

The Lowestoft Tidal Barrier Order

Transport and Works Act 1992

Transport and Works (Applications and Objections Procedure) (England and Wales) Rules 2006



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1 INTRODUCTION

- 1.1 East Suffolk Council (**ESC**) is seeking to manage tidal flood risk in Lowestoft, Suffolk. To achieve this, ESC is proposing to build a tidal barrier, which can be raised and lowered, within the Inner Harbour Entrance Channel of Lake Lothing, to the east of the Bascule Bridge together with associated works (together, the **Scheme**). To fully manage tidal flood risk in Lowestoft, the construction of a tidal barrier on its own is not sufficient to manage risk. A series of tidal flood walls and flood gates are under construction around the Outer Harbour and these works are already complete or will be completed by autumn 2023. The locations of these defences are based upon data and evidence from flooding which occurred during the 2013 east coast tidal surge.
- 1.2 ESC is applying to the Secretary of State for the Environment, Food and Rural Affairs (**Defra**) for an Order under the Transport and Works Act 1992 (**TWAO**) and making an associated request for a direction deeming planning permission to be granted for the Scheme, pursuant to section 90(2A) of the Town and Country Planning Act 1990. The purpose of the proposed TWAO and associated deemed planning direction is to authorise the construction, operation and maintenance of the Scheme.

2 PURPOSE OF THIS REPORT

- 2.1 This report is a summary of consultations undertaken by ESC during the development and design of the proposals comprised within the Scheme. It has been prepared pursuant to rule 10(2)(d) of the Transport and Works (Applications and Objections Procedure) (England and Wales) Rules 2006 (the **2006 Rules**) and is being submitted as part of the TWAO application.
- 2.2 As required by Rule 10(2)(d) of the 2006 Rules, ESC confirms it has consulted with the organisations identified within Schedules 5 and 6 to the 2006 Rules in so far as they may be relevant, having regard to the works comprised within the Scheme. Further details as regards this aspect of the consultation undertaken are provided in **Chapter 13** of this report.
- ESC has carried out extensive consultation and engagement throughout the development of the Scheme. Early consultation was undertaken in the wider context of the development of the Lowestoft Flood Risk Management Strategy which, when approved through the Environment Agency's Strategic Outline Business Case approvals process, developed into the Lowestoft Flood Risk Management Project (LFRMP). This was the wider strategic approach to the management of pluvial, fluvial and tidal flooding in Lowestoft, of which the Scheme forms a significant and substantial part. Throughout, ESC has sought to provide consultees with the opportunity to inform option selection and the development of the Scheme.
- 2.4 The approach adopted in communications and engagement for the LFRMP and the Scheme has been one of open two-way dialogue, ensuring that those directly and indirectly impacted by the proposed approach were informed about the emerging proposals and able to provide their viewpoint. Feedback received has informed the Scheme's progression throughout.
- 2.5 This report documents the engagement and consultation that has been undertaken by ESC, explains the feedback that has been received and summarises how this feedback has been taken into account during the development of the Scheme.
- 2.6 In May 2023 LFRMP was rebranded and these proposals are now known as Lowestoft Flood Protection (**LFP**). In this report, the term LFRMP will be deployed when describing the proposals as they stood at a date prior to the May 2023 rebrand whereas references beyond May 2023 will generally be made to LFP. The tidal barrier and associated works which are the subject of the TWAO application will either be referred to as the Lowestoft Tidal Barrier or the Scheme.

3 STRUCTURE OF THIS REPORT

- 3.1 This report and its appendices set out the consultation and engagement undertaken as part of the development of LFP and, more specifically, the development of the Scheme. The remainder of this report is structured as follows:
 - Chapter 4 explains the objectives of the Scheme;
 - Chapter 5 explains the background to the wider LFRMP proposals of which the Scheme forms part;
 - Chapter 6 provides a high-level description of the Scheme;
 - **Chapter 7** explains the overall approach taken by ESC in relation to consultation and engagement;
 - **Chapters 8, 9** and **10** set out the consultation approaches, methodology and channels for the wider LFRMP proposals;
 - **Chapter 11** sets out the consultation which was undertaken more recently and specifically once the Scheme had been defined;
 - **Chapter 12** provides a high-level summary of the consultation undertaken in the context of the Environmental Impact Assessment undertaken for the Scheme;
 - Chapter 13 summarises the consultation undertaken with statutory consultees, namely those identified under Rule 13 and those named in Schedules 5 and 6 to the 2006 Rules; and
 - Chapter 14 sets out ESC's intended approach to future consultation and engagement as regards the Scheme

4 SCHEME OBJECTIVES

4.1 The objectives of the Scheme were initially defined early in the development of the LFRMP in 2016 but have evolved as the proposals have progressed through the development and delivery stages.

4.2 The objectives are:

- To reduce the risk to residential and commercial properties from the effects of tidal flooding
- To reduce costs associated with developing and insuring property within areas of Lowestoft susceptible to flooding
- To provide a minimum standard of protection of 0.5% AEP against tidal flooding in 2117 to residential and commercial areas of Lowestoft
- To provide businesses with the confidence to grow and invest in areas of the town which are currently not considered suitable for development (planning) due to the risk of tidal flooding
- To enable the development of key sites through the alleviation of direct flooding and protection of essential infrastructure

5 OVERVIEW OF THE LOWESTOFT FLOOD RISK MANAGEMENT PROJECT

- 5.1 Lowestoft has become increasingly vulnerable to flooding from sea, rivers, and rain over a number of decades. Tidal flooding to 400 homes occurred in the east coast tidal surge of 1953. Tidal flooding happened again in the 2013 tidal surge when 158 residential and 233 commercial properties flooded in Lowestoft and Oulton Broad. The tidal flooding also resulted in the closure of key transportation links including Lowestoft railway station and the A47 through Lowestoft.
- 5.2 Lowestoft is particularly susceptible to flooding from tidal surges due to the small normal tidal range compared to other locations along the east coast of England. Lowestoft has a tidal range of approximately 2m. This is low when compared to locations along the outer Thames and Humber estuaries which have tidal ranges in excess of 5m. A consequence of this low tidal range is that a significant tidal surge (>2m) at Lowestoft could cause flooding at almost any state of the tide. In contrast, at locations with a greater tidal range the timing of the surge event compared to high water has greater influence and reduces the likelihood of flooding from the surge.
- In the absence of any formal tidal defences protecting the town, a temporary demountable system is deployed when flood forecasting triggers a surge warning. Without intervention, Lowestoft will become increasingly vulnerable to tidal flooding due to climate change. Lowestoft is currently considered to be at risk from the onset of flooding from tide levels with around a 1in5 (20%) to 1in10 (10%) AEP. This situation is expected to significantly worsen when the impacts of climate change are considered.
- 5.4 The existing level of protection within the town is restricting the growth potential of the local economy. A 1in200 year (0.5% AEP) standard of protection is considered by developers and the Local Planning Authorities to enable the majority of new developments.
- To effectively manage the risk of flooding from all sources in Lowestoft, ESC developed the integrated Lowestoft Flood Risk Management Project (**LFRMP**). LFRMP (now known as Lowestoft Flood Protection) is a major strategy to reduce flood risk from pluvial, fluvial and tidal sources to Lowestoft and commenced in 2014. The proposals for the new tidal barrier comprised within the Scheme form a key part of the wider LFRMP strategy to address tidal flood risk, alongside plans to deliver new flood walls around the Outer Harbour area.
- In 2021 ESC completed the fluvial and pluvial elements of the LFRMP. The new flood walls were granted planning permission and listed building consent in 2020 and construction works were completed in autumn 2023. The construction of the tidal barrier comprised within the Scheme is required to complete the integrated package of works. The lack of protection from flood risk is suppressing the ability of Lowestoft to develop and grow and preventing deprived areas of the town to "level up" as per wider government outcomes. Tidal flood risk is restricting Lowestoft's development and means social deprivation remains a key issue for the town.

6 SCHEME OVERVIEW

- 6.1 The Scheme would involve the construction of a new tidal barrier comprising a pair of mitre gates between abutments, across the entrance channel to Lake Lothing and the Inner Harbour of the Port of Lowestoft, approximately 40 metres downstream (east) of the Bascule Bridge. The new tidal barrier would, when in a fully open position, provide a channel width of approximately 40 metres. In addition to the barrier itself, the Scheme would also include the construction of enclosures/buildings for a new electricity substation and associated mechanics in connection with the operation and maintenance of the barrier.
- 6.2 The Scheme also includes permanent fixings to allow the installation of demountable flood defences on the North and South Quays. These defences would provide a continuous defence between the barrier and the adjacent flood walls which are already constructed or due to be completed by autumn 2023. The flood walls do not form part of the Lowestoft Tidal Barrier Scheme TWAO application (save that the proposed Order includes powers to secure permanent rights to inspect, maintain and operate a short length (approximately 35m) of the flood walls at the western extent of Hamilton Road). Operational buildings are also required.
- 6.3 ESC will be the asset owner for the barrier and the other structures constructed as part of the Scheme and will be responsible for its operation and maintenance. In normal conditions the tidal barrier would be held in an open position. It is designed to be operated for tidal flood risk management at the onset of an extreme surge tide. It would also be operated for testing and staff training, and for maintenance purposes.
- 6.4 Full details of the works required to deliver the Scheme are set out in Schedule 1 to the Draft Order (**Application Document A2**) whilst a more detailed description of the Scheme and the works that will be required to construct it can be found in Chapter 6 (*Scheme Description*) of the Environmental Statement (**Application Document A17**).

7 ESC'S APPROACH TO CONSULTATION

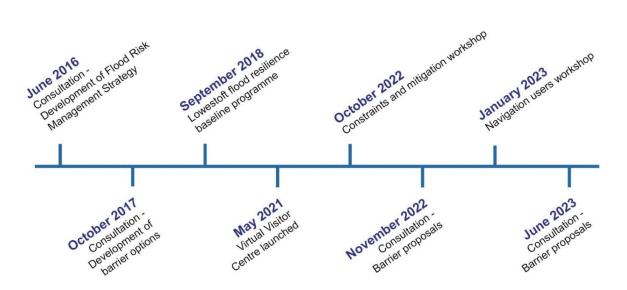
- 7.1 Through its approach to consultation, ESC and its LFRMP partners have undertaken effective stakeholder engagement and meaningful consultation with a wide range of interested parties and individuals over several years.
- 7.2 The Transport and Works Act Guide to Procedures (Department for Transport, 2006) clearly identifies the benefits of pre-application consultation and recommends that promoters 'consult thoroughly on their proposals with relevant statutory authorities, with statutory utilities whose services may be affected, and with all other persons likely to be affected by the proposals'.
- 7.3 ESC fully recognises the importance of maintaining effective channels of communication to enable a two-way flow of information and opinions and appreciates the value that stakeholder feedback can add to its projects. Pre-application consultation has therefore formed an important part of the development of the Scheme, which has been consciously collaborative.
- The proposals comprised within the Scheme have been developed through close working between ESC and its partners, the Environment Agency, the New Anglia Local Enterprise Council and Suffolk County Council, with ESC taking views from a range of stakeholders. As part of the formal project governance, the project's Board, Strategic Steering Group and Key Stakeholder Group have all played an important role in developing the Scheme. The project Board includes ESC, Suffolk County Council, the Environment Agency and the New Anglia Local Enterprise Partnership. The Strategic Steering Group's membership includes statutory and non-statutory partners such as the Associated British Ports (ABP), Suffolk and Waveney Chamber of Commerce, Anglian Water and Natural England. The Key Stakeholder Group is made up of those representing community and business interests such as Lowestoft Vision and Lowestoft Rising as well as key landowners and land agents.
- 7.5 Throughout that development, information has been openly shared, and discussion has been welcomed. In this way, the overall direction and design of the Scheme has been formulated collaboratively. Consultation has also helped shape the evolving design, in response to comments raised.
- 7.6 **Chapter 8** of this report provides an overview of the main phases of consultation that have been undertaken and these are explained further in this report. However, ESC has taken every opportunity to engage with people, beyond the formal consultation rounds. Engagement with internal ESC teams such as planning, major infrastructure projects, economic regeneration and communities has provided important opportunities to embed the Scheme's benefits into plans and strategies such as the Local Plan, Think Lowestoft, an initiative leading to wider development of the area, and plans linking to the provision of green energy.
- 7.7 ESC has adopted various approaches to consultation and engagement, including:
 - Partnership working and close engagement with key stakeholders to jointly develop the Scheme proposals and consider issues arising

- Consultation with key stakeholders and the wider public to gather feedback on specific proposals
- Wider sharing of information through mailshots, emails and newsletters sent to an established stakeholder database, updates of a virtual engagement room with links shared on social media and press releases
- The use of social, digital and virtual tools to ensure that a full age range and social demographic has been reached. This approach also supported continued engagement through social restrictions during the COVID 19 pandemic. ESC offers an online visitor centre which is accessible to different age groups at different locations and times. This can be accessed by anybody with a computer or mobile device. However, for those without access to the internet there has also been 'in person' events and printed materials. Larger print and different language versions have been made available upon request. The Project stakeholder database includes care and residential homes, schools providing inclusive education to those with additional needs and Pupil Referral Units. The database was initially formed through a comprehensive stakeholder analysis at the start of the project and has been added to as the project has developed with input from ESC's economic development and communities' teams, and through interest shown during public engagement events and consultations. ESC's Key Stakeholder Group also includes those who represent charities managing homelessness and substance abuse.
- 7.8 The overall approach ESC has employed to communication, consultation and engagement has been based on the following principles:
 - Engaging directly with key partners and the wider local community.
 - Being honest and open and making every effort to avoid raising unrealistic expectations.
 - Being transparent about how ESC will engage with the broader community. For example, setting out how people can become informed or involved in the Scheme through regular factsheets and newsletters; encouraging feedback through in person events and through the virtual engagement room. Social media and press releases reinforce this by providing contact information for the ESC team members or by directing them to the Scheme's website where information can be found. Minutes of the Strategic Stakeholder Group and the Key Stakeholder Group meetings are made available to interested parties on request.
 - Making time to listen and involve people properly.
 - Being clear about the aspects of the proposals on which feedback is being sought.
 - Listening and taking feedback received into account to shape the detail and design.
 - Being clear about the decisions made and the rationale for them.
 - Ensuring that all engagement is clear and ethical and in accordance with the Chartered Institute of Public Relations Code of Conduct.

- 7.9 These principles were reflected in an initial Communications and Engagement Plan prepared at an early stage of the Project this can be found in **Appendix 2**. This has been updated at key stages of the Scheme's development and has guided all stages of communications and engagement. The development of the Scheme has taken place over a number of years and a comprehensive engagement log can be found at **Appendix 1** to this report.
- 7.10 ESC has also been fully mindful of the statutory requirements set down within the 2006 Rules regarding consultation, notably the requirement to produce this report (set down in Rule 10(2)(d)) and the requirement to explain how it has consulted with those organisations listed in Schedules 5 and 6 to the 2006 Rules. It is confirmed that all applicable bodies named in column (2) of Schedules 5 and 6 of the Rules have been consulted. Further information on this aspect of the consultation is provided in **Chapter 13** of this report.
- 7.11 ESC is committed to ensuring that all those who may have an interest in the proposed Scheme have been informed as regards the proposals and provided with adequate opportunity to express their views. A comprehensive stakeholder mapping exercise was undertaken by the project team and the Strategic Steering Group, early on in the Scheme's development to identify and classify stakeholders based on their relationship to the Scheme.
- 7.12 Stakeholder analysis is regularly reviewed to ensure that it remains up to date. After the red line boundary changes in 2023, a thorough review of the stakeholder database has been done with new stakeholders added and additional engagement undertaken. This is included in the Communications and Engagement plan included at **Appendix 2**. The results of the analysis were used to prepare a programme of consultation and engagement activities. Diversity, inclusion and demographic data has been assessed and the results applied to all consultation and engagement (appended in the Equalities Impact Assessment in **Appendix 3**).
- 7.13 In accordance with the Public Services (Social Value) Act 2012 ESC is required to have regard to economic, social and environmental well-being in connection with public services contracts; and for connected purposes. The delivery of social value as part of the contract for this scheme has allowed for additional engagement with local community groups, charitable organisations and organisations supporting those who are socially disadvantaged. This engagement is set out in **Schedule 1 (Public engagement through delivering social value)** to this report.

8 CONSULTATION OVERVIEW

- 8.1 Consultation on the proposal to build a new tidal barrier has taken place over a number of years and has evolved from early consultation on the wider strategic approach to tidal flood management in Lowestoft (in 2016) to targeted consultation on detailed aspects of the proposed Scheme (in 2023).
- The following timeline below illustrates the key phases of consultation relevant to the Scheme that ESC has undertaken to date. The context and purpose of each phase is explained below.



LFRMS Consultation - Summer 2016

- In 2016 consultation was undertaken as regards the emerging Lowestoft Flood Risk Management Strategy (**LFRMS**). The LFRMS was designed to reduce the risk of pluvial, fluvial and tidal flooding in the town of Lowestoft and was developed between 2014 and 2016. Over 35 organisations (including statutory bodies and non-governmental organisations), Lowestoft Town Council, neighbouring parish councils and members of the public were consulted at key stages of the development of the strategy.
- 8.4 Ongoing consultation and engagement took place through meetings of the Strategic Steering Group, as part of the Lowestoft Transport Infrastructure Group.
- An initial introduction to the emerging strategy was launched at a Lowestoft Rising public event on 2 November 2015. This was attended by over 100 people. The event included members of the public, businesses, landowners, members of the fishing community and elected members. This event provided an important opportunity to introduce key stakeholders to the strategy and to seek initial views that could be taken into account during the development of the LFRMS. Materials from the Lowestoft Rising event are included in **Appendix 4 (2016 consultation materials)** to this report.

8.6 Subsequently, a formal round of public consultation took place between Monday 6 June and Friday 29 July 2016. At this stage, eight options to address tidal flooding were presented as follows:

Table 1: Options to address tidal flooding (2016 Consultation)

Option 1: Do nothing
Option 2: Do minimum
Option 3: Do something – Flood Walls Only
Option 4: Do something – Outer Harbour Barriers and Walls
Option 5: Do something – Bascule Bridge Barrier and Walls
Option 6: Do something – Third Bridge Crossing Barrier and Walls
Option 7: Do something – Temporary Flood Defences Only
Option 8: Do something – Property Level Resilience Measures

- 8.7 Further details of the above options can be found in Chapter 4 (*Consideration of Alternatives*) of the Environmental Statement (**Application Document A17**).
- A summary of the consultation materials employed during the 2016 LFRMS consultation can also be found at **Appendix 4 (2016 consultation materials)** to this report. This includes, at page 49, a summary of the responses received during the consultation. Public feedback on the proposed options was relatively limited but Option 5 performed favourably. Feedback from key stakeholders including ABP and the Royal Norfolk and Suffolk Yacht Club (**RNSYC**) also favoured Option 5, which proposed a combination of new tidal flood walls and a new tidal barrier¹ in the vicinity of the Bascule Bridge.
- 8.9 Following the 2016 LFRMS consultation, three of the consulted options were shortlisted for further assessment: options 3, 5 and 6. ESC proceeded to develop a Strategic Outline Business Case. This involved further options appraisal work as is more fully explained in Chapter 4 of the Environmental Statement and the identification of a preferred option this was option 5 a new tidal barrier within the vicinity of the existing Bascule Bridge together with tidal flood walls.

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¹ At this stage of the Scheme's development, the tidal barrier being contemplated would have provided, when open, a channel width of 28 metres.

8.10 A Strategic Outline Business Case was successfully submitted to the Environment Agency's Large Project Review Group in March 2017. At this stage, the preferred option was endorsed and outline design work for the proposed new tidal barrier and flood defence walls (then known as the 'LFRMP') began.

Scheme Consultation 2017 – 2023

- 8.11 Consultation and engagement on ESC's preferred option of a new tidal barrier together with tidal flood defence walls, has taken place between 2017 and 2023.
- 8.12 There have been seven main stages of public engagement and consultation during the development of the Scheme. Three of these (in 2017, 2022 and 2023) involved a formal round of public consultation. For the purposes of this report, the seven stages have been grouped into three distinct phases as follows:
 - Early Scheme Consultation, explained in Chapter 9 of this report and comprising:
 - (a) October 2017 Public Consultation Development of Barrier Options
 - (b) September 2018 Lowestoft flood resilience programme
 - Interim Scheme Engagement, explained in Chapter 10 of this report and comprising:
 - (a) May 2021 Virtual Visitor Centre launched
 - (b) October 2022 Constraints and Mitigations Workshop
 - TWAO Consultation, explained in Chapter 11 of this report and comprising:
 - (a) November 2022 Public Consultation Barrier Proposals
 - (b) January 2023 Navigation Users Workshop
 - (c) June 2023 Public Consultation Scheme Revisions
- 8.13 Formal public consultations have ensured that stakeholders and the general public were made aware of, informed about and given the opportunity to contribute to the development of the Scheme. By listening and taking on board the views of the public and interested groups ESC has been able to tap into the widest source of information possible which improves the quality of the decisions reached.
- 8.14 These public consultation and engagement activities have been designed to regularly share information on the development of the LFRMP and, subsequently the Scheme with members of the public and other interested parties, to provide a forum for discussion, and to invite comment.
- 8.15 Strategic Steering Group and Key Stakeholder Group meetings have taken place at regular intervals. Newsletters have been sent out quarterly and factsheets relating to specific construction work on the tidal walls and highlighting the overall Scheme have been reshared (copies of the

newsletters can be found at **Appendix 9** to this report). The stakeholder database has been used to mail out (direct and by email). This has been supplemented by postal updates to those directly affected using the electoral roll database held by ESC.

- 8.16 Each of the three formal stages of public consultation (in October 2017, November 2022 and June 2023) shared a common format, comprising:
 - (a) Stakeholder meeting(s) held prior to the public consultation period. Workshops were used to provide invited stakeholders with an update on the proposals, a preview of the consultation materials and an opportunity to ask questions.
 - (b) A public exhibition/ drop-in session, widely advertised and open to all. At each exhibition, display boards providing detail of the proposed Scheme were displayed and project team members were available to explain the details. This material was subsequently shared via the LFRMP website. Public drop in events were held over two extended days; allowing for evening attendance. Details of these can be found in the engagement log in **Appendix 1** to this report.
 - (c) A consultation period for return of comments via feedback form, letter or email.

 Comments were invited after the exhibitions for a period of 6-8 weeks. In addition, stakeholders and members of the public were able to contact the ESC team at any time on the project email address. Details of these can also be found in the engagement log in **Appendix 1**.
- 8.17 Following the 2017 public consultation, further engagement was undertaken as part of the Zurich Flood Alliance UK pilot to provide a baseline for resilience in Lowestoft. Additional workshops enabled involvement in and comment upon the LFRMP to be included. This engagement and the outcomes from it are explained within the report provided in **Appendix 12 (Flood resilience assessment report)**. As opportunities for co-creation are limited with a project of this nature, the nature of resilience baselining offered members of the public the chance to work within their own communities to create actions and action plans that were designed and owned by them, creating not only a sense of responsibility but also a sense of place and how the project (tidal barrier and tidal walls) might contribute to that 'place'. The baselining project, managed by the Zurich Flood Alliance and the London School of Economics, was the UK pilot.
- 8.18 Thereafter, key stakeholder engagement regarding the proposed tidal barrier focussed on the statutory harbour authority and the operator of the Port of Lowestoft, ABP, its tenants, and the RNSYC. Given the intention to construct, operate and maintain a new tidal barrier within the Port, these were considered to be the parties most likely to be affected by the LFRMP proposals. By directing project resources to targeted engagement with those most likely to be affected by the proposals, ESC was able to further develop the proposed Scheme. This, in turn, enabled further public consultation to take place in late 2022.
- 8.19 The global pandemic from March 2020 and the restrictions introduced as a result, adversely affected ESC's ability to engage with members of the general public. Through the introduction of innovative virtual approaches, as more fully explained in **Chapter 10** of this report, ESC

nonetheless provided opportunities for members of the public to remain informed of and involved in the development of the Scheme.

8.20 In November 2022, ESC undertook a further round of public consultation. By this stage, the detailed proposals for the Scheme were well settled and consultation was undertaken with a view to preparing for the submission of a TWAO application. Feedback received during this consultation led ESC to undertake additional stakeholder engagement in early 2023. Thereafter, further revisions were made to the proposals to take account of the feedback received. These revisions included changes to the proposed red line boundary for the Scheme. As a result a further round of targeted consultation was considered to be prudent and this took place in June 2023. Further details of the TWAO consultations undertaken can be found in **Chapters 11** and **13** of this Report.

9 EARLY SCHEME CONSULTATION

9.1 This chapter explains the early consultation undertaken by ESC in later 2017 in respect of the emerging proposals for the LFRMP, the wider project which included both the tidal barrier that is the subject of the TWAO application and the associated tidal flood walls. This followed the options appraisal consultation undertaken in respect of the emerging strategy for flood risk management in Lowestoft in summer 2016 (see **Chapter 8** of this report).

Public Consultation on Development of Barrier Options - October 2017

- 9.2 Following the selection of option 5 as ESC's preferred option, formal consultation was undertaken on the proposed construction of a new tidal barrier and associated flood walls. The consultation took place between 30 October 2017 and 14 December 2017.
- 9.3 The tidal barrier was proposed to be located in the Inner Harbour Entrance Channel and to deliver a channel width of 28 metres, when in an open position. The proposals assumed that the tidal barrier would be constructed in the winter months only, to minimise disruption to the Port of Lowestoft, its tenants and customers and other users of the navigable channel. Winter-only working was also considered to be beneficial to the local tourist season and businesses operating in that sector.
- 9.4 The following activities were undertaken as part of the 2017 public consultation:
 - (a) A stakeholder workshop took place on 1 November 2017 to explore options appraisal and environmental concerns.
 - (b) A public Open Day on 30 November 2017 with a mixed format of formal presentation and Q&A and informal drop-in stye of engagement.
 - (c) Emails promoting the consultation were issued to all parties listed on the stakeholder database, including key and statutory stakeholders; these were sent on 3, 17 and 23 October 2017.
 - (d) Correspondence promoting the consultation was sent to the addresses of businesses and homes who had previously suffered from flooding (information provided through grant information from the December 2013 flood event); these were sent on 3, 17 and 23 October 2017.
 - (e) Briefings were given to relevant politicians and Elected Members were emailed on 3 October 2017.
- 9.5 The consultation was publicised to the general public through:
 - (a) Local media publications advertisements appeared in the Eastern Daily Press, East Anglian Daily Times and Lowestoft Journal on 30 October 2017.

- (b) Social Media channels used at that time included Twitter and ESC's Facebook page.
- (c) Posters placed in prominent areas of Lowestoft such as the Marina Centre, library and Post Office.
- 9.6 Documents were made available to key stakeholders by post or email, and those located within 'at risk' areas using contact details provided by ESC colleagues relating to those households and businesses impacted by the 2013 tidal surge, as well as being made available on the LFRMP website, www.lowestoftfrmp.org.uk. Examples of the consultation materials can be found in **Appendix 5 (2017 consultation materials)** to this Report, alongside a report summarising the responses received to the consultation. The report was shared by email to those who had provided feedback and made available on the LFRMP website. It was also shared with the project steering group which included key stakeholders and organisations. Due to revisions made to the governance structure, the project steering group became the 'Strategic Steering Group' from 2020 onwards.
- 9.7 Two events took place as follows:
 - (a) An environmental workshop took place on 1 November 2017. Over 50 key stakeholders attended this workshop, held at the Orbis Centre, including statutory consultees such as Natural England and the Environment Agency. The workshop considered tidal, fluvial and pluvial flooding and specifically sought views on the environmental implications of the proposed works. A full list of the workshop's attendees is included in Appendix 5 (2017 consultation materials) to this report. Attendees were encouraged to provide feedback on the day and after the event.
 - (b) A public open day / exhibition took place in Lowestoft on 30 November 2017. A public exhibition was held in Lowestoft to support the public consultation. The objective was to provide people with an overview of the development of the preferred option, inform them regarding the known details of the proposals at that stage and to provide a platform for members of the public to ask questions, raise their concerns and to enable ESC to learn about any potential constraints. ESC was seeking views:
 - (i) on the visual appearance of the proposed tidal walls and tidal barrier
 - (ii) from river and harbour users
 - (iii) on environmental aspects of the proposals
- 9.8 41 people attended the environmental workshop and questions (which mainly related to disruption to the navigable channel) were largely posed and responded to in person at the event. The overall sentiment was one of positivity and support for the proposals. Businesses attending and those representing the Chamber of Commerce recognised the economic importance of flood protection for Lowestoft. Presentations were given on a rolling basis throughout the day as well as information

boards, opportunities to ask questions of the project team and information was made available to take away.

- 9.9 **Appendix 5 (2017 Consultation materials)** to this report includes a full summary of both events. The main points raised regarding the proposed new tidal barrier related to:
 - (a) the need to minimise disruption to the operation of the Port of Lowestoft and its users, particularly those operating in the offshore wind sector;
 - (b) the frequency of operations and maintenance activities;
 - (c) the timing of construction works;
 - (d) timescales relating to this and the construction of other major projects in Lowestoft and ongoing investment and maintenance.
- 9.10 Environmental concerns raised at this time related to the potential for impacts on marine mammals and wildlife, particularly during construction works.
- 9.11 Concerns were also raised about the perceived view that a tidal surge coming through the Broads might increase flooding in Lake Lothing. The concerns related to the perception that, if a barrier were in place and closed at high tide, the surge tide, which comes into the Broads approximately two hours after impacting upon the open coast, would meet the increased levels in Lake Lothing and add to the flood risk in the Broads.
- 9.12 Feedback from the consultation supported the development of an initial Outline Business Case for submission to the Environment Agency. Some perceived views, such as the implications of a tidal surge coming through the Broads and the impact upon Lake Lothing as mentioned in the above bullet point, were able to be addressed at the time by sharing modelling results and details for the operation of the proposed tidal barrier.
- 9.13 Regular meetings were set up with other major project teams, such as the Lowestoft Third Crossing (Gull Wing) to share programmes, providing reassurance around traffic management and timings. Environmental concerns fed into the environmental impact assessment process. Feedback was provided to those who raised comments, by email and through the Strategic Steering Group, as per the governance structure at the time.
- 9.14 Consultation feedback was received from ABP, the Environment Agency, Natural England, the RNSYC and other key stakeholders either at the environmental workshop or by correspondence sent after the workshop. The sentiment was largely supportive of the proposals but with expected caveats linked to the development of detailed plans for construction, traffic management and future operations and maintenance of the proposed new flood risk management assets. No adverse comments were received about the preferred option of new tidal flood walls and a tidal barrier comprised of 28 metres mitre gates. Further details of the consultation feedback provided can be found in Appendix 5 (2017 consultation materials) to this report.

10 INTERIM STAKEHOLDER ENGAGEMENT

10.1 This chapter explains stakeholder engagement and other initiatives that took place with the local community between the conclusion of the 2017 public consultation and the first TWAO consultation in late 2022.

Flood Baseline Resilience Programme

- 10.2 As Lowestoft is the only urbanised area in the UK with no formal flood protection measures, ESC considered it to be critical to understand and baseline the level of resilience to the flood risk of its communities and businesses. This was to support the development of the wider LFRMP proposals, including the tidal barrier, and to ensure that communities and businesses in Lowestoft understood the level of current and residual flood risk.
- 10.3 The opportunity to do so became available in 2019 through the innovative tool developed by the Zurich Flood Alliance and the London School of Economics. This tool had been widely used internationally but not in the UK. Lowestoft was the UK's pilot site. Whilst this baselining exercise was not specifically targeted on engaging members of the community and businesses regarding the LFRMP proposals, the nature and extent of the engagement required provided a valuable opportunity to inform the local community about those proposals, to provide project updates and signpost how members of the public could find out more and become involved in the LFRMP proposals as they developed.
- 10.4 Engagement in the baselining exercise took place through:
 - (a) Two targeted workshops which took place on 9 and 12 March 2021 with community (including faith leaders) and business leaders
 - (b) Key informant meetings (professional bodies, including emergency management responders)
 - (c) Questionnaires these were both community and business focused
 - (d) Community forums
 - (e) Emergency planning and resilience community workshops and training
- 10.5 At the initial workshop on 9 March 2021, 35 people, predominately community leaders and business leaders attended. At the second workshop on 12 March 2021, 23 people attended. 17 key informants attended the targeted meeting. 1515 households were surveyed. Outputs from these activities can be seen in **Appendix 12 (flood resilience assessment report)** to this report. The outcomes have informed how ESC can best support communities and businesses to put in place additional resilience measures and support them to manage residual risk in terms of messaging and anticipated action in the event of a tidal surge prior to and following delivery of the proposed new tidal barrier and flood walls.

Implications of a global pandemic on public engagement

- During the COVID 19 pandemic continued public engagement was extremely challenging. It was difficult to engage in consultation broadly and inclusively across the community demographic. Digital transformation and the need for hybrid and blended communications and engagement delivery was therefore heightened by the global pandemic.
- 10.7 It became clear that there was a need to invest in digital infrastructure for the Scheme to match the requirements of a modern engagement experience. Added to that, in the face of a climate emergency, was the need to offer sustainable and climate friendly options, reducing emissions in terms of travel, spotlighted by the pandemic and changes in behaviour as a result. ESC tried different methods of engagement during this period as explained below.

Social and digital media

- 10.8 In the UK, 86.4% of the population use one or more social media channels. As part of a comprehensive approach to communications and engagement, the development of social and digital media channels is essential to a continued flow of information. This is evidenced by similar successful barrier projects across the UK, in particular in Bridgwater, Somerset and Boston, Lincolnshire.
- 10.9 In March 2021 ESC promoted the LFRMP proposals on its social media channels providing increased opportunities for engagement in the development of the proposals of which the Scheme formed part. Table 2 below illustrates the level of engagement with each of the four social media platforms deployed whilst Table 3 documents the level of engagement with the Scheme's own website.

Table 2: Social media

2021	Twitter	Facebook	Instagram	LinkedIn	Total
Impressions	61972	55783	3159	14718	135632
Page Views	6717	497	263	917	8394
2022	Twitter	Facebook	Instagram	LinkedIn	Total
Impressions	31415	52432	1971	35216	121034
Page Views	4014	618	96	474	5202
Jan - Jun 23	Twitter	Facebook	Insta	LinkedIn	Total
Impressions	8327	33000	316	7500	49143
Page Views	8132	87	47	125	373

Table 3: Digital media

Website stats	2021	2022	Jan - Jun 23	Total
Page visits (unique)	7608	5931	3989	17528
Visitors	6803	4585	2898	14286

Online Engagement Events

- 10.10 ESC organised a series of online engagement events to bring the community up to date with the proposals for a new tidal barrier and to offer opportunity to comment. These events were in the form of Zoom meetings and were proposed to take place on 4 (3 sessions), 6 (2 sessions) and 10 (3 sessions) May 2021. The events were advertised by means of an email which was sent on 29 April 2021 to those persons listed on the stakeholder database, through social media (**Appendix 11**) and by means of an ESC press release, issued on 21 April 2021 (please see **Appendix 10** (**Press releases**) to this report). The press release was published in the Lowestoft Journal.
- 10.11 However, these virtual public meetings did not prove to be as popular as hoped. In the end only two meetings took place with 10 attendees participating in total. These included:
- 10.12 **Table 4** sets out the principal issues raised by the attendees at the meetings and summarises the response that was provided by ESC. At this stage, the Scheme proposals still included 28 metre mitre gates and 'winter only working'.

Table 4: Principal issues raised at Online Engagement Events

Issue / topic raised	Response
Length of any closures of the navigable channel	Advised project was in the design phase working to discreet windows of 4 – 8 hours at a time.
Has modelling been completed on where the body of water might go?	Completed as part of the Gorleston – Pakefield coastal strategy. Model showed the water would be dispersed back into the sea.
Concern around the timescale – 5 years – long time for Lowestoft to remain unprotected.	Temporary barriers will be maintained in the meantime, when the flood walls are completed they will offer an additional level of protection.

Resident on Suffolk Road – very happy with design/ progress.	N/a
When will barrier be in place?	At this stage end of 2025, with caveat construction under challenging conditions (winter months) so could slip.
Really positive for the town – flood water affects the area around Lake Lothing, but knock on effects huge to people and businesses in the town. Fantastic to have an engineering project of this type.	N/a
Town Councillor acknowledged the challenge in getting town to engage, despite advertisement.	Project team encouraged attendees to advocate for the project and spread the word.

10.13 As a result of the relatively limited level of engagement that the events generated, ESC concluded that it ought to identify new and more effective ways to engage with the local community notwithstanding the ongoing pandemic.

Virtual Visitor Centre

- 10.14 Later in May 2021, ESC launched its virtual visitor centre to provide information about the emerging LFRMP (now Lowestoft Flood Protection) proposals. The centre can be visited via the following weblink: Lowestoft Flood Protection Virtual Visitor Centre. Screenshots from the Virtual Visitor Centre can also be found at Appendix 8 (virtual engagement materials) to this report.
- 10.15 Content within the virtual visitor centre is regularly reviewed and updated, particularly during formal rounds of public consultation. There are opportunities for interested parties to leave questions for the ESC project team and to provide feedback on the proposals, including the Scheme. This can be viewed in **Table 5**.

Table 5: Questions raised through the Virtual Visitor Centre

Date	Comment	Response
21/06/2021	"How will the defences at Lowestoft affect the river Waveney and likelihood,	Directed to flood risk assessment, clarified the project will have no influence on flooding in Bungay.

Date	Comment	Response	
	frequency and impacts of flooding upstream?"		
22/06/2021	"How will the defences at Lowestoft affect the river Waveney and likelihood, frequency and impacts of flooding upstream"	planning application process a Flood Ris , Assessment was undertaken, which found th	
10/07/2021	"I have noticed through observing the Environment Agency tidal buoy at Lowestoft that wave heights have been very high this week. I believe wave heights reached 6.83 metres at one point. Is this indicative of an increase in wave heights and tidal velocities in the Lowestoft area?"	for your message. Details of the coastal management strategies for the Lowestoft area can be found in the Gorleston to Lowestoft Coastal Strategy."	
12/02/2022	"Hi, one question, where will the water go that is deflected by the barrier. What other flood are at risk as a result of that?"	Response confirming there would be no increased flood risk and added flood risk assessment to the Virtual Consultation Room.	
12/06/2023	Message received: "If the barriers close what will happen to the water it prevents from coming in where will that go?"	Response: "The volume of water that the Lowestoft Flood Protection scheme will stop from going into the town is miniscule compared to the volume of water in the North Sea. Extensive flood risk assessments determined that there are no negative impacts on flood risk outside of the scheme."	

- 10.16 As of 30 June 2023, the engagement rate is as follows:
 - (a) 1383 sessions
 - (b) 4395 page views
 - (c) Bounce rate 49.67%
- 10.17 **Figure 1** below illustrates that 90% of those visiting are new users whilst **Figure 2** illustrates the demographic of visitors.

Figure 1: New and returning users

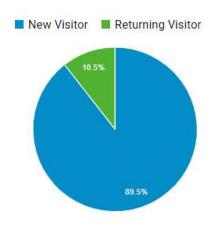
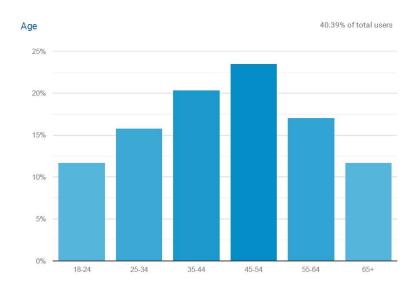


Figure 2: Demographic of visitors



10.18 An additional challenge to traditional engagement methods is attracting those in the 18 to 45 age bracket. Good analytics from the Scheme's virtual engagement tool demonstrates that approaches,

reach and inclusion are at encouraging levels across all age ranges (see **Figure 2** above). This provides quantitative results to support ESC's commitment to equality, inclusion and diversity as set out in **Appendix 3** (**Equalities Impact Assessment**).

- 10.19 The virtual visitor centre continues to operate and in the event that the Secretary of State determines to authorise the Scheme, it will continue to be available throughout the Scheme's detailed design and delivery phases.
- 10.20 The development of the navigational assessments was progressed in partnership with the Harbour Authority. They provided feedback on the limitations of previous navigation simulations used on other projects and it was agreed to instruct HR Wallingford. The reports of the navigation simulations undertaken can be found within Appendix 15C and 15D of the Environmental Statement (application document A17). Using the expertise of the Harbour Authority pilots it became clear that a 28 metre barrier would not allow safe navigation of vessels through the inner harbour entrance channel. Working with the Harbour Authority, ESC identified the need to widen the gates to improve navigation and the evolution of the design to incorporate 40 metre mitre gates was agreed.
- 10.21 The increased width of the barrier improves the resilience of the barrier gates and reduces restrictions on the future development of the Lake Lothing entrance channel. The change to a 40 metre barrier was introduced in 2021 please see **Appendix 13 (Engagement on Navigation Simulations)** to this report. Communications and engagement to that point had focused on the previous 28 metre design.
- 10.22 It is important to note that from initial consultation in 2016 through to October 2022, ESC was engaging and consulting with people based on construction taking place during winter months only, thereby minimising disruption to navigation users, key Port operations and impacts during the main tourist season. From October 2022, with the development of the detailed design and construction methodology, it also became clear after working with ABP, the statutory Harbour Authority, that this would need to change to year-round working.
- 10.23 Since October 2022 wider consultation and engagement has been undertaken to inform and seek views from those directly affected by the proposals such as those in the fishing industry, key navigation users (both commercial and leisure) and Port operators and their tenants, as is explained in the remainder of this report. Opportunities have also been given to discuss the implications of the Scheme with consultees and better understand the nature of any concerns. Key outputs from these discussions are explained within the remainder of this report and its appendices.

11 TWAO CONSULTATION

- 11.1 By late summer 2022, ESC had further developed its plans for the proposed Scheme. In particular, some key changes had taken place to the proposed scheme.
- 11.2 ESC therefore determined that it was an appropriate juncture to undertake a further round of formal public consultation on its proposals. Prior to the launch of the public consultation, ESC hosted a key stakeholder workshop as is explained below.

Key stakeholder workshop (October 2022)

- 11.3 The key stakeholder workshop took place on 21 October 2022. It was hosted by the Key Stakeholder Group, to provide an overview of the Scheme development to date and to explore with key stakeholders important aspects of the proposals, including the proposed method of construction of the tidal barrier, arrangements for the operation of the tidal barrier, impacts on navigation within the Port of Lowestoft and progress with the Environmental Impact Assessment. Email invitations were sent to businesses, organisations, town and parish councils and statutory authorities potentially affected by the Scheme. These invitations were sent out on 21 September, with two email reminders sent out on 29 September and 14 October 2022.
- 11.4 The workshop was structured as follows:
 - (a) Construction methodology and year-round working issues, constraints and implications.
 - (b) Environmental Statement issues, constraints and implications
 - (c) Operations and maintenance issues, constraints and implications
- 11.5 After presentations and informal questions and answers, attendees were asked to work in groups to discuss their views. Those views were shared with the wider group through feedback and further comments were also added.
- 11.6 The workshop also presented an opportunity for key stakeholders to provide feedback to ESC on the proposed consultation plans and materials, ahead of the wider public consultation that was scheduled to take place between 21 November 2022 and 12 January 2023.
- 11.7 36 people attended the workshop. Of these, seven represented statutory consultees, namely those identified under Rule 13 and those named in Schedules 5 and 6 to the 2006 Rules as seen on page 86 of Appendix 6 (2022 consultation materials) to this report. Feedback was collated from the event and fed into project development.
- 11.8 The tables in **Schedule 2 (Summary of matters raised in key stakeholder workshop)** to this report summarise the principal issues raised during the workshop and the responses from the project team. Outputs of the workshop were then collated and fed back to delegates by email as well as those who were not able to attend, with a prompt to provide any additional feedback.

Public Consultation (Winter 2022/23)

- 11.9 Following the key stakeholder workshop on 22 October 2022, ESC reviewed its proposed consultation plans and materials taking account of the feedback received from those who attended that workshop. Thereafter a public consultation was held between 21 November 2022 and 12 January 2023. This consultation was specifically undertaken to update members of the public on the proposals for the Scheme and in anticipation of final preparations for the submission of the Transport and Works Act Order application to the Secretary of State.
- 11.10 The public consultation explained the proposals, focusing on key changes since the last round of formal public consultation back in 2017. In particular, the consultation materials explained that the design of the proposed barrier had evolved and that the width of the proposed mitre gates comprised within the barrier had changed from 28 metres to wider 40 metres, to allow for safer navigation through the barrier. As noted in Chapter 10 of this report, a revised construction methodology had also been developed; this included year-round working rather than winter-only working as had originally been proposed by ESC.
- 11.11 Views were also sought on the outputs of the Navigation Impact Assessment, construction of the tidal barrier, operation of the tidal barrier and the likely environmental effects of the proposals more broadly. The consultation was widely advertised.
- 11.12 The consultation was publicised in the local press, including the Eastern Daily Press and the Lowestoft Journal. A copy of the press release deployed can be seen on page 23 of Appendix 10 (Press releases) to this report and the consultation was publicised on local radio and on the BBC website.
- 11.13 The consultation was publicised on social media, notably Facebook, Instagram and Twitter and details of it were made available at local outlets including Lowestoft library, local shop fronts and at ESC's offices.
- 11.14 On 16 November 2022 a direct mailing about the consultation was sent out to 1,202 recipients (a copy can be found on page 100 of **Appendix 6 (2022 consultation materials)**), drawn from the following groups to inform them about the forthcoming consultation:
 - (a) all parties named on the Project stakeholder database (306 recipients)
 - (b) all parties named in an early draft of the book of reference (604 recipients)
 - (c) local residents who were identified as being directly affected from the data collected post December 2013 tidal surge, data taken from the Environmental Impact Assessment and using electoral roll data. (131 recipients)
 - (d) residents of Taylor Properties (161 recipients). This was as a result of a representative of Taylor Properties attending the consultation drop in and requesting specific information be sent to their tenants.

- 11.15 Two public consultation drop-in events were held at the RNSYC in Lowestoft on 23 and 24 November 2022. These were attended by 42 people and a list of attendees can be found in **Appendix 6 (2022 consultation materials)** of this report.
- 11.16 Adverse weather conditions led to concerns about the level of attendance at the events. ESC identified gaps in engagement with specific groups. Additional face to face engagement with businesses (directly affected), fishing groups (commercial and leisure) and inner harbour marine users took place in the form of visits to businesses/places of work and group meetings. Further details of this additional engagement is reported in ESC's engagement log (see **Appendix 1** to this report) and within **Schedule 3 (Stakeholder engagement: feedback received)** to this report.
- 11.17 Feedback given directly to officers from these face-to-face visits suggested that targeted workshops for businesses/leisure users situated in the Port's inner harbour further up the navigation channel into Oulton Broad would be advisable. A series of workshops were then organised. Outputs of these workshops are included in Schedule 4 (Further engagement with navigation users) to this report.
- 11.18 10 detailed written consultation responses were received by the close of the public consultation. Copies of these responses are provided in **Schedule 5** (**Responses to November 2022 consultation**) to this report. The issues raised were predominately around the desire for advance notice, noise, vibration, channel closure and impacts on navigation.
- 11.19 As a result of the relatively low number of responses received to the consultation, additional workshops were arranged with navigation users, both leisure and commercial users. Details of these can be found in **Schedule 4 (Further engagement with navigation users)** to this report. Comments relating to operations and maintenance such as advance notice of any planned maintenance works and advance notice of any closures for regular maintenance such as the reduction of silt build up, have been taken forward and included as an operations and maintenance plan for the Barrier is developed.
- 11.20 Following analysis of the feedback received during the public consultation, ESC concluded that further workshops, focused on environmental and navigation impacts, should take place.

Navigation users' workshops January/ February 2023

11.21 Following the close of the public consultation in January 2023 a series of additional workshops were scheduled. 15 navigation users were invited to attend the workshops, which took place in February 2023. During the consultation, feedback was received from representatives of both leisure and commercial navigation users. This feedback suggested that workshops specifically for those in channel users, either for pleasure or business, would be beneficial as the impacts of construction would affect their use of the channel. The workshops were targeted at businesses/leisure users situated in the Port's inner harbour and further up the navigation channel into Oulton Broad. Outputs of these workshops are included in **Schedule 4 (Further engagement with navigation users)**.

- 11.22 These additional workshops around navigation usage and environmental issues enabled ESC to further engage with key stakeholders and members of the community and businesses. Table 14 in **Schedule 4 (Further engagement with navigation users)** to this report summarises the further meetings that ESC held with navigation users following the workshops referred to above.
- 11.23 The feedback received has informed the progression of the construction methodology, particularly in respect of proposed channel closures and the need for early notification and for channel closures to avoid the months of July and August.
- 11.24 This has allowed the project team to better understand and have regard to views expressed on:
 - (a) Leisure use and implications for access and egress of the inner harbour during channel closure:
 - (b) Implications for changes to the outer harbour in terms of refuelling and berthing;
 - (c) Implications for water dependent businesses;
 - (d) Implications for tourism;
 - (e) Implications for Port operations;
 - (f) Implications of access for the fishing industry; and
 - (g) Implications of access and egress of RNLI vessels for emergency use.

Public Consultation (Spring 2023)

- 11.25 Following the conclusion of the public consultation in January 2023 and the workshops which took place thereafter, ESC sought to further refine and develop its proposals for the tidal barrier.
- 11.26 A new site compound, at Colin Law Way, was selected as being preferable to the location previously proposed on Commercial Road. The new compound would enable construction materials to travel to the barrier construction site via Lake Lothing, thereby reducing the volume of vehicular traffic.
- 11.27 The construction methodology for the proposed tidal barrier also further evolved and the duration and extent of channel closures required to deliver the Scheme became clearer.
- 11.28 In view of these and other minor changes to the Scheme since last consulted on publicly in late 2022, ESC determined that a further round of targeted public consultation should be undertaken over a 4-week period.
- 11.29 The consultation took place between 5 June and 3 July 2023.
- 11.30 The consultation was advertised as follows:

12 Table 6: Advertisement of consultation

Item	Medium	Number
Stakeholder database	Email	306
Direct mail – previous Book of Reference	Direct mail	126
Direct mail – updated Book of Reference	Direct mail	45
Direct mail – homes at risk of flooding	Direct mail	600
Local advertising	Posters in local venues/shops/businesses, for example tourist locations such as East Point Pavilion	50
Local advertising	A1 sandwich boards – library and ESC Offices	2
Press release issued and carried by the following:	Eastern Daily Press	Circulation 15,255 (printed) Online unknown
	East Anglian Daily Times	Circulation 7721 (printed) Online unknown
	Lowestoft Journal	Circulation 4779 (printed) Online unknown
Social – paid for	Facebook	Table 7
Social – earned	LinkedIn Facebook	Table 6

- 12.1 Two drop in events were held on 13 and 14 June 2023 at the East Point Pavilion, a venue at the centre of the tourist area in Lowestoft.
- 12.2 57 people attended the drop ins. This included members of the public, businesses and landowners directly affected by the works such as the RNSYC and Anglian Water. Materials used to advertise the consultation and for the drop in events can be found in **Appendix 7 (2023 consultation materials)** to this report.
- 12.3 The virtual engagement room for the scheme was updated to reflect the consultation materials and was live from 8 June. 650 unique users accessed the visitor centre during the public consultation.
- To extend the consultation reach, a combination of paid for social media advertising and earned (organic) social media posts was used. Tables 6 and 7 below contain reach.

Table 7: social media channel (earned)

Platform	Reach
Facebook	4,253
LinkedIn	1,308
Total	5,561

Table 8: social media channels (paid for)

Ad-set	Impressions	Reach	Clicks	Cost Per Click	Click Through Rate
Direct2Survey	81,944	27,484	2412	£0.09	2.94%
Virtual Visitor Centre	148,300	25,408	720	£0.28	0.49%
Drop-Ins	17,151	8,836	168	£0.28	0.98%
Total	247,395	61,728	3,300	£0.22	1.47%

12.5 97 survey responses were received during the consultation period. These were received by post and through the online survey. Seven were received by post and the remainder through the online survey. In addition to the online survey responses three responses were received by individual

letter from two navigation users, who are tenants of the Harbour Authority, and the Environment Agency. A summary of the feedback is included in **Schedule 6 (Responses to June 2023 consultation)** to this report.

- 12.6 Port tenants were offered individual meetings. Three tenants took the opportunity to meet with the Head of Partnership and Head of Planning and Coastal Management. Summaries of the key matters raised by the tenants can be found in Table 20 of **Schedule 6 (Responses to June 2023 consultation)** to this report. All three tenants expressed support for the project. Concerns raised were predominately linked to prolonged closures of the channel, particularly linked to fuelling of vessels. Assurances were made of further meetings to enable dialogue to continue.
- 12.7 Of the responses received to the consultation 74% were supportive of the Scheme. 5% were not supportive citing mainly concerns around flooding coming through sewers or misunderstandings around the role of the coastal defences (rock groynes) in protecting Lowestoft. Of the 20% that were not sure there was an uncertainty of how the proposed scheme could be effective. Information detailing the consultation responses can be found in **Schedule 6** (**Responses to June 2023 consultation**) to this report.

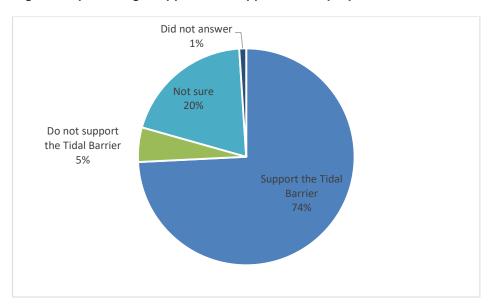


Figure 3 – percentage support/non-support for the proposals

- 12.8 Consultation responses were analysed at consultation end. Where respondents had left contact details a response has been provided if questions were asked. Where questions had not been asked an acknowledgement of receipt of the response has been provided. Of the 97 responses received 21 people responded leaving contact details.
- 12.9 Across social media, the most common comments received were relating to increased flooding in Oulton Broad and to other areas along the open coast. Explanations have been provided to support greater understanding that the scheme proposed will not increase the level of flooding to other areas.

- 12.10 Of the 97 responses the issues raised related to increased noise, vibration (impacts to property) and increased levels of traffic during construction. There were also concerns raised about the increase in flooding to Oulton Broad and to other areas along the open coast as with social media.
- 12.11 Responses to the concerns about flooding in Oulton Broad and on the open coast have been provided to those who have given contact details. A FAQ document has been developed by the project team which will be available on the Scheme website and virtual engagement room to help address these concerns in future.
- 12.12 Concerns raised through the formal consultation responses received through the survey relating to noise, vibration and increased levels of traffic have been responded to using information already within the scheme construction methodology.
- 12.13 Included in **Schedule 6 (Responses to June 2023 consultation)** to this report are the responses received from Port tenants and a summary is provided there to explain how those responses have been taken into account. The matters raised by the Environment Agency in the context of its response to the consultation undertaken in respect of the draft Order (see Chapter 13 of this report) are considered in Chapter 5 of the ES (**Application Document A17**).

13 REGULATORY EIA CONSULTATION

Environmental Impact Assessment

- 13.1 Environmental Impact Assessment (**EIA**) is a fundamental part of developing the Scheme. The findings of the EIA are presented in the Environmental Statement (**ES**) which is being submitted in support of the TWAO application. Consultation is a key element in the development and formulation of the EIA and is referred to here as Regulatory EIA consultation.
- 13.2 Regulatory EIA consultation has been carried out at key stages in the EIA process between 2017 and 2023 in order to understand the views and opinions of a number of statutory bodies and interested parties with regards to the Project and to ascertain what they consider to be key issues and priorities.
- 13.3 This chapter outlines the key stages of regulatory consultation undertaken for the EIA.

EIA Scoping consultation

In November 2017 a Preliminary Environmental Impacts Report (PEIR) was submitted to the Secretary of State for the Environment, Food and Rural Affairs and the Marine Management Organisation (MMO) alongside a request for an EIA scoping opinion. As part of the scoping process, a number of statutory consultees were invited to provide comments on the proposed scope of the EIA and these responses were included within the Scoping Opinions issued in June and October 2018. Copies of these responses are provided within **Appendix 1A** to the ES (**Application Document A17**). All comments received by consultees have been taken into account in the EIA process as more fully explained within Chapter 5 of the ES (**Application Document A17**).

Environmental Stakeholder consultation 2023

13.5 Further regulatory consultation with environmental stakeholders in the spring of 2023. Details of the parties consulted, the feedback received and how this has been taken into account is set out within Table 5-3 of Chapter 5 of the ES (**Application Document A17**).

14 CONSULTATION ON DRAFT TWAO

- 14.1 Rule 10(2)(d) of the 2006 Rules provides that an applicant for a TWAO should confirm, in the consultation report which accompanies the application, that relevant organisations identified in Schedules 5 and 6 to those Rules (who are entitled to either receive a copy of the application as made, or to be served with notice of the making of the application) have been consulted).
- 14.2 In addition to the consultation undertaken and described within this report, on 25 May 2023 all organisations (with two exceptions for the reasons explained below) named in column (2) of Schedules 5 and 6 to the 2006 Rules and considered relevant to the Scheme were sent a copy of the draft TWAO, an explanatory memorandum explaining the intended purpose and effect of each article of the draft TWAO and an associated plan showing the nature and extent of the Scheme. All consultees were invited to provide comments on the draft TWAO by Friday 7 July 2023. Since the draft TWAO was sent to the Schedule 5 and Schedule 6 consultees in May 2023, two further parties have been identified as falling within category 16 of Schedule 6 to the 2006 Rules, namely Peterson and Southampton Marine Services Ltd. Although these consultees were not contacted on 25 May 2023 they have been consulted on the Scheme (see for instance Table 20 of **Schedule 6** (**Responses to June 2023 consultation**) to this report).
- 14.3 The letter also explained that a TWAO application was being prepared, that a public consultation would start on 5 June 2023 and, in the case of statutory consultees listed in Schedule 5 to the 2006 Rules, the letter also asked the consultee to return a pre-paid proforma advising whether they wished to receive, when the application was submitted, the TWAO application documents electronically or in hard copy.
- 14.4 Copies of the letters that were sent alongside the draft TWAO, together with a list of all organisations to whom the letters were sent, can be found at **Appendix 14 (Draft Order Consultation Materials (May 2023))** to this report.
- 14.5 By Friday 7 July 2023 responses had been received from ten organisations. Comments on the draft Order were received from Associated British Ports, the Environment Agency, Royal Mail and Trinity House. A summary of the matters raised by those bodies in relation to the draft Order and details of how these have informed progression of the proposals and the drafting of the proposed TWAO (application document A2), is provided at Schedule 7 (Feedback received from consultees on Draft Order (May 2023) to this report. Comments relating to the Scheme's potential environmental impacts were received from the Environment Agency, Historic England and the Inland Waterways Association and these are summarised at Table 5-4 of Chapter 5 (Consultation) to the Environmental Statement (Application Document A17), along with details of how the matters raised have been considered. Natural England, National Highways and the Marine Management Organisation responded acknowledging the consultation but did not raise any comments.
- 14.6 Following legislative amendments made to the 2006 Rules announced in July 2023 to enable applications to be submitted, served and progressed in electronic format, the Schedule 5 bodies were sent a further letter, on 31 July 2023, explaining they would no longer be issued with printed copies or USB sticks containing the application documents. The letter explained that the written notice of the application that they would still receive would provide details of where to view the

application documents on a website and how a paper copy might be requested. A copy of this letter can also be found at **Appendix 14 (Draft Order Consultation Materials (May 2023))** to this report. Essex and Suffolk Water responded to the letter of 31 July 2023 stating that they were unable to trace having received the 25 May 2023 letter and requesting a copy. A copy of the 25 May 2023 letter was emailed to Essex and Suffolk Water who responded to acknowledge receipt.

15 FUTURE CONSULTATION

- 15.1 Should the Secretary of State determine to authorise the Scheme, consultation, engagement and information sharing will continue throughout the detailed design, construction and operational stages of the proposed tidal barrier. Future planned consultation activities include:
 - individual meetings with landowners, and their representatives, who are directly affected by the proposals;
 - consultation with affected landowners during the detailed design and construction stages of the Scheme;
 - ongoing meetings with other affected groups, in particular with marine users and the fishing community;
 - keeping the local community and general public informed of Scheme progress;
 - ongoing Strategic Steering Group and Key Stakeholder Group meetings through the detailed design stage to support and inform further development and to help identify opportunities and enhancements that the Scheme could help to deliver; and
 - a Community Liaison Manager will be appointed for the duration of the construction programme and a Stakeholder Communications Plan will be developed and implemented that includes community engagement before work commences (see the Mitigation Action Plan at Appendix 18A to the ES (Application Document A17).

PUBLIC ENGAGEMENT THROUGH DELIVERING SOCIAL VALUE

The Public Services (Social Value) Act 2013 requires those who commission public services to think about how they can also secure wider social, economic and environmental benefits, securing these for their local area and stakeholders.

Scheme contractors Balfour Beatty are commissioned through the Scape Framework. The Scape Framework is a founding member of the National Social Value Taskforce and in partnership with the Social Value Portal, they helped to develop the National TOMs (Themes, Outcomes and Measures), a set of economic, social and environmental performance measures which underpin every project. They rigorously measure and report on performance management. The provides the Scheme with evidence to calculate the impact and success of the Scheme locally.

However, the development of social value for the Scheme has not just focused on the procurement of local services. It has also provided additional opportunity for engagement with local people and businesses, particularly those at the beginning of their career; enabling young people and their families to gain valuable insights into and opportunities to become involved in the Scheme. The infographic below provides a view of the number of students engaged, work experience placements taken up and employment provided across the lifetime time of the Scheme to date. The result of this engagement means that over 2000 families in Lowestoft are better informed of the Scheme, with the opportunity to pose questions and raise concerns.

Figure 4: Social value infographic (2016 to 2023)



Engagement with schools and colleges

We recognise the importance of engaging students in the understanding of climate change and flood risk, particularly relating to where they live.

In 2017, in partnership with Flipside UK and as part of the Watertight Words literacy initiative, an exercise took place involving over 1,000 students at schools and colleges in Lowestoft. Students were encouraged, through a series of workshops, to express the words and phrases that they associated with the sea. The results of these workshops were translated into display boards that were placed initially on the Town Hall and then moved to other locations in Lowestoft.

A series of those words and phrases will be etched inside the glass tidal flood walls which are adjacent to the tidal barrier and will be accompanied by interpretation boards.

We have initiated a number of events at schools and colleges including:

- (a) careers fairs;
- (b) talks with colleges about career opportunities/apprenticeships on the project (resulting in six apprenticeships to date);
- (c) school visits;
- (d) virtual and in person work experience (30 weeks in total);
- (e) virtual student career's fair (from 2021 to date) Norfolk and Suffolk Coast Forum

 Careers Fair 2022 in partnership with the Lowestoft Flood Protection Project

 (exhibition.app). Screenshots of the Virtual Careers Fair can also be found at

 Appendix 8(virtual engagement materials) to this report; and
- (f) student specific Norfolk and Suffolk Coast Conference workshops and learning opportunities (2018, 2019, 2021 (virtual) and 2022 (virtual) conference).

In October 2022 a competition was launched for schools in Lowestoft to encourage entries to support the naming of the proposed tidal barrier. This closes at the end of the academic year 2023. Further activities leading up to this period, designed to encourage participation, are planned.

SUMMARY OF MATTERS RAISED IN KEY STAKEHOLDER WORKSHOP (OCTOBER 2022)

The tables provided in this Schedule summarise the principal issues raised during the Key Stakeholder Workshop held on 21 October 2022, the responses given by ESC at that time and, where relevant, any updates to that initial response to reflect the latest position at the time of preparing this report.

Table 11: Noise/ Vibration

Issue/ topic raised	ESC response (2022)	Current position
Precondition surveys – properties to be inspected.	The extent of this is to be confirmed by ESC once the vibration data has been analysed.	The effects of vibration have been assessed in Chapter 9 of the ES (Noise & Vibration). The assessment concluded that a Vibration Management Plan will be required to ascertain on site measurement of vibration levels associated with piling and to set out a framework of controls which will be agreed with ESC Environmental Protection Officers.
Impact on tourism.	Minimal envisaged. ESC to confirm response.	A long-term benefit and key objective of the Scheme will be improved tourism as a result of reduced flood risk.
		Channel closures will not take place between mid-July and the end of August to minimise disruption during the peak sailing season (see Chapter 15 (Navigation) of the ES).
		Channel closures and piling works will be planned and communicated in advance (Chapter 15 (Navigation) of the ES).
		Chapter 8 (Population & Human Health) notes that while there will be disruption to facilities such as the Yacht Basin, Royal Plain, South Pier, Bandstand Pier / Heritage Quay and Royal Green / Royal Green Car Park

Issue/ topic raised	ESC response (2022)	Current position
		during construction, this will be temporary, with mitigation in place to minimise impacts.
Sink holes in RNSYC area.	This is an Anglian Water issue.	The sink holes were a collapsed sewer which has now been now corrected by Anglian Water.
Impact of vibration on the Bascule Bridge – potential disruption should bridge fail. Detailed inspection required, before during and after piling.	Bascule Bridge reports requested. Monitoring will be agreed with stakeholders by ESC.	The effects of vibration have been assessed in Chapter 9 of the ES (Noise & Vibration). The assessment concluded that a Vibration Management Plan will be required to ascertain on site measurement of vibration levels associated with piling and to set out a framework of controls which will be agreed with ESC Environmental Protection Officers.
Use learning from vibration monitoring for tidal walls and test pile.	Already in place. In addition, we are using data collected from LEEF project.	The construction methodology takes into consideration lessons learnt from previous phases. In addition, Chapter 9 of the ES (Noise & Vibration) identifies the need for a Vibration Management Plan which includes a requirement to undertake test piling.
Suggestion of piling on both sides at same time to mitigate length of operations.	Operations will be optimised where feasible.	The approach to construction will be optimised where feasible and will balance the need to minimise disruption to the Inner Harbour Entrance channel with the need to limit significant levels of noise and vibration.
Impact from sustained noise on local employees/ residents/ pedestrians.	Appropriate monitoring and mitigation will be agreed with stakeholders by ESC.	Appropriate monitoring and mitigation will be in place during construction work (as set out in Chapter 9 of the ES (Noise & Vibration)). There will be some disruption, any piling works will be planned and communicated in advance.

Issue/ topic raised	ESC response (2022)	Current position
Piling activities for such large scale construction works will be very disruptive to local residents in the immediate area. Work scheduling will be crucial to ensure disruption avoids sleeping times.	Appropriate monitoring and mitigation will be agreed with stakeholders by ESC. Construction work is scheduled to take place during the day, any night works will be communicated in advance.	Appropriate monitoring and mitigation will be agreed with stakeholders by ESC (as set out in Chapter 9 of the ES (Noise & Vibration)). Construction work is scheduled to take place during the day, any night works will be communicated in advance.
Port operators – operators on radio to vessels need clear listening capacity.	Noted.	Noted.
Look at cross impacts on road/ pedestrians from other major projects in area.	Currently, there are no known projects occurring at the time of the barrier construction period, the EIA process will consider this.	The ESC team will coordinate with adjacent projects.
Impacts on businesses – especially those with outside seating and those operating in the channel – prolonged and continued noise/ vibration may affect trade/ drive people away – loss of revenue.	The noisy periods of construction (mainly piling), are currently around three months duration spread over a 10-month period.	Appropriate monitoring and mitigation will be agreed with stakeholders by ESC (as set out in Chapter 9 of the ES (Noise & Vibration)). Piling activities will be planned and communicated in advance,
Consider noise impact on residents near/ around site compound.	Appropriate monitoring and mitigation will be agreed with stakeholders by ESC.	Appropriate monitoring and mitigation will be agreed with stakeholders by ESC (as set out in Chapter 9 of the ES (Noise & Vibration)). Piling activities will be planned and communicated in advance,
Consider local residents who are shift workers –	Current planned works are day shifts only. Some longer shifts and	Appropriate monitoring and mitigation will be agreed with stakeholders by ESC (as set out in Chapter 9 of the ES (Noise & Vibration)). Piling activities

Issue/ topic raised	ESC response (2022)	Current position
sleep could be impacted by noise/ vibration	night works may be required. These will be notified in advance.	will be planned and communicated in advance.
Some disruption while transiting the bridge channel. Significant disruption while on the waiting pontoon in the Trawl Dock and in the RNSYC, particularly if piling is 24/7.	Appropriate monitoring and mitigation will be agreed with stakeholders by ESC.	Working hours and construction activities will be planned and communicated in advance. Appropriate monitoring and mitigation will be agreed with stakeholders by ESC (as set out in Chapter 9 of the ES (Noise & Vibration)).
My business is based by the harbour, delivering training could be an issue if there is continuous noise.	Appropriate monitoring and mitigation will be agreed with stakeholders by ESC.	Working hours and construction activities will be planned and communicated in advance. Appropriate monitoring and mitigation will be agreed with stakeholders by ESC (as set out in Chapter 9 of the ES (Noise & Vibration)).
An impact on operations / audiences at Marina Theatre. Audible in auditorium for audiences. Resulting in complaints, lower attendance & decrease in revenue. Causing headaches for staff, affecting well-being & work environment, resulting in lower work output & possible increased staff turnover.	Appropriate monitoring and mitigation will be agreed with stakeholders by ESC.	Working hours and construction activities will be planned and communicated in advance. Appropriate monitoring and mitigation will be agreed with stakeholders by ESC (as set out in Chapter 9 of the ES (Noise & Vibration)).

Table 12: Traffic

Issue/ topic raised	ESC Response (2022)	Current position
Gull Wing should be open taking much of the traffic – impact on traffic/ pedestrians heading to the town centre.	Noted.	Noted. This has been considered in the traffic assessment reported in Chapter 14 of the ES.
Impact on road access to RNSYC.	Construction traffic will be required on RNSYC road access. Measures to be agreed with stakeholders.	A traffic management plan will be in place and communicated in advance (as set out in Chapter 14 of the ES (Transport)).
Concerns around lorry movements – consultation with bus operators required.	Traffic impact should be minimal and not affect the bus operators.	Impacts on traffic (severance & delay) are assessed in Chapter 14 of the ES and conclude that these impacts will be minor adverse. A traffic management plan will be in place and communicated in advance (as set out in Chapter 14 of the ES (Transport)).
Blue light responder concerns - traffic congestion, time of Bascule Bridge elevated, need to map out pinch points.	Traffic impact should be minimal. Bridge openings as per current openings. Gullwing is due to be complete by this stage.	Impacts on traffic (severance & delay) are assessed in Chapter 14 of the ES and conclude that these impacts will be minor adverse. Communication with blue light responders and stakeholders will take place throughout the construction phase. A traffic management plan will be in place and communicated in advance (as set out in Chapter 14 of the ES (Transport)).
Pedestrian access on Royal Plain needs managing due to heavy vehicles.	Construction traffic will be required on RNSYC road access. Measures to be agreed with stakeholders.	A traffic management plan will be in place and communicated in advance (as set out in Chapter 14 of the ES (Transport)).

Issue/ topic raised	ESC Response (2022)	Current position
Risk to pedestrians from increased/ disrupted traffic.	Construction traffic will be required on RNSYC road access. Measures to be agreed with stakeholders.	A traffic management plan will be in place and communicated in advance (as set out in Chapter 14 of the ES (Transport)).
Concerns around causing congestion – avoid Victoria Road and Oulton Broad.	Traffic impact should be minimal, the EIA process will consider this.	Impacts on traffic (severance & delay) are assessed in Chapter 14 of the ES and conclude that these impacts will be minor adverse. A traffic management plan will be in place and communicated in advance (as set out in Chapter 14 of the ES (Transport)).
Consider the Pea season – arrive to Birds Eye on tractors 24/7.	Noted. ESC to instruct constraint.	Noted. Will be raised with key stakeholders to ensure minimal disruption.

Table 13: Ecology

Issue/ topic raised	ESC Response (2022)	Current position
Environment protection team may be inundated with queries re/ noise and vibration concerns.	Comment noted.	Noted. Consultation with this team has been held and there will be ongoing engagement (as needed).
Marine Management Organisation (MMO) – conditions on licence associated with noise levels – consider East Marine Plan Refresh and MMO tourism policy.	Engagement with the MMO has been undertaken previously and will continue as the scheme proposals develop. The Eastern Marine Plan has been considered in the Scheme's emerging EIA; any update to the plan will be reflected in the final ES. MMO tourism policy noted.	MMO engagement is underway.

Issue/ topic raised	ESC Response (2022)	Current position
Disturbance to pets/ domestic animals in area.	Disturbance impacts on pets / domestic animals is not considered within the emerging EIA. With respect to noise and vibration, pets / domestic animals are not considered as sensitive receptors in impact assessment guidance and a methodology for assessment of noise and vibration impacts on pets is not available. However, it is reasonable to assume that any mitigation recommended to lesson impacts on human receptors would also be beneficial to pets / domestic animals.	Disturbance impacts on pets / domestic animals is not considered within the EIA. With respect to noise and vibration, pets / domestic animals are not considered as sensitive receptors in impact assessment guidance and a methodology for assessment of noise and vibration impacts on pets is not available. However, it is reasonable to assume that any mitigation recommended to lesson impacts on human receptors would also be beneficial to pets / domestic animals.
Disturbance from noise/ vibration on fish, migratory fish (eels), birds, breeding birds and other sensitive species including land mammals and their food source.	Disturbance from noise and vibration during construction on marine and terrestrial ecology has been considered in the emerging EIA. Behavioural (avoidance) and physiological (barotrauma) impacts on fish and migratory fish have been considered, with a simple transmission loss model used to determine the distances over which impacts may occur, noting that the existing harbour infrastructure will provide some attenuation of noise/vibration effects. Breeding bird (notably Kittiwake), will experience noise and vibration disturbance however it is anticipated that the Lowestoft Harbour population is habituated to a degree of noise and vibration due to the operation of the busy harbour	Disturbance from noise and vibration during construction on marine and terrestrial ecology has been considered in the EIA (see Chapter 10 of the ES (Biodiversity, Flora and Fauna)). Behavioural (avoidance) and physiological (barotrauma) impacts on fish and migratory fish have been considered, with a simple transmission loss model used to determine the distances over which impacts may occur, noting that the existing harbour infrastructure will provide some attenuation of noise/vibration effects. Breeding bird (notably Kittiwake), will experience noise and vibration disturbance however it is anticipated that the Lowestoft Harbour population is habituated to a degree of noise and vibration due to the operation of the busy harbour environment. Nevertheless, some nest

Issue/ topic raised	ESC Response (2022)	Current position
	environment. Nevertheless, some nest abandonment is considered a potential impact of the scheme during construction.	abandonment is considered a potential impact of the Scheme during construction.
If migratory fish use the Great Yarmouth route consider access/ egress, timing and cumulative impacts.	Consideration of the effects on migratory fish are included within the emerging EIA. Consideration of relevant projects in relation to cumulative effects have been identified and considered as appropriate.	Consideration of the effects on migratory fish are included within the EIA ((see Chapter 10 of the ES (Biodiversity, Flora and Fauna)). This concludes impacts will be minor adverse. Consideration of relevant projects in relation to cumulative effects have been identified and considered as appropriate in Chapter 17 of the ES (Cumulative Effects).
Increased stress to porpoises, seals, otters and kittiwakes.	The emerging EIA has considered the potential impacts of disturbance and physical injury to harbour porpoise and seals due to underwater noise and vibration as a result of construction works, specifically piling. A simple transmission loss model has been used to determine the distances over which impacts may occur, noting that the existing harbour infrastructure will provide some attenuation of noise/vibration effects. Disturbance to otter in Lake Lothing from marine craft used during construction has been considered, however habituation to the presence of existing marine traffic is anticipated. Disturbance to Kittiwake as a result of noise, vibration and presence of construction	Chapter 10 of the ES (Biodiversity, Flora and Fauna)) has considered the potential impacts of disturbance and physical injury to harbour porpoise and seals due to underwater noise and vibration as a result of construction works, specifically piling. A simple transmission loss model has been used to determine the distances over which impacts may occur, noting that the existing harbour infrastructure will provide some attenuation of noise/vibration effects. Disturbance to otter in Lake Lothing from marine craft used during construction has been considered, however habituation to the presence of existing marine traffic is anticipated. Disturbance to Kittiwake as a result of noise, vibration and presence of construction workers and machinery has been considered. It is anticipated that the Lowestoft Harbour population is habituated to a degree of noise and

Issue/ topic raised	ESC Response (2022)	Current position
	workers and machinery has been considered. It is anticipated that the Lowestoft Harbour population is habituated to a degree of noise and vibration and human activity, due to the operation of the busy harbour environment. Nevertheless, some nest abandonment is considered a potential impact of the scheme during construction.	vibration and human activity, due to the operation of the busy harbour environment. Nevertheless, some nest abandonment is considered a potential impact of the scheme during construction.
Consider the likelihood of having to disturb Kittiwakes nesting on the mitre gates and other sub-aerial asset elements (despite the spiked design and two weekly maintenance ops).	Kittiwake nesting on the mitre gates and other elements will be considered in the emerging EIA. Alternative nesting resource will be reviewed as part of the EIA, it is anticipated that use of this facility will potentially reduce the likelihood of kittiwake nesting on other areas of the proposed barrier.	Kittiwake nesting on the mitre gates and other elements is considered in Chapter 10 of the ES (Biodiversity, Flora and Fauna), With alternative nesting included as mitigation, it is anticipated that use of this facility will potentially reduce the likelihood of kittiwake nesting on other areas of the proposed barrier.
Water quality – will this be impacted by dredging? Including bathing / Blue Flag application implications.	The emerging EIA identifies that dredging and excavations present a potential impact to water quality, by increasing suspended sediment in the main channel. This will only be temporary and scheduled to take place near high water when tidal flows are weak and therefore transport of sediment plumes is expected to be localised. There is also the potential to affect dissolved oxygen concentrations, although it should be noted that most of the	Chapter 12 of the ES (Water, Geomorphology and Ground Conditions) identifies that dredging and excavations present a potential impact to water quality, by increasing suspended sediment in the main channel. This will only be temporary and scheduled to take place near high water when tidal flows are weak and therefore transport of sediment plumes is expected to be localised. There is also the potential to affect dissolved oxygen concentrations, although it should be noted that most of the sediment will be removed from the water column.

Issue/ topic raised	ESC Response (2022)	Current position
	sediment will be removed from the water column.	
Air quality – any issues for children/ families using fountains/ South Pier – rise in air pollution from increased traffic.	Potential air quality impacts due to emissions from construction traffic have been scoped out of the EIA. Based on predicted construction traffic flows associated with the scheme, the number of construction traffic vehicles is below the screening criteria for identifying roads where there is the potential for a significant effect on local air quality. The impact of dust emissions generated during construction on human health has been scoped into the EIA, with the conclusion reached that all phases of the scheme are likely to give rise to negligible to low risks to human health.	Potential air quality impacts due to emissions from construction traffic have been scoped out of the EIA. Based on predicted construction traffic flows associated with the scheme, the number of construction traffic vehicles is below the screening criteria for identifying roads where there is the potential for a significant effect on local air quality. The impact of dust emissions generated during construction on human health has been scoped into the EIA, with the conclusion reached that all phases of the scheme are likely to give rise to negligible to low risks to human health (see Chapter 16 of the ES (Air Quality and Climate)).
Water temperature – monitoring requirement stipulated by MMO and CEFAS.	Comment noted. To be discussed with MMO as necessary, during marine licence application process.	Project engaging with MMO and CEFAS on their requirements.
Impacts of sedimentation from dredging / piling - cause drafts around berths? Bury benthic fauna?	The emerging EIA identifies that sedimentation impacts from dredging / piling with largely be confined to the Inner Harbour Entrance Channel. The greatest impact will be from dredging which will be temporary and scheduled to take place near high water when tidal flows are weak and therefore transport of sediment plumes is expected to	Chapter 12 of the ES (Water, Geomorphology and Ground Conditions) identifies that sedimentation impacts from dredging / piling with largely be confined to the Inner Harbour Entrance Channel. The greatest impact will be from dredging which will be temporary and scheduled to take place near high water when tidal flows are weak and therefore transport of sediment

Issue/ topic raised	ESC Response (2022)	Current position
	be localised. Any impacts on berths in the Yacht Basin, Trawl Basin or in the Inner Harbour will likely be negligible.	plumes is expected to be localised. Any impacts on berths in the Yacht Basin, Trawl Basin or in the Inner Harbour will likely be negligible.
Will silt move in East side of yacht basin to a position that could cause difficulty for small vessels?	The emerging EIA identifies that sedimentation impacts with largely be confined to the Inner Harbour Entrance Channel. The greatest impact will be from dredging which will be temporary and scheduled to take place near high water when tidal flows are weak and therefore transport of sediment plumes is expected to be localised. Any impacts in the Yacht Basin will likely be negligible.	Chapter 12 of the ES (Water, Geomorphology and Ground Conditions) identifies that sedimentation impacts with largely be confined to the Inner Harbour Entrance Channel. The greatest impact will be from dredging which will be temporary and scheduled to take place near high water when tidal flows are weak and therefore transport of sediment plumes is expected to be localised. Any impacts in the Yacht Basin will likely be negligible.
High sediment loads can damage engine cooling systems and also impact the sensitivity of depth sounding electronic equipment. Additional dredging requirements will increase sediment loads.	The emerging EIA identifies that sedimentation impacts with largely be confined to the Inner Harbour Entrance Channel. The greatest impact will be from dredging which will be temporary and scheduled to take place near high water when tidal flows are weak and therefore transport of sediment plumes is expected to be localised.	Chapter 12 of the ES (Water, Geomorphology and Ground Conditions) identifies that sedimentation impacts with largely be confined to the Inner Harbour Entrance Channel. The greatest impact will be from dredging which will be temporary and scheduled to take place near high water when tidal flows are weak and therefore transport of sediment plumes is expected to be localised.

Table 14: Navigation

Issue/ topic raised	ESC Response (2022)	Current position
Concern on impacts of piling on season (May/ June) for	update including planned	The impacts of the Scheme on Navigation have been assessed in
the leisure vessels and	closure/possession dates. The	Chapter 15 of the ES (Navigation).

Issue/ topic raised	ESC Response (2022)	Current position
businesses – need as much notice as possible.	initial possession/closures windows will be scheduled three months prior to the possession/closure.	We plan to give weekly update with a two week lookahead.
Heritage Quay – will it remain operational including the diesel berth? Will Excelsior and other vessels need to moor elsewhere?	ESC to understand requirements from stakeholders and agree mitigation.	The impacts of the Scheme on Navigation (including Heritage Quay users) have been assessed in Chapter 15 of the ES (Navigation). Heritage Quay users will be consulted ahead of any planned construction works.
CEFAS Endeavour Survey vessel moored in inner harbour – has advanced schedule of movements which will be affected. Advance notice needed.	We plan to provide a monthly update including planned closure/possession dates. The initial possession/closures windows will be scheduled three months prior to the possession/closure.	The impacts of the Scheme on Navigation have been assessed in Chapter 15 of the ES (Navigation), with advanced notice identified as key mitigation. In addition, we plan to give weekly update with a two week lookahead.
Closures to channel – some businesses cannot manage more than 24-hour closure – may need to relocate to fulfil obligations.	ESC to understand requirements from stakeholders and agree mitigation.	The impacts of the Scheme on Navigation have been assessed in Chapter 15 of the ES (Navigation). We will provide a three month lookahead for major channel closures and provide a weekly update with a two week lookahead.
RNLI will have access at all times, may need boat in Lake Lothing to mitigate potential impact during construction on access.	ESC to understand requirements from stakeholders and agree mitigation.	The impacts of the Scheme on the RNLI's operations have been assessed in Chapter 15 of the ES (Navigation). Mitigation has been identified including provision of slipway access to Lake Lothing during the periods when channel closures of the Inner Harbour Entrance Channel are in place.

Issue/ topic raised	ESC Response (2022)	Current position
Mutford Lock currently only access to Broads – need to ensure both sides of Broads not closed at same time. Liaise with Broads authority.	ESC to understand requirements from stakeholders and agree mitigation.	The impacts of the Scheme on Navigation have been assessed in Chapter 15 of the ES (Navigation). Consultation with the Broads Authority regarding the planning of Inner Harbour Entrance Channel closures has been identified as mitigation.
Fishermen access – how will they be affected? – possible temporary loss of manoeuvring, fuelling or storage space.	ESC to understand requirements from stakeholders and agree mitigation.	The impacts of the Scheme on Navigation have been assessed in Chapter 15 of the ES (Navigation). Consultation with affected users of the Inner and Outer Harbours to communicate scheduling of channel closures will be required.
Amenity/pleasure vessels will need to be evacuated at certain times during the construction i.e., for concrete pours.	We plan to provide a monthly update including planned closure/possession dates. The initial possession/closures windows will be scheduled three months prior to the possession/closure.	The impacts of the Scheme on Navigation have been assessed in Chapter 15 of the ES (Navigation). We will provide a three month lookahead for major channel closures and provide a weekly update with a two week lookahead.
MMO – Marine Plans must be consulted as there are policies pertaining to temporary closures, fish, port and shipping, tourism and social/ recreation.	Noted.	Relevant policies of the Eastern Inshore Marine Plan have been considered in Chapter 3 of the ES (Legislation and Planning Policy).
Advance notice of channel closure timing and duration could be given (12 weeks minimum), with a monthly update and flow of information.	Noted.	We will provide a three month lookahead for major channel closures and provide a weekly update with a two week lookahead.

Issue/ topic raised	ESC Response (2022)	Current position
For long closures – make note in Reeds Almanac. For all closures, notice to mariners.	We plan to provide a monthly update including planned closure/possession dates. The initial possession/closures windows will be scheduled three months prior to the possession/closure.	The impacts of the Scheme on Navigation have been assessed in Chapter 15 of the ES (Navigation), with notice to mariners identified as key mitigation. We will provide a three month lookahead for major channel closures and provide a weekly update with a two week lookahead.
Concern on impacts of piling on season (May/ June) for the leisure vessels and businesses – need as much notice as possible	We plan to provide a monthly update including planned closure/possession dates. The initial possession/closures windows will be scheduled three months prior to the possession/closure.	The impacts of the Scheme on Navigation have been assessed in Chapter 15 of the ES (Navigation). We will provide a three month lookahead for major channel closures and provide a weekly update with a two week lookahead.
Overnight closures preferable to daytime.	We plan to provide a monthly update including planned closure/possession dates. The initial possession/closures windows will be scheduled three months prior to the possession/closure.	The approach to the scheduling of closures will be optimised where feasible and will balance the need to minimise disruption to the Inner Harbour Entrance channel with the need to limit significant levels of construction noise and vibration and other disruption at night. We will provide a three month lookahead for major channel closures and provide a weekly update with a two week lookahead. Closure of the barrier during operation will be scheduled to minimise disruption to navigation.

Table 15: Operation and Maintenance

Issue/ topic raised	ESC Response (2022)	Current position
What impact will shopping trolleys and other dumped material have in terms of barrier getting stuck or them being retrieved?	The tidal barrier will be located in an area of the navigation channel that is currently dredged by ABP on a regular basis and is adjacent to land that is currently secured by ABP and RNSYC. There is unlikely to be a risk	The tidal barrier will be located in an area of the navigation channel that is currently dredged by ABP on a regular basis and is adjacent to land that is currently secured by ABP and RNSYC. There is unlikely to be a risk
Several boat-based businesses in the harbour which would be impacted by closures- possible to get consensus on times of least impact?	This is part of the ongoing conversations with ABP, RNSYC and other navigation channel users and will be incorporated in the Barrier Operation Plan, including necessary communication routes	Ongoing discussions with local businesses as part of our stakeholder engagement will help inform the barrier operation plan.
Night closures of the channels/roads may be preferable for businesses and local commercial operations but would not be suitable for the project.	This is part of the ongoing conversations with ABP, RNSYC and other navigation channel users and will be incorporated in the Barrier Operation Plan, including necessary communication routes	Ongoing discussions with local businesses as part of our stakeholder engagement will help inform the barrier operation plan.
Possible problems with docking when maintenance in place/closures. Manageable if known.	This is part of the ongoing conversations with ABP, RNSYC and other navigation channel users and will be incorporated in the Barrier Operation Plan, including necessary communication routes	Ongoing discussions with local businesses as part of our stakeholder engagement will help inform the barrier operation plan.

Issue/ topic raised	ESC Response (2022)	Current position
The annual schedule of routine maintenance and barrier operations should be published well in advance – with caveat about having to change O&M plans due to weather constraints. This schedule of annual and biweekly ops should be made publicly available	This is part of the ongoing conversations with ABP, RNSYC and other navigation channel users and will be incorporated in the Barrier Operation Plan, including necessary communication routes	Ongoing discussions with local businesses as part of our stakeholder engagement will help inform the barrier operation plan.
In the case of any prolonged (multiday) closures of the inner harbour, active working vessels will need a temporary berth in the outer harbour- this needs to be planned and organised well in advance. Space for any vessels needing an emergency berth should still be available.	This is part of the ongoing conversations with ABP, RNSYC and other navigation channel users and will be incorporated in the Barrier Operation Plan, including necessary communication routes	Ongoing discussions with local businesses as part of our stakeholder engagement will help inform the barrier operation plan.
RNSYC/ public/ pedestrian access to the barrier needs to be controlled during O&M. Usual access will be closed during ops- how will this be managed?	This is to be considered during the project development	Ongoing discussions with local businesses as part of our stakeholder engagement will help inform the barrier operation plan.
Public interest in watching the barrier in action could result in people stopping on the Bascule bridge to watch the O&M procedure- H&S implications – designated public viewing area and site boards?	This is to be considered during the project development	Ongoing discussions with local businesses as part of our stakeholder engagement will help inform the barrier operation plan.

Issue/ topic raised	ESC Response (2022)	Current position
Long duration of closure during the day would result in a downward footfall but this could overcome if the closures only take place at night.	This is part of the ongoing conversations with ABP, RNSYC and other navigation channel users and will be incorporated in the Barrier Operation Plan, including necessary communication routes	Ongoing discussions with local businesses as part of our stakeholder engagement will help inform the barrier operation plan.

Table 16: Other

Issue/ topic raised	ESC Response (2022)	Current position
Take learning from Gull Wing engagement – going above and beyond during construction. Personal visits. (contractor led)	Current engagement is via ESC. However, Gull Wing benchmark is noted.	Contractor will be working under the considerate contractor scheme and engagement with businesses and stakeholder will be expected.
How will community react to increased traffic? Risk of protest.	Traffic impact is envisaged to be minimal. ESC to explore the risk of protest(s).	Impacts on traffic (severance & delay) are assessed in Chapter 14 of the ES and conclude that these impacts will be minor adverse. Risk of protest during construction is noted and will be added to risk register.
Delegates desired more information about the Kittiwake breeding platform installation (currently under NDA) as compensation for disturbance by LEEF project – are these tried and tested?	The Kittiwake breeding platform is being developed in consultation with ABP. Further details can be shared when available	ESC are not the developer of the LEEF Scheme. Impacts on kittiwake as a result of the tidal barrier are considered in Chapter 10 of the ES (Biodiversity, Flora and Fauna).
Labour issues/ material availability	Noted.	Noted.
Blue Light responder - Site security – would like details of site security of compound/ machinery. Bridge climbers need negotiators – concern re. access restrictions	Main commercial Road compound is located in ABP commercial property (as per the Tidal Walls current compound). To date, minimal security by the contractor has been required. Bridge climbers - ESC to respond.	Noted, The project will engage with blue light responders throughout.

STAKEHOLDER ENGAGEMENT: FEEDBACK RECEIVED

Comments raised by members of the public between formal consultation stages

In addition to the seven main phases of public consultation, from strategy development and options appraisal (2016) through to final formal consultation, the project team has been open to ongoing conversations with members of the public, businesses, key and statutory stakeholders through informal channels in between the main stages of consultation and throughout project development. Those conversations have also supported the development of the project communications and engagement database, helping to ensure that any updates are reaching as many people as possible.

For example, the team has actively encouraged comments and questions to be submitted outside of formal consultation periods, through the project email address and, when the virtual engagement room was launched in May 2021, through the live questions and comments option.

As a public authority, members of the public may use a more formal route to raise concerns. This can be done by requesting a response through the Freedom of Information Act 2000.

The table below shows the requests received over the current lifetime of the project (2015 to 2023). In addition to those requests shown below, a further two requests have been received where further clarification has been sought from ESC's Freedom of Information (**FOI**) team but has not been provided at this time.

All FOI requests have been resolved to date without the need for a formal inquiry.

Table 9: Freedom of Information requests

Question outline	Response	Outcome
Requesting current versions of the project plan and budget of the Lowestoft flood defence project	Directed to information housed on the Project website and virtual visitor centre	Resolved
Information requested about communications with a specific business	Information that could be provided under the Act was given. Where this was not possible, this was explained.	Resolved
Information requested about the amount of money and financial benefits that the Project had agreed to pay to Associated British Ports as part of the costs of the Lowestoft Flood Risk Project.	Confirmation that ESC have not made any agreement with Associated British Ports to pay money or financial benefit as part of the costs to the Lowestoft Flood Risk Management. Project.	Resolved

Question outline	Response	Outcome
Whether the Council has any planned for Managed Retreat in this and other areas.	Confirmed no plans in this or other areas. Adaptation plan provided for Easton Bavents	Resolved
What plans the Council has to allow homes to be built in medium and high flood risk zones.	Spreadsheet provided, linking to guidance and process, procedure and mitigation actions required for those seeking to build/develop homes in flood risk zones	Resolved

In all cases the project team has sought to provide open and honest information about the Scheme.

LFP and to explain the rationale for key decisions. Many of the issues raised in this way sought further information or reflected a viewpoint based on a misunderstanding of key information. In some cases, responses provided helped to clear these issues up. In other cases, there remained a difference of opinion between the commentator and the project team.

The table below provides a summary of the activities and responses included in **Appendix 1 (Engagement log)**. Engagement about the Scheme began in 2015. The engagement log is long and comprehensive. The table below summarises, for ease, the main issues and activities during that timeframe.

Table 10: Issues and activities log

Activity	Date	Purpose	What was achieved?
Lowestoft Rising Community Event	11/02/2015	Initial introduction to the project.	Over one hundred visitors to the event who had an early opportunity to be introduced to the project.
Email	15/05/2016	Draft of consultation materials by email for comment to business advisory group.	To ensure that the consultation materials were fit for purpose and to gather independent views to help them to be developed.
Public Consultation	06/06/2016 - 29/07/2016	Introduction to the Lowestoft Flood Risk Management Strategy and to demonstrate links to the Gorleston to Lowestoft Coastal Strategy.	Opportunity for the community and businesses to make early comment.

Activity	Date	Purpose	What was achieved?
		Drop ins on 20th and 21st June.	
Lowestoft Fayre	17/03/2017 - 18/03/2017	Introduction to all projects and initiatives happening or planned for in Lowestoft.	Good engagement and information promoted.
Consultation period on four aspects: Fluvial / pluvial, Tidal, Environmental aspects of tidal, and views from river users.	30/10/2017 - 14/12/2017	Initial options appraisal. Setting out options considered, withdrawn and the reasoning behind this. Comments requested on information shared, to stakeholder data base, through local papers, social media.	Comments received largely supportive of the approach.
Workshop	01/11/2017	To explore the options appraisal and environmental concerns. Comments requested on information shared, to stakeholder data base, through local papers, social media.	Comments received largely supportive of the approach.
Project Open Day	30/11/2017	To set out options appraised and strategy progress. Format followed was a mix of formal presentation and Q&A and informal drop in style engagement. Comments requested on information shared, to stakeholder data base, through local papers, social media.	Comments received largely supportive of the approach.

Activity	Date	Purpose	What was achieved?
Public Meetings (virtual)	04/05/2021 06/05/2021 10/05/2021	Update on the project for the public to begin to bring out any concerns.	Concerns recorded; attendees added to contact database for future engagement.
Tidal Flood Walls Ground Breaking (In person and live streamed)	21/05/2021	Tidal Flood Walls Ground Breaking (In person and live streamed)	Coverage in local newspapers. EADT / EDP / Lowestoft Journal and across social media. In person engagement with 30 key stakeholders on site due to COVID restrictions. Over 140 people joined the event through the livestreaming provision. Coverage included mention of the full project objectives, including tidal barrier.
Virtual Visitor Centre Launched	24/05/2021	Virtual Visitor Centre Launched.	Launched due to restricted rules (COVID 19) to allow multiple people to learn about the project, receive updates, and leave comments and questions. This form of basic gaming technology has allowed the project to reach age ranges that have previously proved challenging. Analytics are used to help continue to shape the virtual room. Will be updated throughout the project.
Virtual Visitor Centre Query	21/06/2021	"How will the defences at Lowestoft affect the river Waveney and likelihood, frequency and impacts of flooding upstream?"	Directed to flood risk assessment, clarified the project will have no influence on flooding in Bungay.
Virtual Visitor Centre Query	22/06/2021	"How will the defences at Lowestoft affect the river Waveney and likelihood, frequency and impacts of flooding upstream"	Response sent 22/06/ 2021: "As part of the planning application process a Flood Risk Assessment was undertaken, which found the project will not increase flood risk upstream of the scheme. The project will not have any

Activity	Date	Purpose	What was achieved?
			influence on the flood risk in Bungay. The Flood Risk Assessment can be found at the planning portal under "supporting documents""
Virtual Visitor Centre Query	10/07/2021	"I have noticed through observing the Environment Agency tidal buoy at Lowestoft that wave heights have been very high this week. I believe wave heights reached 6.83 metres at one point. Is this indicative of an increase in wave heights and tidal velocities in the Lowestoft area?"	Response sent 26/10/2021: "Thank you for your message. Details of the coastal management strategies for the Lowestoft area can be found in the Gorleston to Lowestoft Coastal Strategy."
Virtual Visitor Centre Query	12/02/2022	"Hi, one question, where will the water go that is deflected by the barrier. What other flood are at risk as a result of that?"	Response confirming there would be no increased flood risk and added flood risk assessment to the Virtual Consultation Room.
Meeting	26/07/2022	Represented LFP at the Lowestoft Ambassadors meeting.	Regen team now have footfall counters in place - may be useful data for funding. Opportunity for volunteering/ social value with Warm Rooms. Potential construction on Station Square.
Email	21/09/2022	Email Invite to 21/10 workshop.	Sent to members of the Key Stakeholder Group as hosts, separate invite sent to list of stakeholders identified. Invite sent to Peter Langford who raised at Suffolk Resilience Forum meeting to ensure attendance of blue light responders, Suffolk Highways and National Highways.

Activity	Date	Purpose	What was achieved?
Email	29/09/2022	Chase email invite to 21/10 workshop.	Individual chase emails to invite to 21/10 workshop - increase in RSVPs.
Letter	11/10/2022	Letter invites for 21/10 workshop.	Letter invites to stakeholders identified as landowners/ tenants of land packages impacted by barrier.
Email	14/10/2022	Final chase email invite to 21/10 workshop.	Individual chase emails to invite to 21/10 workshop - increase in RSVPs.
Workshop	21/10/2022	Key Stakeholder Workshop aiming to draw out concerns and impacts from Key Stakeholders relating to the EIA, NIA, barrier construction, operation, and maintenance.	Concerns across a range of topics drawn out and distilled for Project Team to respond to. Attendance from range of stakeholders including navigation users, Schedule 5 and 6 consultees and blue light responders.
Letter	16/11/2022	Letter invite for consultation and drop in events to residents/ businesses potentially impacted by the tidal barrier construction.	Letter sent to addresses on Waveney Road, Pier Terrace, Marine Parade, London Road South and landowners identified in the land packages document.
Email	16/11/2022	Notes and presentation from Key Stakeholder Workshop (21/10) distributed.	Briefing sent to ESC councillors, Strategic Steering Group and Key Stakeholder Group.
Email Briefing	18/11/2022	Briefing for councillors and members of LFP governance structure to make aware of consultation to share with their networks.	Briefing sent to ESC councillors, Strategic Steering Group and Key Stakeholder Group.

Activity	Date	Purpose	What was achieved?
Consultation	21/11/2022 - 12/01/2023	Consultation to draw out impacts/ concerns from stakeholders and community around the construction, operation and maintenance of the tidal barrier. Materials available to view on the virtual engagement room, Riverside, Marina Centre and Library.	13 surveys completed by stakeholder, underrepresented groups identified, and further consultation organised.
Email	21/11/2022	Email inviting database to view consultation materials and attend drop-ins.	Email sent to LFP stakeholder database.
Drop-in Sessions	23/11/2022 - 24/11/2022	Drop-in sessions for public and stakeholders to find out more about the barrier, view consultation materials and answer any questions.	42 people attended over the two sessions. Concerns around adverse weather affecting attendance – further consultation with underrepresented groups planned.
Business Engagement	28/11/2022	The purpose of the outreach was to discuss the project with local business owners and share the consultation paper with those who are close to the construction area and might be impacted by the building works.	Covered: Station Square, Bevan Street East (Part), East end of Commercial Road, A47 on the North side of the Harbour/Trawl Dock, Denmark Road (nearest station square). Project team discussed with the business owners, which were open, the nature of the works, providing them with the booklet for reference and encouraged them to provide feedback on the TWAO. Directed any specific concerns to email the team and someone would be in touch to discuss the concerns.
			the booklet posted though the door, distributing approximately 50 booklets.

Activity	Date	Purpose	What was achieved?
Email	05/12/2022	Email asking to share consultation materials with contacts, including property/landowners in Lowestoft.	The Oulton Broad Yacht Station Manager got in touch to be added to the stakeholder database.
Email	06/12/2022	Ensure those on the project stakeholder database has received information regarding the consultation.	Email to each person on stakeholder database with booklet, virtual engagement room link and survey.
Email	06/12/2022	Email to Eastern IFCA to organise meeting with fishermen/ fishing businesses re. tidal barrier consultation.	IFCA provided the project with contact details for the Lowestoft Inshore Fishing Fleet Association.
Booklet Delivery	06/12/2022	ESC dropped off some booklets and a poster to the Taylor's Properties office for display.	Poster displayed in Taylors Properties on Waveney Road (A47).
Letter / Booklet Delivery	08/12/2022	Ensure residents in the immediate vicinity to the barrier construction have engaged with the consultation and are aware of potential impacts during construction.	Letters, booklets and surveys sent to addresses in the immediate vicinity of the barrier location (Waveney Road, Station Square, Marine Parade, London Road South, Pier Terrace).
Email	16/12/2022	Request from Lowestoft Cruising Club to share consultation booklet to share with members.	Shared booklet, linked to survey and offered to provide paper copies of survey if needed.
Email	05/01/2023	Post-Christmas email regarding consultation.	Email sent via Mailchimp to the stakeholder database.

Activity	Date	Purpose	What was achieved?
Radio	09/01/2023	Final push for consultation.	Info regarding consultation added to the East Coast One radio bulletins.
Email	13/01/2023	Email from individual with additional comment on the consultation.	Additional comment: "it is (still) important to ensure that "backflow" is prevented on all drainage ("combined" or "otherwise") from road gullies (and "basements") in the event that the water level in "Lake" Lothing (or MORE importantly "seaward" of the "proposed" barrier - if that is where ANY discharge to) rises above "inlet" levels."
Email	22/02/2023	Communication regarding change to TWAO Location Plan and increased length of channel closures to 4-5 x 3-week channel closures. Offered to meet with anyone concerned and/or felt they would be impacted.	Sent to the project stakeholder database.

FURTHER ENGAGEMENT WITH NAVIGATION USERS

The table below summarises the engagement undertaken with navigation users following the Navigation Users' Workshops in January and February 2023.

Table 18: Summary of Navigation Users' engagement

Navigation User	Date	Purpose of engagement	What was achieved?
Lowestoft Inshore Fishing Fleet Association	24/01/2023	Engage the Lowestoft Inshore Fishing Fleet Association with the barrier and any impacts.	Will reach out to colleagues based in the Inner harbour who will be impacted by channel closure. Negligible impact from barrier works on themselves, will remain on contact database.
Royal Yachting Association, Norfolk and Suffolk Boating Association, Oulton Broad Parish Councillor	09/02/2023	Navigation user consultation re. increased potential channel closures to 4-5 x 3-week durations.	Highlighted the importance of ensuring channel closure does not coincide with Yarmouth closure, advised private boat users are largely seasonal.
Excelsior Trust	09/02/2023	Navigation user consultation re. increased potential channel closures to 4-5 x 3-week durations.	Highlighted Trust takes bookings for the following season in the October prior, so as much notice as possible. The ship needs to pass through the channel once in March and once in November. Important not to miss/ be delayed in November as vital maintenance works take place to ensure the ship can continue to run.

Navigation User	Date	Purpose of engagement	What was achieved?
Oulton Broad Water Sports Centre	09/02/2023	Navigation user consultation re. increased potential channel closures to 4-5 x 3-week durations.	Occasionally requires navigation of the channel. Any channel closures will need communicating with as much notice as possible.
Mutford Lock	09/02/2023	Navigation user consultation re. increased potential channel closures to 4-5 x 3-week durations.	Advised most traffic through the Lock does not go out to sea. Advised navigation users in Brundle (Broadland Cruising Club), Broom, the Norfolk Yacht Agency, DNR Marine and Broadlands Holiday Park will need engaging.
SMS Marine	09/02/2023	Navigation user consultation re. increased potential channel closures to 4-5 x 3-week durations.	Concerned about loss of business during the channel closures. They have big lead times so will need to know when closures will happen with as much notice as possible. Mentioned having the closures over weekends will help trade. Interested in becoming a subcontractor on the project. Discussed moving some of their operations to the outer harbour during closures.
Sheader Marine/ Lowestoft Yacht Services	09/02/2023	Navigation user consultation re. increased potential channel closures to 4-5 x 3-week durations.	Largely supportive of the project and pragmatic around any closures, doesn't think channel closures/ change to navigation will have a big impact. Highlighted the importance of good communication when it comes to warning of the channel closures.

Navigation User	Date	Purpose of engagement	What was achieved?
			Mentioned the current difficulty of exiting the Broads via Great Yarmouth and potential issues if the channel is closed at the same time as Great Yarmouth being blocked.
Broads Authority	09/02/2023	Navigation user consultation re. increased potential channel closures to 4-5 x 3-week durations.	Outlined the current challenges with Great Yarmouth and that everything currently goes in and out via Mutford Lock. Hopeful the Haven Bridge will be sorted in the next few months, Braden Bridge more complex, but the Haven is the lower bridge. Highlighted the importance of being able to get through Great Yarmouth during the 3-week closure. Outlined key locations for bigger boatyards in the Broads who might be affected by channel closures – offered to share details. Happy to share information relating to closures to Broads users, mentioned these communications will need to be clear and straightforward (suggested maps with arrows) as some of the users are not experienced mariners. Broads Ecology team would like sight of the EIA.

RESPONSES TO NOVEMBER 2022 CONSULTATION

The table below shows the responses to the consultation which ran from 21 November 2022 – 12 January 2023.

Table 17: Public Consultation Responses (November 2022)

Consultee	Comment	Response (2022)
	Some disruption while transiting the bridge channel. Significant disruption while on the waiting pontoon in the Trawl Dock and in the Royal Norfolk and Suffolk Yacht Club (RNSYC), particularly if piling is 24/7.	There will be piling during the course of the project, and this will cause noise and vibration. But this is limited to a period of approximately two months, spread out over a nine-month period.
	Minor impact while transiting the bridge channel. Some disruption while on the waiting pontoon in the Trawl Dock and in the Royal Norfolk and Suffolk Yacht Club (RNSYC), particularly if piling is 24/7.	There will be piling during the course of the project, and this will cause noise and vibration. But this is limited to a period of approximately two months, spread out over a nine-month period.
Lowestoft Cruising Club	Any closure of the bridge channel will have significant impacts on the activities of boats wishing to transit the bascule bridge in either direction. There are over 400 vessel berths at the western end of Lake Lothing. Lowestoft Cruising Club has 73 serviced pontoon vessel berths, an overwintering boat compound, vessel slipway and mast crane, and a clubhouse. Our 130 members actively cruise the East Coast and further afield in sailing and motor yachts out of Lowestoft harbour. We also host visiting yachts throughout the year. When construction was initially planned for the winter months impacts on our sailing activities were thought to be minimal, as most of our activity is from March to October. All year working, including summer months, means significant adverse impacts are guaranteed. Lowestoft is a refuge port in times of adverse weather conditions and safe berthing would be required in the outer harbour. Berthing capacity in the RNSYC will be significantly reduced.	Follow up meeting took place with Lowestoft Cruising Club to discuss their concerns and mitigate against the impact of channel closures where possible. Proposed berths at the RNSYC to be used by Lowestoft Cruising Club during times of closure.

Consultee	Comment	Response (2022)
	Significant temporary additional small boat berthing in the outer harbour, with access to the quay, is essential during closures for both visiting and local vessels. Visiting vessels will need well publicised advance notice of closures so they can plan, if necessary, to avoid visiting Lowestoft. Access to the RNSYC refuelling berth should be maintained. Access to the Broads via Mutford Lock would be restricted, particularly if there are closures at the only other access in Great Yarmouth. Advance warning of closures should be given at a minimum of 12 weeks / 3 months' notice. Such plans should be widely promulgated via Notices to Mariners, a dedicated website, and via social media.	
	High sediment loads can damage engine cooling systems and also impact the sensitivity of depth sounding electronic equipment. Additional dredging requirements will increase sediment loads.	The emerging EIA identifies that sedimentation impacts with largely be confined to the Inner Harbour Entrance Channel. The greatest impact will be from dredging which will be temporary and scheduled to take place near high water when tidal flows are weak and therefore transport of sediment plumes is expected to be localised.
	There needs to be a risk assessment of the safety issues for vessels transiting the ongoing construction works. Clear VHF radio communication should be established. Specific safety navigation instructions for boaters should be widely promulgated via Notices to Mariners, a dedicated website, and via social media.	Noted. The feedback provided has fed into the navigation impact assessment undertaken and subsequently reported as part of the ES (application document A17).
	The contractors should be tasked to minimise disruption to navigation wherever possible and maintain strict safety standards for passing vessels.	Noted. The feedback provided has fed into the navigation impact assessment undertaken and subsequently reported as part of the ES (application document A17).

Consultee	Comment	Response (2022)
	Any closure of the bridge channel will have significant impacts on the activities of boats wishing to transit the bascule bridge in either direction. There are over 400 vessel berths at the western end of Lake Lothing. Access to sea and return to moorings would be significantly curtailed. (See question 3 for more details.)	Noted. The feedback provided has fed into the navigation impact assessment undertaken and subsequently reported as part of the ES (application document A17).
	Advance warning of planned closures should be given at a minimum of 12 weeks / 3 months notice. Such plans should be widely promulgated via Notices to Mariners, a dedicated website, and via social media. (See question 3). Closures for tidal surges should be at a minimum of 5 days' notice.	This is part of the ongoing conversations with ABP, RNSYC and other navigation channel users and will be incorporated in the Barrier Operation Plan, including necessary communication routes.
	There needs to be a risk assessment of the safety issues for vessels transiting the ongoing construction works. Clear VHF radio communication should be established. Specific safety navigation instructions for boaters should be widely promulgated via Notices to Mariners, a dedicated website, and via social media.	Noted. The feedback provided has fed into the navigation impact assessment undertaken and subsequently reported as part of the ES (application document A17).
	The positive impact would be no further flooding and damage during tidal surges at the Lowestoft Cruising Club site.	Support for the Scheme noted.
Individual community member /	Piling activities for such large-scale construction works will be very disruptive to local residents in the immediate area. Work scheduling will be crucial to ensure disruption avoids sleeping times.	It is not possible to complete a project of this nature and magnitude without times when noise levels are significant. However, we will let people know well in advance when those periods of noise will be.
Lowestoft resident		There will be piling during the course of the project, and this will cause noise and vibration. But this is limited to a period of approximately two months, spread out over a nine-month period.

Consultee	Comment	Response (2022)
	Many of the harbour structures are Victorian era, these could be very vulnerable to vibration	Surveys will be completed on buildings in advance of piling work.
	effects	During periods of piling monitors will be placed in nearby buildings to ensure vibration remains inside specified safe levels.
	Agitation of sediments will be detrimental to water quality and will need to be carefully managed and mitigated	The emerging EIA identifies that sedimentation impacts with largely be confined to the Inner Harbour Entrance Channel. The greatest impact will be from dredging which will be temporary and scheduled to take place near high water when tidal flows are weak and therefore transport of sediment plumes is expected to be localised. Any impacts in the Yacht Basin will likely be negligible.
	Spoil disposal from demolitions of old pier structures	Noted.
	These will have been covered within the NavSim and NRA process.	Noted. The feedback provided has fed into the navigation impact assessment undertaken and subsequently reported as part of the ES (application document A17).
	Disruption to vessel traffic can be mitigated by advance notice and the provision of alternative berths on a temporary basis.	Noted. The feedback provided has fed into the navigation impact assessment undertaken and subsequently reported as part of the ES (application document A17).
	Business disruption from marine traffic delays will be less than that caused by significant tidal flooding	Noted. The feedback provided has fed into the navigation impact assessment undertaken and subsequently reported as part of the ES (application document A17).
Anonymous	Disruption to everyday lives but no pain - no gain!	Support for the Scheme noted.

Consultee	Comment	Response (2022)
	Overnight closures preferable to daytime.	Noted. The feedback provided has fed into the navigation impact assessment undertaken and reported as part of the ES (application document A17).
	We're a port town so our water is not perfect anyway.	No response required.
	Some disruption but wildlife is pretty resilient.	No response required.
	Mental health and wellbeing.	Noted. The feedback provided has fed into the assessment of impacts on population and human health undertaken and reported as part of the ES (application document A17).
Individual community member / Lowestoft resident	Navigation disruption - No provided that Bridge could still be used for Cars	During the course of construction, there will be no need for additional traffic management such as land closures and diversions. There will be times when an increase in traffic is noticeable. This is likely to be when the project is ready for delivery of concrete. We will know in advance when this will be and will let people know. As much as we can, we will be using Lake Lothing to move material to site to reduce additional traffic.
	Benefit - Properties not being flooded	Support for the Scheme noted.
MJ Training	My business is based by the harbour, delivering training could be an issue if there is continuous noise.	It is not possible to complete a project of this nature and magnitude without times when noise levels are significant. However, we will let people know well in advance when those periods of noise will be.
(Business)		There will be piling during the course of the project, and this will cause noise and vibration. But this is limited to a period of approximately two months, spread out over a nine-month period.

Consultee	Comment	Response (2022)
	The building are old, my concern would be any issue with regards to the buildings and	Surveys will be completed on buildings in advance of piling work.
	vibration	During periods of piling monitors will be placed in nearby buildings to ensure vibration remains inside specified safe levels.
	There is obviously concerns for the shipping businesses in the area, not sure if there would be any significant impact on my business based on the end of Commercial Road. I would be interested to know more.	Noted. The feedback provided has fed into the navigation impact assessment undertaken and reported as part of the ES (application document A17).
	I would be concerned for the town and beach water quality and the impact this could have on tourism for the town.	The emerging EIA identifies that dredging and excavations present a potential impact to water quality, by increasing suspended sediment in the main channel. This will only be temporary and scheduled to take place near high water when tidal flows are weak and therefore transport of sediment plumes is expected to be localised. There is also the potential to affect dissolved oxygen concentrations, although it should be noted that most of the sediment will be removed from the water column.
	I assume all efforts would be made to ensure the safety, replanting etc. here.	Noted. The feedback provided has fed into the assessment undertaken and reported as part of the ES (application document A17).
	Long term would there be any issues environmentally? Would this solve the problem of flooding from all aspects, sea, river and rainfall, to make the disruption and impacts on the environment worthwhile?	The proposed tidal barrier will reduce the risk of tidal flooding to the town of Lowestoft. The likelihood of significant environmental effects arising of the proposals has been considered in the context of the EIA undertaken and reported in the ES. It is considered that the benefits to be realised by the proposed tidal barrier outweigh any adverse effects and for this reason

Consultee	Comment	Response (2022)
		consent is being sought fo the proposed Scheme.
	Will this change the overall use of the harbour after the construction is finished? I.e would the same size vessels still be able to access the harbour?	The 40 metre mitre gate will allow the navigation channel width to be unchanged upon completion, allowing the same sized vessels to use the harbour.
	How long would this really take, will we have a breakdown of events beforehand.	A programme will be put together in advance of construction start. This will be communicated, with known periods of channel closures and piling works.
	Are we talking about overnight closures as per the current closers for the bridge? If so this will not affect my business.	During the course of construction, there will be no need for additional traffic management such as land closures and diversions. There will be times when an increase in traffic is noticeable. This is likely to be when the project is ready for delivery of concrete. We will know in advance when this will be and will let people know. As much as we can, we will be using Lake Lothing to move material to site to reduce additional traffic.
	We would only need prior notice if closing during the day. Then we would need at least a week, to advise clients on how to get to us and parking advice via any diversions.	During the course of construction, there will be no need for additional traffic management such as land closures and diversions. There will be times when an increase in traffic is noticeable. This is likely to be when the project is ready for delivery of concrete. We will know in advance when this will be and will let people know. As much as we can, we will be using Lake Lothing to move material to site to reduce additional traffic.

Consultee	Comment	Response (2022)
	Would regular closure result in a change in water quality? If so how badly and will it affect drainage and beach water quality?	The emerging EIA identifies that dredging and excavations present a potential impact to water quality, by increasing suspended sediment in the main channel. This will only be temporary and scheduled to take place near high water when tidal flows are weak and therefore transport of sediment plumes is expected to be localised. There is also the potential to affect dissolved oxygen concentrations, although it should be noted that most of the sediment will be removed from the water column.
	Again would this have an effect on wildlife etc., if so what plans do you have in mind to minimise this?	The emerging EIA identifies that sedimentation impacts from dredging / piling with largely be confined to the Inner Harbour Entrance Channel. The greatest impact will be from dredging which will be temporary and scheduled to take place near high water when tidal flows are weak and therefore transport of sediment plumes is expected to be localised. Any impacts on berths in the Yacht Basin, Trawl Basin or in the Inner Harbour will likely be negligible.
	Would this impact on tourism, getting in and out of the town, beaches etc.?	During the course of construction, there will be no need for additional traffic management such as land closures and diversions. There will be times when an increase in traffic is noticeable. This is likely to be when the project is ready for delivery of concrete. We will know in advance when this will be and will let people know. As much as we can, we will be using Lake Lothing to move material to site to reduce additional traffic.

Consultee	Comment	Response (2022)
	Thinking of on land not getting into the harbour itself, what kind of diversions will be required and for how long?	During the course of construction, there will be no need for additional traffic management such as land closures and diversions. There will be times when an increase in traffic is noticeable. This is likely to be when the project is ready for delivery of concrete. We will know in advance when this will be and will let people know. As much as we can, we will be using Lake Lothing to move material to site to reduce additional traffic.
	We are assuming this is required due to the change in climate and the higher chance of flooding occurring, if so we will have to accept some impact from the build and operation. However we will need more information as to how significant that could be.	Noted. Further information on the need for the Scheme has been set out within the Statement of Aims (application document A4) that accompanies the application.
	nothing to worry about - its a construction project so you'll be working to "considerate constructor" standards or similar	No response required.
Anonymous	The design sucks. An opportunity missed time and time again in Suffolk is to make stuff look a bit funky/interesting/artistic or even just "not sh!t". Couldn't it be a nice colour not grey? couldn't it have a more nautical theme, some towers or sails or something. it is the main entrance to the harbour, so should shout "welcome". Think "Colossus of Rhodes", or at least some kind of arch. Make it a landmark feature, not an apology.	Noted. The feedback provided has fed into the assessment undertaken and reported as part of the ES (application document A17).
Business Owner	Yachts come into our yard for rigging and maintenance work, with the NTMs we can plan so that boats don't get trapped in the harbour. I forward the NTMs to my berth holders so they can plan trips where they want to leave or return to the harbour.	Noted. The feedback provided has fed into the navigation impact assessment undertaken and reported as part of the ES (application document A17).

Consultee	Comment	Response (2022)
	Having attended the stakeholders meeting I believe that there are the appropriate methods in place to protect the local ecology	Support for the Scheme noted.
	The construction of the barrier is absolutely necessary to protect Lowestoft in the future.	Support for the Scheme noted.
	Other businesses might find forward planning difficult	Noted. The feedback provided has fed into the navigation impact assessment undertaken and reported as part of the ES (application document A17).
	For the main part I believe we will be able to plan around the closures. The main problem would be if a visiting yacht wanted to come in for emergency rigging work	Noted. The feedback provided has fed into the navigation impact assessment undertaken and reported as part of the ES (application document A17).
	Benefits - The prevention of flooding in Lowestoft	Support for the Scheme noted.
Marina Theatre	An impact on operations/audiences at Marina Theatre. Audible in auditorium for audiences. Resulting in complaints, lower attendance & decrease in revenue.	It is not possible to complete a project of this nature and magnitude without times when noise levels are significant. However, we will let people know well in advance when those periods of noise will be.
		There will be piling during the course of the project, and this will cause noise and vibration. But this is limited to a period of approximately two months, spread out over a nine-month period.
	Piling will have an impact (already has) on operations/audiences at Marina Theatre. Audible in auditorium for audiences. Resulting in complaints, lower attendance & decrease in revenue. Causing headaches for staff, affecting well-being & work environment,	It is not possible to complete a project of this nature and magnitude without times when noise levels are significant. However, we will let people know well in advance when those periods of noise will be.
	resulting in lower work output & possible increased staff turnover.	There will be piling during the course of the project, and this will cause noise and vibration. But this is limited to a

Consultee	Comment	Response (2022)
		period of approximately two months, spread out over a nine-month period.
	If the bridge is shut, will affect Marina Theatre audiences & staff getting to/from the theatre. Could result in smaller audiences/increased audience reticence & decrease in revenue.	During the course of construction, there will be no need for additional traffic management such as land closures and diversions. There will be times when an increase in traffic is noticeable. This is likely to be when the project is ready for delivery of concrete. We will know in advance when this will be and will let people know. As much as we can, we will be using Lake Lothing to move material to site to reduce additional traffic.
	Depends on if bridge/road shut. More than 1 or 2 weeks would affect us.	Noted. The feedback provided has fed into the navigation impact assessment undertaken and subsequently reported as part of the ES (application document A17).
	As much as you can give us. But our programme of shows is booked 12-18+ months in advance so couldn't alter. For audiences, advance notice might help. Or it stop them from booking - hard to know.	Noted. The feedback provided has fed into the navigation impact assessment undertaken and subsequently reported as part of the ES (application document A17).
River User	What will be the mean tidal level inside of the flood defence gate when closed and how will this be maintained.	Although detailed design work has yet to be undertaken further information relating to the design and operation of the new tidal barrier comprised within the Scheme are provided in Chapter 6 of the ES (application document A17).

SCHEDULE 6

RESPONSES TO JUNE 2023 CONSULTATION

The table below shows the responses to the public consultation which ran from 5 June 2023-3 July 2023.

Table 19: Public Consultation Responses (June 2023)

Consultee	Comment	ESC Response
River User	With the Bandstand and South Pier tourism area included in this boundary, significant consideration/mitigation needs to be given to the impact this is going to have on tourism, which is a large source of income for many local businesses and a big part of why people visit Lowestoft.	Communication of any anticipated disruption will be shared in advance, with access maintained at all times. Any diversions will be clearly signed.
	Will compensation be offered to vessels/company's/individuals for the additional cost of fuel/time so that vessels can divert via GREAT YARMOUTH and the BROADS NETWORK to get to the other side during the closures?	The impact of closing the navigation channel has been carefully assessed. ESC will work with channel users to, where possible, mitigate the impact of channel closures.
		Closures will be planned and communicated in advance.
	[Year round working] is good as it means the project will be completed quicker. It is vital this is delivered on schedule.	Support for the proposed construction methodology noted.
	During the construction of the tidal defence walls along the SOUTH PIER, there has been extremely significant disruption to local businesses and charities on the pier and nearby, who rely on general footfall to keep trading. Large and complex systems of heras fencing has been very ugly but more significantly, has prevented people accessing the pier and getting to local businesses. Even though there are routes through, these are extremely poorly signed/highlighted and people are simply not walking down the pier like they used to, causing massive loss of revenues and engagement of local businesses and charities	Communication of any anticipated disruption will be shared in advance, with access maintained at all times. Any diversions will be clearly signed.

Consultee	Comment	ESC Response
	on the pier. When construction of the barrier impacts on the SOUTH PIER / BAND STAND area, it is absolutely vital that fencing/traffic management is kept to an absolute minimum, and where it is absolutely necessary, that fencing/management is simple and low key and for a as short time as possible. Additionally clear signage for all local businesses and charities should be provided to reduce the impact that low footfall is going to have on them. Ideally there should be no construction activities or fencing systems set up on the SOUTH PIER / BAND STAND as this is a popular tourist area and consideration for other areas that aren't a direct pedestrian / tourist area should be used instead, such as the grassed areas of ROYAL GREEN and other nearby concrete hard standings such as SOUTH QUAY immediately WEST of the flats on BELVEDERE ROAD, as these areas are low impact, won't stop pedestrians/tourists from accessing key areas and will be out of the way.	
Individual community member/	We need to stop Lowestoft flooding again in the future.	Support for the Scheme noted.
Lowestoft resident	The lesser the risk of flooding, the more people would be willing to invest and move to the area.	
	Not concerned about any environmental impact.	
	It is needed ASAP.	
Jet Adventures	So far, support for small businesses and charities has been very poor. Unless that improves my only choice would be to object to the construction.	Meetings will be arranged with stakeholders directly impacted by construction to help the project team understand any concerns
	As a business it's reducing my confidence in the area.	and work together to find a way forward. The current mooring utilised by
	Mitigation needs to consider small businesses	your company on the Heritage Quay will remain available for your

Consultee	Comment	ESC Response
	that need passage to survive.	use during the works construction.
	It would be much better for the area to only run the project outside tourism periods	Year-round working will speed up the construction programme, allowing for the work to be completed efficiently. Channel closures will not take place in late July and August to prevent disruption during the school summer holidays.
Individual	Supports the barrier to stop flooding	Support for the Scheme noted.
member/ Lowestoft resident	Construction impacts - It is what it is	
Individual community	It will keep Lots people and property safe from flood.	Support for the Scheme is noted. Communication of any anticipated
member/ Lowestoft resident	Good and clear advanced warning must be adhered too. Please do not let this be via social media alone, not everyone is on social media or even the internet	disruption will be shared in advance via a variety of channels including letters to residents using electoral roll data and local press.
	Updates and sharing information is necessary along with strictly adhering to the mitigating protocols	
Individual community member/ Lowestoft resident	My biggest concern is over the effect that construction will have on the local road network. Will it force road/footpath closures? It would be a shame to get the third crossing up and running only to be back to square one with only two crossings for periods of time.	The construction methodology has been developed to avoid the use of roads where possible, moving material to the site on the water. There may be some longer bridge openings. These will be known and communicated in advance.
		There are currently no road closures planned. The location of the site compound will allow project staff to walk or cycle to the construction site, reducing potential increases in traffic.
Anonymous	Even though I am Lowestoft born and bred I	As explained in this report,

Consultee	Comment	ESC Response
	don't know anything about the proposals.	significant consultation has been undertaken on the proposals over many years, commencing in June 2016.
Anonymous	What was the point of the flood defences just carried out. There's not enough businesses to save to fund it.	The tidal flood walls will work in combination with the tidal barrier to provide protection from flooding.
Anonymous	What difference will it make to places along the coastline etc. and inside the broads	The tidal barrier will have no impact along the coast. The volume of water the barrier will prevent from flowing into Lake Lothing is very small in comparison to the volume of the North Sea. Flood risk modelling has been carried out to determine there are no negative impacts of flood risk outside the scheme.
Individual community member/ Lowestoft resident	Does not support the construction as water will come up sewers or by North Denes	Flood modelling completed as part of the scheme took into account the whole area. The flood walls along Hamilton Road reduce the flood risk to the Power Park area significantly. There is an existing risk of overtopping of the existing defences close to the site occupied by Birds Eye. This overtopping is managed through the existing drainage in the area. Sewers are the responsibility of Anglian Water. As part of the scheme, we have identified a number of outflows in the harbour area, most of which have flap valve on them to prevent tidal waters entering into the sewers. The scheme has installed an additional valve as part of the tidal walls construction by Station Square.
	Waste of money	The case for the Scheme is set out

Consultee	Comment	ESC Response
		within the Statement of Aims (application document A4) that accompanies the application.
	If the men worked all day you may hear some noise but always standing about smoking/ vaping or on mobile phones working if they did will take half the time to finish!!!	The proposed working hours have been established having regard to the need to efficiently deliver the Scheme whilst also seeking to mitigate any environmental effects that the construction activities required might give rise to.
	Why take so long work 24 hours	The proposed working hours have been established having regard to the need to efficiently deliver the Scheme whilst also seeking to mitigate any environmental effects that the construction activities required might give rise to.
	Again if they worked (underlined) it would get done quicker and not cost so much. The Chinese would have had it done in half the time	The proposed working hours have been established having regard to the need to efficiently deliver the Scheme whilst also seeking to mitigate any environmental effects that the construction activities required might give rise to.
	The Sea!! Is dirty and polluted are you changing that?	The impacts of the Scheme on the water environment have been considered as part of the EIA undertaken and the results of this assessment are set out in Chapter 12 (Water Environment) of the ES (application document A17).
	Waste of money sure there must be an easier and quicker way to achieve the same	The case for the Scheme is set out within the Statement of Aims (application document A4) that accompanies the application.
	Don't waste money on feedback get the job done	Support for the Scheme is noted.

Consultee	Comment	ESC Response
Individual community member/ Lowestoft resident	Please hurry up & open the footpath across the Bridge its taking the mick How long its been shut considering every time I walk past nothing is being Done	The footpath on Waveney Road, which was closed as part of the tidal flood wall construction works, has now been reopened.
Port Organisation	No concerns.	Noted.
Individual community member/ Lowestoft resident	Supports the tidal barrier as I believe it will reduce the overall risk of flooding. But if there was a severe tidal surge it could still potentially flood.	Extensive flood risk modelling has been carried out, considering the projected impact of climate change, to ensure the tidal barrier will provide protection for the next 100 years.
	I do not think it will decrease or increase investor or business confidence. As other issues like port Authority ABP running the harbour in the way that they do already puts off investors and businesses. And even puts of people using the harbour at Lowestoft in general.	The case for the Scheme is set out within the Statement of Aims (application document A4) that accompanies the application.
	When applying for a transport and works act order (TWAO) everything should be taken into consideration to cause as little impacts as possible. And when construction takes place cause as little disruption as possible. Any permanent land use should be chosen wisely.	Careful consideration has been given to the Scheme proposals to seek to avoid, minimise or mitigate any likely adverse effects. For further information, please see the ES (application document A17).
	Any noise and vibrations that occur during construction will affect people in the area. It should be kept to as little as possible.	Careful consideration has been given to the Scheme proposals to seek to avoid, minimise or mitigate any likely adverse effects. For further information, please see the ES (application document A17).

Consultee	Comment	ESC Response
	Temporary closure of the inner harbour entrance/ bridge channel should be arranged to be closed as least as possible. Or given the best closure to get the best result of that closures. However; the bascule bridge is getting old if it lifts to many times it will just get stuck. It also causes allot of traffic problems when it opens or potentially gets stuck. (ABP) the Port Authority is a rip off and charges people allot of money for bridge lifts and to use the harbour in general. They are very fussy with their procedures. Which is another reason why people do not like using it.	The construction methodology has been developed to avoid the use of roads where possible, moving material to the site on the water. There may be some longer bridge openings. These will be known and communicated in advance. There are currently no road closures planned. The location of the site compound will allow project staff to walk or cycle to the construction site, reducing potential increases in traffic.
	Year-round working is best to speed up the construction process the quicker it is done the better to minimize disruption. But also working around peak times of usage in the harbour. Doing the cheapest option is also best as rising inflation costs and economic climate not being very good at the moment.	Year-round working will speed up the construction programme, allowing for the work to be completed efficiently. Channel closures will not take place in late July and August to prevent disruption during the school summer holidays.
	Environmental impacts of construction will only be temporary. Water quality in recent years at South beach has been affected by sewage discharge into the North Sea as a result the beach lost its blue flag status. Sediment in the outer harbour is sucked clean at regular intervals and ABP carry out dredging regularly. A pollution incident would only be accidental and if happened would probably disappear in time. Tidal flows are constantly changing work may alter them a little put should not have a big impact. Local ecology is important and should always be protected where at all possible to do so.	Careful consideration has been given to the Scheme proposals to seek to avoid, minimise or mitigate any likely adverse effects. For further information, please see the ES (application document A17).

Consultee	Comment	ESC Response
	Construction is the most important parts of the project it needs to be done correctly so that it is able to operate properly.	Noted.
	The tidal barrier being closed during a flood event or tidal surge is essential and is why it mainly has been built. Regular maintenance and testing of the tidal barrier is also essential however; should be done to minimize disruption to other people and things as much as is possible to do so. People being notified of this in advance would also be good.	Maintenance of the tidal barrier will be planned and communicated in advance.
	The barrier may stop surge water entering Lake Loathing however, it may start pushing it somewhere else. Down South Lowestoft seafront and beach also Pakefield beach and North Denes. Tidal flow changes will be minimal and would not have a major impact. Fish can go somewhere else temporarily offshore or up another river. ABP do sediment removal and dredging regularly. Sites in use should be cleaned so as to not affect future users. Physiochemicals should be kept to a minimum where possible.	The tidal barrier will have no impact along the coast. The volume of water the barrier will prevent from flowing into Lake Lothing is very small in comparison to the volume of the North Sea. Flood risk modelling has been carried out to determine there are no negative impacts of flood risk outside the scheme.
River User/ Individual Community Member/ Lowestoft resident	The overall works are very important - all thinking individual would agree. Keep those affected well informed before + during works and problems should be kept to a minimum. This is especially relevant to any last-minute changes.	Support for the Scheme noted.
Business Owner / Landowner/ Individual Community Member / Lowestoft	Major concerns about noise & vibration to nearby businesses & residents. Major concerns about increase in traffic through town by concrete delivery lorries	It is not possible to complete a project of this nature and magnitude without times when noise levels are significant. However, we will let people know well in advance when those periods of noise will be.

Consultee	Comment	ESC Response
resident		There will be piling during the course of the project, and this will cause noise and vibration. But it is anticipated that this will be limited to a period of approximately six months, spread out over the first 18 months of construction.
Anonymous	Flooding has been a real problem for many years and with global warming coming we will need it.	Support for the Scheme noted.
Anonymous	Supports the barrier - Great idea let's get on with it please.	Support for the Scheme noted.
	Sometimes you have to have a bit of disruption to achieve a long term goal.	
Individual community member/ Lowestoft resident	Construction may cause terrible traffic congestion.	The construction methodology has been developed to avoid the use of roads where possible, moving material to the site on the water. There may be some longer bridge openings. These will be known and communicated in advance. There are currently no road closures planned. The location of the site compound will allow project staff to walk or cycle to the
		construction site, reducing potential increases in traffic.
	Okay with possible noise and vibration, but it may effect local trade.	It is not possible to complete a project of this nature and magnitude without times when noise levels are significant. However, we will let people know well in advance when those periods of noise will be.
		There will be piling during the course of the project, and this will cause noise and vibration. But it is anticipated that this will be limited

Consultee	Comment	ESC Response
		to a period of approximately six months, spread out over the first 18 months of construction.
	I think the benefits will outweigh the negatives in the long term.	Support for the Scheme noted.
Anonymous	It's important we protect our environment, especially the town and low lying residential areas.	Support for the Scheme noted.
	As an investor I would want to know my investment, at least the physical aspects of it are as secure as they can be.	
Individual community	It's needed to save time, money, jobs and lives potentially.	Support for the Scheme noted.
member/ Lowestoft resident	With rising sea levels, will it be enough for another 'once in a hundred years' event?	Extensive flood risk modelling has been carried out, considering the projected impact of climate change, to ensure the tidal barrier will provide better protection for the next 100 years.
	Colin Law Way is a long way from the construction site. Construction traffic would impact on traffic flow on Bascule Bridge, around the Station etc. Lots of land available off Whapload Rd area.	During the course of construction, there will be no need for additional traffic management such as land closures and diversions. There will be times when an increase in traffic is noticeable. This is likely to be when the project is ready for delivery of concrete. We will know in advance when this will be and will let people know. As much as we can, we will be using Lake Lothing to move material to site to reduce additional traffic.

Consultee	Comment	ESC Response
	If the Construction workers worked shifts, 6-2, & 2-10 and actually worked in those hours it would be done quicker and more efficiently, rather than the current works where, at any time, you could see 4 people watching and 1 working, and knocking off at 12on Friday. Not getting value for money.	The proposed working hours have been established having regard to the need to efficiently deliver the Scheme whilst also seeking to mitigate any environmental effects that the construction activities required might give rise to.
	Given the site position it could be 24/7 shifts.	The proposed working hours have been established having regard to the need to efficiently deliver the Scheme whilst also seeking to mitigate any environmental effects that the construction activities required might give rise to.
	Environmental impacts of construction - Irrelevant. What's more important, humans or wildlife/plants?	Support for the Scheme noted although ESC also fully recognises the importance of minimising the effects of the proposals on the environment.
Individual community member/ Lowestoft resident	We only flood twice in a hundred years you should keep replacing the greyness and sea defences like you did in the sixties get your act together which you won't	The case for the Scheme is set out within the Statement of Aims (application document A4) that accompanies the application.
	People don't shop in Lowestoft me included no free parking homeless in shop doorways go to BECCLES Southwold it's thriving no decent bus service	Aspects of the feedback relate to matters beyond the scope of the Scheme.
	Repair Jackson's jetty and all groynes to PAKEFEILD lighthouse.	Aspects of the feedback relate to matters beyond the scope of the Scheme.
	Construction/ environmental impacts - Won't affect me	No response required.

Consultee	Comment	ESC Response
Individual community member/ Lowestoft resident	Hope I can get cheaper home insurance soon.	Support for the Scheme noted.
Anonymous	Investment - It isn't just down to the local area flooding. It's also down to the footfall in the town, there isn't much to attract people into the town. The rents are too high surely landlords would rather be getting some cash flow in rather than it sitting there empty. The confidence would increase for more offshore work in the area due to the measures of the barrier being put in place.	Support for the Scheme noted although some aspects of the feedback relate to matters beyond the scope of the Scheme.
Anonymous	The residents have had so much disruption to their lives in the last few years	It is not possible to complete a project of this nature and magnitude without times when noise levels are significant. However, we will let people know well in advance when those periods of noise will be.
		There will be piling during the course of the project, and this will cause noise and vibration. But it is anticipated that this will be limited to a period of approximately six months, spread out over the first 18 months of construction.
Lowestoft resident flooded in 2013	Businesses and property owners alike will benefit greatly from the reassurance the flood defences will give them.	Support for the Scheme noted
Individual	Red line boundary - No problem with it.	No response required.

Consultee	Comment	ESC Response
community member/ Lowestoft resident	As we're located close to the Bascule Bridge we will be affected but looking at the bigger picture are more than happy to put up with short term inconvenience and disruption.	Support for the Scheme noted
	Can't wait for the reassurance the project will bring that our home won't be flooded again.	
	Delighted that this investment in Lowestoft is being made.	
Anonymous	Previous floods have proved how vulnerable parts of Lowestoft are.	Support for the Scheme noted
Tenant of Riverside Business Centre	We have already experienced noise and vibration within the building. We are able to cope but hopefully it will be built quite swiftly.	It is not possible to complete a project of this nature and magnitude without times when noise levels are significant. However, we will let people know well in advance when those periods of noise will be. There will be piling during the
		course of the project, and this will cause noise and vibration. But it is anticipated that this will be limited to a period of approximately six months, spread out over the first 18 months of construction.
	If we can access Canning Road then we are unaffected.	Noted.
Business Owner	If it tempers the flood risk it's very sensible.	Support for the Scheme noted
	It's Lowestoft. We're used to constant disruption and will be accepted like every other major one we've had during the recent crossing works both sides.	

Consultee	Comment	ESC Response
Anonymous	Supports the barrier, although I'm not sure how that is going to work really. What will stop a flood tide going round and over the side of the gates. Also the contractor should be forced to use locally based suppliers and workers.	The tidal barrier will have no impact along the coast. The volume of water the barrier will prevent from flowing into Lake Lothing is very small in comparison to the volume of the North Sea.
		Flood risk modelling has been carried out to determine there are no negative impacts of flood risk outside the scheme.
		Where possible local suppliers and sub-contractors will be used
Anonymous	Though I support this scheme, as a Lowestoft resident, I do see it as a Climate Emergency adaptation project rather than mitigation. I believe that we collectively have to be much more emphatic in demanding sensible routes towards mitigation goals.	Support for the Scheme is noted.
	Investment - There's a possibility omitted, i.e. It will maintain current levels of confidence	Support for the Scheme is noted
	It might have some impact at a personal level, but so does everything else	Careful consideration has been given to the Scheme proposals to seek to avoid, minimise or mitigate any likely adverse effects. For further information, please see the ES (application document A17).
	People will complain. Good communications will be the best answer.	As explained within the Mitigation Action Plan provided at Appendix 18A to the ES (application document A17), a community Liaison Manager will be appointed for the duration of the construction phase.
		A Stakeholder Communications Plan will also be developed and implemented that includes community engagement before

Consultee	Comment	ESC Response
		work commences on the Scheme.
	It's a lot of concrete, but my feeling is that marram grass won't work in this situation.	No response required.
Oulton Resident	With the ever-increasing risk of coastal flooding due to sea level rises from climate change, the town and villages within the area need to be able to defend itself.	Support for the Scheme noted.
	Giving the area a coastal defence will help encourage investment and growth in the area.	
	Construction - This is unlikely to have an impact on me as I work from home.	
	The sooner construction is complete, the better for everyone.	
	Providing water quality can be maintained, then thus should generally mitigate anything else.	
Business Owner	The information presented doesn't really demonstrate how alternative options to the selected scheme have been considered. Controlling sea levels at this location will probably have impacts East bound, so outcomes with and without for the full affected areas should be shown. If proven that this solution and system achieved a cost benefit outcome, what measures are used and in place to activate a flood barrier closure? What sort of contract would this be let on? Who owns the responsibility if it fails under set conditions?	Chapter 4 (Consideration of Alternatives) of the ES (application document A17). explains the main alternatives that were considered in developing the proposals. The tidal barrier will have no impact along the coast. The volume of water the barrier will prevent from flowing into Lake Lothing is very small in comparison to the volume of the North Sea. Flood risk modelling has been carried out to determine there are no negative impacts of flood risk outside the scheme. Once complete the barrier will be operated by ESC.

Consultee	Comment	ESC Response
	How are other projects and planning permissions phased with this potential development?	The ESC team will liaise with other planned projects in Lowestoft, such as the redevelopment of the Royal Plain.
	These works could be carried out (safely) with minimal navigational impact, though at increased costs	The impact of closing the navigation channel has been carefully assessed. ESC will work with channel users to, where
	The channel should and could be only closed for very short periods if the construction process is phased. And if the location is deemed most appropriate.	possible, mitigate the impact of channel closures. Closures will be planned and communicated in advance.
	Proper environmental benefits and considerations will be discarded due to the costs of executing.	Careful consideration has been given to the Scheme proposals to seek to avoid, minimise or mitigate any likely adverse effects. For further information, please see the ES (application document A17).
	How much local content will be considered? Or will this scheme be similar to the third crossing, where major components and parts are imported and barged in from European neighbours	It is intended that, where possible, local suppliers and sub-contractors will be used.
	There is probably a better method to control the seabed around the location than continually opening and closing the gates, adding wear and tear	Noted.
	Who will own and operate the tidal barrier? A contractor who travels hundreds of miles to activate the maintenance? Or local contractors?	The tidal barrier will be an ESC asset and will be operated by a local team.

Consultee	Comment	ESC Response
	What happens in the event of complete failure? The barrier doesn't close, or closes and can't open?	A full barrier operations plan is in place to support the closure and opening of the gates in the event of a tidal surge. This includes procedures should failure of components occur such as:
		24 hours before the tidal barrier will be closed, deployment pre-checks will be carried out to give the team time to resolve any issues that become apparent. The pre-checks will involve the whole or full movement of the mitre gate. Additional pre-checks will take place 2 hours before planned closures to make sure power supply is still available and water level sensors are still operating properly.
		There are a number of features and items of the gate, as well as mechanical and electrical plant and equipment, that will be incorporated into the barrier operating system to provide backup/ levels of operational redundancy should certain components that are critical to the deployment of the gate fail.
		It is envisaged that a stand-by generator will automatically start up should mains power be lost.
		Two electronically operated winches will be provided one on the north-eastern end of the barrier structure, and one on the south-eastern side. Electric winch operation will provide the ability to open or close individual leaves of the mitre gate if there is a loss of hydraulic power.

Consultee	Comment	ESC Response
		If the tidal barrier fails to reopen after being closed, it has been designed to naturally open with the falling tide to prevent total blockage of the navigation channel.
Shopmobility	My charity is Lowestoft Shopmobility at 15, Station Square, which is right opposite the inner harbour or Trawl Basin I think you call it. We had to use sandbags to stop any flooding in 2013.	The case for the Scheme is set out within the Statement of Aims (application document A4) that accompanies the application.
	Noise & Vibration - Being at 15, Station Square we would be concerned about this. We already have in our "shop" a box which is measuring the vibrations of all the past work but have never had any feedback from the results of this. Presumably we will have the same again?	It is not possible to complete a project of this nature and magnitude without times when noise levels are significant. However, we will let people know well in advance when those periods of noise will be.
		There will be piling during the course of the project, and this will cause noise and vibration. But it is anticipated that this will be limited to a period of approximately six months, spread out over the first 18 months of construction.
		During these periods monitors will be placed in nearby buildings to ensure vibration remains inside specified safe levels.
	The only closure which would impact on us and our clients is closure of the Bascule Bridge.	There may be some prolonged openings of the Bascule Bridge for large movements of material to site from the site compound on Colin Law Way. These will be known and communicated in advance.
	I cannot see that year-round working would impact on us too much.	Support for the construction methodology noted.

Consultee	Comment	ESC Response
	I am sure the local ecology would soon recover. We have hundreds of Kittiwakes which are nesting all over the town!	
Anonymous	The water will find its way in further up the coast.	The tidal barrier will have no impact along the coast. The volume of water the barrier will prevent from flowing into Lake Lothing is very small in comparison to the volume of the North Sea.
		Flood risk modelling has been carried out to determine there are no negative impacts of flood risk outside the scheme.
Anonymous	To protect the environment, wildlife and human homes.	Support for the Scheme noted
	Investment will be increased - By saying that we take flooding seriously.	
	Construction won't affect me, as I live about 2 miles from site.	No response required.
Individual community member/ Lowestoft resident	It is unclear as to how "at risk" the area is and what this barrier will achieve.	Almost 10 years ago, in December 2013 over 150 homes and businesses were flooded, and Lowestoft was affected for many days after the tidal surge. As the only undefended town in the UK, this triggered the need for action and the introduction of Lowestoft Flood Protection scheme. In Autumn 2023 the construction of the tidal walls will be complete, protecting many homes and businesses. The remaining element of the project, the tidal barrier, will begin construction in 2025.

Consultee	Comment	ESC Response
	I'm pretty sure cleaning up the town centre might attract more investors and businesses!	Support for the Scheme noted.
	Red line boundary - None, looks well thought out.	
	Construction impacts - None, it's not a residential area	
	What negative impact would this have on the shipping and marine industry bridge side? And pleasure craft?	The impact of closing the navigation channel has been assessed. The scheme will work with channel users where feasible to mitigate the impact of channel closures.
		Closures will be planned and communicated in advance.
	Seems a long construction period for commissioning some gates. Surely preparation works could reduce the total closure?	ESC is seeking to minimise cost and programme as much as possible.
	Will there be local content sourcing for the scheme?	Where possible local suppliers and sub-contractors will be used.
	Who pays and owns it?	Funding for the tidal barrier has come from a variety of sources including ESC, the Government's Green Recovery Fund and the New Anglia Local Enterprise Partnership.
		Once complete the tidal barrier will be an ESC asset.
Individual community member/ Lowestoft resident/ Port Organisation	What are the associated secondary radial gates? Were these mentioned in the construction sequence in Case for Change? Have I missed something?	The secondary radial gates are connected to and retract into the bottom of each mitre gate leaf. When the gate is in the closed position they are lowered through approximately a metre depth of silt to close on the concrete cill and

Consultee	Comment	ESC Response	
		seal the gate opening. They can be raised to allow sluicing to occur so as to equalise water levels either side of the barrier.	
		They were not mentioned separately in the construction sequence as they form an integral part of the whole barrier gate.	
Waveney Chamber of	It's other reasons in vectors haven't come to Lowestoft.	Noted.	
Commerce	Essential infrastructure to protect Lowestoft from marine flood and major damage such an event would cause.	Support for the Scheme is noted	
	It will provide investor assurance that the town will have sufficient protection to mitigate the risk of a repeat of the extensive damage to buildings and infrastructure caused by the last event.		
	The impact mitigation measures are reasonable for the scope of work involved.	Support for the Scheme noted	
	Well considered proposals.		
Individual community member/	Unsure of support - Cost implications, construction implications, boating implications.	The case for the Scheme is set out within the Statement of Aims (application document A4) that	
Lowestoft resident	Not sure investors and/or businesses are that fussed by water ingress apart from those on Waveney Drive and other roads surrounding the docks.	accompanies the application.	
	Impossible to locate on https://www.lowestoftfrmp.org.uk/project-background . Lists A-L appendices		
	Visiting boats arrive outside of July/August. Limited attitude and knowledge exposed.	It is known that visiting boats and other vessels regularly navigate	

Consultee	Comment	ESC Response
	See answer above - not possible to find 'impactsand mitigation. (just the one mitigation?)	through the Inner Harbour Entrance Channel outside of July/August. However, from assessing the impact of closing the
	Make sure prior notice is widespread.	navigation channel, it has been determined that the peak period
	The consultation booklet is not user-friendly. whe caus between Augustian and the consultation booklet is not user-friendly.	when a channel closure would cause the most disruption is between mid-July to the end of August – particularly for recreational navigation users.
		The Scheme will work with channel users, where possible, to mitigate the impact of channel closures.
		Closures will be planned and communicated in advance.
		Please seen chapter 15 (Navigation) of the ES (application document A17) for further details.

The table below shows the responses received from Port tenants during the 2023 consultation. The feedback received has fed into the navigation impact assessment undertaken.

Table 20: Responses to June 2023 Consultation

Stakeholder	Date	Purpose / what are you looking to achieve?	What was achieved?
Greater Gabbard Offshore Wind Farm	03/07/2023	Letter in response to the tidal barrier consultation.	Raised concerns relating to: Berthing allocation Fuel supply access Parking Provisions Port accessibility Noise and vibrations Project team to organise a meeting to discuss and take these into account.
Petersons	04/07/2023	Meeting with project team to provide update on the tidal barrier project and discuss current planned channel closure durations and the impacts this may have.	Petersons encouraged to have early engagement on this matter. Project team to visit site to understand how Petersons operate. Petersons advised loading boats can be done in the outer harbour during times of closure, but fuelling is more complex. Tankers an option but costly, advised there may be fuelling on the redeveloped LEEF. Petersons to share typical summer activity from previous three years to enable project team to understand peak times. Project team advised weekly meetings would be offered during construction with a two week lookahead to keep informed of construction activity, even when not impacted.
Caudwell Marine	04/07/2023	Meeting with project team to provide update on the tidal barrier project and discuss current planned channel closure durations and	Caudwell Marine advised Peel Ports in Great Yarmouth charge £150 per vessel each way if they need to access the North Sea that way during the planned closures. Advised fuelling would be the biggest issue – uses EM560, which the RNSYC do not currently stock.

Stakeholder	Date	Purpose / what are you looking to achieve?	What was achieved?
		the impacts this may have.	Project team advised weekly meetings would be offered during construction with a two week lookahead to keep informed of construction activity, even when not impacted.
CEFAS	04/07/2023	Meeting with project team to provide update on the tidal barrier project and discuss current planned channel closure durations and the impacts this may have.	CEFAS advised their Endeavor vessel requires a deepwater berth, concerned increased sediment might increase dredging requirements. Project team advised that outside of the cofferdams there would be no other sediment change. This will be monitored throughout construction. CEFAS advised Endeavor periodically comes in and out of Port, will share schedule with project team. Important to have dialogue with the team to indicate times when closures would have minimal impact. CEFAS advised ABP lease expires in 2025. Project team advised weekly meetings would be offered during construction with a two week lookahead to keep informed of construction activity, even when not impacted.

SCHEDULE 7

FEEDBACK RECEIVED FROM CONSULTEES ON DRAFT ORDER (MAY 2023)

The table below identifies the parties who provided comments on the draft Order, the nature of the comments they provided and explains how the comments made have been taken into account.

Table 21: Comments in response to consultation on Draft Order (May 2023)

Provision of Draft TWAO	Comment Received	How comment has been taken into account
Consultee: Associate	ed British Ports	
Article 2 (Interpretation)	"building" – this should be updated to include port infrastructure (to ensure that this is covered by the related protective works covenants).	It is considered that port structures / buildings would already be caught by the existing definition of "building" and so no amendment has been proposed to the draft Order (application document A2).
	"Inner Harbour Entrance Channel", "Inner South Pier" "Inner North Pier" "Lowestoft Harbour" – for the avoidance of any doubt, all of these definitions should be clearly set out by reference to an approved plan.	These areas are clearly labelled within the TWAO application, including within the Planning Direction Drawings (application document A16) and so no amendment has been proposed to the draft Order.
	"marine environment" – include a reference to 2 metres from the quay edge. The rationale for this definition requires explanation.	This definition has been included to enable a distinction to be drawn between the marine and the terrestrial environments and so no amendment has been proposed to the draft Order.
	"navigation" – whilst the inclusion of recreational navigation is agreed, the definition should be expanded to ensure all navigation is addressed.	The ordinary definition of 'navigation' is already clear. The purpose of the definition is to clarify that recreational navigation is included, unless stated otherwise and so no amendment has been proposed to the draft Order.

Provision of Draft TWAO	Comment Received	How comment has been taken into account
Article 4 (Power to construct and maintain works)	4(3)(a) - the works included here must be tied to a plan to provide some certainty. The works 'as the Council thinks fit' should be removed.	The scheduled works will be shown on the works plans submitted with the TWAO application (drafts of which are enclosed with this letter), ancillary works are not shown on a plan due to their minor nature. The principal purpose of these well-established provisions relating to ancillary works is to enable further details to emerge at detailed design stage.
		Therefore, it is not appropriate or necessary to show them on the Order plans. We do not consider that the wording works 'as the Council thinks fit' should be removed', the purpose of this wording is to denote that these ancillary works will only be undertaken where ESC has deemed them necessary as part of the Scheme. There is precedent for this wording in the Boston Barrier Order 2017 and the Bridgwater Tidal Barrier Order 2022 and so no amendment has been proposed to the draft Order.
	4(3)(b) - embankments should be defined or removed (ABP are not aware of any being proposed as part of the Works).	References to 'embankments' are not considered to be necessary and so this wording has been removed from article 4(3)(b) of the draft Order.
	4(3)(f) – please clarify to what this is intended to relate?	The scope of the ancillary powers has been drawn having regard to the nature of the construction activities required for the Scheme and in view of recent precedents in other made

Provision of Draft TWAO	Comment Received	How comment has been taken into account
		Orders. Given the requirement for works in and to watercourses this provision has been included at Article 4(3)(f).
Article 5 (Power to deviate)	Generally, it is understood that the extent of the limit of deviation was intended to reduce as the plans were further developed. In light of the proposed timescales, we assume the plans are now fully developed/finalised – as such, please can you advise the final proposed limits of deviation? Again, it is difficult to comment without the final plans.	The limits of deviation are shown on the Order Plans (application document A3), drafts of which have also now been shared with ABP.
	5(3)(b) – the reference here to surface bed is incorrect. We assume this should be mean high water. In this respect, you should also clarify if this is at spring tide or neap tide.	Article 5(3)(b) has been updated such that the measurements are now stated with reference to Above Ordnance Datum (AOD).
Article 7 (Works and dredging etc. in the marine environment)	ABP would propose that, when dredging is required, the Council should apply to the harbour authority, requesting it to undertake the dredging works (at the Council's cost) and in accordance with an agreed programme. In the event that ABP is unable to dredge (for instance, if it does not have access to the specific dredging technology required for the area surrounding the Gates) then the Council will have the right to step in and dredge (subject to all Port health and safety requirements/access protocols etc.).	Whilst ESC is content to explore the possibility of ABP undertaking dredging on its behalf, ESC must retain the powers in the Order to undertake the dredging to ensure the Scheme can be delivered and so no amendment has been proposed to the draft Order.
Article 12 (Temporary stopping up and diversion of streets)	No stopping up/diversion should occur to ABP roads without ABP's consent. In addition, please can you clarify how any proposed road closures would impact ABP's pilot transports?	ABP would be consulted in relation to the exercising of the powers under Article 12(1) in respect of roads for which ABP is the 'street authority'. ABP have been asked to provide further detail as to its pilot transports.

e requested details of any dialogue with above. Until we have had the opportunity with tenants, we reserve our position in of this article. tutory harbour authority, ABP has a strict in place for these actions. As such, an asenting regime must be incorporated into cle. Clarification as to what precisely is d would be welcome. The Explanatory andum probably requires expansion?	Details of consultation undertaken with Port tenants and users is provided in this report. ESC has requested a copy of the protocol to which ABP has referred. A copy is awaited and, in the meantime, no amendment has been proposed to the draft Order.
in place for these actions. As such, an asenting regime must be incorporated into cle. Clarification as to what precisely is d would be welcome. The Explanatory andum probably requires expansion?	protocol to which ABP has referred. A copy is awaited and, in the meantime, no amendment has been proposed to the draft
y wish to test the scope of this article.	The proposed construction methodology for the Scheme is set down within Chapter 6 (Scheme Description) of the ES (application document A17).
	ESC is happy to discuss the practicalities of Port access for surveys and investigations and has historically complied with the Port's requirements in respect of recent works undertaken.
eneral point, it is unclear why both "tidal and works in the "marine environment" are l. Please can you clarify the distinction in the proposed works? It appears to us	Whilst tidal works would also be works within the marine environment, the latter term has been employed more generally throughout the Order to reflect activities within the marine environment. As such the latter is broader in scope. It should be noted that in
2	risit for the purpose of surveying or ating would need to be approved by ABP. eneral point, it is unclear why both "tidal and works in the "marine environment" are d. Please can you clarify the distinction in the proposed works? It appears to us re may be a risk of duplication.

Provision of Draft TWAO	Comment Received	How comment has been taken into account
		has been employed to similar effect. The marine environment in Lowestoft harbour is not generally referred to as a river and for this reason alternative terminology has been employed.
	25 (i) – There should also be a requirement for these works to be approved by ABP (as well as the Secretary of State). This reflects the protective provision.	Appropriate provisions for the protection of ABP in its capacity as the statutory harbour authority have been included within Schedule 9 to the draft Order and so no amendment has been proposed to article 25.
	25(3) – There should be a requirement to consult with ABP in this respect.	In circumstances where notice has been served by the Secretary of State ESC would be obliged to comply with that notice. It is not clear where the opportunity for consultation with ABP would arise in that scenario and so no amendment has been proposed to the draft Order.
Article 26 (Lights on tidal works during construction)	26 - Again, there should be a requirement for approval from ABP (as SHA).	Article 26 of the draft Order has been amended to provide that ESC will take steps for the prevention of danger to navigation as directed by ABP. Note that Articles 27 and 30 of the draft Order have also similarly been amended.
	We have provided an overview position above but, generally, are unable to comment until Schedules 4 and 5 are populated.	Not applicable.
	As above, ABP has significant concerns with respect to the current operating proposals for the	Safety is of the upmost importance to ESC and the

Provision of Draft TWAO	Comment Received	How comment has been taken into account
Article 43 (Power to operate scheduled works)	Gates. By way of example only, we note that when operating the Flood Gates the Council must 'have regard to the safety of vessels in the environment'.	assessment of the operational phase of the Scheme on navigation has not identified risks to the safety of vessels.
	It is unclear, however, how the Council would have regard to this as they have little to no visibility over this (nor are we aware of any proposals in this respect which would allow them to properly comply with this requirement).	ESC would welcome further discussion with ABP as to the proposed operational arrangements for the Scheme.
	43(6) – ABP cannot accept this. Again, by way of example, if the Gates malfunction and an ABP customer is caught within the channel, the customer would incur significant cost which – inevitably – it would want to seek to recoup from ABP. This would not necessarily arise as a result of negligence but could have costly consequences if a vessel is operating to a strict timetable (as is often the case).	The drafting of Article 43(6) reflects the provisions of earlier made Orders relating to tidal barriers, including those within operational ports and so no amendment has been proposed to the draft Order.
Articles 44-50	44 to 50 – The powers provided to the Council under these articles to an extent duplicate the harbour authorities existing powers. The Council should not be seeking to effectively adopt the role of the harbour authority. As such, these powers are inappropriate and unnecessary. If necessary, ABP would be content to accept a 'last resort' step-in power in the unlikely scenario that the harbour authority has not taken action against such offences.	ESC, as the promoter of the TWAO application, is seeking the rights and powers considered necessary to enable the construction, operation and maintenance of the Scheme and so no amendment has been proposed to the draft Order. There is no intention on the part of ESC to take on the general statutory duties of ABP as the harbour authority. It is ESC's desire to work with ABP as harbour authority to ensure the Scheme can be delivered without unduly impeding on its statutory responsibilities.
Article 51 (<i>Byelaws</i>)	51 – Please see our comments on the relevant schedule below.	Noted.

Provision of Draft TWAO	Comment Received	How comment has been taken into account
Article 58 (Power of disposal, agreements for operation, etc.)	58 – There is a typo of 'may'	Article 58(1) has been amended to address this.
Articles 64 (Disapplication of legislation) and 65 (Local legislation)	64 to 65 – These disapplication provisions are currently not accepted and we look to justification from the promoter.	The purpose of the proposed disapplication of certain existing legislation is explained in the Explanatory Memorandum to the draft Order (application document A3).
Schedule 1 – Scheduled Works	Work No 1 (c) – insert an agreed depth	Article 5 of the draft Order provides the depth.
	Work No 1 (d) – this needs to be more specific, how many piles/where etc. In addition, the reference to quaysides needs to be clarified, we understand that this should be the Inner Northern Pier and Inner Southern Pier but please advise if there are any other areas captured.	Work No 1(d) has been amended to specify the existing quaysides referred to (the North Quay and the South Quay).
	Work No 3A – this needs to include details of the building's height etc.	Whilst the TWAO will be bound by the limits of deviation shown on the Order plans, the detailed design of the operational buildings required to deliver the Scheme has yet to be undertaken. Further details can be found
		within the Planning Direction Drawings (application document A17) and the Design and Access Statement for the Scheme (application document A13).
	Work No. 4 – there needs to be an obligation to hand back at the Council's cost here.	Whilst ESC has confirmed to ABP that Work No.4 will be handed back to ABP, no amendment to the Order

Provision of Draft TWAO	Comment Received	How comment has been taken into account
		provisions are considered to be necessary in this respect.
	Work No. 6 – it should be made clear that these buildings are to be temporary. What is the council's intentions with regard to each building?	The buildings referenced in Work No. 6 are not proposed to be temporary — they relate to permanent welfare and storage facilities required in connection with the operation of the barrier.
Schedule 3 – Modification of compensation and compulsory purchase enactments for creation of new rights	We do not have sufficient information to comment on this Schedule at this time. We reserve our client's position to do so in due course.	Noted.
Schedules 4 and 5 – Compulsory Acquisition and Temporary Possession	As above, these schedules are blank. This information is vital to ABP reverting with a full position on the Draft Order and, as such, we request that this is provided by return.	Schedule 4 (Land which may be compulsorily acquired) and Schedule 5 (Land of which temporary possession only may be taken) have now been populated in the draft Order. Draft Land Plans were shared with ABP.
Schedule 6 – Lowestoft Tidal Barrier Byelaws	This schedule (and the related article) is unnecessary.	The proposed byelaws are considered to be necessary. They will enable ESC to take appropriate action in the event of activities or behaviours in the vicinity of the proposed infrastructure that might otherwise lead to damage or a safety risk. The inclusion of byelaws is precedented in other recent statutory works Orders.

Provision of Draft TWAO	Comment Received	How comment has been taken into account
Schedule 9 – Protection for the Harbour Authority	3(1) – The plans provided should be full and detailed. The words '(except for minor works or maintenance or repair)' should be removed. The square brackets around 'approval' should be removed.	The definition of 'plans' is such that ESC will be required to provide "plans, sections, elevations, drawings, specifications, programmes, construction methods and descriptions" in respect of the works.
		However, ESC must retain the ability to undertake minor maintenance and repair works without needing to seek ABP's approval. The square brackets around 'approval' have been removed.
	3(3) – This needs some amendment. Plans should be provided to ABP, who should have 28 days (or, if necessary, such longer period as agreed between the parties) to approve or refuse the plans (acting reasonably and providing full reasons in the event of a refusal). ABP require the ability to approve and comment on the plans. There may also be some scenarios where 28 days is too short – if, for instance, external consultants are required – and, as such, we have suggested that provision is included to agree a longer period. ABP does not accept a deemed approval provision, this should be removed.	ESC is willing to agree an appropriate extended time period in specified circumstances and will consider the appropriate mechanism for this. In circumstances where a response from ABP to the relevant plans provided has not been forthcoming, ESC must retain the ability to undertake the works to ensure delivery of the Scheme.
	3(4) – As below, any requirement for an inspection must be accompanied (at Council cost). It must be undertaken in accordance with ABP health and safety protocols and access procedures.	Paragraph 3(4) provides a right for ABP to inspect, rather than a requirement upon it to do so.
	4 – As built drawings must be provided to ABP within 3 months of completion.	Paragraph 4 of Schedule 9 has been amended to provide for this.
	5(1) – The ability to close Lowestoft Harbour must be a general power exercisable only ABP acting	Article 5(1) does not limit ABP's power to close the harbour to

Provision of Draft TWAO	Comment Received	How comment has been taken into account
	in its role as harbour authority. It cannot be limited to a scenario where it is requested to do so by an emergency service or government agency. This is necessary to ensure it can properly meet its responsibilities as harbour authority.	only where it is requested to do so by an emergency service or government agency. ABP may also close the harbour where ABP "reasonably considers that it is necessary to do so in response to [] any emergency or accident, or an imminent threat to the health or safety of persons".
	5(2) – We would suggest this is via Notice to Mariners.	Please seen chapter 15 (Navigation) of the ES (application document A17) for further details.
	5(6) – This is not sufficient. ABP must be consulted in advance of any sale, agreement or other transaction under article 6 as it needs to be satisfied that the entity is of suitable standing. This consultation should be undertaken as soon as reasonably practicable.	It is assumed that this comment is directed at paragraph 6 of the protective provisions. Any such transfer would require the consent of the Secretary of State under Article 6 of the draft Order and this would therefore be a matter for the Secretary of State's consideration.
	8 – At this stage we would simply note that provision will need to be made for loss of business arising as a result of the construction and operation of the Gates.	ESC recognises the need for further discussion with ABP regarding the payment of compensation in accordance with the compensation code.
	In addition to the above, there are a number of further protections which ABP require. Until we have had full details of the plans/schedules etc., we must reserve our position to add to these additional requirements, which are set out below:-	The points raised in respect of dredging and compliance with ABP's health and safety procedures and access protocol have been addressed above.
	In the event that the Council undertake its own dredging pursuant to step-in rights, if that dredging has an impact on the channel, ABP reserves the right to hold.	In respect of the overriding traffic principle, ESC is content to agree to an appropriate form of words

Provision of Draft TWAO	Comment Received	How comment has been taken into account
	the Council liable for any and all costs incurred remediating this. If the Council (or its agents) wish to enter the Port to carry out inspections/surveys, they will need to be accompanied by a member of ABP (the cost of which will be borne by the Council). Any persons will also need to strictly comply with ABP's health and safety procedures and access protocol. The overriding traffic principle – as agreed in the flood wall agreements – will apply equally to the Works and must be included as a protective provision	and discussions continue between the parties.
Consultee: Environm	<u> '</u>	
Article 22 (planning permission)	The TWAO/ EM makes reference to the TCP GPDO 1995 (Article 22) which is out of date – should be GPDO 2015.	The reference to the Town and Country Planning (General Permitted Development) Order 1995 in the relevant part of the Explanatory Memorandum (application document A2) has been updated.
		Article 22 of the draft Order references s90(2A) and s264(3) of the Town and Country Planning Act 1990, both of which are still in force.
Article 24 (Felling or lopping of trees)	Under Article 24 of the TWAO there is no mention of Tree Preservation Orders?	Although the provisions of this article would confer powers to fell trees on ESC, these powers would remain subject to the protection regime set out in section 211 of the Town and Country Planning Act 1990 and the relevant exemptions set down within the Town and Country Planning (Tree

Provision of Draft TWAO	Comment Received	How comment has been taken into account
		Preservation)(England) Regulations 2012.
Consultee: Royal Mai	il	
Not applicable.	Is your client aware of the presence of Royal Mail post-boxes within the order limits? If so, this avoids our post-boxes team wasting time doing a search as it is generally very easy for a scheme promoter to identify where we have apparatus as opposed to that of other statutory undertakers.	It is understood that there are no Royal Mail post-boxes within the Order limits.
Consultee: Trinity Ho	ouse	
Article 54 (Saving for Trinity House)	We confirm that Trinity House welcomes and supports the inclusion of the saving provision in the draft Order.	Noted.
Article 27 (Provisions against danger to navigation)	We confirm that Trinity House welcomes and supports the provision generally made in Article 27 of the draft Order for the notification requirements to Trinity House, and its powers of direction, for the prevention of danger to navigation and the stipulation of appropriate Aids to Navigation in the case of injury to, or destruction or decay of, a tidal work or any part of it.	Noted.
Article 30 (Permanent lights on tidal works)	We confirm that Trinity House welcomes and supports the provision generally made in Article 30 of the draft Order for the prevention of danger to navigation, and its powers of direction, in relation to the stipulation of appropriate Aids to Navigation upon completion of a tidal work.	Noted.
Articles 27(Provisions against dangers to navigation) and 30 (Permanent lights on tidal works)	With regard to Articles 27 and 30, Trinity House would suggest that it may be advantageous, however, for provision to made within this part of the draft Order for the notification requirement on East Suffolk Council, and the powers of direction [of Trinity House] in relation to Aids to Navigations to additionally include reference to the Harbour	Articles 27 and 30 of the draft Order have been amended to provide that ESC will take steps for the prevention of danger to navigation as directed by Trinity House and the Harbour Authority or, failing agreement between them, Trinity House.

Provision of Draft TWAO	Comment Received	How comment has been taken into account
	Authority (as defined in the draft Order) in each instance.	
	This being the case, with regard to powers of direction in respect of Aids to Navigation it would also be appropriate, in our view, for the Articles to also make clear that in the event of any disagreement between Trinity House and the Harbour Authority in this regard the Aid to Navigation requirements would be as stipulated by Trinity House.	
	We would suggest that this drafting would better reflect the powers and duties of Trinity House, as a GLA, having regard to section 199 of the Merchant Shipping Act, 1995, and section 78 of the Harbours Docks and Piers Clauses Act 1847 and, ultimately, provide further clarity on the position with regard to your client's position under the Order.	
	We believe that there is precedent for such drafting as reflected by The Boston Barrier Order 2017 / SI 1329 https://www.legislation.gov.uk/uksi/2017/1329/contents/made	
	With regard to the above referenced potential amendments to the proposed Lowestoft Tidal Barrier Order, we would also respectfully draw attention to the fact that, within the proposed Order limits, there are existing local Aids to Navigation established. These Aids to Navigation having originally been subject to the sanction of Trinity House under its powers as a GLA.	
	We anticipate that these existing Aids to Navigation are likely to be affected by the planned demolition and construction works for the new tidal barrier, if approved.	
	Ordinarily, we would therefore expect the Harbour Authority to seek the sanction of Trinity House, as a GLA, for the modification, discontinuance or establishment of such local Aids to Navigation. Hence, therefore, it would	

Provision of Draft TWAO	Comment Received	How comment has been taken into account
	seem logical for appropriate provision to be made for the Harbour Authority within the drafting and context of Articles 27 & 30 of the draft Order.	
Article 26 (Lights on tidal works during construction)	Trinity House further observes that Article 26 (<i>Lights on tidal works during construction</i>) of the above referenced Boston Barrier Order refers to the Secretary of State and to the Harbour Authority as regards the prevention of such steps as are necessary for prevention of danger to navigation. We would suggest, therefore, that a similar drafting in Article 26 of the proposed Lowestoft Tidal Barrier Order might, therefore, be appropriate. Currently this Article appears to make no such provision for the Harbour Authority in this regard.	Article 26 of the draft Order has been amended to provide that ESC will take steps for the prevention of danger to navigation as directed Trinity House and the Harbour Authority or, failing agreement between them, Trinity House.



To find out more about the Lowestoft Tidal Barrier, email or visit our website.



lowestoftfrmp@eastsuffolk.gov.uk www.eastsuffolk.gov.uk

To view the Lowestoft Tidal Barrier TWAO Application Documents visit:



https://www.eastsuffolk.gov.uk/lowestofttidal-barrier-TWAO-application

> Lowestoft Tidal Barrier Order