

BOROUGH COUNCIL OF KING'S LYNN & WEST NORFOLK

THE WASH EAST COASTAL MANAGEMENT STRATEGY

**Minutes of the Meeting of the above held on Thursday, 2nd March, 2023
at 2.00 pm in the Offices at Valentines Road and Microsoft Teams**

PRESENT:

Councillor Paul Kunes – Borough Council (Chair)
James Albone – Historic England
Paul Bland – Hunstanton South Beach Owners Association
Councillor Ian Devereux – Borough Council
Vanessa Gouldsmith – Natural England
Sydney Jacus – Norfolk County Council
Jade Kite – Borough Council
Derrick Lloyd – Hunstanton Chamber of Trade
Andrew Murray – Civic Society
Adele Powell – The Wash and North Norfolk Marine Partnership
Dave Robson – Borough Council
Michael Ruston – Hunstanton Chamber of Trade
Jim Scott – RSPB
Chris Smith – Environment Agency
Michael Williamson – Heacham Parish Council
Adrian Winnington – Hunstanton Town Council

APOLOGIES:

Will Fletcher – Historic England
Catherine Harries – Environment Agency
Andrew Jamieson – Norfolk County Councillor
Katy Owen – NCC
Claire May – Borough Council
Matthew Moore – Anglian Water
Matthew Philpott - WLMA
Tamara Rowson – Natural England

		<u>ACTION</u>
1	<u>WELCOME AND INTRODUCTIONS</u> The Chair welcomed everyone to the meeting. Those present introduced themselves.	
2	<u>MINUTES FROM THE STAKEHOLDERS FORUM HELD ON 18TH OCTOBER 2022</u>	

	The minutes from the previous meeting were agreed as a correct record subject to Paul Bland's organisation being amended to Hunstanton South Beach Owners Association.	
3	<p><u>MATTERS ARISING</u></p> <p>There was none.</p>	
4	<p><u>HUNSTANTON COASTAL MANAGEMENT PLAN</u> (Pages 6 - 36)</p> <p>Officers delivered a presentation that provided an update on Units A, B and C, as attached, highlighting the following:</p> <p><u>Unit A</u></p> <p>The Cliff survey had been conducted in April 2022 and the findings were presented to the Group. There had been a slight increase in certain areas, but mainly the erosion levels were in line with projections.</p> <p>A summary of blockfall events were provided along with detail of the beach level changes.</p> <p>A pilot project to look at trigger levels had been carried out and was included in the report. It used terrestrial LIDAR monitoring to review erosion levels which would be used to review the trigger levels in the Coastal Management Plan. Currently the trigger for intervention was the cliff edge within 10m of an at risk area. The Pilot study suggested that the lighthouse area could meet the trigger level by 2050. The current Coastal Management Plan projection for management intervention (currently rock armour) was 2068 to 2072. Data would continue to be collected to inform future projections and hopefully roll out further trials for other areas going forward.</p> <p>The Group was informed that the full Cliff Survey report was available on the Borough Council's website at https://www.west-norfolk.gov.uk/info/20098/water_management_and_flooding/851/hunstanton_cliffs_monitoring</p> <p>Questions were invited and it was explained that projections and options had been looked at to slow erosion, but the current plan was no active intervention until trigger thresholds had been met. The ongoing monitoring would provide advance warning of when the trigger levels were likely to be met so that plans could be implemented well in advance. It was explained that any early intervention would have a shelf life, and would need replacing, that's why no active intervention was the agreed plan.</p>	

Comments were made that it was important knowledge was passed down to whoever would be in place to take this forward in the future once trigger levels were met and funding mechanisms available at the time would have to be explored.

It was explained that the 10m trigger had been identified by the British Geological Survey.

It was also explained that the fence along the cliffs would be looked at to see if it needed moving back.

Councillor Devereux declared an interest as a Member of the RFCC and the group discussed the impact the proposed Wash Barrier would have on coastal erosion. It was explained that this project was still at concept stage and lots of investigations on its impact would be required once more detail was known.

Unit B

A summary of the outcomes of the three coastal trend reports was presented to the Stakeholder Forum at its previous meeting were now being translated into next steps.

Numerous repairs had been completed along with routine maintenance. A survey of defences was also being carried out which would identify the grade of assets and would then provide a report of recommended work required.

The Stakeholders Forum were reminded that the Wash East Coast Management Strategy looked at the line of defence and beach levels from a flood protection view, not tourism and the appearance of the beach to visitors. It was explained that bringing sand in to Hunstanton from elsewhere that there was no guarantee that it would stay due to the coastal processes now acting in Hunstanton.

Information on the natural movement of material was provided as well as detail of off coast sand banks. It was explained that the Groynes were not trapping material as they should and even if they were replaced, it would have little impact on beach levels.

The Group was reminded that there was historical precedent for low beach levels in Hunstanton, but historical data was unavailable to determine if this was cyclical.

The Group was provided with information on the annual recycling project at Heacham and it was explained that the shingle ridge was the flood defence in this area.

Unit C

	<p>The Funding Group were continuing to meet. Annual recycling work had just been completed, beach volumes were stable and there was currently plenty of material available at the Scalp for recycling. The CIC were continuing to raise funds for the recharge which was likely to be required in the next two to three years. Work was now underway to plan for the Recharge including delivery methods and licences required.</p> <p>The Group was informed that grass cutting at Snettisham had been carried out and was programmed for two cuts this year.</p> <p>.</p>	
5	<p><u>FUNDING GROUP UPDATE</u></p> <p>Originally recharge work had been scheduled for this financial year. This was now not required due to there being a sufficient amount of material for recycling to take place, so budgets and finances were being reviewed.</p> <p>Work was ongoing to look at where the recharge material would come from and to ensure that it was compatible.</p> <p>The Group was reminded that Funding for the Recharge comprised of CIC funds, Anglia Water Funding, Borough Council and EA Funding.</p>	
6	<p><u>ANY OTHER BUSINESS</u></p> <p>Those present were informed that the newsletter would be circulated around June. In the meantime the website and this Group would be kept updated as required.</p> <p>The Group was informed that the SMP Explorer was currently being finalised and should be launched by the end of the year.</p> <p>The Stakeholders Group could arrange an additional meeting if required to discuss the Wash Barrier, once more information was available. Adele Powell invited the Stakeholders Forum to a King's Lynn Joint Advisory Group Meeting where the Wash Barrier would be discussed.</p>	
7	<p><u>DATE OF THE NEXT MEETING</u></p> <p>To be scheduled.</p>	

The meeting closed at 3.15 pm

WECMS Stakeholder Forum

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Minute Item 4

Thursday 2nd March 2023 (14:00 – 16:00)

Borough Council of
**King's Lynn &
West Norfolk**



1. Welcome & Apologies



2. Minutes of Last Meeting



3. Matters Arising



6 4. Hunstanton Coastal Management Plan:

Unit A – Hunstanton Cliffs



Annual Cliff Monitoring

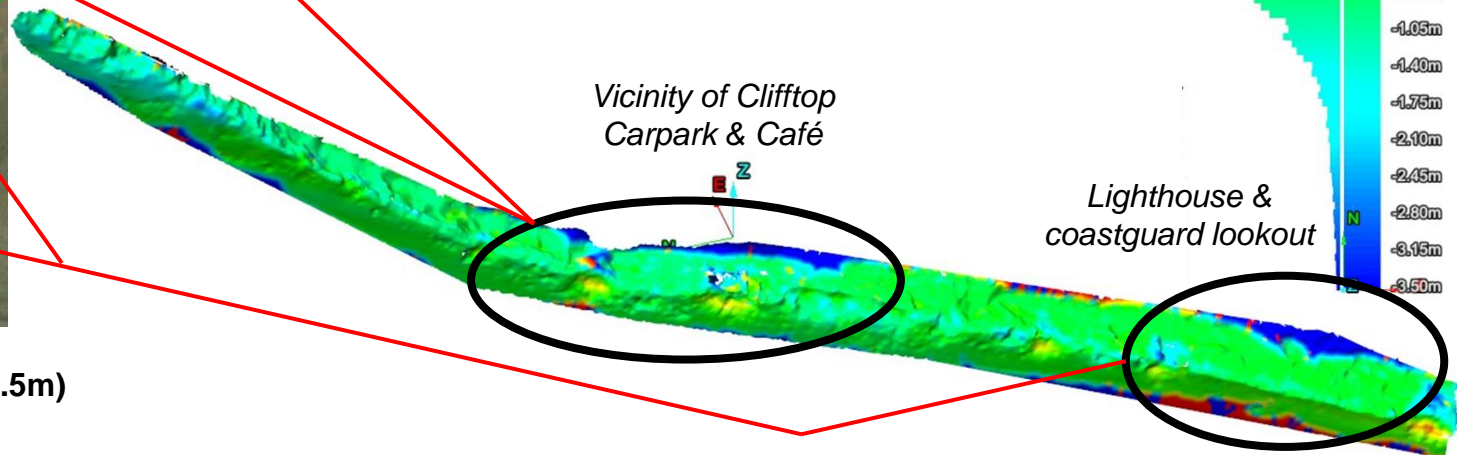
- Terrestrial LiDAR survey undertaken in April 2022.
- Report finalised in December 2022. Key findings include:
 - Slight acceleration in the rate of erosion, especially for the northern section.
 - Northern section now most active area.
 - Erosion of the southern and middle sections remains in-line with previous reports.
 - Mean cliff recession rate has increased from 0.10m (2021) to 0.11m (2022).



North Section

Analysis of Change (2010-2022)

- Between 2010-2022 two locations have observed blockfalls.
- These blockfalls have a depth between 3.5 meters & 4 meters.
- The material lost from the cliff face has accumulated on the beach at the base of the cliffs.

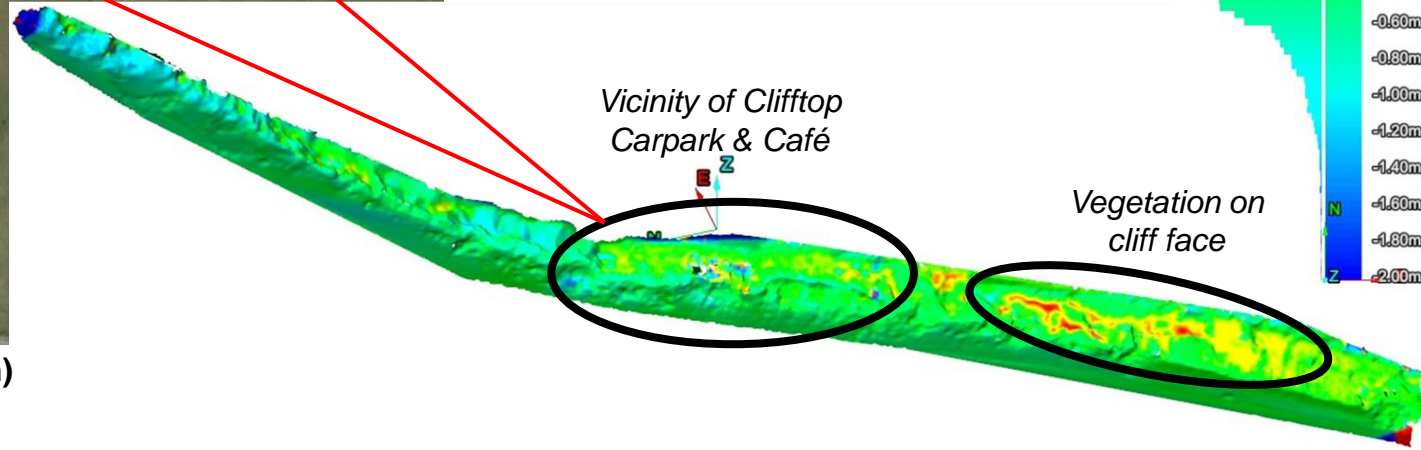


Red = Accumulation (up to 3.5m)
Blue = Erosion (up to 3.5m)

North Section

Analysis of Change (2021-2022)

- Between 2021-2022 one location has observed a blockfall.
- The blockfall had a depth of approx. 2 meters.
- The material lost from the cliff face has accumulated on the beach at the base of the cliffs.
- Vegetation presence increasing.

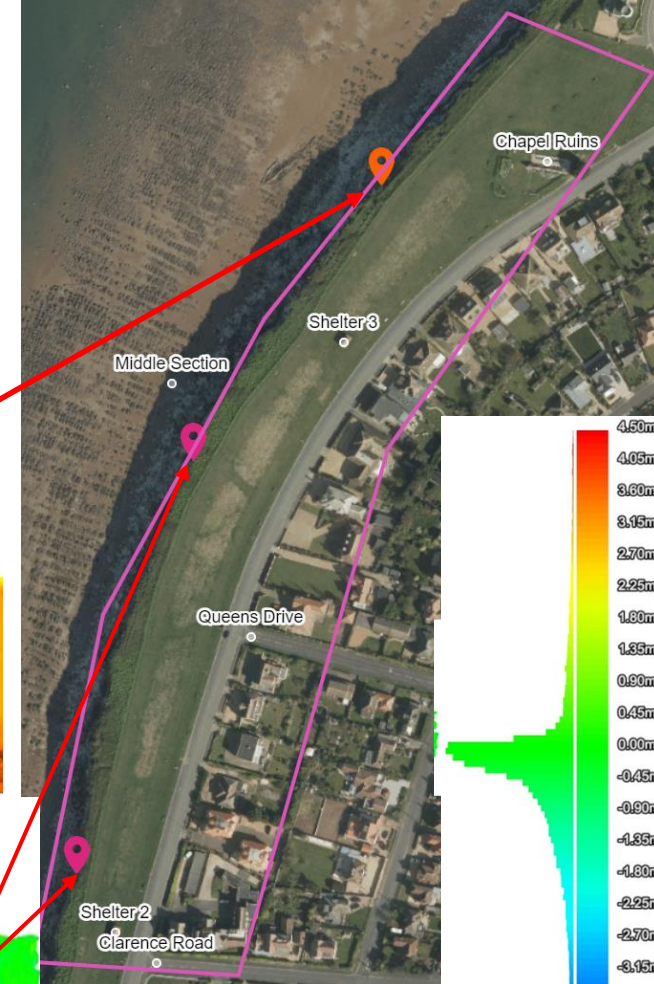
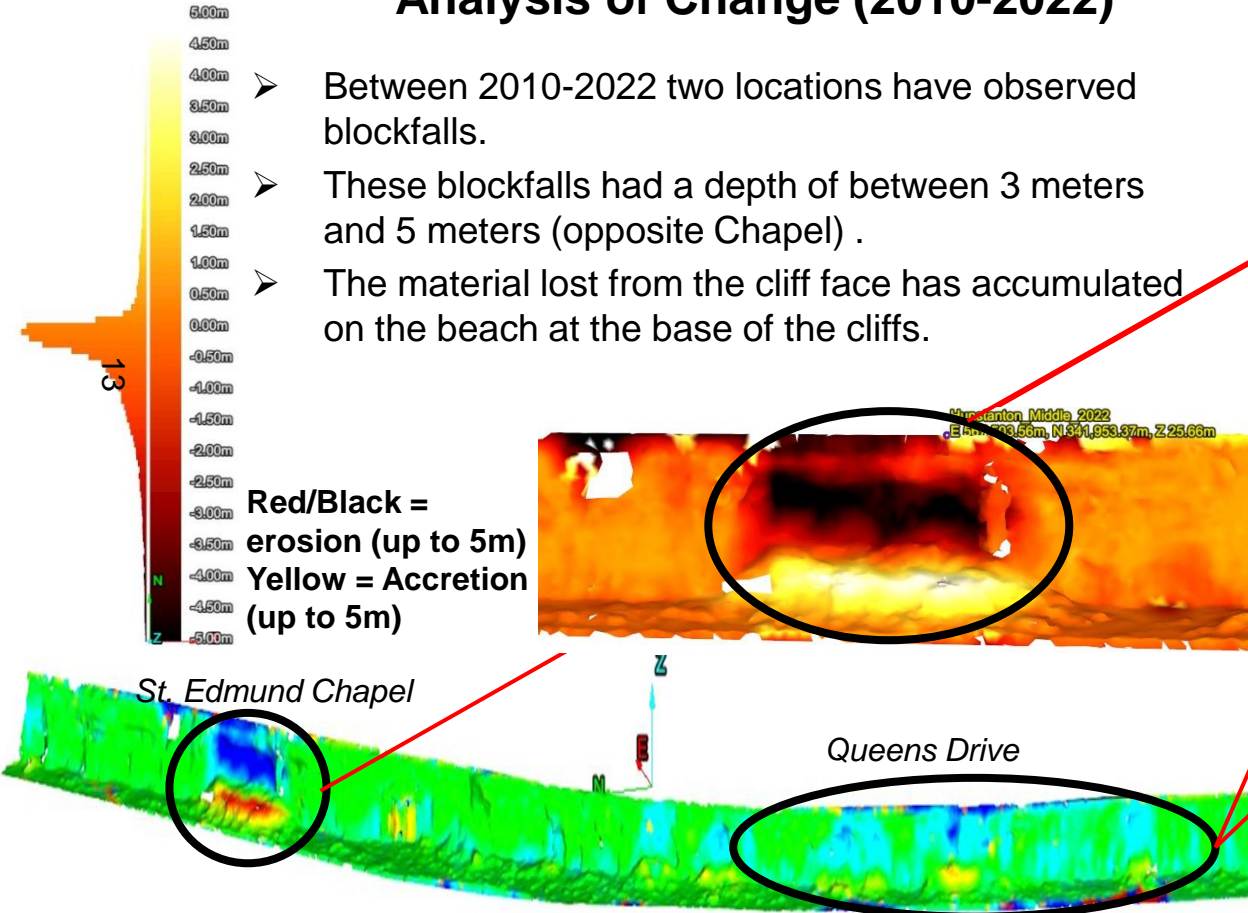


Red = Accumulation (up to 2m)
Blue = Erosion (up to 2m)

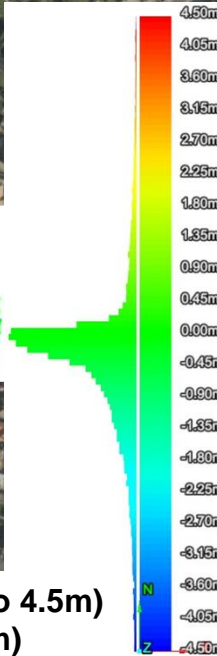
Middle Section

Analysis of Change (2010-2022)

- Between 2010-2022 two locations have observed blockfalls.
- These blockfalls had a depth of between 3 meters and 5 meters (opposite Chapel) .
- The material lost from the cliff face has accumulated on the beach at the base of the cliffs.



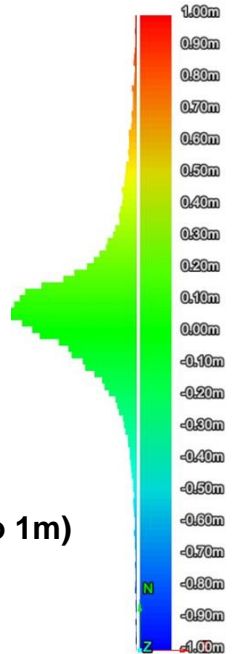
Red = Accumulation (up to 4.5m)
Blue = Erosion (up to 4.5m)



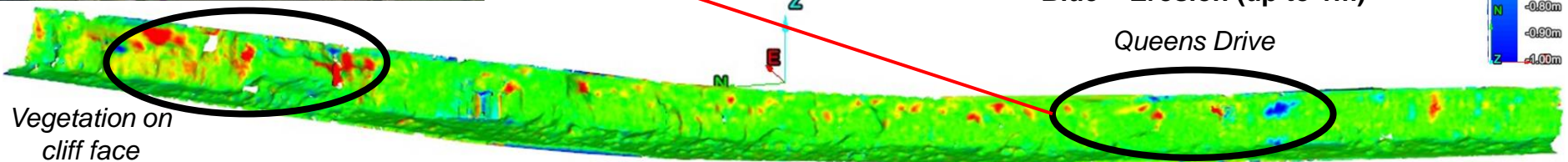
Middle Section

Analysis of Change (2021-2022)

- Between 2021-2022 one location has observed a blockfall.
- The blockfall had a depth of between 1-2 meters.
- The material lost from the cliff face has accumulated on the beach at the base of the cliffs.
- The remainder of the cliff section has observed minor changes and vegetation presence has increased.



Red = Accumulation (up to 1m)
Blue = Erosion (up to 1m)



South Section

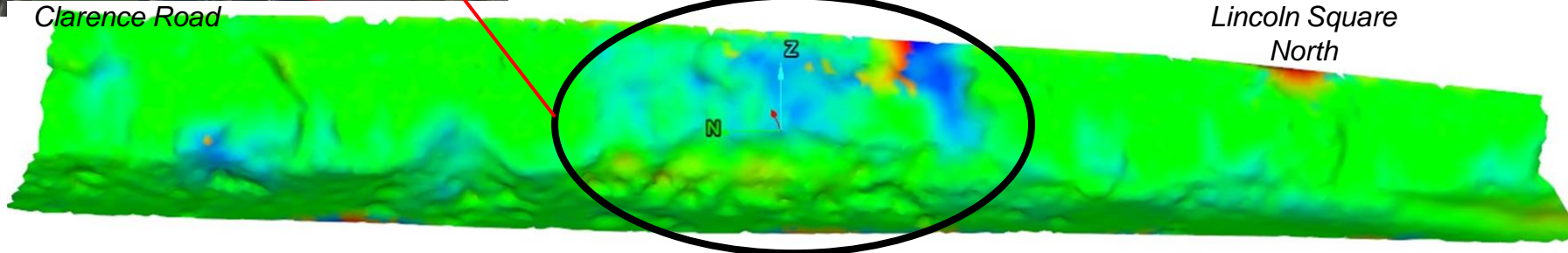
Analysis of Change (2010-2022)

- Between 2021-2022 one location has observed a blockfall.
- The blockfall had a depth of approx. 4 meters.
- The material lost from the cliff face has accumulated on the beach at the base of the cliffs.



Red = Accumulation (up to 4.5m)

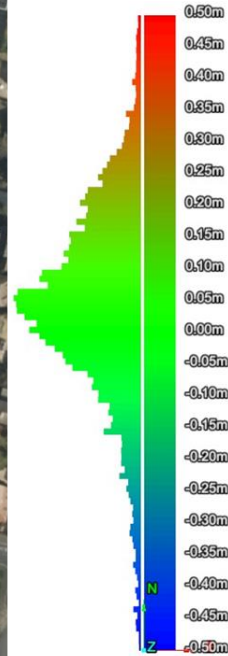
Blue = Erosion (up to 4.5m)



South Section

Analysis of Change (2021-2022)

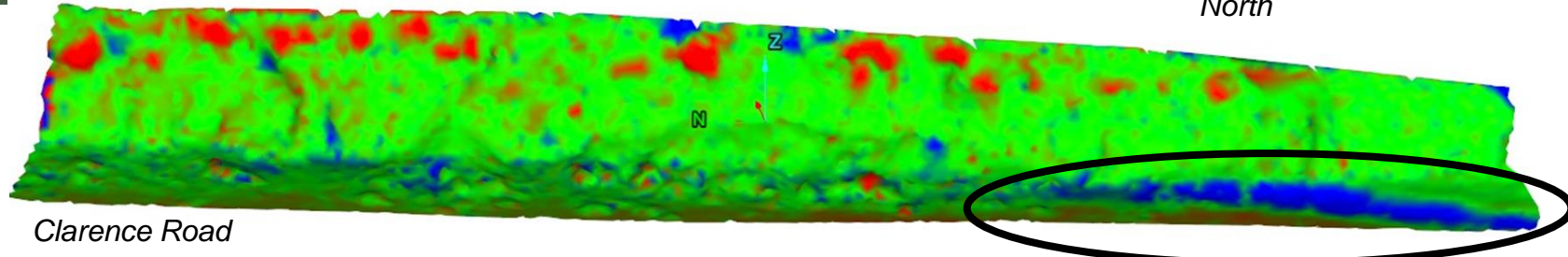
- Between 2021-2022 there have been isolated areas of loss of up to 0.5m.
- Numerous areas have observed vegetation presence increase.
- Erosion at the base of the cliffs is indicative of beach material being removed from the frontage.



Red = Accumulation (up to 0.5m)

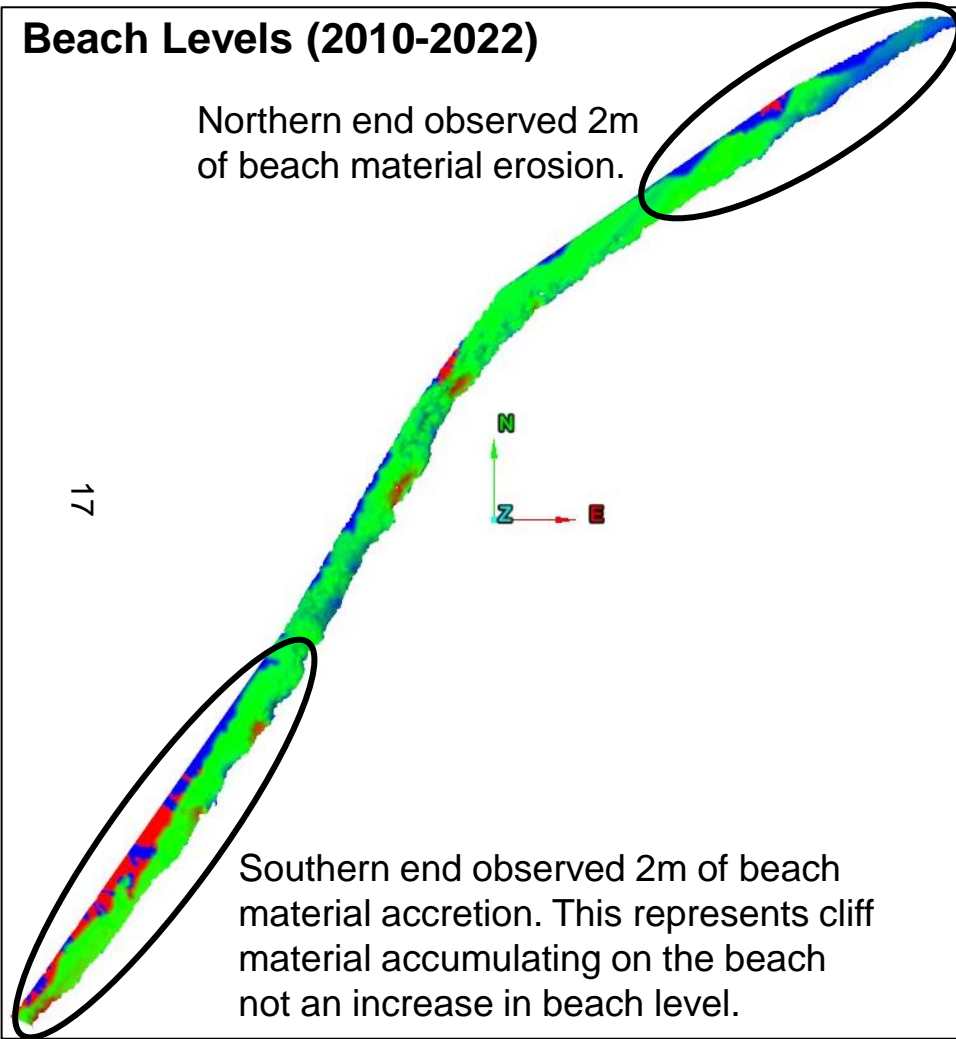
Blue = Erosion (up to 0.5m)

*Lincoln Square
North*



Beach Levels (2010-2022)

Northern end observed 2m of beach material erosion.



Southern end observed 2m of beach material accretion. This represents cliff material accumulating on the beach not an increase in beach level.

Colour by distance from objects

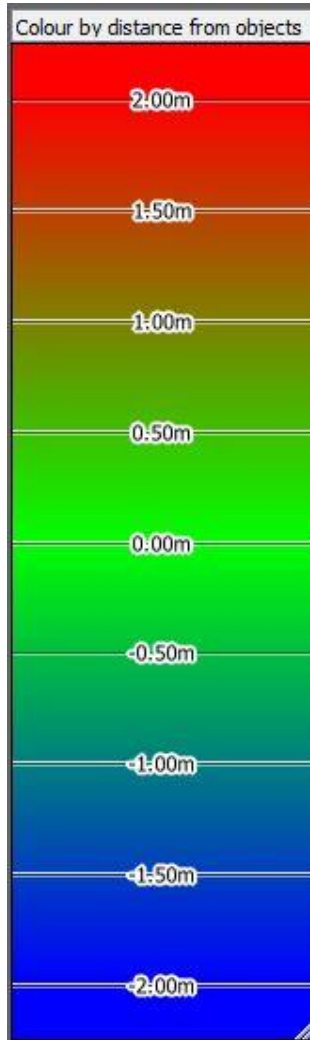
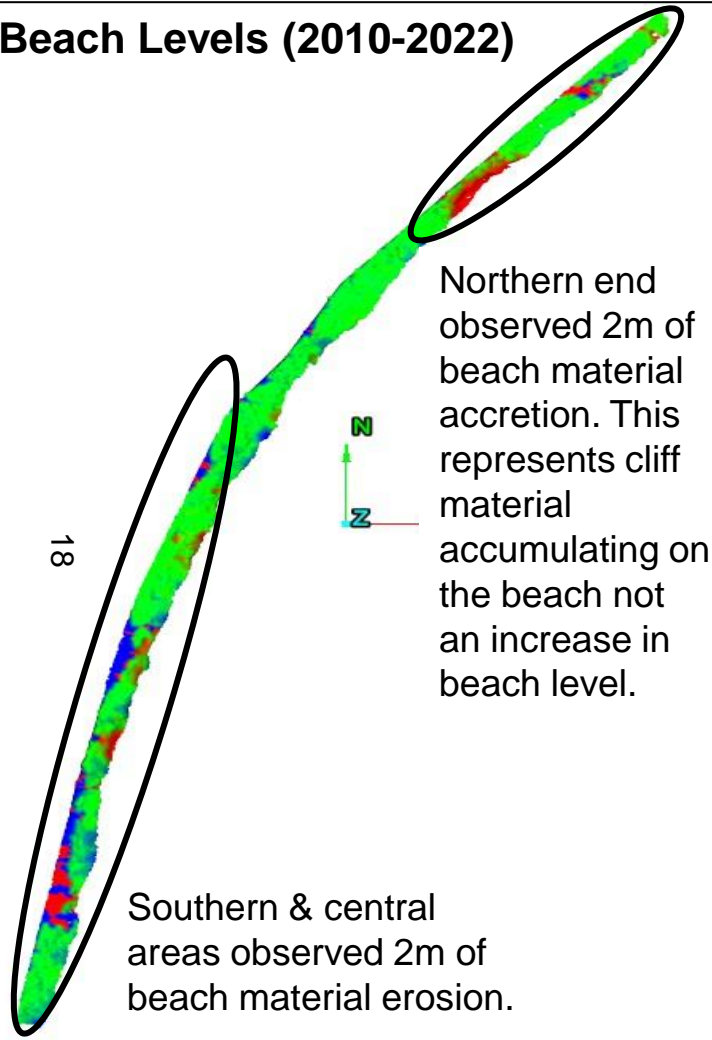


Beach Level Change North Section

Beach level change in front of the Hunstanton Cliffs between 2010-2022.

Between 2021-2022 there was limited change observed.

Beach Levels (2010-2022)



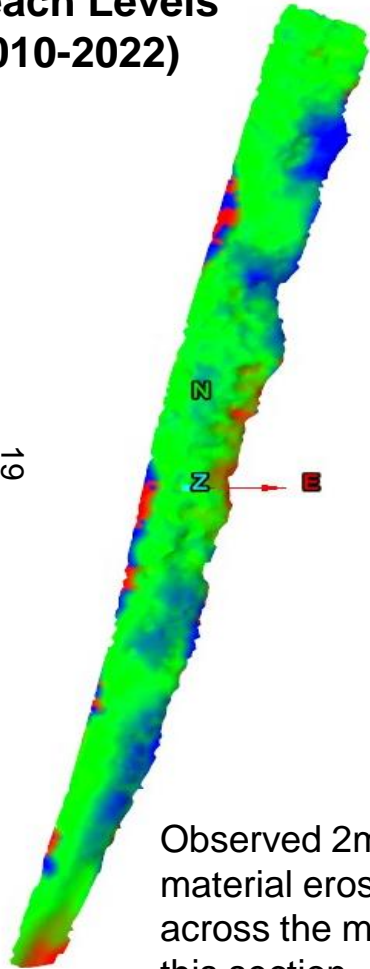
Beach Level Change Middle Section

Beach level change in front of the Hunstanton Cliffs between 2010-2022.

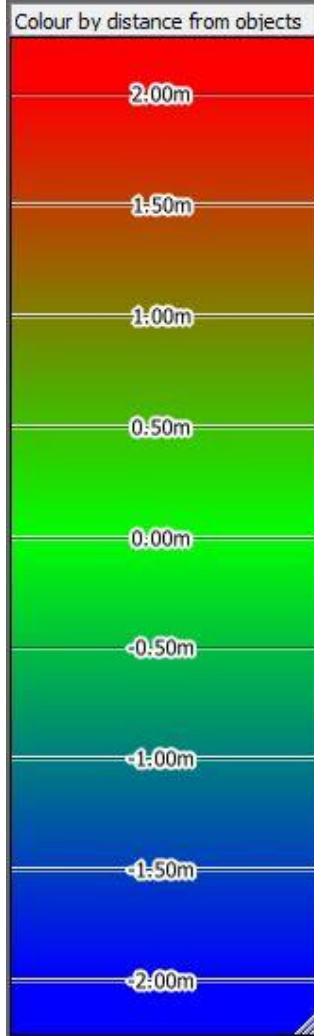
Between 2021-2022 there was limited change observed.

Beach Levels (2010-2022)

19



Observed 2m of beach material erosion across the majority of this section.



Beach Level Change

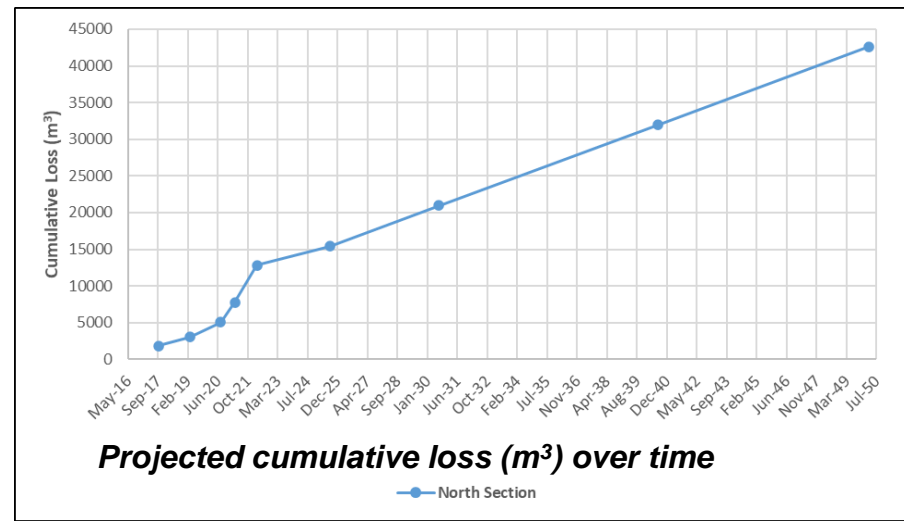
South Section

Beach level change in front of the Hunstanton Cliffs between 2010-2022.

Between 2021-2022 there was limited change observed.

Trigger Level Pilot

- Completed for the north section between the Coastguard Lookout and Lighthouse from 2010-2050.
- Potential future cliff erosion rates were projected for 2025, 2030, 2040 & 2050.
- Preferred trigger level is when the closest cliff edge is less than 10m away.
- Outcomes are a projection only. Actual rates of erosion may vary.
- As data collection continues, future erosion projections will become more accurate.

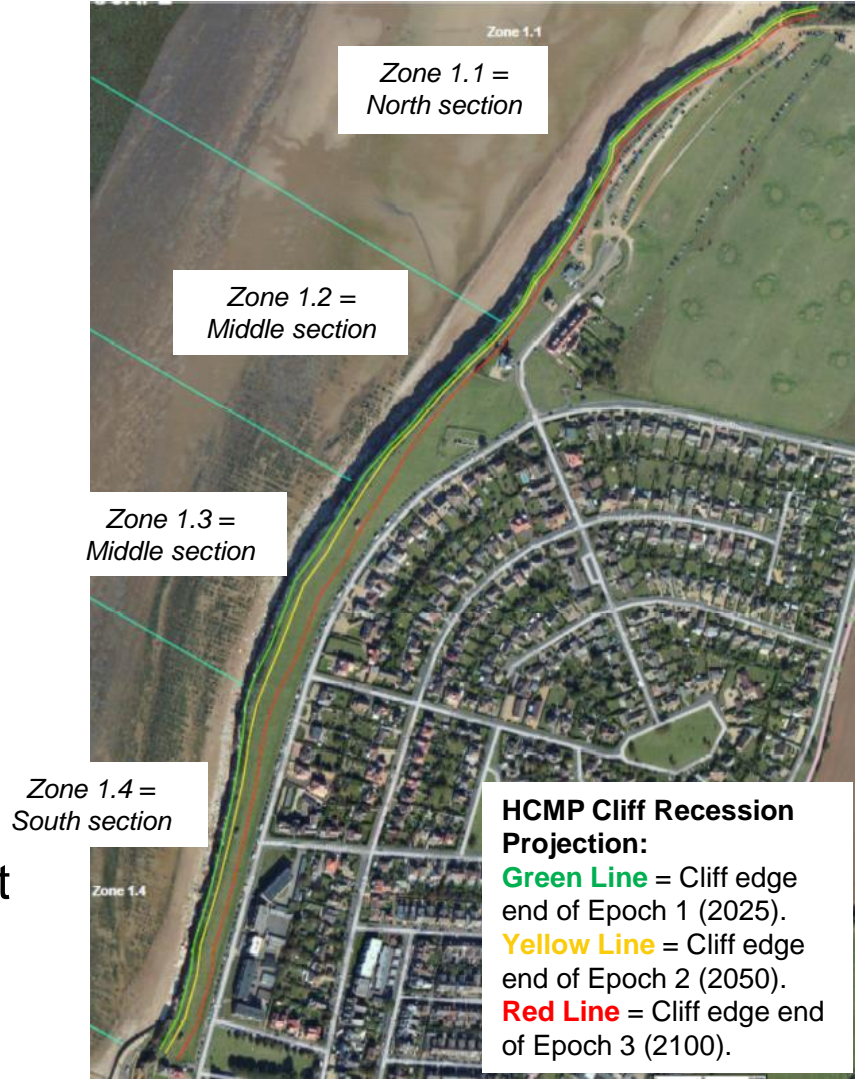


Estimated cliff recession projections (m³ and tonnes).

Period		Elapsed Time (days)	Cumulative Time (days)	North Section			North Section		
Start	End			Material Loss (m3)	Cumulative Loss (m3)	Cumulative Loss/m (m3)	Material Loss (t)	Cumulative Loss (t)	Cumulative Loss/m (t)
Aug-10	Oct-12	785	785						
Oct-12	Oct-17	1829	2614	1850	1850	4	4255	4255	8
Oct-17	Mar-19	522	3136	1200	3050	6	2760	7015	14
Mar-19	Aug-20	510	3646	2000	5050	10	4600	11615	23
Aug-20	Mar-21	239	3885	2700	7750	15	6210	17825	35
Mar-21	Apr-22	370	4255	5100	12850	25	11730	29555	57
Loss/Year					1103			2537	
Apr-22	Aug-25	1218	5473		15423	30		35474	69
Aug-25	Aug-30	1826	7299		20939	41		48159	94
Aug-30	Aug-40	3653	10952		31969	62		73529	143
Aug-40	Mar-50	3529	14481		42631	83		98052	190

Trigger Level Pilot

- The new pilot suggested the Lighthouse could reach the 10m trigger by 2050.
- HCMP predicted rock armour could be required between 2068-2072.
- This figure shows project locations of the cliff edge over the next 100-years from the HCMP.
- The date of 2050 projected by the pilot trigger levels does fall within the previous projections of 2050-2100 (Epoch 2 & 3 / yellow & red lines) and is in line with current SMP policy.



Trigger Level Pilot

- The HCMP recommended collecting higher resolution data to improve projections for when future management is required.
- The pilot completed is achieving this and improving projections.
- Annual data collection should continue alongside further roll out of trigger level pilots (i.e. middle & south sections).
- Outcomes of further trigger level pilots will feed back into HCMP predictions and could result in timelines being updated.

22



Next Steps...

- Annual surveys to continue.
- No post storm surveys yet required.
- Trigger level pilot was successful and should be rolled out further.
- 23 • Consideration safe location of cliff top fence to be considered in next report alongside timescales for rollback.
- Some changes may be required to the HCMP in the future depending on future trigger level pilots.
- The full report has been added to the cliff monitoring webpage.



4. Hunstanton Coastal Management Plan:

Unit B – Hunstanton Town



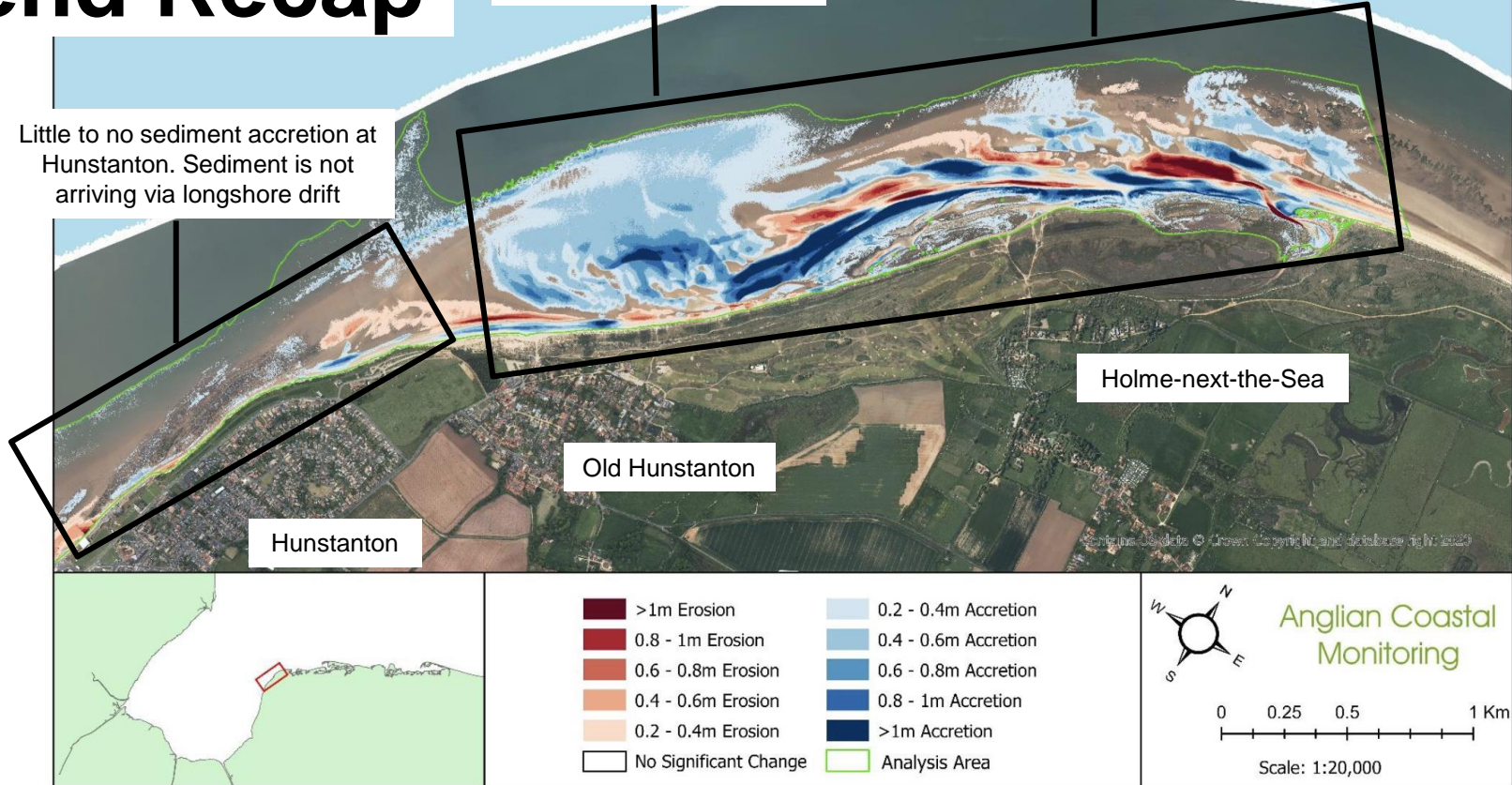
Coastal Trend Recap

25

Little to no sediment accretion at Hunstanton. Sediment is not arriving via longshore drift

Significant offshore sediment accretion on sandbanks (blue areas)

Red areas represent erosion of sandbanks from wave impact



Coastal Trend Recap

26



Coastal Trend Recap

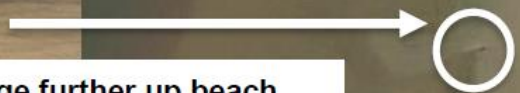


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Discharge further seaward
tending northwards

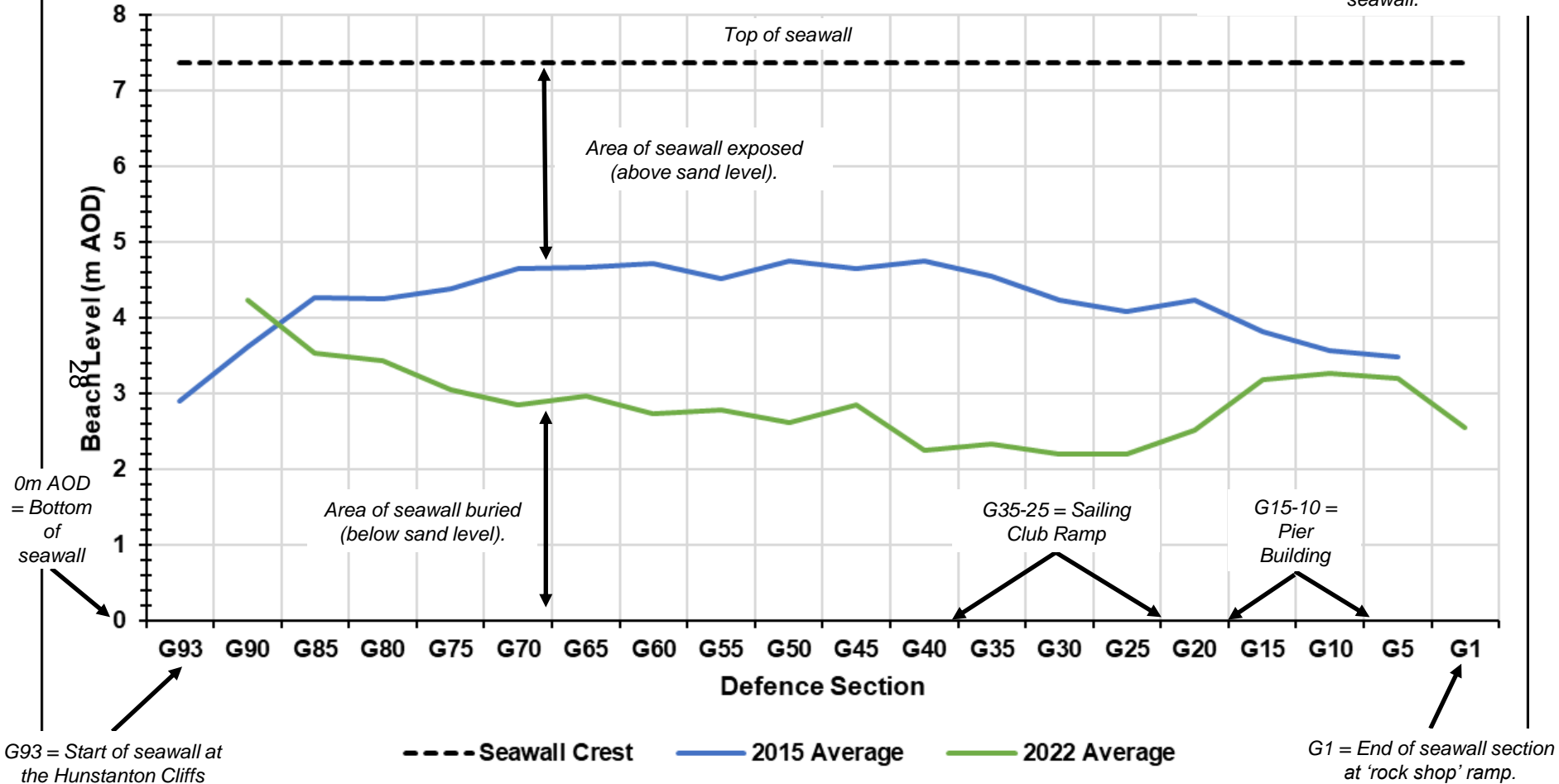


Discharge further up beach
tending southwards



Section G Average Beach Levels (2015 & 2022)

Coloured lines = Height of beach material against the base of the seawall.



2022/23 Financial Year Budget & Works

Defence Element	Summary	Cost	Status
Floodgates	Preventative maintenance inspection of floodgates.	£2,064.00	Complete
Rock shop ramp	Concrete repair.	£10,657.00	Complete
Navigation Marker	Replacement of marker elements (brace).	£2,254.00	Complete
Navigation Marker	Replacement of marker elements (brace).	£1,240.00	Complete
Navigation Marker	Replacement of numbered markers (x5).	£1,780.00	Complete
Blockwork Seawall	Reinstatement of all missing or damaged mortar joints.	£28,605.00	Complete
Outfall	Jetting and survey of all Borough Council promenade outfalls.	£1,095.00	Complete
Technical advice retainer	Coastal engineering technical advice retainer.	£1,666.33	Ongoing
Outfall	Replacement of outfall grate.	£486.00	Complete
Promenade	Concrete repair.	£862.34	Complete
All defences	Asset inspection survey and condition assessment of all coastal defences.	£13,650.00	Ongoing
Navigation Marker	Reattachment of navigation marker brace.	£1,180.00	Complete
Navigation Marker	Painting of beacons as per Trinity Lighthouse inspection results.	£5,780.00	Ongoing
Outfall	Jetting & clearance of outfalls and replacement of seized grates.	£1,905.00	Pending – 7 th March
n/a	LGA Coastal SIG annual subscription fee.	£330.00	Complete
Floodgates	Implementation of routine maintenance measures recommended by survey.	£5,230.00	Ongoing
Navigation Marker	Replacement of marker elements (brace)	Tbc	Pending

Total spend as of February 15th 2023 is £80,308.50. Remaining budget is £15,691.50.

Blockwork seawall before repair



Before



Missing outfall cover before



30 Blockwork seawall after repair



After



After



Asset Inspection Survey

- Visual survey of all coastal defences undertaken by AECOM in December.
- Purpose of inspection is to:
 - Identify the current condition grade of defences (between 1-5).
 - Recommend areas requiring further investigation to determine defence condition & associated costs.
 - Recommend repairs or capital works required to maintain standard of protection & associated costs / timelines.
 - Recommend H&S works required to groynes.
 - Update defence residual life & HCMP capital work timelines.
 - Assess impact of beach level erosion on defence sections G-C.
- Report is currently in draft and outcomes being considered.

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Data collection & monitoring

- Discussions with EA's Anglian Coastal Monitoring Programme & National Oceanography Centre ongoing.
- 32 • Focus on options for more frequent / higher resolution beach level monitoring across the Hunstanton frontage.
- Asset inspection results will further inform this.



5. Funding Group Update:

Unit C – Wolferton Creek to South
Hunstanton



Beach Recycling & Recharge

- Funding group meetings continue.
- Annual beach recycling commenced on 13th February.
- Funds continue to be successfully raised by the CIC.
- Beach recharge likely to be required in the next 2-3 years.



6. Any Other Business

