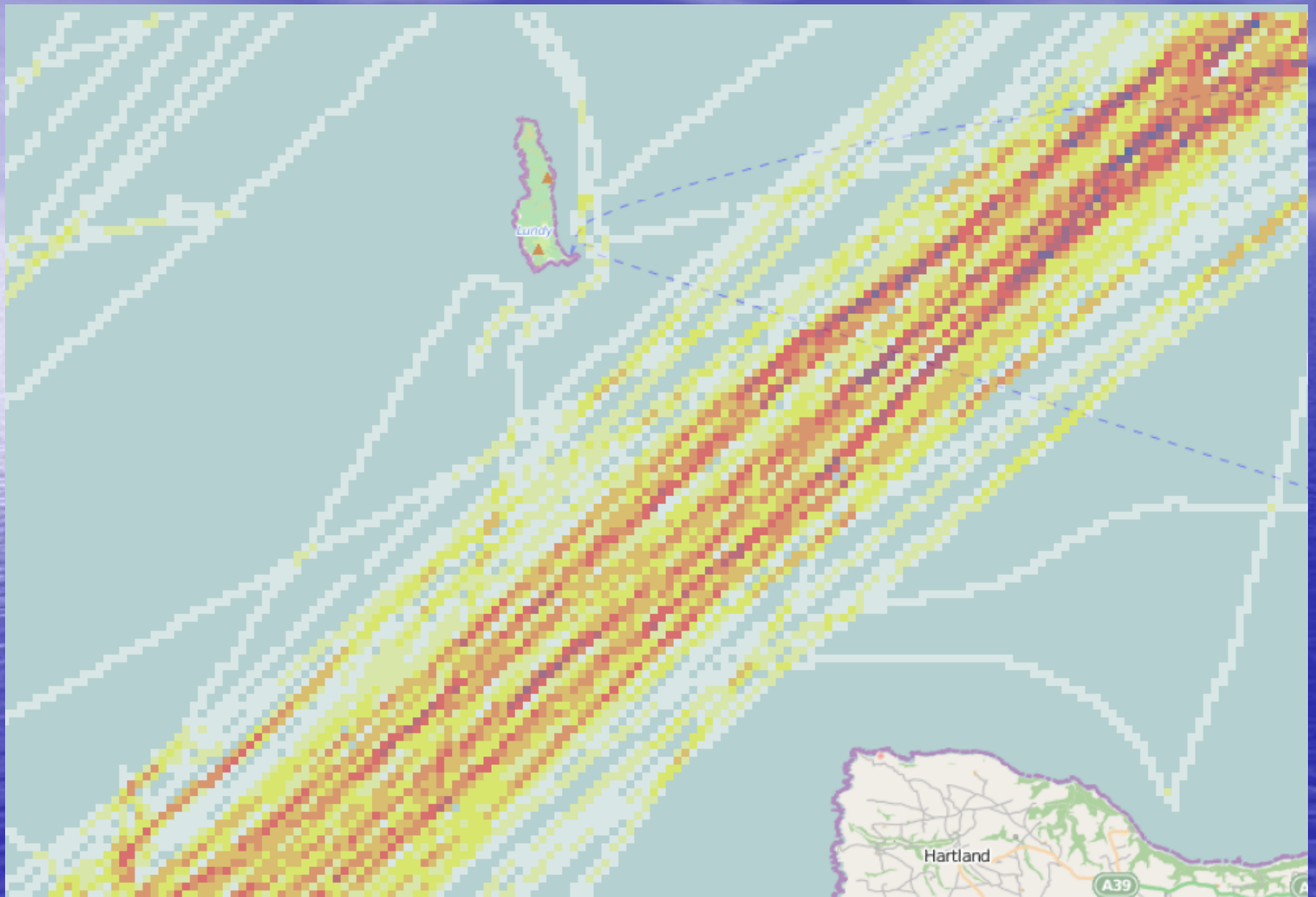


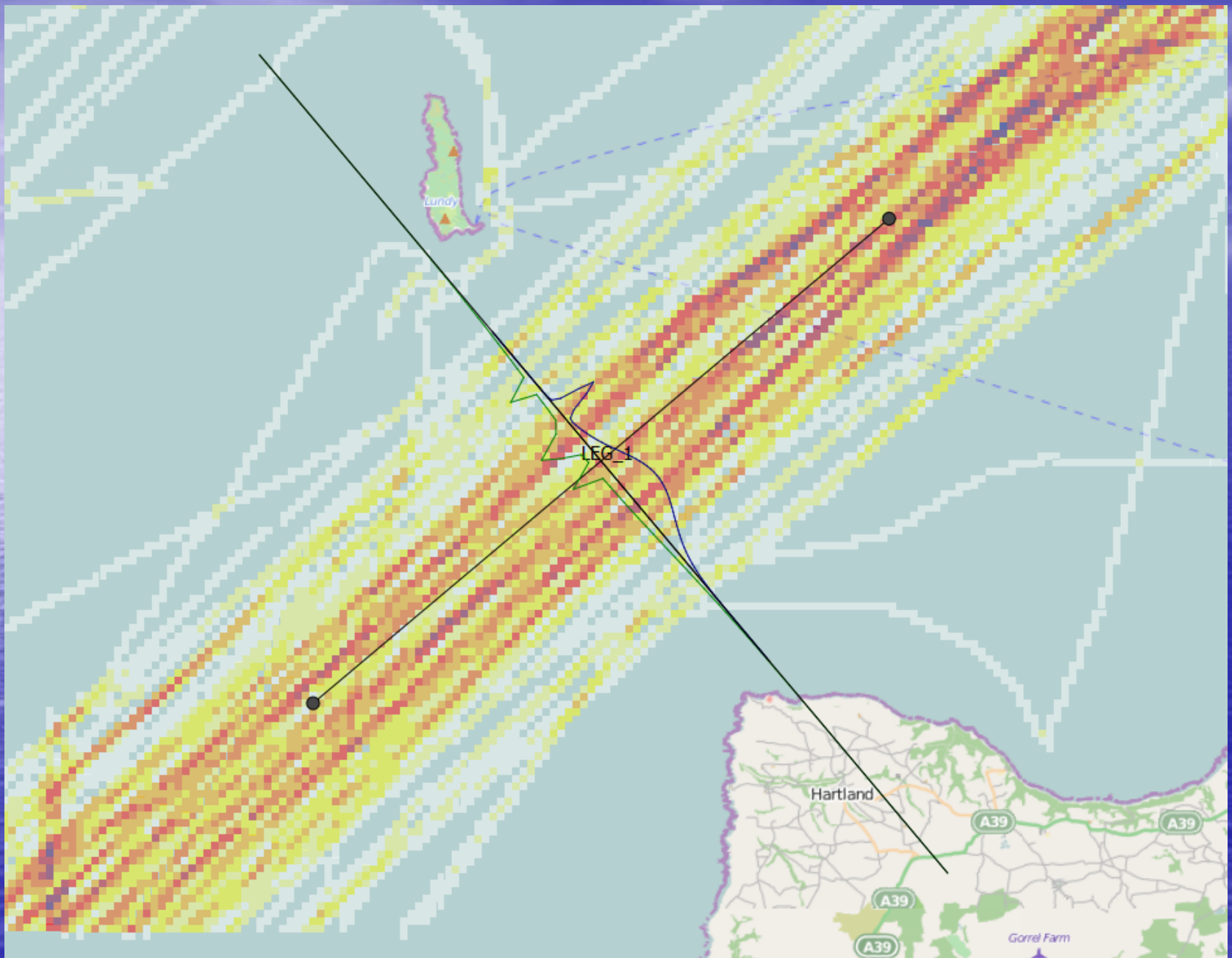




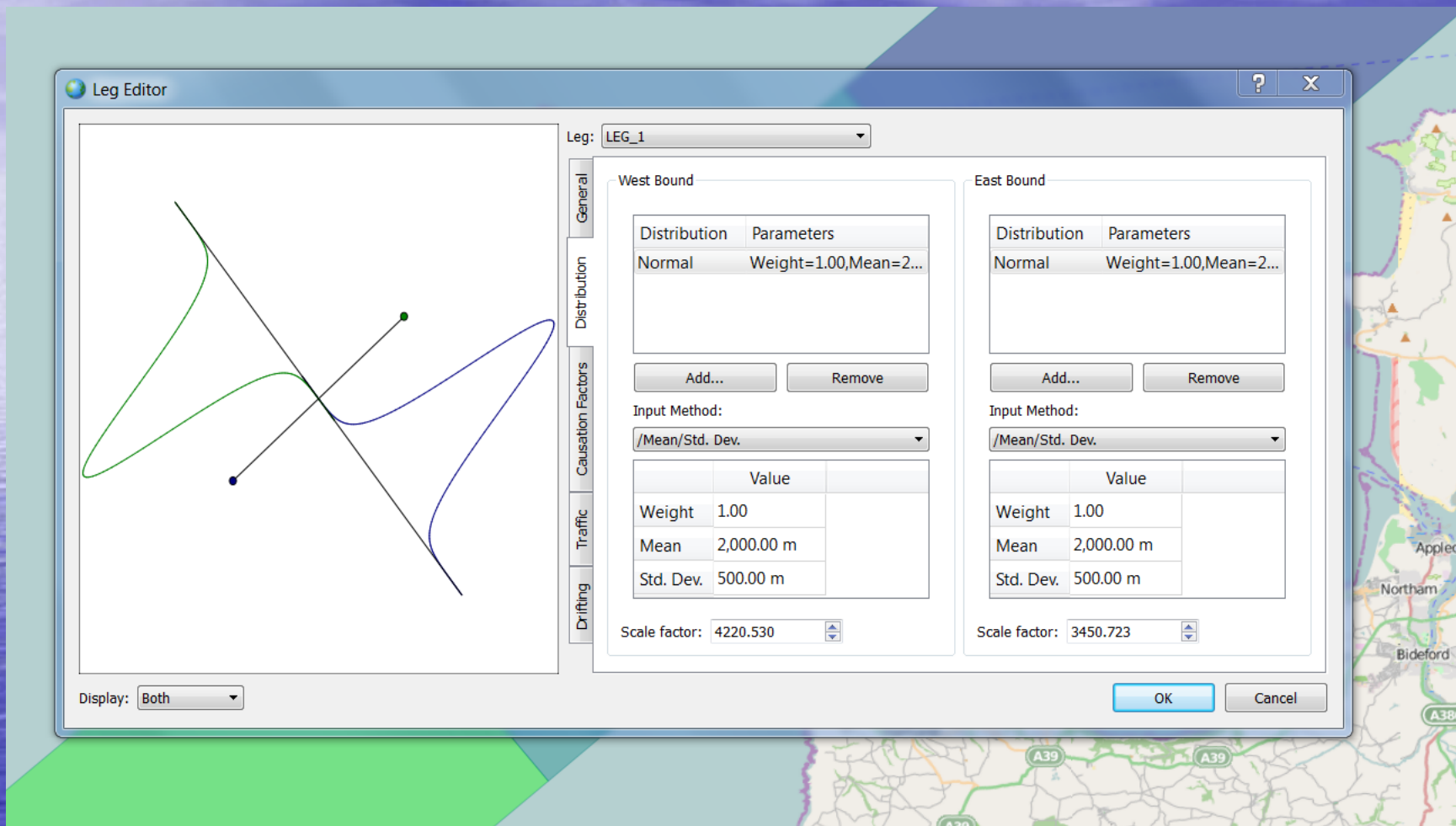
	Gabbard 8 - V1	Gabbard 8 - V2	Unit	
Powered Grounding	---	0.06287	Incidents/Year	
Drifting Grounding	---	0.04099	Incidents/Year	
Total Groundings	---	0.1039	Incidents/Year	
Overtaking	6.795e-05	(43%) 9.683e-05	Incidents/Year	
HeadOn	3.484e-05	(328%) 0.000149	Incidents/Year	
Crossing	---	---	Incidents/Year	
Merging	---	---	Incidents/Year	
Bend	---	---	Incidents/Year	
Area	---	---	Incidents/Year	
Total Collisions	0.0001028	(139%) 0.0002459	Incidents/Year	

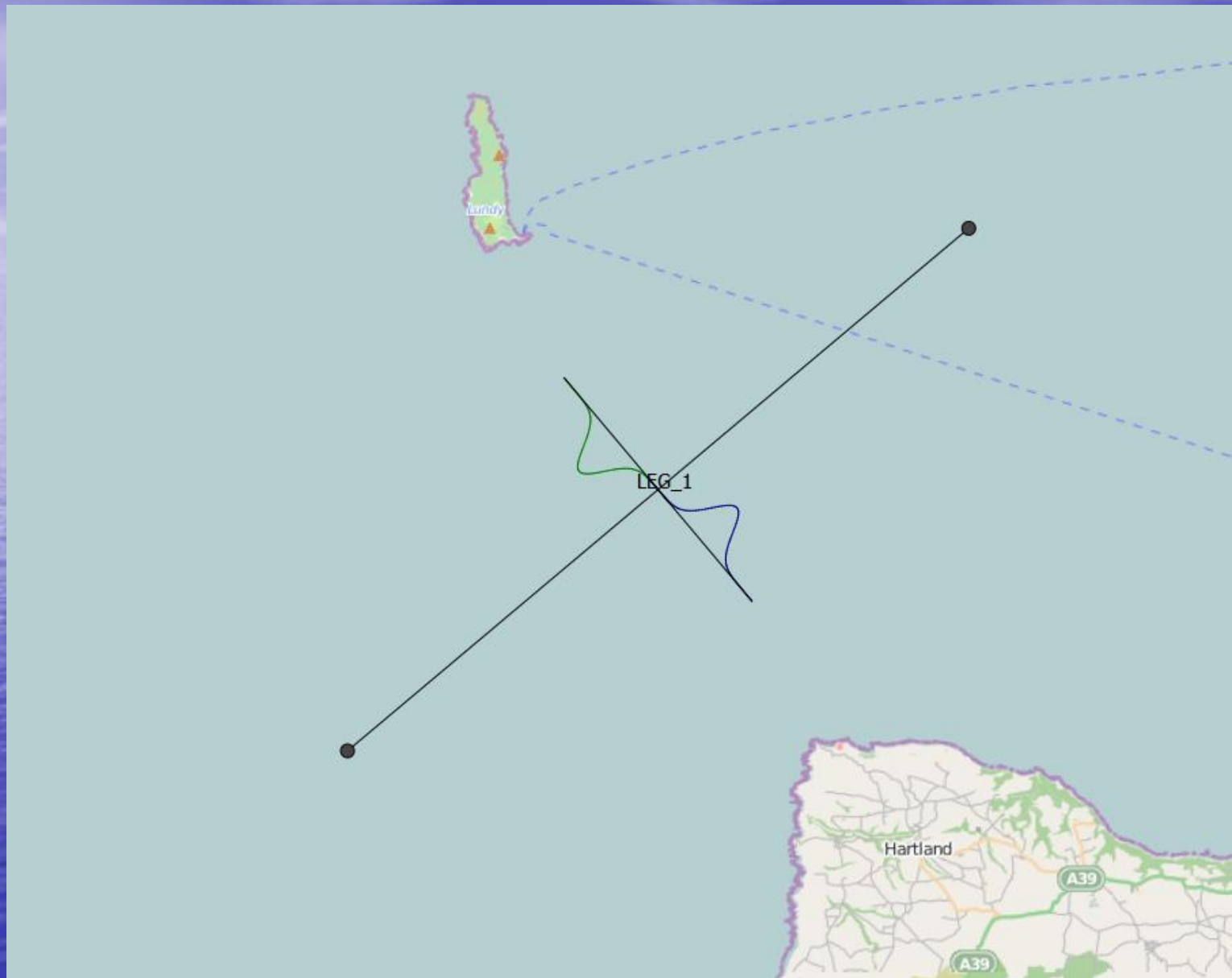


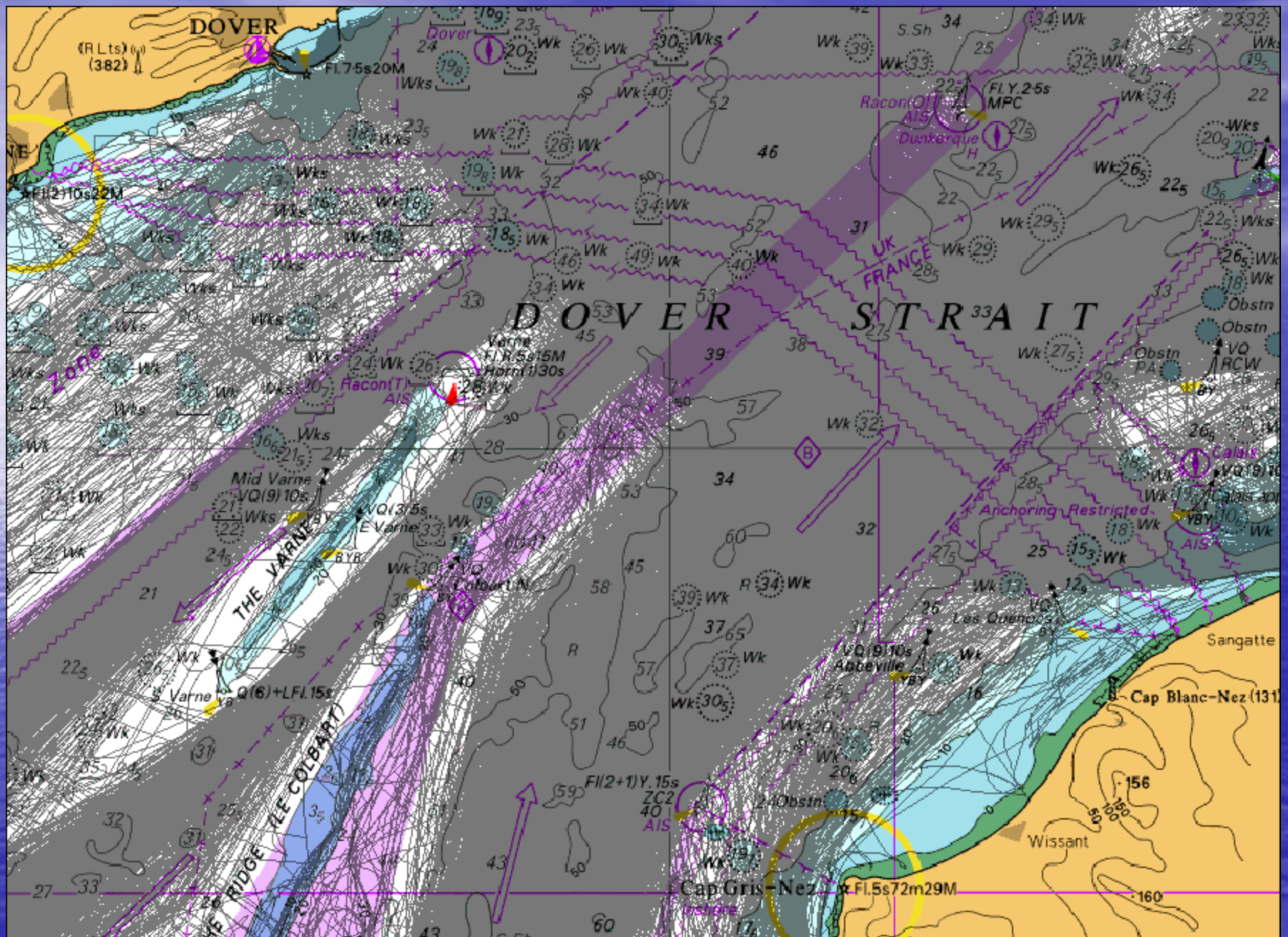


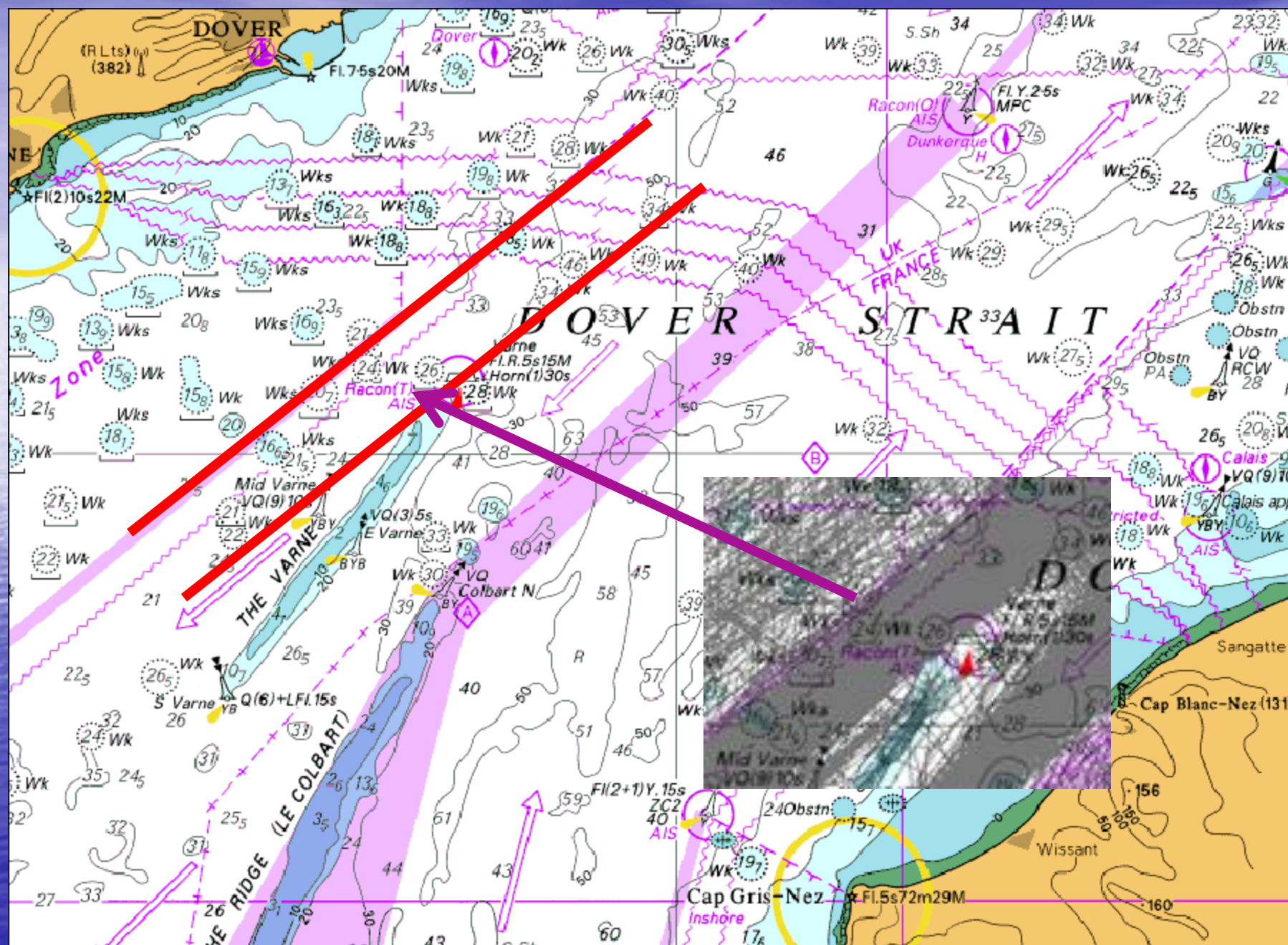


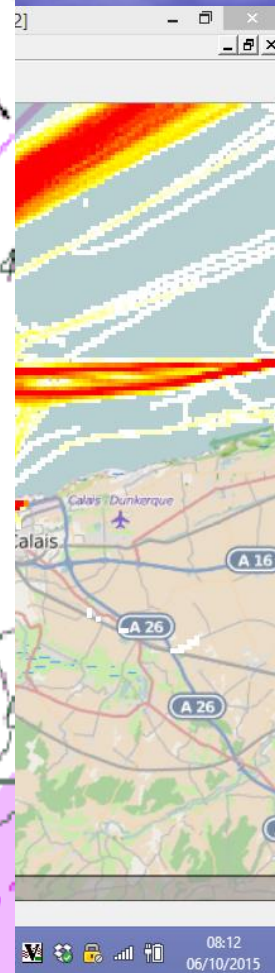
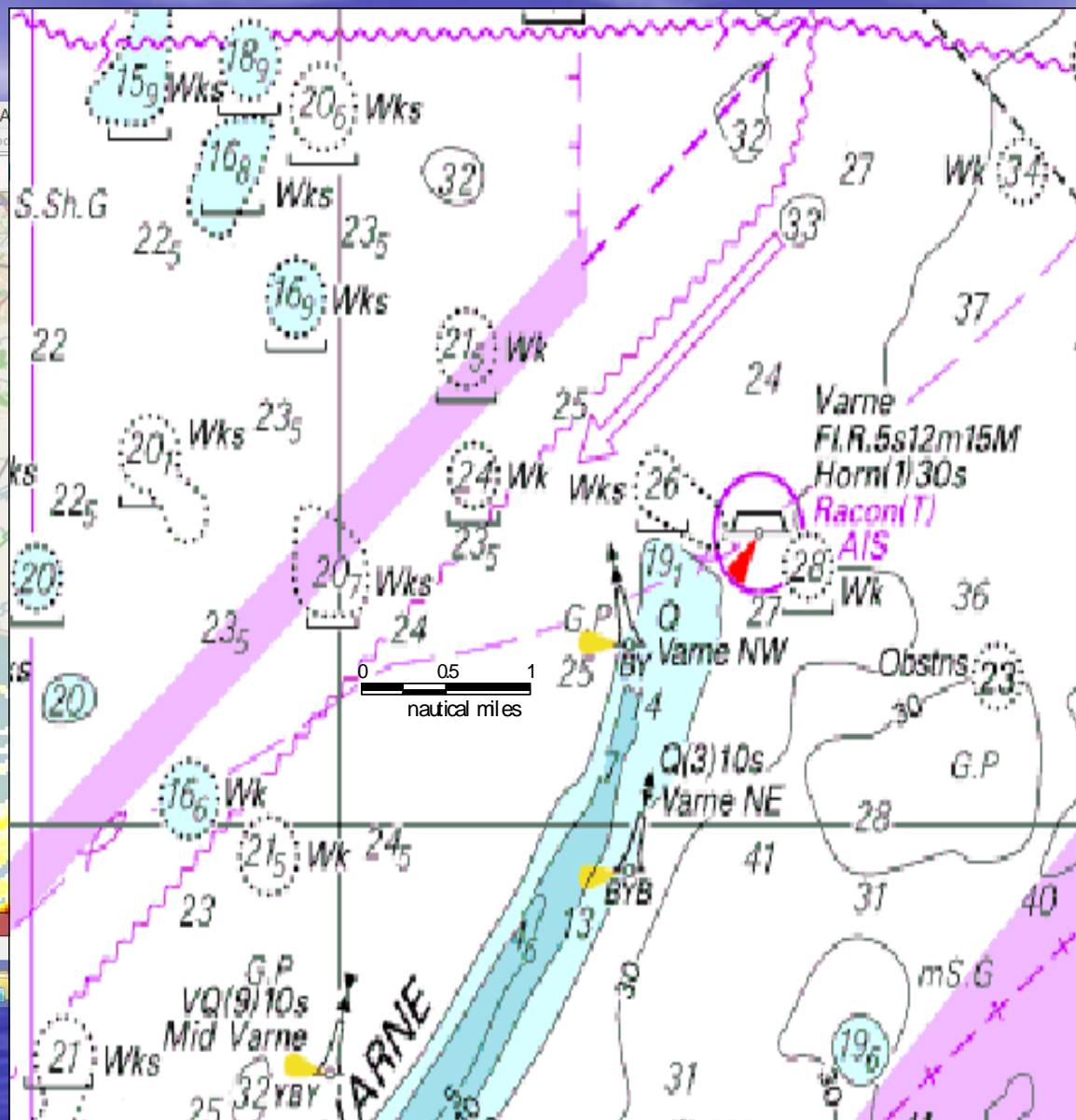
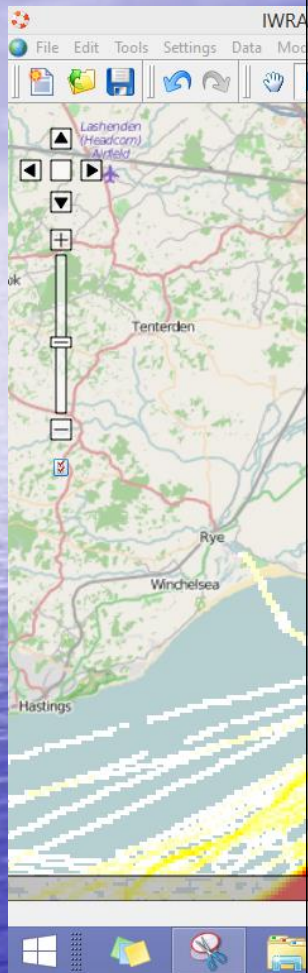


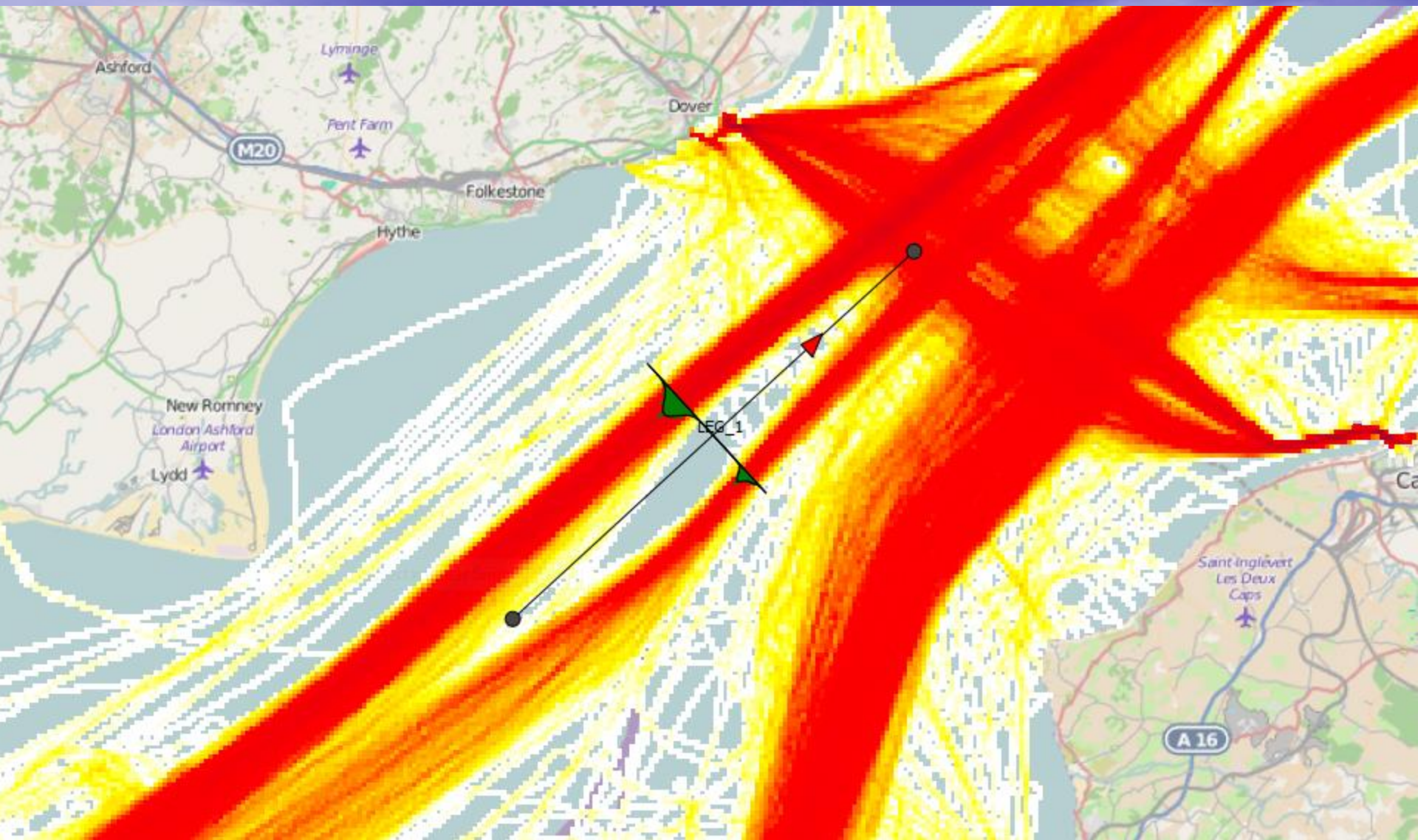


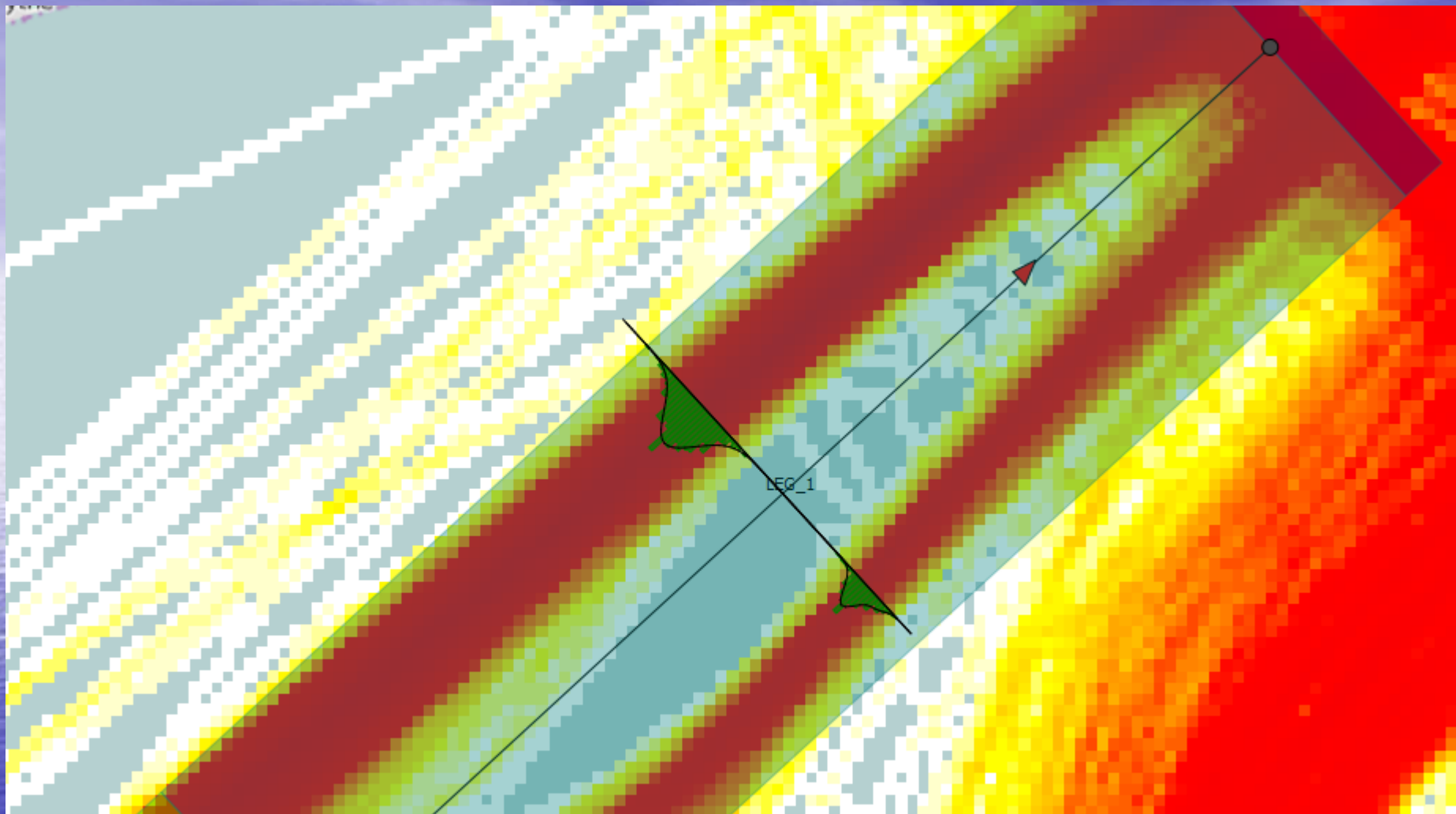






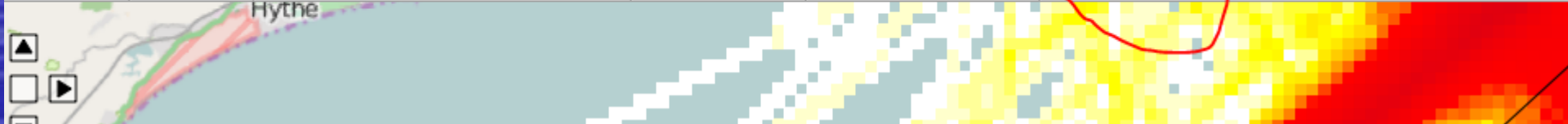


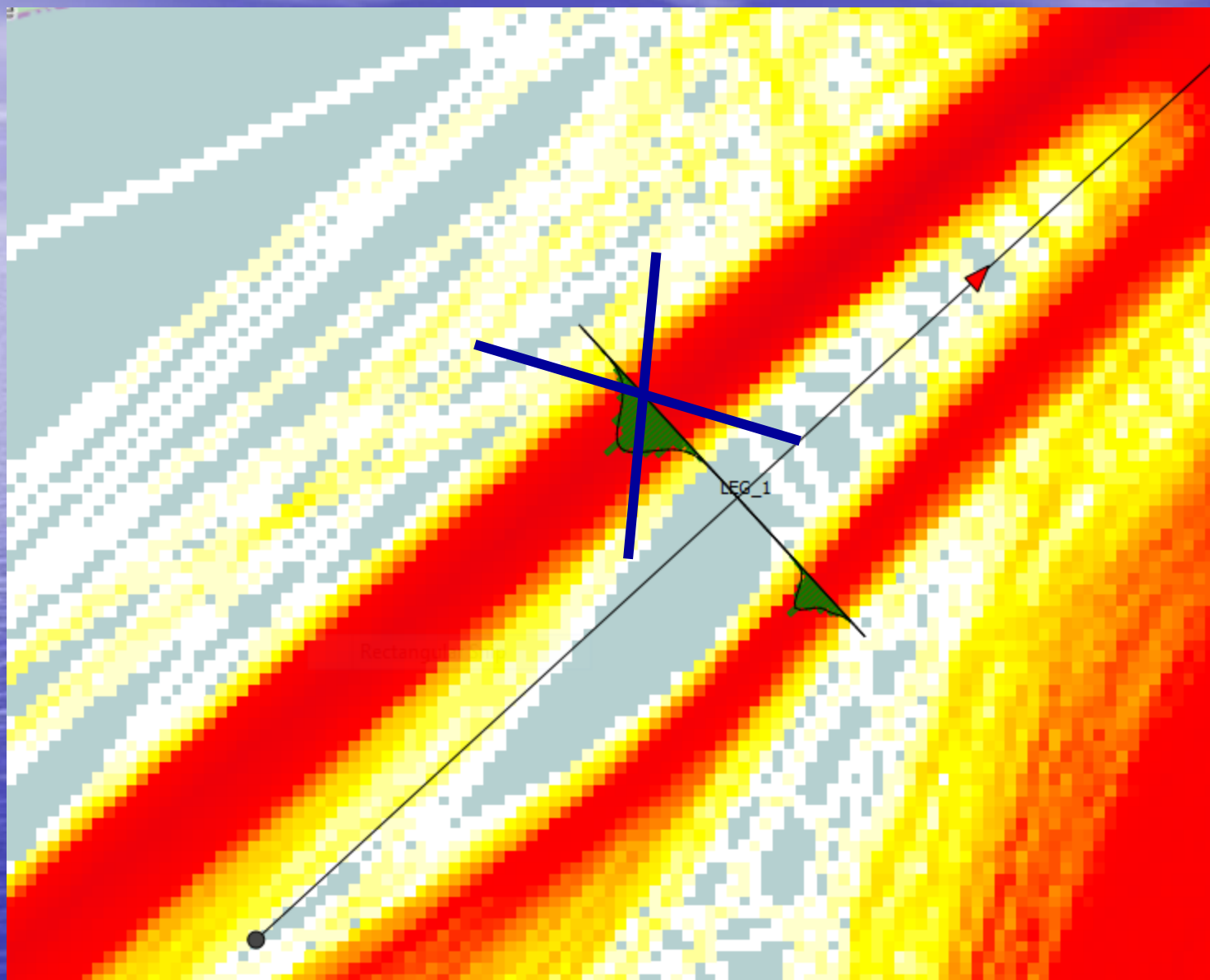




IWRAP Mk2 Extended v5.0.0BETA 26JUL2015_A - Licensed to roger barker (Trinity House) - by GateHouse - Expires 31 M

File Edit Tools Settings Data Model Actions Map View Help





Leg Editor

Leg: LEG_1

General
Distribution
Causation Factors
Traffic
Drifting

West Bound

Distribution	Parameters
Normal	Weight=0.76, Mean=2,594.95,...
Normal	Weight=0.20, Mean=-2,705.16,...
Normal	Weight=0.04, Mean=-3,276.25,...

Add...

Remove

Input Method:

/Mean/Std. Dev.

	Value
Weight	0.04
Mean	-3,276.25 m
Std. Dev.	186.96 m

Scale factor: 92091.781

East Bound

Distribution	Parameters
--------------	------------

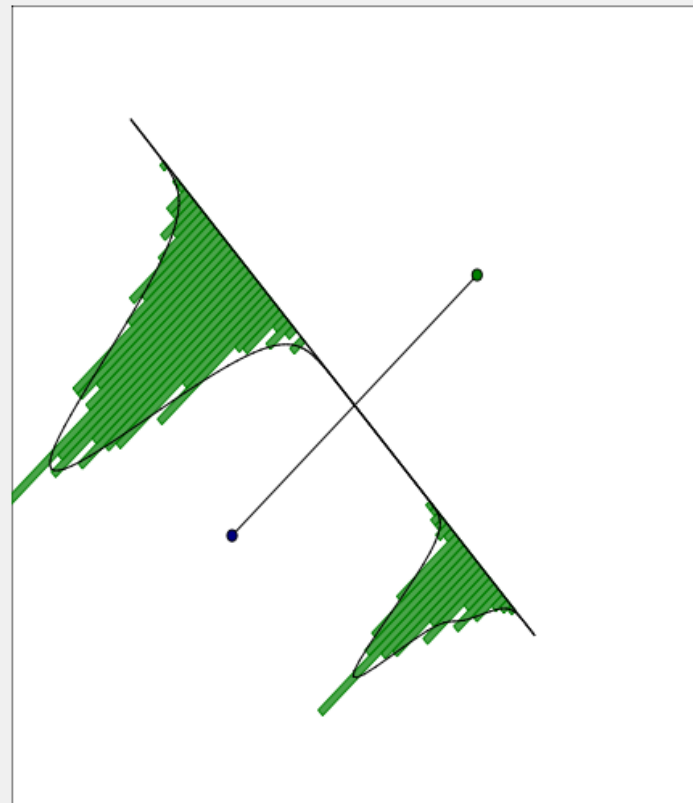
Add...

Remove

Input Method:

	Value
Weight	

Scale factor: 1.000



Display: Both

OK

Cancel

Normal Curve

Standard Deviation

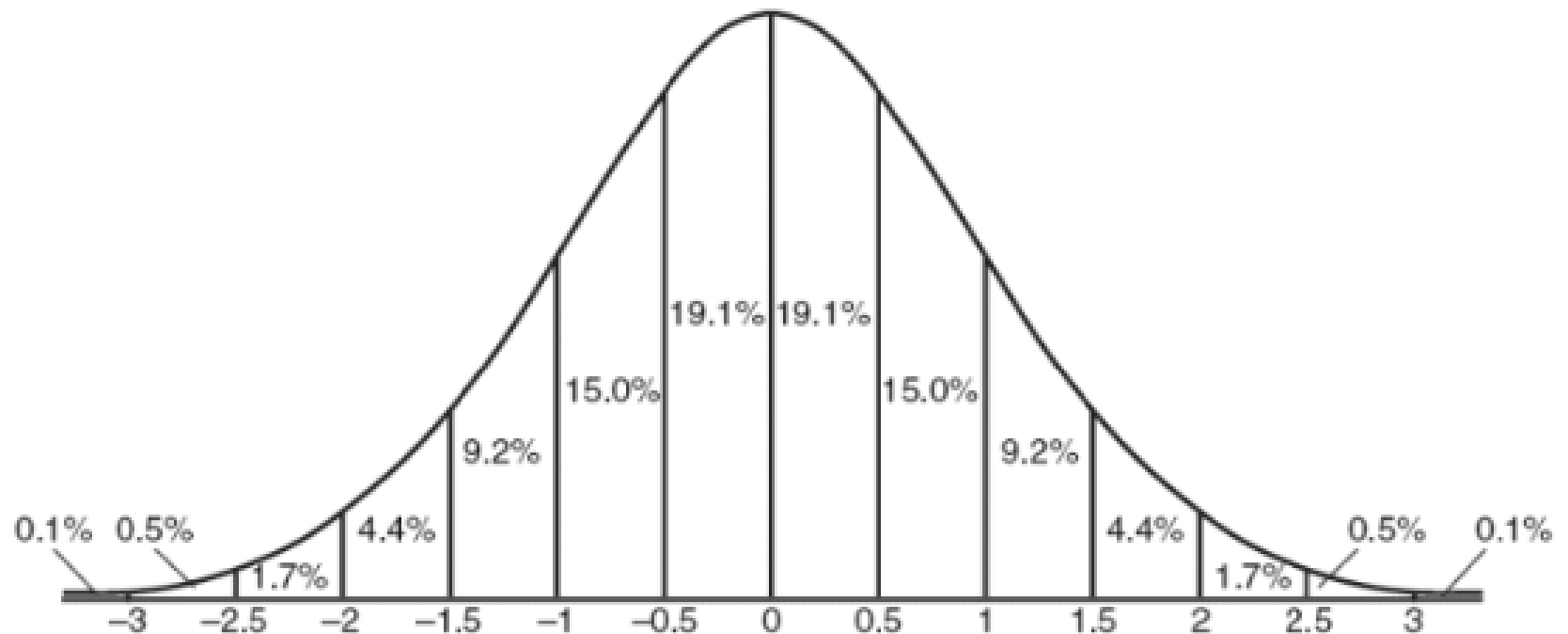
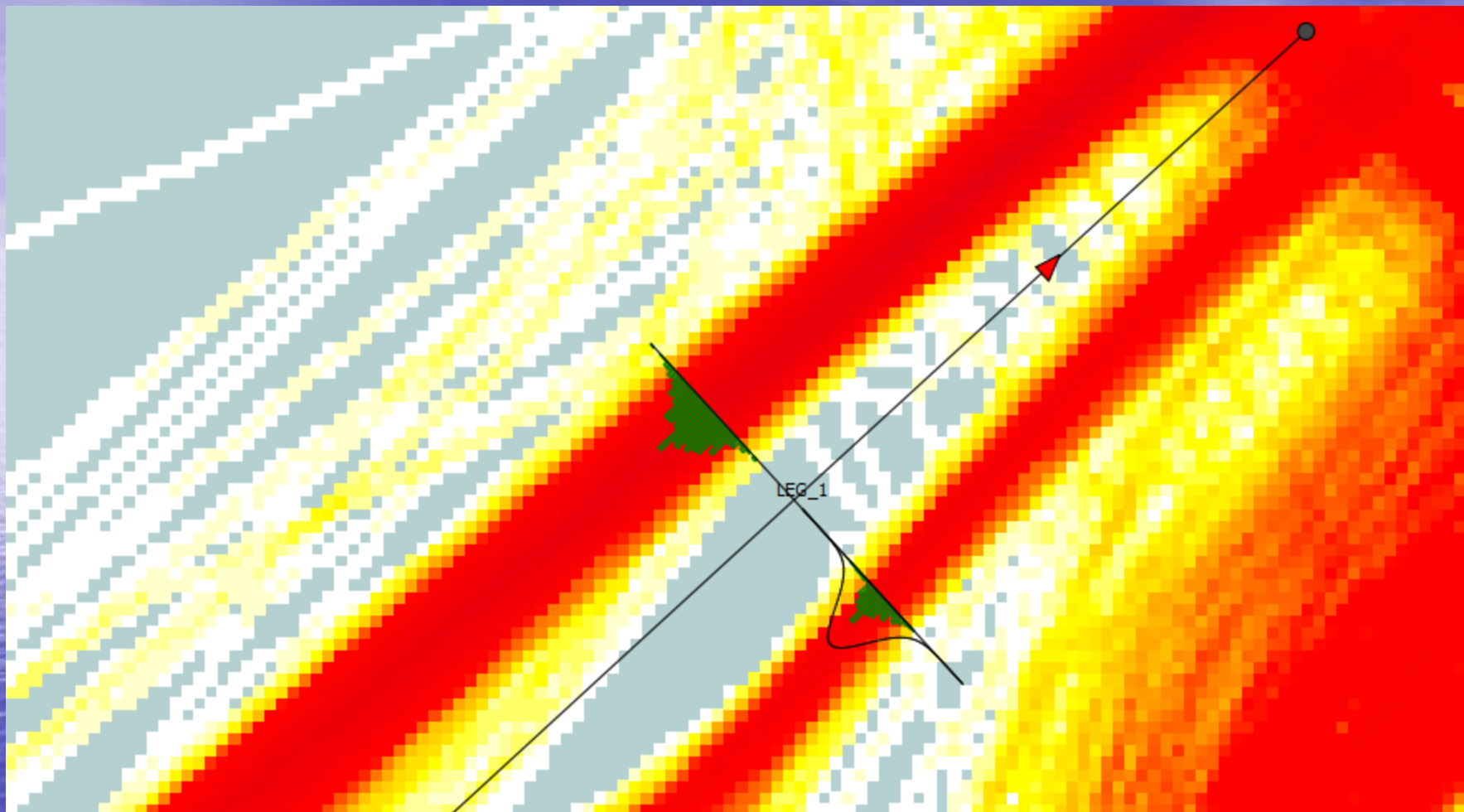
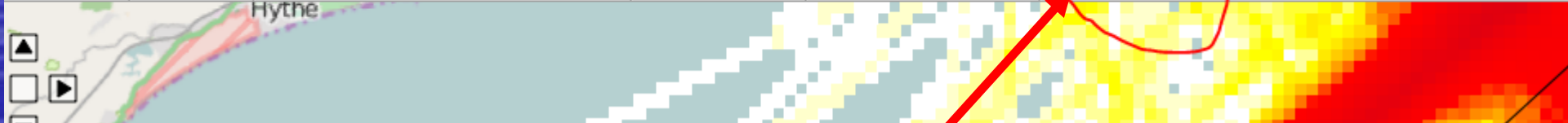


Chart prepared by the NY State Education Department



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File Edit Tools Settings Data Model Actions Map View Help



Jobs



State	Name	Algorithm	Model	Started	Completed
Completed	Roger 5 - South	Incident v1.0	Roger-2 v1.4	Tue 6. Oct 07:37...	Tue 6. Oct 07:37:21 2015
Completed	Roger 1	Incident v1.0	Roger-2 v1.4	Tue 6. Oct 07:27...	Tue 6. Oct 07:27:49 2015

Results

	Roger 1	Roger 5 - South	Unit
Total Groundings	---	---	Incidents/Year
Powered Allision	---	---	Incidents/Year
Drifting Allision	---	---	Incidents/Year
Total Allisions	---	---	Incidents/Year
Overtaking	0.008695	(55.934%) 0.01356	Incidents/Year
HeadOn	---	---	Incidents/Year
Crossing	---	---	Incidents/Year
Merging	---	---	Incidents/Year
Bend	---	---	Incidents/Year
Area	---	---	Incidents/Year
Total Collisions	0.008695	(55.934%) 0.01356	Incidents/Year

Singapore

