

Great Yarmouth Third River Crossing Order 202[*]

Document NCC/GY3RC/EX/035: Deadline 3: Applicant's comments on submissions received at Deadline 2, including Responses to Written Representations and Interested Parties' Responses to ExA's First Written Questions

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Infrastructure Planning

The Infrastructure Planning (Examination Procedure) Rules 2010

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Foreword

This Responses to Written Representations and to Interested Parties Responses to First Written Question Responses is part of the Examination submissions relating to an application ('the Application') submitted by Norfolk County Council ('the Applicant') to the Secretary of State for a Development Consent Order ('DCO') under the Planning Act 2008.

If made by the Secretary of State, the DCO would grant development consent for construction, operation and maintenance of a new bascule bridge highway crossing of the River Yare in Great Yarmouth, and which is referred to in the Application as the Great Yarmouth Third River Crossing (or 'the Scheme').

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Glossary of Abbreviations and Defined Terms

| | |
|---------------|--|
| ASI | Accompanied Site Inspection |
| CoCP | Code of Construction Practice |
| DCO | Development Consent Order |
| dDCO | Draft Development Consent Order |
| DML | Deemed Marine Licence |
| EIA | Environmental Impact Assessment |
| ExA | Examining Authority |
| ExQ1 | Examining Authority's First Written Questions |
| ES | Environmental Statement |
| GYPA | Great Yarmouth Port Authority |
| GYPC | Great Yarmouth Port Company |
| MMO | Marine Management Organisation |
| NSBA | Norfolk & Suffolk Boating Association |
| pNRA | preliminary Navigation Risk Assessment |
| RR | Relevant Representation |
| RYA | Royal Yachting Association |
| SOCG | Statement of Common Ground |
| The Applicant | Norfolk County Council (in its capacity as Highway Authority and promoter of the Scheme). |
| The Scheme | The Great Yarmouth Third River Crossing project for which the Applicant seeks development consent. |

1 Introduction

1.1 Purpose of this Report

- 1.1.1 This report, submitted for Deadline 3 of the Examination, contains the Applicant's responses to Written Representations and answers to the First Written Questions prepared by interested parties and submitted to the Examination for Deadline 2, 22 October 2019.
- 1.1.2 Written Representations were submitted by the below parties:
- Marine Management Organisation (REP2-023)
 - Goodchild Marine Services Limited (REP2-028)
 - Trinity House (REP2-029)
 - Royal Yachting Association (REP2-025 and REP2-026)
 - Norfolk and Suffolk Boating Association (REP2-030)
- 1.1.3 In addition, responses to the Examining Authority's First Written Questions were provided by the below parties:
- Ashtons Legal on behalf of Perenco UK Limited (REP2-019)
 - BDB Pitmans LLP on behalf of Great Yarmouth Port Authority and Great Yarmouth Port Company (REP2-020)
 - Burness Paull LLP on behalf of ASCO UK Limited (REP2-021)
 - Natural England (REP2-024)
 - Goodchild Marine Services Limited (REP2-027)
 - Environment Agency (REP2-031)
- 1.1.4 The report provides the Applicant's response to the issues raised, thereby providing a reference document for all interested parties and the Planning Inspectorate.
- 1.1.5 The Applicant's response to Written Representations made by ASCO UK and Perenco UK are included in the Post Compulsory Acquisition Hearing Submission including written submission of oral cases (Document Reference NCC/GY3RC/EX/037).

2 Marine Management Organisation (REP2-023)

2.1 Key Issues and Applicant's Responses

Key Issue

Comments on Written Responses and responses to comments on Relevant Representations ('RR')

- 2.1.1** (1.1) The Applicant has provided comments on the MMO's RR in Document NCC/GY3RC/EX/008 [REP1-002]: Response to Relevant Representations, dated 8 October 2019. The MMO have reviewed these comments and are in the process of consulting our technical advisors.
- 2.1.2** (1.2) A conference call with the applicant was held on 22 October 2019 to discuss these comments. Following clarification that no dredged material will be disposed to sea, the MMO agree the chemical analysis point is no longer relevant.
- 2.1.3** (1.3) The other comments, which were raised in the MMO's Rule 8 response, dated 4 October 2019, remain the same until they have been reviewed by our technical advisors. A summary of these points are:
- 2.1.4** (1.3.1) All changes to the current version of the draft DML have been agreed with the applicant, however it should be noted that it may be necessary to amend the scope of the proposed development, amend existing conditions and/or include additional conditions.
- 2.1.5** (1.3.2) Due to the basic information provided on the duration and nature of the pile driving and local migratory fish, the MMO do not believe there is enough information to grant a licence for the works.
- 2.1.6** (1.3.3) The Environmental Statement should include a discussion of a detailed scour assessment and should discuss whether the coastal process impacts (i.e. flow and sedimentation) would increase in scale under climate change.
- 2.1.7** (1.3.4) It is the opinion of the MMO that the evidence base to support ES conclusions in terms of underwater noise is insufficient.

Applicant's Response

- 2.1.8** The Applicant acknowledges MMO's agreement that chemical testing is not relevant to the Scheme.

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- 2.1.9** The Applicant acknowledges MMO's agreement (noted in 1.3.1 above) that all conditions in the current draft Deemed Marine Licence ('DML') have been agreed. The Applicant does not intend to make any changes to the scope of the authorised development set out in Schedule 1 to the DCO such that any additional conditions within the DML would be necessary. Further to discussions with the MMO, who clarified that their comment in this regard relates to their desire for the DML to accord as closely as possible to an ordinary, the DML has been updated at Deadline 3 to provide further clarity on this point (Document Reference NCC/GY3RC/EX/039).
- 2.1.10** With reference to 1.3.2 (above), the Applicant is confident that there is sufficient information presented within the Benthic and Fish Ecology Report (Document Reference 6.2, Planning Inspectorate Reference APP-122) and the Environmental Statement ('ES'), Chapter 8: Nature Conservation (Document Reference 6.1, Planning Inspectorate Reference APP-096) to grant a licence for the piling works associated with the Scheme. The assessment of effects on benthic and fish ecology, including noise and vibration effects, is summarised in paragraphs 8.8.33 to 8.8.37 of the ES. The Applicant will provide detailed information on in-river piling works, including method, timing and duration, via the DML, in the construction method statement required under paragraph 5 of Schedule 13 (Deemed Marine Licence) to the draft DCO (Document Reference NCC/GYTRC/EX/023, Planning Inspectorate Reference REP2-009)). The Applicant can confirm that it has had two meetings with the Marine Management Organisation to try and address their concerns on this issue. This included a discussion of the results of further literature reviews which indicated that there may be a presence of migratory fish within the River Yare but which acknowledged that the extent and duration of such a presence at any given time could only be a snapshot, the anticipated construction programme and the existing mitigation measures for fish already contained within the DCO and Outline CoCP. These discussions culminated in the Applicant proposing a number of additional mitigation measures in respect of migratory fish to account for their potential presence at the time of construction. These measures were summarised in a memorandum to the Marine Management Organisation and are set out in the DML and Outline CoCP (Document Reference NCC/GY3RC/EX/043) submitted at Deadline 3. The Applicant continues to engage with the Marine Management Organisation to ensure that they are content that the existing and additional mitigation measures proposed in the memorandum are appropriate in respect of fisheries.
- 2.1.11** With reference to 1.3.3 and 1.3.4 (above), the Applicant has responded to these points (which are repeated from the Marine Management Organisation's relevant representation) at Issue Numbers ENV31 and ENV32, respectively, in the Applicant's Response to Relevant

Representations (Document Reference NCC/GY3RC/EX/008, Planning Inspectorate Reference REP1-002). Since that response was provided, as acknowledged in paragraphs 3.1.31 and 3.1.53 of the Applicant's Response to Written Representations (Document Reference NCC/GY3RC/EX/016, Planning Inspectorate Reference REP2-002). Further in relation to 1.3.3, the Applicant has also committed to supplying to the MMO an evaluation of the scour conditions that could arise as a result of climate change. This evaluation will be achieved by comparing the flow velocities under current water levels and those predicted under climate change. It is anticipated that this will show the scour rate assessment presented in the ES would not be exceeded in the event of climate change sea level rise.

Key Issue

Comments on Statements of Common Ground (SoCG)

- 2.1.12** (2.1) The MMO reviewed version 5 of the SoCG and requested, in an email dated 4 October 2019, that the applicant adds the point that 'results of the dredging chemical analysis including coordinates are required to be able to inform a full review and, depending on these results, further mitigation measures may be required.'
- 2.1.13** (2.2) The MMO note that this sentence has been added to the MMO SoCG in Document NCC/GY3RC/EX/010: Statement of Commonality for Statements of Common Ground at Deadline 1, dated 8 October 2019.
- 2.1.14** (2.3) As detailed in paragraph 1.2, as no dredged material will be disposed to sea, the MMO agree the chemical analysis point is no longer relevant. This comment can therefore be removed from the SoCG.
- 2.1.15** (2.4) As detailed in sub-paragraph 1.3.1, the MMO has highlighted that it may be necessary to include and/or amend conditions in the draft DML. If this is necessary, such changes will need to be recorded in the SoCG.

Applicant's Response

- 2.1.16** The Applicant has relocated the sentence regarding the chemical analysis of dredged material from the latest version of its Statement of Common Ground ('SoCG') with the Marine Management Organisation (Document Reference NCC/GY3RC/EX/034) as submitted at Deadline 3, in the section detailing 'matters agreed' between the parties. The Applicant acknowledges that, should for any reason a need arise for dredging operations to be undertaken by the Applicant, a separate dredging disposal license would be required. Further to discussions with the MMO, who clarified that their comment in this regard relates to their desire for the DML to accord as closely as possible to an ordinary Marine License, the DML (Document Reference

NCC/GY3RC/EX/039) has been updated at Deadline 3 to provide further clarity on this point'

- 2.1.17** Furthermore, as acknowledged in paragraph 3.1.3 of the Applicant's Response to Written Representations (Document Reference NCC/GY3RC/EX/016, Planning Inspectorate Reference REP2-002) it is understood that the terms of the Deemed Marine Licence ('DML') are agreed with the Marine Management Organisation. This was reflected in the updated draft DCO submitted at Deadline 2 (Document Reference NCC/GY3RC/EX/023, Planning Inspectorate Reference REP2-009). Further to discussions with the MMO, who clarified that their comment in this regard relates to their desire for the DML to accord as closely as possible to an ordinary Marine License, the DML has been updated at Deadline 3 to provide further clarity on this point.

Key Issue

Comments on Applicant's draft ASI itinerary

- 2.1.18** (3.1) The MMO has reviewed Document NCC/GY3RC/EX/011 [REP1-005]: Draft Itinerary for Accompanied Site Inspection ('ASI'), dated 8 October 2019, and have no comments on the proposed itinerary. We have confirmed in our response to the Rule 16 letter that a representative from the MMO wishes to attend the ASI on Tuesday 19 November 2019.

Applicant's Response

- 2.1.19** The Applicant welcomes the MMO's proposal to attend the ASI.

Key Issue

Responses to ExQ1

- 2.1.20** (4.1) The MMO has reviewed the Examining Authority's written questions and requests for information ('ExQ1'), issued on 1 October 2019. None of the questions are addressed to the MMO and we have no comments on the questions asked.

Applicant's Response

- 2.1.21** The Applicant notes the MMO's position in relation to ExQ1.

Key Issue

Comments on any additional information/submissions received by Deadline 2

- 2.1.22** (5.1) The MMO has reviewed the written responses received by Deadline 1. It is evident that progress has been made to address and/or resolve some comments, however there are others that remain outstanding. Further to our comments in our Rule 8 response, dated 4 October 2019, we advise that conditions could be added to the DML to ensure the Applicant follows the advice of interested parties and that any agreed mitigation measures are implemented in full. To this end, the MMO would welcome engagement with relevant interested parties and the Applicant should they wish to discuss the inclusion of conditions within the DML, or any other matters within the remit of the MMO.
- 2.1.23** (5.2) Any changes to the scope of the development, for example inclusion of layby berths, would need to be included in the DML and may require the inclusion of additional conditions within the DML.
- 2.1.24** (5.3) The MMO wish to highlight that the operation and maintenance regime would not be conditioned on the DML as it is not within the remit on the MMO, however the ExA should have regard to relevant policies in the East Marine Plan.

Applicant's Response

- 2.1.25** The Applicant has worked closely with Interested Parties and it is considered that no additional conditions related to engagement with other Interested Parties are required within the DML, as the concerns of other Interested Parties are either not relevant to the marine environment or are addressed within other secured documentation such as the Outline CoCP (Document Reference 6.16, Planning Inspectorate Reference APP-187), the Archaeological Written Scheme of Investigation (Document Reference 6.9, Planning Inspectorate Reference APP-180) and Protective Provisions within the DCO (e.g. for the Environment Agency) (latest version Document Reference NCC/GY3RC/EX/023, Planning Inspectorate Reference REP2-009).
- 2.1.26** The Applicant does not intend to make any changes to the scope of the authorised development set out in Schedule 1 to the DCO such that no additional conditions within the DML are anticipated to be necessary.
- 2.1.27** With reference to 5.3 (above), during the teleconference held on 22nd October 2019 with the Marine Management Organisation, it was noted, with regard to the Marine Policy Statement and East Inshore Marine Plan, that

the consideration of such matters is included appropriately with the Case for the Scheme (Document Reference 7.1, Planning Inspectorate Reference APP-188).

Key Issue

Responses to any further information requested by the ExA

- 2.1.28** (6.1) The MMO has reviewed the Examining Authority's written questions and requests for information (ExQ1), issued on 1 October 2019. The MMO is not aware of any request by the ExA for further information from the MMO.

Applicant's Response

- 2.1.29** The Applicant notes the MMO's position in relation to ExA requests for further information.

3 Goodchild Marine Services Limited (REP2-027 and REP2-028)

3.1 Key Issues and Applicant's Responses

Written Question Response

(ExQ1 1.8.11) - Approximately how many openings of the Breydon and Haven bridges does your business reply upon each week and on average how long to does it take for the bridges to be opened?

- 3.1.1 As a company we build between four and five commercial craft each year, and on average each vessel requires 6 bridges lifts during its trials period (3 out 3 in). In addition, we exhibit at the Seawork show held in Southampton annually and boats (usually two) for exhibiting requires a lift both outboard and inbound upon their return to their yard.
- 3.1.2 What is much harder to estimate is how many bridge lifts are requested by our clients as they arrange lifts directly, but we would estimate around 4 to 6 lifts per week as an average.
- 3.1.3 Clearly with the recent issues of bridge failures we are informed when a client is unable to get to our facility or indeed if they deem the risk of unreliable bridge lifts may stop them returning to sea they have cancelled work we had booked in which is immensely, frustrating and jeopardises our business and staffs job security.
- 3.1.4 We also have a maintenance contract to maintain the Pilot boats for Great Yarmouth and Lowestoft ports, whilst the majority of repair are done on station there are times when a lift out of the water is necessary, so the vessels have to transit to our yard. On average, we maintain 4 Pilot boats and each one requires a bridge lift in and out every six months for routine work and of course in the event of a breakdown or damage immediate access is needed for us to honour contract obligations.
- 3.1.5 We have recently also used the Mutford lock exit for some of our smaller vessels negating the need to be frustrated by a last min cancellation with the vulnerability of the availability of the bridge lifts.
- 3.1.6 We also if possible ask clients if they are able to go under the bridge at low water to alleviate the need for a bridge lift.
- 3.1.7 The difficulty to equate is the loss of works due to the Bridge breakdowns as it has become evident that Wind Farm vessels do not attend the yard now

due to the fragility of the bridge lifts, so over the past couple of years. Our work capacity has decreased to zero from those companies, as they have not chosen to use Lowestoft as a preference for their repair and mooring facility.

- 3.1.8** We hope if the workings of the new bridge and the current two bridges can be worked in tune then we will be able to whole heartedly encourage the Wind Farm and other commercial vessels back to our yard for moorings and repairs.
- 3.1.9** Please find attached a letter sent after the total frustration of this year's Boat show and an email from a frustrated client. I can furnish you with more but felt a couple of examples of how the bridges have caused problems to use as a company would indeed give background to our thoughts

Applicant's Response

- 3.1.10** The Applicant has responded to this issue in its Response to Written Representations (Document Reference NCC/GY3RC/EX/016, Planning Inspectorate Reference REP1-002).
- 3.1.11** The maintenance of Breydon Bridge is the responsibility of Highways England. Maintenance of Haven Bridge is the responsibility of Norfolk County Council as highway authority.
- 3.1.12** The completion of the Third River Crossing will enable more substantive maintenance works to the Haven Bridge.
- 3.1.13** As identified in response to Issue Number MP3 in the Applicant's Response to Relevant Representations (Document Reference NCC/GY3RC/EX/008, Planning Inspectorate Reference REP1-002) the Applicant has outlined a number of measures in the Scheme design specification that are intended to reduce the potential of a Third River Crossing failure impacting marine operations.
- 3.1.14** The Applicant notes that because of the need for visual safety assessment during bridge operations it is not considered optimal to control bridge operations from remote locations, therefore each bridge will retain its own operating procedure and point of control location.
- 3.1.15** The Applicant can confirm that it will work with Great Yarmouth Port Company, who operate Breydon and Haven Bridges (on behalf of Highways England and Norfolk County Council), to coordinate, where this is feasible, the opening regimes of the three bridges – the parties are currently considering the potential for a single notification procedure covering a vessel's request for lifts of all three bridges.

Key Issue

Statement of Common Grounds

- 3.1.16 Having spoken to some other Interested Parties today, we as a company now feel it is an absolute must that we have a SoCG since the following have come out of the discussions.

Opening Regimes for all 3 Bridges

- 3.1.17 Not being taken as a complete package by the Applicant as the Applicant feels they only need to consider the 3rd Bridge crossing openings on its own merit. If this is the case, then we strongly disagree with it being recommended to being constructed.

Applicant's Response

- 3.1.18 In carrying out the assessments supporting its application for the Scheme, the Applicant has carefully considered the Scheme's integration within existing port operations and the operation of the existing river crossings. The Preliminary Navigational Risk Assessment (which was updated at Deadline 2 [REP2-016]) takes into account current port operations which includes the operation of the two existing river crossings.
- 3.1.19 As identified in response to Issue Number MP1 in the Applicant's Response to Relevant Representations (Document Reference NCC/GY3RC/EX/008, Planning Inspectorate Reference REP1-002), the draft DCO (Document Reference NCC/GY3RC/EX/023, Planning Inspectorate Reference REP2-009) contains, at Schedule 10, a Scheme of Operation that outlines how the scheme bridge is intended to function – and it is noted in particular that it requires 'on demand' openings for commercial vessels, to minimise interference with business operations.
- 3.1.20 The Applicant will work with GYPC, who operate Breydon and Haven Bridges (on behalf of Highways England and Norfolk County Council respectively), to coordinate, where this is feasible, the opening regimes of the three bridges. The Applicant has discussed the principle for notifications for bridge openings for all bridges to be made via the Scheme contact process with GYPC as operator of the existing two bridges. If GYPC are in agreement this would mean the requisite sub notices will be taken care of by the operator of the Scheme and a vessel will only need to make one application to have any number of the bridges opened for an individual passage.

Key Issue

SoCG from the Broads Authority

- 3.1.21 Having read with interest their SoCG when publish on your site on the 10th October, we thought this would cover our concerns as a commercial entity it does not. The Navigation Committee and the Broads Authority appears to not appreciate that the Project has moved on and perhaps they will not get another opportunity to express their views. I see that their SoCG is complete and submitted so that seems to be end of discussions with the Broads Authority.

Applicant's Response

- 3.1.22 The Applicant's engagement with the Broads Authority is summarised within the signed Statement of Common Ground (SoCG) for the Broads Authority (Document Reference NCC/GY3RC/EX/010, Planning Inspectorate Reference REP1-004 – see Appendix L thereof), submitted at Deadline 1. Whilst it is acknowledged that all matters are agreed, the Applicant will continue to liaise with the Broads Authority throughout the Examination, design and operational processes. The Applicant would welcome further engagement with Goodchild Marine Services Limited. In the Applicant's Response to Written Representations (Document Reference NCC/GY3RC/EX/016, Planning Inspectorate Reference REP2-002), submitted at Deadline 2, the Applicant stated in paragraph 9.1.44 that it was happy to develop a SoCG with this party. The Applicant can confirm that it has commenced engagement with Goodchild Marine with the aim of developing a SoCG, for submission to the Inspectorate in due course.

4 Trinity House (REP2-029)

4.1 Key Issues and Applicant's Responses

Key Issue

Schedule 14 (protective provisions), Part 6 (for the protection of Great Yarmouth Port Authority – GYPA) of the draft DCO (Paragraph 1)

- 4.1.1 Trinity House notes that certain provisions of Part 6 of Schedule 14 relate to matters concerning the safety of navigation, including the provision of lighting for the control of navigation (see in particular paragraphs 57, 64 and 72 of Part 6).
- 4.1.2 Accordingly, Trinity House seeks clarification please from both the Applicant and GYPA that the provisions of this Part shall not prejudice or derogate from Trinity House's rights, duties or privileges (per article 63 of the draft DCO) and more particularly that Trinity House's powers with respect to lighting under the Harbours, Docks and Pier Clauses Act 1847 Act (which apply to the Port of Great Yarmouth) shall continue in full force and effect notwithstanding the provisions of the draft DCO.

Applicant's Response

- 4.1.3 The Applicant confirms that article 63 of the draft DCO (Document Reference NCC/GY3RC/EX/023, Planning Inspectorate Reference REP2-010) ensures that nothing in the Order, if made, would prejudice or derogate from any of the rights, duties or privileges of Trinity House. The provisions of Part 6 of Schedule 14 (provisions for the protection of the Great Yarmouth Port Authority) would not supersede the effect of article 63.

5 Great Yarmouth Port Authority and Great Yarmouth Port Company – (REP2-020)

5.1 Key Issues and Applicant's Responses

Response to Written Questions

(ExQ1 1.0.8) In principle do you have any concerns to the 50m clear span shown on the submitted plans?

- 5.1.1 The 50m clear span proposed has been considered by GYPA including the Pilotage team. Whilst the bridge infrastructure narrows the existing navigation channel, there remains width sufficient for all vessels presently using the port safely to pass without undue hinderance.

Applicant's Response

- 5.1.2 The Applicant notes GYPA's agreement that the proposed navigation channel is sufficient for all vessels using the port.

Response to Written Questions

(ExQ1 1.0.9) What specific concerns do you have in relation to the preliminary Navigational Risk Assessment (pNRA) that has been carried out on behalf of the applicant?

- 5.1.3 The NRA was undertaken following an exercise involving Vessel simulations. This exercise was undertaken with the participation of GYPA Pilots. The output from the NRA now requires review by GYPA, to ensure the conclusions and recommendations from the assessment are properly expressed. However, the NRA Report was only very recently received by GYPA, which means that there has been insufficient time to review and reflect upon the contents of the NRA Report in advance of Deadline 2. GYPA will provide its comments on the Report by no later than Deadline 3 in the examination timetable

Applicant's Response

- 5.1.4 The Applicant accepts that the pNRA is a live document and will be updated throughout the course of the Scheme, as is provided for in paragraphs 7.2.1 and 7.3.1 of the pNRA submitted at Deadline 2 (Document Reference NCC/GY3RC/EX/029, Planning Inspectorate Reference REP2-015). The Applicant awaits GYPA's further comments on the updated pNRA and will

consider any suggestions made in due course, including the necessity for an updated version to be submitted to the Examination.

Response to Written Questions

(ExQ1 1.0.10) The General Arrangement plans show waiting areas either side of the proposed bridge adjacent to Bollard Quay. With that in mind can you provide further details to support your concerns about 'lay-by berths'?

- 5.1.5 Leisure Vessels:** The waiting areas proposed and shown in the General Arrangements are suitable for this category of craft.
- 5.1.6** However, neither of the proposed locations are adequate to meet the safe mooring requirement of a commercial vessel needing to transit the bridge (due to factors including but not limited to a very close proximity to the bridge and the size/design of these facilities safely to moor a large Vessel.
- 5.1.7 Outbound Vessels:** would remain adequately secured to the Quay until the bridge is confirmed fully open, before proceeding on passage. This fully mitigates the safety risk to the Vessel of bridge failure to open, however it is likely that this process would require the bridge to be open for an appreciable period (potentially up to twenty-five minutes each time, in GYPA's considered view) in order to allow outbound vessels to transit through.
- 5.1.8 Inbound Commercial Vessels:** Once the vessel has entered the inner harbour, there is no designated/available place for the vessel safely to be berthed if, for whatever reason, the bridge does not open. The Vessel becomes exposed to wind and tide (including a reducing depth of water) and is severely compromised in her ability safely to manoeuvre (including insufficient room to turn).
- 5.1.9** Mitigations considered included
- a) opening the bridge before the Vessel enters the Inner Harbour. This would require the bridge is open for a period likely to cause significant disruption to road traffic (30 mins +) and to occur at time coinciding with maximum demand (Rush hours). The Harbour Authority would require the power unilaterally to decide when the bridge must open and expect no challenge.
 - b) providing a designated Emergency Layby Berth that the Vessel's Passage Plan identifies as a contingency for failure to open. Such berth should be located, based on Pilots' advice, to the south of the proposed crossing. The Length, Depth and Bollards etc at such berth require to be adequate, safely to moor a Commercial vessel of type

presently using the port and at all states of Tide. GYPA is able and supportive to advise the Applicant accordingly.

- 5.1.10** Safety of navigation will be compromised by any failure of the bridge to open as expected. Consequences for the affected Vessel absent adequate contingency, include but are not limited to collision (with another vessel and/or bridge) and/or grounding with consequential pollution.
- 5.1.11** GYPA strongly recommends that an emergency lay-by berth should be provided for commercial shipping. This option will shorten the time required for the bridge to remain open.
- 5.1.12** The NRA considered the risk of bridge failure to open and the effect of this factor on Vessels under way in the Inner Harbour but the report has only recently been made available for review by the Harbour Authority.

Applicant's Response

- 5.1.13** The Applicant acknowledges GYPA's comment that the waiting facilities are suitable for leisure vessels only, this is in line with the intended use.
- 5.1.14** In practice, this would work as follows in the event that the bridge failed to open:
- 1) The smaller and more manoeuvrable commercial vessels would be able to either return to sea, proceed to an alternative berth (in consultation with GYPA/GYPC) or hold station in the river.
 - 2) For the larger commercial vessels an alternative emergency berth could be prearranged with GYPA/GYPC prior to the vessel entering the river as part of the pilotage plan for the vessel's passage.
 - 3) If no emergency berth or other safe alternative is available, the bridge would be opened before the vessel enters the port. Opening the bridge before a vessel enters the port would prevent a scenario arising in which a vessel had entered the port but was unable to reach its end destination due to a failure of the bridge to open. By opening the bridge in advance, any operational failure would become known whilst the vessel still had the opportunity to remain at sea. While the frequency of such occurrences cannot be fully predicted, based on available historical vessel movement data we would anticipate this to be very low. In this instance the Applicant could accept an extended opening period.

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- 5.1.15** The bridge is also designed to include an emergency operation mode, for application when the operator considers an emergency has arisen under the Standard Operating Procedures. When this emergency operation mode is activated, the bridge and its mechanisms will stop in a controlled manner under the actions of the hydraulic system. Manual emergency operation will be subsequently allowed to return the bridge to the closed position.
- 5.1.16** Once the bridge is in the closed position, either as a result of any emergency stop or other fault conditions during operation, procedures “back-up systems” mentioned above will allow the bridge to operate under supply fault conditions as follows:
- Standby power facilities diesel generator sets shall be permanently installed in the east and west bascule piers. In the event of a main power failure during bridge operations, the standby generator sets shall start automatically. In addition, a portable generator connection facility shall provide an alternative emergency standby power supply in the event of a mains power failure and standby generator failure.
 - Multiple hydraulic pumps such that the bridge can be opened in the event a pump fails or is removed to be serviced.
 - Multiple hydraulic cylinders such that the bridge can be operated in the event a cylinder fails or is removed to be serviced.
 - Operation of the bridge under reduced number of actuators – under the accidental condition of the failure of one actuator, it will be possible to move the bridge to the open or closed position as deemed necessary.
- 5.1.17** Schedule 14 to the draft DCO (Document Reference NCC/GY3RC/EX/023, Planning Inspectorate Reference REP2-009) includes a provision, at paragraph 70, which states that on a failure to operate, the bridge is to be kept (so far as practicable) in the raised position, so as to allow vessel passage.

Response to Written Questions

(ExQ1 1.3.4)

- i. What evidence is there that the acquisition of land within the port estate will act to the serious detriment of the port undertaking?*
- ii. What proportion of the existing berth space to be acquired is in current active or proposed use?*
- iii. What specific detriment do you identify to the existing port operations from the severance of land?*

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- iv. *In what ways will the bisecting of the inner harbour damage your ability to secure further business from the off-shore wind sector?*
 - v. *What specific evidence do you have that the effects identified above will result in the deflection of future business to competitor ports?*
 - vi. *What other mitigation measures have you proposed in respect of the above matters?*

5.1.18 These matters have been dealt with between GYPA and the Applicant.

Applicant's Response

5.1.19 The Applicant acknowledges GYPA's response and confirms that these matters have been agreed with GYPA.

Response to Written Questions

(ExQ1 1.6.3) What specific evidence do you have to substantiate your concerns about the scheme's hydrological effects?

- 5.1.20 The Vessel simulation exercise was undertaken using a model of the port and included estimation of the amendment to present flow of tide and sediment movement likely as a consequence of the new bridge infrastructure. The exercise predicts changes to flow pattern from what our experience and our planning is based.
- 5.1.21 There are consequences for navigation of vessels transiting the bridge and navigating/mooring at adjacent berths. The simulation exercise enabled GYPA to identify the likely changes arising and make assessment of anticipated changes to the vessel evolutions affected.
- 5.1.22 There are predicted changes likely to sediment movement likely to be experienced to the North and South of the river crossing. From preliminary reports this would manifest as scouring with the immediate channel and increase in sedimentation around the adjacent berths where flows have been changed. In terms of flow the models show, as would be expected, an increase in current flow during peak periods through the constrained channel created and eddy or counter currents experienced upstream and downstream depending on the direction of tidal flow. These changes and effects must be appraised for effect on transiting vessels in order to ascertain navigational safety.

Applicant's Response

- 5.1.23 The Applicant considers that the anticipated effects of the Scheme on hydrodynamic and sediment transport have been sufficiently addressed in the ES - the Applicant has undertaken additional vessel simulations with improved hydrodynamic resolution which have reaffirmed these predictions and are reflected in the updated pNRA submitted at Deadline 2 (REP2-015).
- 5.1.24 The Applicant awaits GYPA's further comments on the updated pNRA (Document Reference NCC/GY3RC/EX/029, Planning Inspectorate Reference REP2-015) and will respond accordingly once these have been received and considered.

Response to Written Questions

(ExQ1 1.8.8) How many commercial ships have passed through the site of the proposed bridge in the previous twelve months?

- 5.1.25 1806 Inbound heading North
- 5.1.26 1715 Outbound heading South
- 5.1.27 3521 total commercial vessels passing the proposed 3RC location

This is not inclusive of Pilot Launch movements

Applicant's Response

- 5.1.28 The numbers of vessel movements past the bridge location within the last 12 months are consistent with the values obtained from the historical movement records used during Scheme development and as part of the pNRA process as detailed on page 10 of Appendix B to the pNRA (Document Reference NCC/GY3RC/EX/029, Planning Inspectorate Reference REP2-015) (an annual average over a 7-year period of 3597 excluding Pilot Launch movements).

Response to Written Questions

(ExQ1 1.8.9) Will two-way working through the proposed new bridge be permitted for recreational vessels?

- 5.1.29 GYPA will require to consult with Leisure/recreational vessel stakeholders. It is envisaged Leisure vessels will rely on the facilities indicated on the General Arrangement. The waiting facility will reduce the frequency of bridge openings. It is expected that during the bridge open period, leisure vessel(s)

may pass before or after a commercial vessel, subject to communication protocols (to be developed).

Applicant's Response

- 5.1.30** The Applicant considers that this matter is primarily a navigational safety matter and the Applicant will be discussing this matter further with GYPA.

Response to Written Questions

(ExQ1 1.8.10) How much notice do you usually receive of a commercial vessel requiring a bridge lift on (a) the inward passage and (b) departure?

- 5.1.31** The 2 bridges with opening arrangements, located in the port are subject to demands from shipping radically different to the proposed new bridge.
- 5.1.32** Haven and Brayden bridges require 24-hour advance notice of a request to open. There is no Commercial vessel needing to transit either bridge and the consequence of failure to open is not comparable to the new bridge being proposed.
- 5.1.33** The Port requires Vessels (other than Leisure) have made a Booking, before entering the port. In event a booking indicates a Vessel will proceed to a berth requiring a transit of the proposed bridge, the information will be known 12 hours in advance of such transit (min 2hours mandated).
- 5.1.34** Bridges under planning consideration but located elsewhere, with opening arrangements and similar demand from shipping have mitigated the failure to open risk by provision of an Emergency Layby facility, after due consideration to the alternative prolonged open period. A Protocol to underpin bridge opening (including advance notification requirement) was developed and will be required here, after due assessment to ensure adequacy including relevant timings. The effectiveness of the Protocol demands good communication is maintained between bridge Operator, Port and Vessel.

Applicant's Response

- 5.1.35** The Scheme of operation has been developed in conjunction with GYPC/A taking into account all existing operational procedures.
- 5.1.36** The Applicant has considered the benefits of providing a dedicated emergency layby berth in relation to bridge opening durations and has concluded that the costs of providing such a facility are not proportional to the level of additional benefit they would provide (see the above discussion on this point).

6 Norfolk and Suffolk Boating Association (REP2-030)

6.1 Key Issues and Applicant's Responses

Key Issue

- 6.1.1 Norfolk and Suffolk Boating Association noted its concerns in connection with the Great Yarmouth Third River Crossing, and stated those concerns are also being raised in representations submitted by the Royal Yachting Association ('RYA'). Norfolk and Suffolk Boating Association's concerns include:

- a) adequate small craft lay-by moorings upstream and downstream,
- b) opening arrangements for large / tall craft, and
- c) possible effects on upstream water levels.

Applicant's Response

- 6.1.2 The Applicant acknowledges these matters are under discussion with RYA; current positions are detailed in SoCG between the Applicant and the RYA.
- 6.1.3 These matters are also considered in the Applicant's Responses to Written Representations submitted at Deadline 2 (Document Reference NCC/GY3RC/EX/016, Planning Inspectorate Reference REP2-002), at Issue Number MP10 in the Applicant's Response to Relevant Representations (Document Reference NCC/GY3RC/EX/008, Planning Inspectorate Reference REP1-002) and at Issue Number 3 of the Applicant's written summary of oral submissions made at the Open Floor Hearing (Document Reference NCC/GY3RC/EX/009, Planning Inspectorate Reference REP1-003).
- 6.1.4 The commercial nature of the quays on the east bank makes location of a small vessel waiting facility on this side of the river impracticable. The risks associated with collisions during large vessel passages is considered within the preliminary Navigation Risk Assessment ('pRNA') (Document Reference 6.14, Planning Inspectorate Reference APP-185) updated at Deadline 2 (Document Reference NCC/GYTRC/EX/029, Planning Inspectorate Reference REP2-015), and additional operational measures are considered to reduce these risks, in particular that any vessels on the pontoons would be released through the bridge prior to a large vessel transit.

7 Environmental Agency (REP2-031)

7.1 Key Issues and Applicant's Responses

Key Issue

Q 1.6.1. Can you please provide an update to your letter 31 July 2019 and specifically when you anticipate providing final comments on the modelling work?

- 7.1.1** Further to the concerns raised in our Relevant Representations, the Applicant undertook to present new modelling incorporating the extended domain that was recommended. We received confirmation from the Applicant's consultants on 22 October that all models had been uploaded successfully. Due to the size of the files it took until 24 October to successfully transfer all data. Our national teams that verify the accuracy of flood modelling, are now reviewing the submitted modelling with a deadline to report by 8 November. If the model is found to be sufficiently reliable, the case will be passed to our local teams to review the Flood Risk Assessment. To date, we have not received a revised Flood Risk Assessment. We had previously raised concerns to the Applicant regarding identification of offsite receptors and comparison of impacts/flood risk from the proposals. It is possible that some of these concerns might be answered quite quickly but until the modelling is reviewed we cannot address the Flood Risk Assessment in detail. I stress that at the time of writing we are not in a position to comment on the reliability of the information presented and it is possible that errors or anomalies may be found that require further investigation. Therefore, whilst this case is being treated as a priority there are factors outside of our control that mean I cannot say with confidence that we will be in a position to comment before the commencement of the Issue Specific Hearings in November.

Applicant's Response

- 7.1.2** Further to the ongoing discussions on the Flood Risk Assessment, Environmental Statement - Appendix 12B (Document Reference 6.2, Planning Inspectorate Reference APP-135) and the associated modelling with the Environment Agency, the Applicant undertook further sensitivity modelling to address the concerns raised by the Environment Agency. The further sensitivity modelling and a memorandum explaining how the Applicant has addressed each concern of the Environment Agency's concerns was submitted to the Environment Agency on the 21st and 22nd October 2019.

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- 7.1.3** The further sensitivity modelling was supplementary to that presented in the Flood Risk Assessment. The conclusions of the Flood Risk Assessment remain as presented in the application documents.
- 7.1.4** On the 13th November 2019 the Applicant welcomed the receipt of two additional comments from the Environment Agency in relation to the further sensitivity modelling matters. A response to one of these comments was provided on the 15th November 2019. With regards to the second comment, the Applicant has commenced the further sensitivity modelling for the T1000 event (as requested). The Applicant will be providing the further sensitivity modelling to the Environment Agency prior to the end of November 2019.