Environment Agency

Our ref: CCN/2020/172579

Mr Michael Windsor
[redacted]

Date: 17/05/2020

Dear Michael

Provision of Flood Risk Information for Sarah Gate Lane, Quadring

Thank you for your request to use our flood risk information in the development of the Flood Risk Assessment (FRA) for the above site. The information is set out below and attached. It is important you read any contextual notes on the maps provided.

We aim to review our information on a regular basis, so if you are using this data more than twelve months from the date of this letter, please contact us again to check it is still valid.

Flood Map

The attached map includes the current Flood Map for your area. The Flood Map indicates the area at risk of flooding, **assuming no flood defences exist**, for a flood with a 0.5% chance of occurring in any year for flooding from the sea, or a 1% chance of occurring for fluvial (river) flooding. It also shows the extent of the Extreme Flood Outline which represents the extent of a flood with a 0.1% chance of occurring in any year, or the highest recorded historic extent if greater.

In some locations, such as around the fens and the large coastal floodplains, showing the area at risk of flooding assuming no defences may give a slightly misleading picture in that if there were no flood defences, water would spread out across these large floodplains. This flooding could cover large areas of land but to relatively shallow depths and could leave pockets of locally slightly higher land as isolated dry islands. It is important to understand the actual risk of the flooding to these dry islands, particularly in the event of defence failure.

The Flood Map also shows the location of formal raised flood defences and flood storage reservoirs. It represents areas at risk of flooding for present day only and does not take account of climate change.

The Flood Map only indicates the extent and likelihood of flooding from rivers or the sea. It should also be remembered flooding may occur from other sources such as surface water sewers, road drainage, etc.

History of Flooding

With regards to the history of flooding I can advise we do not have any records of flooding in this area. It is possible recent flooding may have occurred which we are currently investigating, therefore this information may be subject to change. It is possible other flooding may have occurred which other organisations, such as the Lead Local Flood Authority (ie top tier council), Local Authority or Internal Drainage Board (where they exist), may have records.

FLOODS DESTROY BE PREPARED

Ceres House, Searby Road, Lincoln, LN2 4DW
Customer services line: 03708 506 506
Email: enquiries@environment-agency.gov.uk
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Tidal Flood Risk Information

Tidal Defence Information

The tidal defences protecting this site consist of earth embankments. They are in good condition and reduce the risk of flooding (at the defence) to a 1% (1 in 100) chance of occurring in any year. We inspect these defences routinely to ensure potential defects are identified.

Tidal Flood Levels

The attached table shows our current best estimate for extreme tide levels.

Levels for the Humber Estuary have an assessment date of 2014, with others having an assessment date of 2017, which should be used in any consideration of future increases due to climate change.

Modelled Hazard Mapping

For certain locations we have carried out modelling to map the maximum values of flood depth, velocity and hazard rating (danger to people) resulting from overtopping and / or breaching of defences at specific locations for a number of scenarios.

At present this information is available along the full coastal / tidal floodplain, except the tidal Witham Haven in Boston (upstream of Hobhole) where only breaching and not overtopping has been modelled and the tidal River Welland upstream of Fosdyke Bridge where neither breaching nor overtopping are available. Hazard mapping is also available for fluvial flood risk in Northampton, Lincoln, Wainfleet and some isolated rural locations.

The number of locations we have this information for is expected to increase in time.

Detailed Hazard Mapping is available within the 2017 Update of South Holland Strategic Flood Risk Assessment. This can be downloaded via the following link:
http://www.southeastlincslocalplan.org/south-east-lincolnshire-strategic-flood-risk-assessment-march-2017

Development Planning

If you would like local guidance on preparing a flood risk assessment for a planning application, please contact our Sustainable Places team at Inplanning@environment-agency.gov.uk. It will help if you mention this data request and attach your site location plan.

We provide free preliminary advice; additional/detailed advice, review of draft FRAs and meetings are chargeable at a rate set to cover our costs, currently £100 (plus VAT) per hour of staff time. Further details are available on our website at
https://www.gov.uk/guidance/developers-get-environmental-advice-on-your-planning-proposals.

General advice on flood risk assessment for planning applications can be found on GOV.UK at https://www.gov.uk/guidance/flood-risk-assessment-for-planning-applications

Climate change will increase flood risk due to overtopping of defences. Please note the climate change data included has an allowance for 20% increase in flow. Updated guidance on how climate change could affect flood risk to new development - 'Flood risk assessments: climate change allowances' was published on GOV.UK in February 2016. The appropriate updated climate change allowance should be applied in a Flood Risk Assessment.

You should also consult the Strategic Flood Risk Assessment produced by your local planning authority.

Data Licence and Other Supporting Information

We respond to requests for recorded information we hold under the Freedom of Information Act 2000 (FOIA) and the associated Environmental Information Regulations 2004 (EIR).

This information is provided in accordance with the Open Government Licence which can be found here: http://www.nationalarchives.gov.uk/doc/open-government-licence/version/3/

Further information on flood risk can be found on the GOV.UK website at: https://www.gov.uk/browse/environment-countryside/flooding-extreme-weather

Other Flood Risk Management Authorities

The information provided with this letter relates to flood risk from main river or the sea. Additional information may be available from your Lead Local Flood Authority (ie county council or unitary authority) or, where they exist, the Internal Drainage Board.

Further Contact

I hope we have correctly interpreted your request. If you are not satisfied with our response to your request for information, you can contact us within two calendar months to ask for our decision to be reviewed.

If you have any queries or would like to discuss the content of this letter further please contact Sarah Curl using the details below.

Yours sincerely,

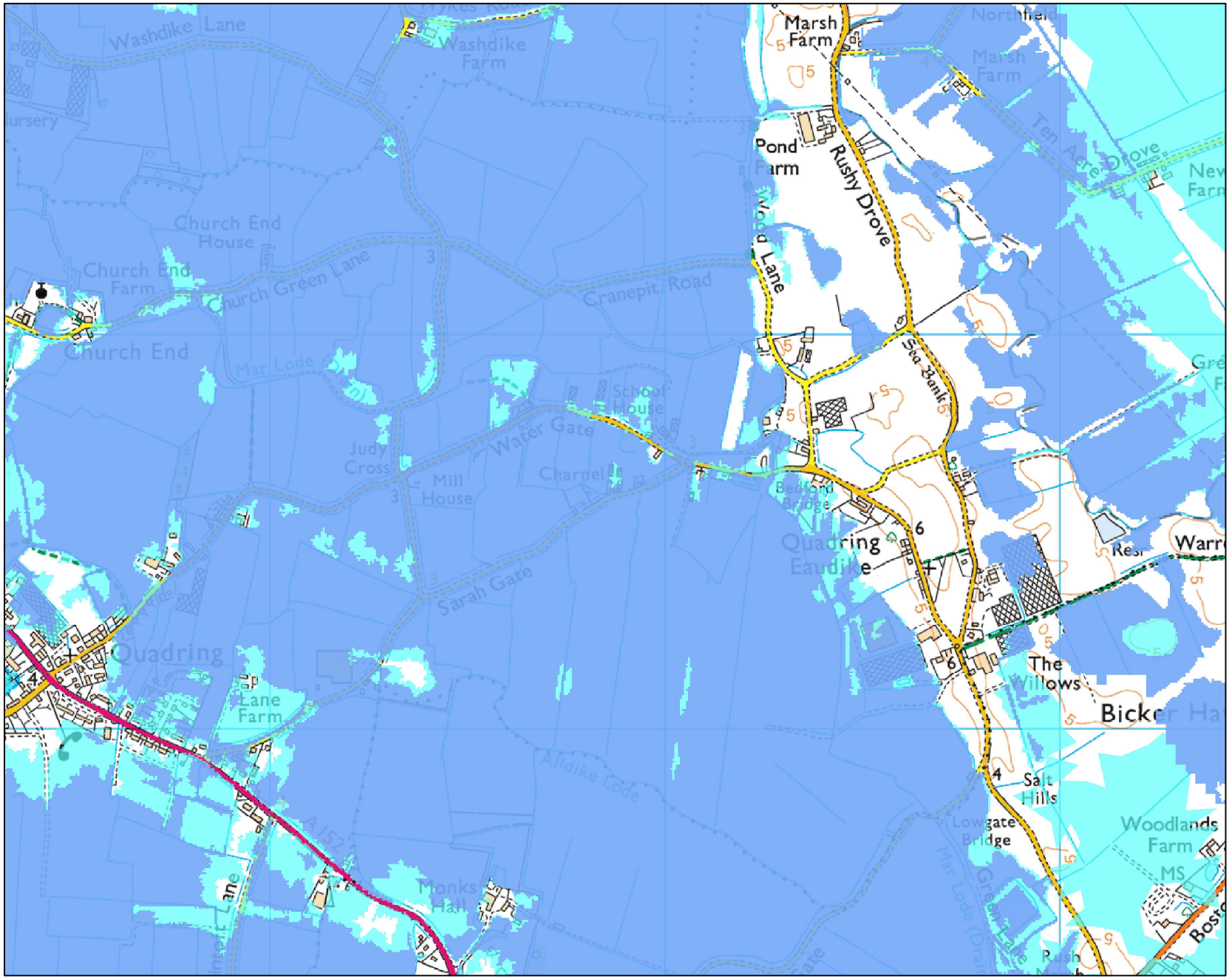
p.p. 

Alastair Windler
Partnerships and Strategic Overview Team Leader - Welland and Nene

Direct dial 020 302 53535
Direct e-mail PSOWN@environment-agency.gov.uk

Enc.
Flood Map
Tidal Levels Map and Tables

Flood Map centred on TF 23875 33605 - created June 2020 [Ref: CCN-2020-172579]



Environment Agency

Scale 1:10,000

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Legend

- Main River
- Raised Defences
- Flood Storage Areas
- Area at Risk of Flooding from Rivers or The Sea
- Extreme Flood Outline

Dark blue shows the area that could be affected by flooding, either from rivers or the sea, if there were no flood defences. This area could be flooded:

- from the sea by a flood that has a 0.5% (1 in 200) or greater chance of happening each year.

- or from a river by a flood that has a 1% (1 in 100) or greater chance of happening each year.

Light blue shows the extent of the Extreme Flood Outline, which represents the extent of a flood event with a 0.1% chance of occurring in any year, or the highest recorded historic extent if greater.

These two colours show the extent of the natural floodplain if there were no flood defences or certain other manmade structures and channel improvements. Sites outside the two extents, but behind raised defences, may be affected by flooding if the defences are overtopped or fail.

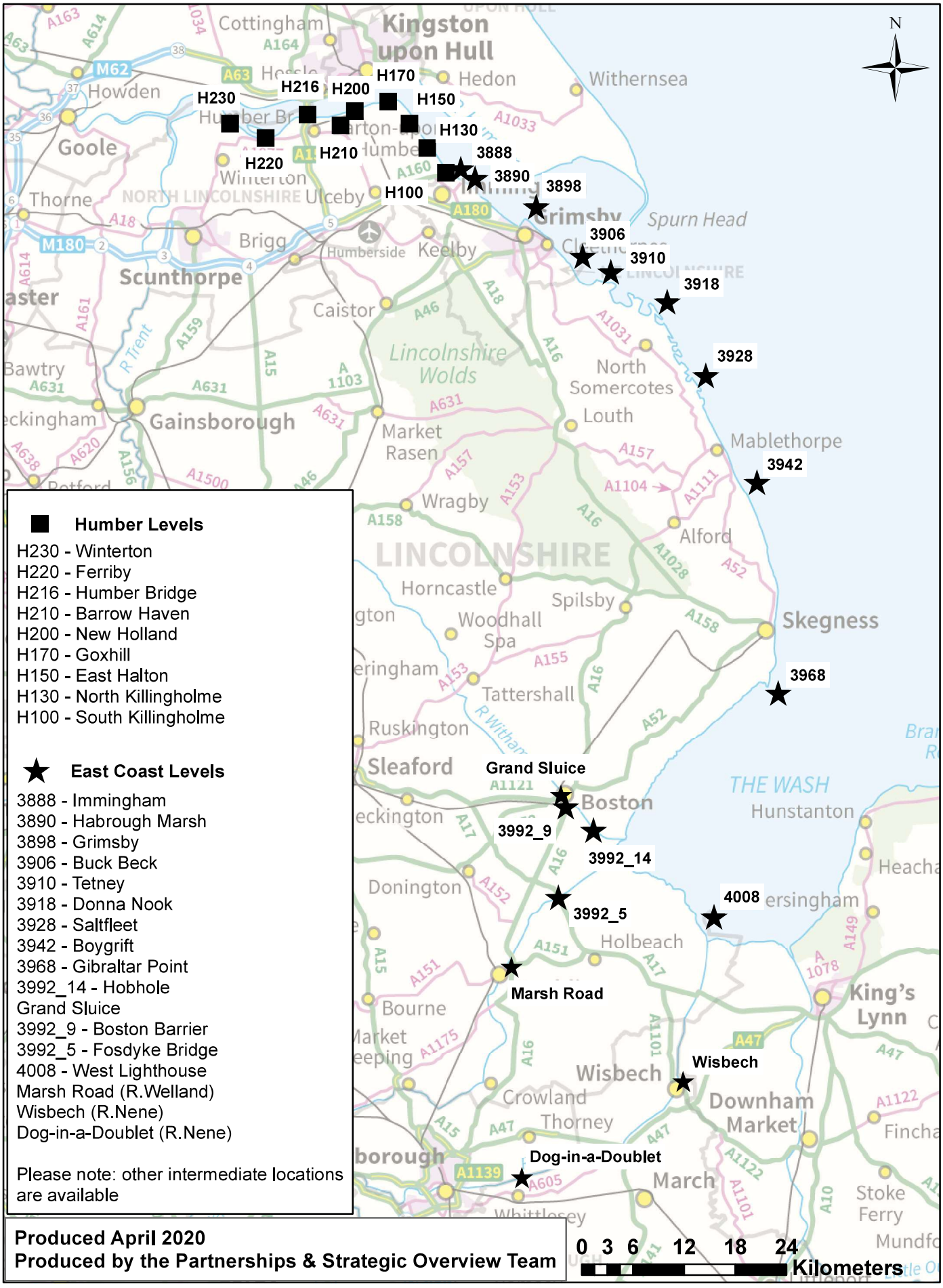
Created by the Partnerships and Strategic Overview Team, Kettering

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Contact Us: National Customer Contact Centre, PO Box 544, Rotherham, S60 1BY. Tel: 03708 506 506 (Mon-Fri 8-6). Email: enquiries@environment-agency.gov.uk

Tidal Level Location Map
Lincolnshire & Northamptonshire Area

Environment Agency



Humber Levels

H230 - Winterton
H220 - Ferriby
H216 - Humber Bridge
H210 - Barrow Haven
H200 - New Holland
H170 - Goxhill
H150 - East Halton
H130 - North Killingholme
H100 - South Killingholme

East Coast Levels

3888 - Immingham
3890 - Habrough Marsh
3898 - Grimsby
3906 - Buck Beck
3910 - Tetney
3918 - Donna Nook
3928 - Saltfleet
3942 - Boygrift
3968 - Gibraltar Point
3992_14 - Hobhole
Grand Sluice
3992_9 - Boston Barrier
3992_5 - Fosdyke Bridge
4008 - West Lighthouse
Marsh Road (R.Welland)
Wisbech (R.Nene)
Dog-in-a-Doublet (R.Nene)

Please note: other intermediate locations are available

Produced April 2020
Produced by the Partnerships & Strategic Overview Team

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Humber Estuary

2014 Interim Water Level Profile

Ref	Location	Easting	Northing	Annual Chance (1 in x) of Tide Level metres ODN																			
				1			10			50			100			200			300			1000		
				Confidence Bound			Confidence Bound			Confidence Bound			Confidence Bound			Confidence Bound			Confidence Bound			Confidence Bound		
				5%	50%	95%	5%	50%	95%	5%	50%	95%	5%	50%	95%	5%	50%	95%	5%	50%	95%	5%	50%	95%
H230	Winterton	493420	422830	5.13	5.14	5.15	5.47	5.51	5.56	5.67	5.74	5.82	5.74	5.83	5.92	5.81	5.90	6.00	5.84	5.94	6.03	5.94	6.02	6.06
H220	Ferriby	497550	421150	5.03	5.04	5.05	5.38	5.42	5.47	5.59	5.67	5.77	5.67	5.77	5.89	5.74	5.86	6.00	5.78	5.91	6.06	5.91	6.04	6.19
H216	Humber Bridge	502478	423914	4.97	4.98	4.99	5.33	5.37	5.42	5.55	5.64	5.74	5.64	5.75	5.88	5.72	5.86	6.02	5.75	5.92	6.10	5.88	6.09	6.31
H210	Barrow Haven	506380	422620	4.91	4.92	4.93	5.27	5.31	5.36	5.50	5.60	5.72	5.60	5.73	5.89	5.69	5.86	6.08	5.74	5.94	6.18	5.87	6.17	6.51
H200	New Holland	508020	424330	4.86	4.87	4.88	5.21	5.26	5.31	5.45	5.55	5.67	5.55	5.68	5.84	5.64	5.81	6.03	5.68	5.89	6.13	5.82	6.12	6.47
H170	Goxhill	511970	425440	4.66	4.67	4.68	5.00	5.04	5.09	5.24	5.34	5.46	5.33	5.47	5.65	5.43	5.61	5.85	5.47	5.69	5.96	5.62	5.95	6.37
H150	East Halton	514450	422870	4.58	4.59	4.60	4.91	4.96	5.01	5.15	5.25	5.38	5.25	5.39	5.57	5.34	5.53	5.77	5.39	5.62	5.90	5.54	5.89	6.33
H130	North Killingholme	516530	420000	4.50	4.51	4.52	4.82	4.87	4.92	5.05	5.15	5.28	5.15	5.28	5.46	5.24	5.42	5.66	5.29	5.51	5.78	5.43	5.77	6.19
H100	South Killingholme	518700	417120	4.41	4.41	4.42	4.72	4.77	4.82	4.95	5.05	5.17	5.05	5.18	5.35	5.14	5.32	5.55	5.18	5.40	5.67	5.33	5.66	6.08
3888	Immingham*	520440	417625	4.16	4.17	4.19	4.50	4.53	4.62	4.73	4.80	5.00	4.83	4.93	5.19	4.93	5.06	5.41	4.98	5.14	5.55	5.15	5.38	6.01

NOTE:

- The base date for the data is 2014.
- The levels are still water levels. Depending on the use of the data it may be necessary to consider wave heights and / or joint probability analysis of water level and other variables.
- Levels for other annual chance probabilities are available if required.
- The information is due to be updated in mid-2020
- *The levels for Immingham are taken from the 2018 Coastal Flood Boundary dataset.

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East Coast and Wash: Immingham to the West Lighthouse

2018 Coastal Flood Boundary Extreme Sea Levels

Environment Agency

CFB Ref	Location	Easting	Northing	Annual Chance (1 in x) of Tide Level in metres ODN																			
				1			10			50			100			200			300			1000		
				Confidence Bound			Confidence Bound			Confidence Bound			Confidence Bound			Confidence Bound			Confidence Bound			Confidence Bound		
				2.5%	50%	97.5%	2.5%	50%	97.5%	2.5%	50%	97.5%	2.5%	50%	97.5%	2.5%	50%	97.5%	2.5%	50%	97.5%	2.5%	50%	97.5%
3888	Immingham	520440	417625	4.16	4.17	4.19	4.50	4.53	4.62	4.73	4.80	5.00	4.83	4.93	5.19	4.93	5.06	5.41	4.98	5.14	5.55	5.15	5.38	6.01
3890	Haborough Marsh	522100	416512	4.14	4.15	4.17	4.48	4.51	4.60	4.70	4.77	4.97	4.80	4.90	5.16	4.90	5.03	5.38	4.94	5.10	5.51	5.11	5.34	5.97
3898	Grimsby	529295	413162	3.98	3.99	4.01	4.31	4.34	4.43	4.53	4.60	4.80	4.61	4.71	4.97	4.71	4.84	5.19	4.74	4.90	5.31	4.88	5.11	5.74
3906	Buck Beck	534709	407369	3.87	3.88	3.90	4.19	4.23	4.31	4.41	4.50	4.68	4.50	4.61	4.86	4.61	4.75	5.10	4.64	4.82	5.22	4.80	5.05	5.66
3910	Tetney	538035	405537	3.85	3.86	3.89	4.17	4.22	4.30	4.40	4.50	4.67	4.49	4.61	4.86	4.60	4.75	5.10	4.63	4.82	5.21	4.80	5.06	5.66
3918	Donna Nook	544641	401997	3.82	3.83	3.86	4.14	4.19	4.27	4.38	4.48	4.65	4.47	4.60	4.85	4.58	4.74	5.10	4.63	4.82	5.22	4.81	5.08	5.68
3928	Saltfleet	549131	393360	3.78	3.79	3.82	4.11	4.16	4.26	4.36	4.46	4.64	4.47	4.59	4.86	4.57	4.74	5.11	4.63	4.83	5.25	4.83	5.11	5.74
3942	Boygrift	555131	380860	3.72	3.74	3.77	4.06	4.11	4.22	4.33	4.43	4.65	4.43	4.57	4.87	4.56	4.73	5.13	4.62	4.83	5.28	4.85	5.15	5.82
3968	Gibraltar Point	557652	356181	4.16	4.17	4.20	4.51	4.56	4.67	4.76	4.85	5.08	4.85	4.97	5.27	4.94	5.10	5.49	4.99	5.18	5.63	5.14	5.41	6.09
3992_14	Hobhole	535990	340116	4.96	4.97	5.01	5.40	5.44	5.56	5.66	5.76	5.98	5.78	5.90	6.20	5.88	6.04	6.44	5.92	6.11	6.57	6.03	6.31	6.99
	Grand Sluice*	532366	344510	4.93	4.94	4.98	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3
3992_9	Boston Barrier	532754	342852	4.93	4.94	4.98	5.41	5.45	5.57	5.73	5.83	6.05	5.85	5.97	6.27	5.93	6.09	6.49	5.94	6.13	6.59	5.98	6.26	6.94
3992_5	Fosdyke Bridge	531886	332234	4.87	4.88	4.92	5.31	5.35	5.47	5.58	5.68	5.90	5.71	5.83	6.13	5.82	5.98	6.38	5.87	6.06	6.52	6.01	6.29	6.97
4008	West Lighthouse	550094	329971	4.87	4.88	4.91	5.21	5.26	5.37	5.46	5.56	5.78	5.56	5.68	5.98	5.66	5.82	6.21	5.71	5.90	6.35	5.86	6.14	6.81
-	Marsh Road	525988	324065	-	5.04	-	-	5.44	-	-	5.73	-	-	5.85	-	-	5.98	-	-	-	-	-	-	-
-	Wisbech	546110	309940	-	4.83	-	-	5.25	-	-	5.53	-	-	5.66	-	-	5.78	-	-	-	-	-	-	-
-	Dog-in-a-Doublet	527200	299287	-	3.67	-	-	4.00	-	-	4.22	-	-	4.32	-	-	4.42	-	-	-	-	-	-	-

See next page for notes

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East Coast and Wash: Immingham to the West Lighthouse

2018 Coastal Flood Boundary Extreme Sea Levels

NOTES:

The following notes apply to all CFB sites (ie all on table excluding Marsh Road, Wisbech, Dog-in-a-Doublet)

- The base date for the data is 2017.
- The levels are still water levels. Depending on the use of the data it may be necessary to consider wave heights and / or joint probability analysis of water level and other variables.
- Levels for other annual chance probabilities are available if required.
- For additional information relating to the 2018 Coastal Flood Boundary Extreme Sea Levels or to access the full dataset for the above sites or intermediate locations refer to the Defra Metadata Catalogue at https://deframetadata.com/geonetwork/srv/eng/catalog.search#/metadata/84a5c7c0-d465-11e4-b0bd-f0def148f590

The following notes apply to all Marsh Road, Wisbech, Dog-in-a-Doublet

- The base date for the data is 2006
- The levels are still water levels. Depending on the use of the data it may be necessary to consider wave heights and / or joint probability analysis of water level and other variables.
- Levels for other annual chance probabilities are available if required.
- These levels will be updated as their respective tidal river models are updated.

The following notes apply to Grand Sluice

- The data is based on CFB 2018 data for Boston Barrier site, capped at 5.3mAOD to reflect use of the barrier.
- The base date for the data is 2017
- The levels are still water levels. Depending on the use of the data it may be necessary to consider wave heights and / or joint probability analysis of water level and other variables.
- For additional information relating to the 2018 Coastal Flood Boundary Extreme Sea Levels or to access the full dataset for the above sites or intermediate locations refer to the Defra Metadata Catalogue at https://deframetadata.com/geonetwork/srv/eng/catalog.search#/metadata/84a5c7c0-d465-11e4-b0bd-f0def148f590