

The Lake Lothing (Lowestoft) Third Crossing Order 201[*]



Document SCC/LLTC/EX/94: Response to ABP's Deadline 5 and Oral Submissions at 7 & 8 March 2019 Hearings

Planning Act 2008

The Infrastructure Planning (Examination Procedure) Rules 2010

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Response to ABP's D5 and Oral Submissions at 7 & 8 March 2019 Hearings

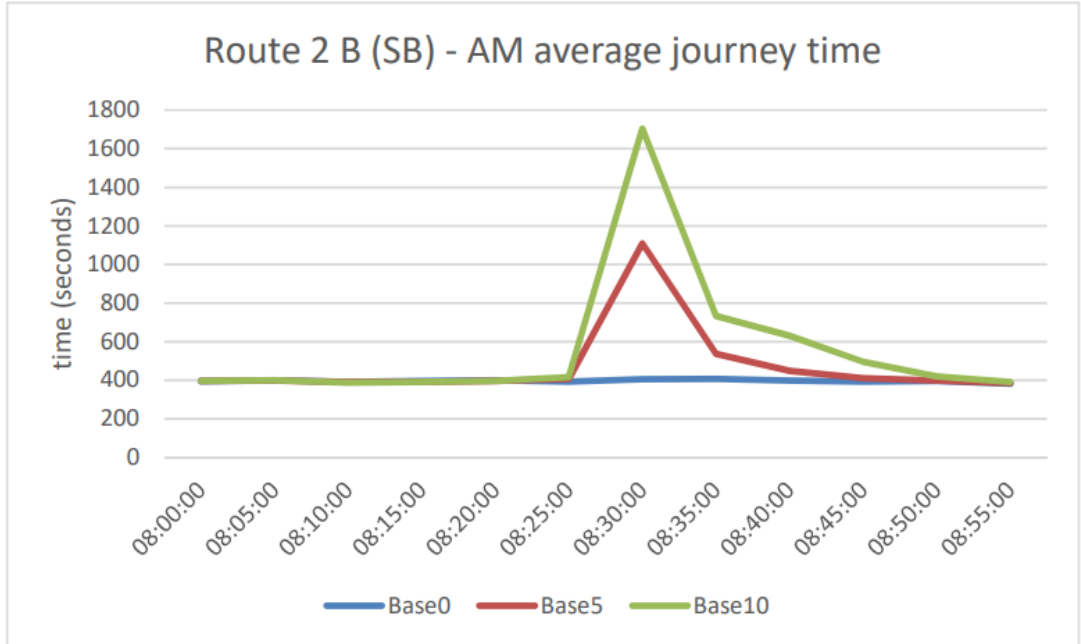
Reference	Extract / Summary	Applicant's response
Impact on Future Port Activity		
<p>Response to the Impact of the Scheme on the Port of Lowestoft Report (REP5-023)</p> <p>Paragraphs 3.19 - 3.24</p>	<p>No Scheme Benefit</p> <p>ABP sets out its position that:</p> <ul style="list-style-type: none"> it does not benefit from the Scheme itself, and that it is wrong to say that further development in the Port needs the bridge as a pre-requisite; activities within the Port estate will not receive any benefit from the Scheme; referring to previous consultation is no concrete evidence of Port business support (rather than general support); the Applicant has selectively quoted from a Nautilus report; the author of which has orally indicated to ABP that he is not a marine or shipping expert and has not considered in any great detail matters relating to the operation of the proposed bridge. 	<ul style="list-style-type: none"> In the absence of the Scheme the economic benefits of the Scheme will not be realised, those benefits accrue across all users of the highway network, which would include ABP and its tenants. The present value of benefits is set out in the Economics Report (document reference APP-106) at approximately £300m (Table 10-1). TUBA (Transport User Benefit Analysis) is used to calculate the user benefits due to time and vehicle operating cost savings resulting from the Scheme, and the business user impacts from TUBA are used to estimate 'wider benefits': specifically the increased output of the business user market as a result of changes to the efficiency of the transport system. Approximately one third of the benefits derived are "business user benefits". Those benefits increase further in the 'high growth scenario' as reported in the Economics Report. As such, as a major employer and landlord in Lowestoft, both ABP and its current and prospective tenants will benefit from the improved journey times and journey reliability that the Scheme offers. Lowestoft already suffers significant congestion and delay as a consequence of the lack of opportunities to cross Lake Lothing, forcing traffic onto a limited number of routes. The consequences of "not changing", as it is described in section 2.6 of the Outline Business Case (OBC) (Document Reference 7.4, PINS Reference APP-107) are that the traffic issues identified in Lowestoft will continue to deteriorate. There is further anecdotal evidence in the OBC as to how current traffic conditions are affecting the viability of businesses in Lowestoft, including those in the energy sector. It is noted that ABP does not object to the principle of a third crossing of Lake Lothing (as set out in its Written Representation, paragraph 15.1 (document reference REP3-024)), as such there is an implicit recognition that a third crossing <i>is</i> beneficial. As set out in the Case for the Scheme (Document Reference 7.1, PINs Reference APP-091) DfT's recent (2018) Study of England's Port Connectivity argues that "if our ports are to continue to thrive then the national, regional and local infrastructure supporting them has to be effective and efficient". As such it is appropriate to consider the adequacy of highway connectivity to Ports, including Lowestoft to ensure their growth plans can be supported, given that transit of a given cargo, for example, does not end at the port. As an example, ABP has noted the large number of HGV movements associated with Dudmans, and similarly that its major new tenant Peterson is a logistics provider. Petersons has separately made contact with the County Council in respect of the HGV movements it anticipates generating on Commercial Road. As such it is clear that both parties have an interest in efficient movement of goods by road. Waveney District Council's new Local Plan (due to be adopted on 20 March 2019), at a strategic level, is in agreement with ABP about the role of the Port in supporting the growing role in the offshore energy sector and that being a key driver of regeneration in Lowestoft. However, that plan also recognises that "traffic congestion is considered to be an issue which holds back economic growth. In particular, there are issues at the two crossings of Lake Lothing. A third crossing over

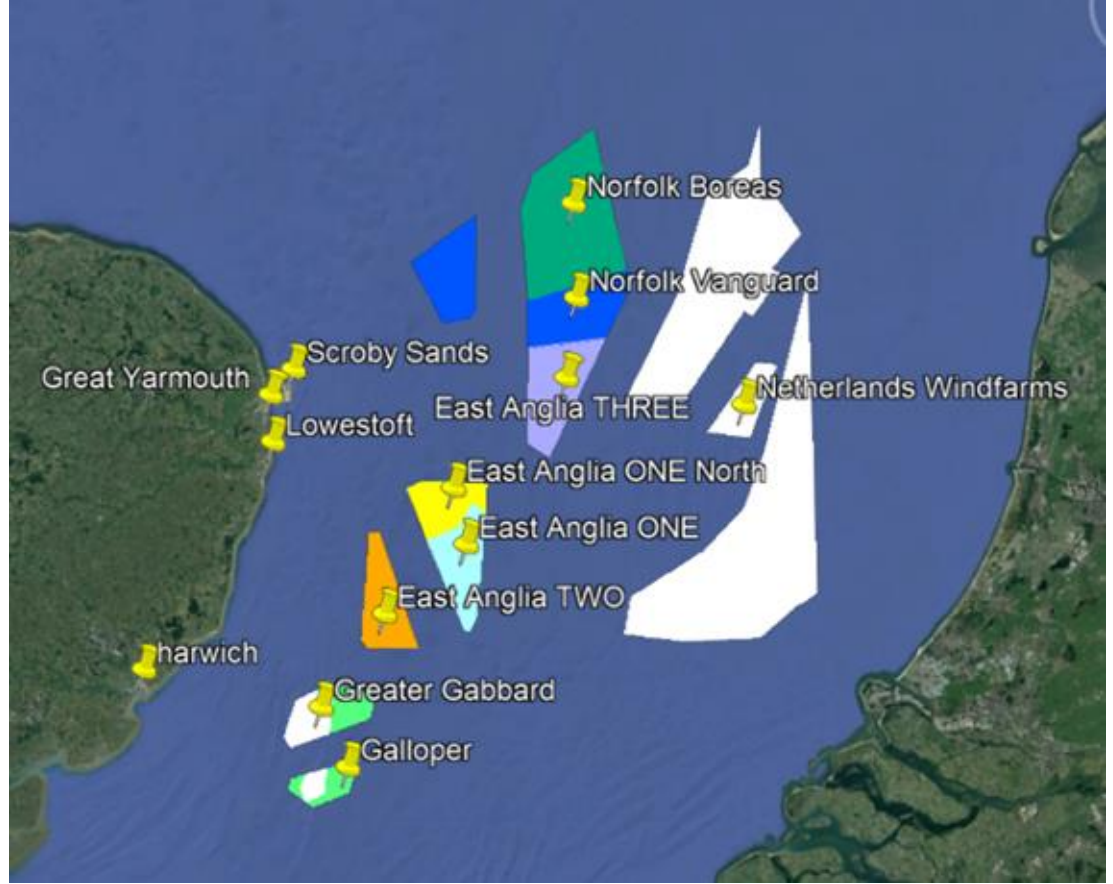
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		<p>Lake Lothing is planned to be in place by 2022 to help alleviate traffic congestion in the town, improve connectivity and help deliver regeneration sites.”¹</p> <ul style="list-style-type: none"> The Scheme is therefore described as “essential” infrastructure in that plan, defined as “necessary to support and mitigate development and ensures policy objectives of the Local Plan are met. Development could take place without this infrastructure but its sustainability would be undermined.”² Consequently, the Local Plan in planning for the nature of development that ABP is envisaging considers that a third crossing is necessary to sustainably support such growth.
<p>Response to the Impact of the Scheme on the Port of Lowestoft Report (REP5-023)</p> <p>Paragraphs 3.25 – 3.27 and 3.86-3.88</p>	<p>Bridge Lifts</p> <ul style="list-style-type: none"> The Applicant considers that <i>"it is implicit if the Inner Harbour were to become busier, additional/longer lifts of the A47 Bascule Bridge would be required."</i> This assumption is not based on any technical expertise and is unduly pessimistic. Although the frequency for bridge lifts may potentially need to be increased in the future to accommodate additional capacity at the Port, ABP does not consider that an increase in Port activity would result in longer lifts of the A47 Bascule Bridge. This is because ABP will not accommodate longer bridge lifts for more than one large commercial vessel at a time on the grounds of navigational safety (i.e. longer bridge lifts would only be required if more than one large vessel was required to transit through the bridge at any one time, and such vessels cannot be corralled together on navigational safety grounds). As such, any increase in Port vessel activity would most likely result in more frequent lifts of existing duration – due to larger numbers of commercial vessels – as opposed to longer lifts. ABP is firmly of the view that there is no correlation between the existence of the LLTC and how often the A47 Bascule Bridge will need to open. As the A47 Bascule Bridge is the closest bridge to the sea, all vessels entering or exiting the Inner Harbour must transit through this bridge irrespective of whether or not the LLTC is constructed. As such, the LLTC bridge will not have any impact on the amount of bridge lifts undertaken at the A47 Bascule Bridge. 	<ul style="list-style-type: none"> If more vessels are entering the Port it will be necessary for the A47 Bascule Bridge to be open for more time. This may manifest itself in either more frequent openings or longer average openings and would be vessel dependent. ABP has set out in its representations that it anticipates significant growth in CTV numbers in the Port, and the Harbour Master explained at the Issue Specific Hearing (ISH) in the context of how vessel activity is managed during the restricted time periods that there are instances where <i>"numerous windfarm vessels have needed to transit outwards and inwards at the same time... and they are highly manoeuvrable vessels so they will all come down and hold position as closely as they can safely do to each other and to the bridge so that when we open the bridge as soon as the restriction has finished they can transit through [together] as quickly as possible"</i>³. As such, the Applicant's statement was not therefore suggesting that the longest bridge lifts would get longer, rather that the shorter duration bridge lifts could take longer as more CTV vessels transited on a single lift. With respect to the traffic consequences of this assumption, the SATURN model input is the total duration of unavailability of the Scheme (resulting from a lift of the Scheme Bridge) in a given hour. Whether that comprises two five-minute periods or one ten minute period does not affect the strategic traffic modelling and thus the economic assessment of the Scheme. The duration of bridge opening is, however, relevant to the operational assessment of traffic conditions, as naturally a longer bridge lift will result in longer delays and deteriorations in journey time reliability. This is reflected within the more detailed VISSIM traffic microsimulation model that was used for the operational assessment. Within the Transport Assessment (document reference REP3-056) the Applicant has sought to demonstrate a range of potential outcomes of relinquishing control of bridge opening in the peak hours. Clearly there are a wide range of permutations. The relative effect of two five-minute lifts over a single 10-minute option would depend on the timing of the two openings and how close together they were, however by way of instruction, Figure 3 from the Justification and Traffic Effects of draft Scheme of Operation (document reference REP4-016) is repeated below.

¹ http://consult.waveney.gov.uk/gf2.ti/f/911330/35229029.1/PDF/-/Waveney_Local_Plan_Final_Draft.pdf p13

² Ibid p269.

³ ISH recording, 1:00:30

Reference	Extract / Summary	Applicant's response
		<p><i>Figure 3 - Route 2B - AM average journey time by 5 minute interval</i></p>  <ul style="list-style-type: none"> The relative impact of a 5 and 10 minute bridge lift on journey times across the A47 Bascule Bridge is shown in this figure. With a single lift in the hour the journey time variability is confined to a single period in that hour. While a 5 minute lift has less of an impact than a 10 minute lift, repeating that event in the same hour would evidently double the likelihood of a journey being affected by a bridge lift. Furthermore, as can be seen above, the effect of a 10 minute lift is not simply a doubling of that of a 5 minute lift, a 5 minute lift is proportionately worse as congestion takes longer to dissipate, meaning therefore the total delay to all journeys being made is likely to be greater with two bridge lifts in an hour than one. Consequently, the Applicant considers that it is reasonable to expect that there is potential for bridge lifts to increase in both duration and frequency if the Port became busier and their attendant traffic consequences are appropriately presented in the Application. With respect to ABP's final point regarding the lack of correlation between the frequency of opening of the Scheme and Bascule Bridge, there is evidently no suggestion by the Applicant that the existence of the Scheme bridge affects the number of times the Bascule Bridge opens for vessels, but rather that the benefit of the Scheme bridge is that it provides an alternative route for vehicular traffic when the Bascule Bridge is lifted and therefore provides a reduction in delays and congestion on the road network. The benefit of the Scheme therefore increases where the Bascule Bridge is being opened more frequently for vessels.
Response to the Impact of the Scheme on the Port of Lowestoft Report (REP5-023) and Annex 2 (REP5-027)	<p>Future Prospects - General</p> <p>ABP sets out its view that it is well placed to experience further growth given:</p> <ul style="list-style-type: none"> it has recently secured a contract with Peterson, offshore logistics 	<ul style="list-style-type: none"> The Applicant agrees that Lowestoft is well placed to benefit from offshore developments. However, considering the BVG report, the Applicant notes that whilst berth demand highlighted considers all windfarms that "could be met" by Lowestoft, it does not give details of the breakdown

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Paragraphs 3.29 - 3.41	<p>specialists;</p> <ul style="list-style-type: none"> the opportunities set out in the BVG report; there is still a further 6,300MW of windfarms to be constructed as part of Round Three, notwithstanding Vattenfall going to Great Yarmouth (and noting that Lowestoft could still win spin-off work from that); the Port will be supporting Innogy's summer maintenance campaigns; it has invested in demolition to facilitate the redevelopment of the Shell Quay site into the East of England Energy Hub; that the location of that hub has already served Galloper Wind Farm, which involved over 2,500 CTV movements; that Network Rail's sidings project is already under construction, and should not be dismissed as 'speculative' just because there is no customer. <p>At the Hearing, ABP also highlighted the Government announcement of 7 March that there will be an increase in Government investment in offshore wind.</p>	<p>of CTV's by windfarm or the assumptions on where that windfarm will be serviced from. Based on the CTV requirement rates stated in the BVG report the total demand for CTV berths from all potential East Anglian windfarms (i.e. including potential Round 4 windfarms whose locations are not known) before 2039 (commencement of repowering) would peak at 51 CTV's - therefore only if Lowestoft secured all windfarm operations would this demand be required.</p> <ul style="list-style-type: none"> In Figure 3 the report shows that berth demand up to 2028 is for between 20 and 30 vessels, consistent with the current provision of 26 berths in the Outer Harbour. Therefore the requirements for additional CTV berthing only becomes realised past this date by which point the Scheme would have been operational for over 5 years and the operational regime would be well known. The Applicant has considered the travel times from the various windfarms proposed for the East Anglia region and has set out a table of such later in this document (under item CTVs - Impact of Bridge). Based on this table and the CTV usage rates noted above, assuming that operators use the port with the shortest travel time, the demand at Lowestoft would peak at 36 vessels, rather than 51. The Applicant notes that the BVG report makes reference to future Round 4 sites but make no assessment of where these sites may be in relation to local port facilities. The below map shows the locations of the currently planned windfarms to the nearest UK port and so the potential areas available for future development.
<p>Response to the Impact of the Scheme on the Port of Lowestoft Report (REP5-023)</p> <p>Paragraphs 3.42 – 3.53</p>	<p>Future Prospects – CTVs</p> <p>ABP sets out its view that the Applicant's view on the CTV market prospects for the Port are pessimistic, and notes that:</p> <ul style="list-style-type: none"> the Applicant's claims are unsubstantiated and that evidence should be provided of the advice it has received; in fact, windfarms often switch to a CTV-led model rather than SOVs and helicopter support as suggested by the Applicant; in any event SOV operations are reliant on CTV's to deliver products/stores/equipment/personnel to the SOV from its port base; Norfolk Vanguard is further away than Scottish Power developments, as such it has limited use as 'local' evidence; the Port of Lowestoft is well placed to support CTV movements to offshore wind farms, as evidenced by the BVG report; and the reduction in CTV movements during the third vessel survey directly relates to the end of the construction phase of the Galloper offshore wind farm, and the setting up of the permanent O&M base for Galloper in Harwich. As such, the conclusions stated by the Applicant as to 'operator preference' are inappropriately drawn and cannot be substantiated 	

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		<ul style="list-style-type: none"> The Applicant also notes that, notwithstanding the Government's announcement of 7 March, both it and the BVG report assumes that all offshore proposals will be consented. The Navitus Bay decision is evidence that it cannot be assumed that all offshore wind proposals will be consented. With a number of projects taking place in close proximity to each other and to a number of statutorily designated sites (including newly created ones in respect of harbour porpoise), issues such as habitats will need to be considered before such development is taken forward - see for example the numerous questions and submissions on this issue submitted to Deadline 4 of the Norfolk Vanguard project. As such notwithstanding Government policy support there must remain uncertainty over the quantum and scale and location of future windfarms, a number of which are not yet even known of. As such the assessment on the upper limit of the possible CTV generation associated with the sector assumed by BVG may be optimistic. The impacts of the Scheme on this potential growth presented in the BVG report are based on the assumption that the presence of the Scheme will prove a sufficient deterrent to operators locating at Shell Base. The Applicant disagrees with this premise. What the BVG report does not consider is the constraints existing at alternatives to Lowestoft - any O&M operation that does not locate at Lowestoft will need an alternative port which may in itself have negative factors. The impact of the Scheme on Lowestoft's ability to attract CTVs cannot be seen in isolation. The Applicant does not consider that the Scheme will have an impact on the Network Rail sidings project. The term "speculative" was used by the Applicant on the basis that no operator has been identified not to imply that the development may not occur.
<p>Response to the Impact of the Scheme on the Port of Lowestoft Report (REP5-023)</p> <p>Paragraphs 3.54 - 3.65</p>	<p>Air Draught – Figure to be Assumed</p> <p>ABP considers that the Applicant has not properly considered the implications of the height of the bridge on air draft; noting that the fact that 45 of the 50 CTVs observed during the Vessel Survey had an air draft of less than 11.5m, and therefore would not require a LLTC opening is not relevant as:</p> <ul style="list-style-type: none"> it assumes a 0.5 metre clearance at highest astronomical tide (HAT) would be sufficient. This has not been resolved or accepted by ABP, who would prefer 1m, reducing the effective height of the bridge to 11m; the Applicant cannot insist that a particular margin is adopted; this is especially the case as PIANC Guidance indicates that the air draught should actually be 2 metres; and 1m will only be acceptable with suitable measures in the NRA. <p>As such, the 11.5m height at HAT cannot be used as the starting point of considering whether serious detriment is caused to the Port.</p>	<ul style="list-style-type: none"> The Applicant has not proposed using 0.5m as the safe clearance margin for transit of the bridge in the closed position. The value of 11.5m air draft was used as a cut-off in the vessel survey to establish an anticipated opening frequency as this assessment did not include tidal variations (Neaps - 1.1m, Springs - 1.9m, HAT/LAT - 2.8m). The Applicant has (in a similar way to the information contained in ABPmer's assessment) previously considered the variations in water levels in the port and the effects on transit clearance with a 1m allowance – this is set out in the Applicant's response to ABP's Deadline 4 submissions at page 6 (Document Reference SCC/LLTC/EX/81, PINS Reference REP5-007). This shows that the number of transits used in the assessments are realistic. Figure A shows the height of vessels accessing the port on 26/9/17 (a date chosen for a high volume of CTV movements) against a Scheme bridge with 1m clearance allowance. This illustrates that both assessment methods produce a requirement for 6 bridge openings. The PIANC guidance focuses on large commercial vessels, the smallest vessel shown in Table 1.1 "Example ship dimensions" of that document is 226m LOA and 24m Beam. This is in comparison to a CTV vessel with a LOA of 27m and beam of around 11m which would typically be able to clear the bridge without a lift. The design examples given in the PIANC guidance cover a general cargo ship with a height of 48m and a 40m tanker in the Panama Canal, so are therefore of limited relevance. A 2m clearance on a 12m bridge amounts to 16.6% of the clear height; this is significantly higher than the 5% base calculation figure given in the guidance.

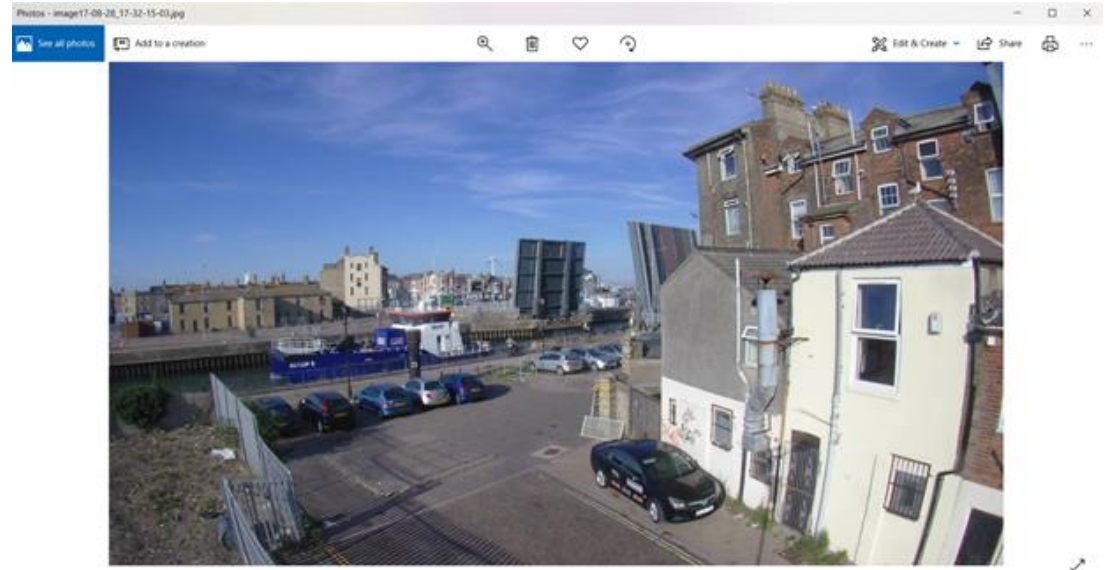
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Response to the Impact of the Scheme on the Port of Lowestoft Report (REP5-023) Paragraphs 3.66--3.71 Annex 3 (REP5-028)	<p>Air Draught – Current and Future Trends</p> <p>ABP also considers that the Applicant's claims as to the number of lifts required as a result of air draught exceeding the bridge height are inaccurate noting:</p> <ul style="list-style-type: none"> the Applicant has not shown how its assessment of impact on air draught has considered climate change; it is often the case that a vessel's Master does not precisely know the air draft of its particular vessel. Therefore, any reliance (particularly on the basis of general arrangement drawings) on the implication that a 24-person CTV has an air draft of 11m and as such can fit until the LLTC without a bridge lift is very dangerous, given the serious navigational risks arising from the potential for vessel strikes on the LLTC; no evidence has been provided to show that the majority of CTVs have an air draft of 10.5m to 11m (except for the largest CTVs with an air draft of 13m), and does not consider that the size of CTV vessels will increase; during the Accompanied Site Inspection, 50% of the CTVs present at the Port clearly had an air draft that would not fit under the LLTC without a bridge lift (i.e. the air draughts of those CTVs were approximately 14/15m); Annex 3 to their submission demonstrates that both currently and in the future, the majority of CTVs would require a bridge lift, noting that larger CTVs (e.g. 23m+ LOA) which are increasingly being used to service further offshore Round 3 wind farms have masts supporting navigational equipment which exceed 12m and that for Round 3 wind farm projects, the CTVs now in use are generally in the range 20-25 m, with some vessels on the market now approaching 30 m LOA. In general terms, increases in CTV length/ beam will be accompanied by an increase in air draught. 	<ul style="list-style-type: none"> The effects of climate change on sea levels are comprised of two components, static water level rise and increased surge. The static water level aspect will raise the average water level at the location, while the surge increase will raise the maximum water levels during extreme weather events. The Applicant acknowledges that the Scheme may have to open more often in future years as a result of climate change, however this will occur so far into the future (and is on the basis of HAT which in itself is not a particularly frequent occasion) that vessels would have already had to adapt to the existence of the Scheme. Of the CTV vessel transits observed during the survey, 638 were by Damen FCS 26m vessels and 611 were Damen FCS 20m vessels, these two vessel types therefore accounted for 70% of all CTV movements, from published vessel data, sourced from both manufacturers and operators, both these vessel types have an air draft of less than 11.5m. The Applicant therefore queries ABP's suggestion that the vast majority of CTVs currently using the Port would be unable to pass under the Scheme bridge. The Applicant considers that it is reasonable to assume that the Master of a vessel that was operating frequently out of Lowestoft would calculate its air draft knowing that this information would be required. As the ABPmer report <i>Overview of CTV Characteristics</i> (document reference REP5-028) notes, CTVs come in many shape and sizes, with numerous potential additional features added post construction e.g. communication aerials some that can be detached or lowered if necessary, this shows that vessels can be altered to improve operations and indicates that there is a need for masters to be flexible in how they operate the vessels. As noted in ABPmer report, there is no direct correlation between vessel length and height, and no certainty that the lengths of CTV's will necessarily increase in the future. The Applicant also considers that the height restriction of the Scheme would be taken into consideration by operators when selecting vessels for operations.
Response to the Impact of the Scheme on the Port of Lowestoft Report (REP5-023) Paragraphs 3.72 – 3.76	<p>CTV – Impact of Bridge</p> <p>ABP re-emphasises that the imposition of the new bridge means that operators are not prepared to accept the operational and financial risk of operating from a port with two bridges between their berths and the windfarm.</p> <p>For example, a 15 minute delay, twice a day, would cost an operator approximately £600 per day (based on the Applicant's estimated running costs of £1,200 per hour). This clearly demonstrates why such CTV operators and other port customers do not want to be located to the west of the LLTC.</p>	<ul style="list-style-type: none"> ABP states that operators are not prepared to accept the 'operational and financial risk' operating from a port with two bridges between their berths and the windfarm. Clearly the effect of the Scheme, with which the Application is concerned, must be seen in the context of the existing circumstances, which include: <ul style="list-style-type: none"> An existing lifting bridge between the Inner and Outer Harbour; The unreliability of the existing Bascule Bridge – according to an FOI request⁴ responded to by Highways England, the bridge was closed 193 times from 2007 to September 2015 for planned and unplanned closures; An operating regime on the existing Bascule Bridge which discourages commercial traffic during the periods 0815 - 0900 hours, 1230 - 1300 hours and 1700 – 1745 hours (i.e. for 2 hours per day); The Harbour Master (as explained at the ISH) interpreting these periods as 'restrictions' in which vessels, in particular CTVs which are highly manoeuvrable and not tidally restricted, would be required to avoid;

⁴ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/461146/CRS_727_086_Redacted_.pdf

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		<div><ul style="list-style-type: none"><ul style="list-style-type: none">The Harbour Master (as explained at the ISH) confirming that ABP goes to some lengths to advertise the restricted periods and that vessels (including those not under pilotage) therefore time their transits accordingly; andABP offering CTV berths furthest from their windfarms, which therefore necessitates a 15-minute transit through the Inner Harbour twice per day.The Applicant would therefore argue that the impact of the Scheme should be seen in that context, and further that:<ul style="list-style-type: none">The Scheme is being designed to target a reliability of 99.9%, with anticipated unavailability to vessel traffic of 8 hours per year on average (as discussed further below in respect of the Emergency Berth)The Scheme of Operation being widely available and consequently taken into account in the planning of vessel transits, as the existing operating regime of the Bascule Bridge is taken into account today.In other ports CTV operators have worked from inside enclosed dock systems with the potential for far more substantial delays in transiting from berth to sea. For example, Siemens/DONG operations out of Port of Liverpool were from the enclosed dock with locking operations that take between 15 and 20 mins per movement.As in any commercial venture an assessment of the relative costs and risks of locating in any particular location would have to be made. In this case therefore, assuming a CTV operator would otherwise locate in Lowestoft, notwithstanding the existing circumstances, the question is whether they would alter their decision entirely as a consequence of the Scheme. This would require an assessment of alternative options and their relative merits.Accepting there are a variety of factors that apply to the choice of location, if one simply looks at transit time to windfarms from Lowestoft, Great Yarmouth and Harwich, this would suggest that the geographic proximity of Lowestoft which would benefit every single CTV movement should be balanced against the risk of a potential need to marginally adjust journey times of some CTV movements that would otherwise look to specifically target the minutes either side of the current restricted periods to take account of the Scheme of Operation.</div> <table><tr><th>Windfarm</th><th>Lowestoft</th><th>Great Yarmouth</th><th>Harwich</th></tr><tr><td>East Anglia 1</td><td>01:11</td><td>01:20</td><td>02:14</td></tr><tr><td>East Anglia 1 North</td><td>01:01</td><td>01:07</td><td>02:10</td></tr><tr><td>East Anglia 2</td><td>01:03</td><td>01:16</td><td>01:27</td></tr><tr><td>East Anglia 3</td><td>01:38</td><td>01:37</td><td>03:01</td></tr><tr><td>Norfolk Vanguard (East)</td><td>01:50</td><td>01:45</td><td>03:18</td></tr><tr><td>Norfolk Vanguard (West)</td><td>01:24</td><td>01:15</td><td>03:07</td></tr><tr><td>Norfolk Boreas</td><td>02:07</td><td>02:03</td><td>03:41</td></tr><tr><td>Greater Gabbard</td><td>01:30</td><td>01:44</td><td>01:03</td></tr><tr><td>Galloper</td><td>01:29</td><td>01:40</td><td>01:17</td></tr></table> <div>Key: Travel time in hrs at 25knts from windfarm centre to harbour entrance (internal travel time Lowestoft (shell quay – 15mins) GY (berth4/5 - 6mins) Harwich (galloper base – 11 min))</div>	Windfarm	Lowestoft	Great Yarmouth	Harwich	East Anglia 1	01:11	01:20	02:14	East Anglia 1 North	01:01	01:07	02:10	East Anglia 2	01:03	01:16	01:27	East Anglia 3	01:38	01:37	03:01	Norfolk Vanguard (East)	01:50	01:45	03:18	Norfolk Vanguard (West)	01:24	01:15	03:07	Norfolk Boreas	02:07	02:03	03:41	Greater Gabbard	01:30	01:44	01:03	Galloper	01:29	01:40	01:17
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Reference	Extract / Summary	Applicant's response
		<ul style="list-style-type: none"> The Applicant therefore considers that windfarm operators will continue to be rational in their decision-making on port selection and have due regard to the relative effect of the Scheme on existing circumstances. The Applicant considers it unlikely that the effect of the introduction of the Scheme to the Port of Lowestoft against the context above would unilaterally mean that CTV operators would no longer be interested in locating at Shell Quay.
<p>Response to the Impact of the Scheme on the Port of Lowestoft Report (REP5-023)</p> <p>Paragraphs 3.77-3.85, and 3.89-3.90</p>	<p>Future Growth Scenario</p> <p>ABP considers that the Applicant's future growth scenario is unsubstantiated and so should not be taken into account when considering whether a serious detriment has occurred noting that:</p> <ul style="list-style-type: none"> there is no justification for considering Edge Economics report as 'extreme'; the Applicant's proposed scheme does increase the hours during which vessel movements are restricted; its potential customers will not consider land located to the west of the LLTC to be an option; the Shell Quay site is not 'remote', given the past evidence of Galloper Wind Farm, and that many competitor ports have berths which are less accessible and are located at a greater distance from the sea than the former Shell Base at Lowestoft; any delay arising from a restriction above and beyond the existing bridge will result in a very significant operational and financial impediment to offshore wind farm operators located to the west of the LLTC; the Applicant's assumptions are incorrect or unjustified in terms of number of vessel movements. 	<ul style="list-style-type: none"> The Edge Economics report (appended to ABP's Written Representation (document reference REP3-024) at paragraph 12 states that ABP defined the scenarios to be tested, those being a with- and without- bridge situation. The Edge Economics report appears to rely heavily on an earlier version of the BVG report (dated July 2018), which was ultimately submitted to the examination in February 2019 (and therefore only then available to the Applicant). The Edge Economics Report defers to the BVG report for details on methodology at various points and applies the following key assumptions for the with- bridge scenario to the Inner Harbour: <ul style="list-style-type: none"> Crew Transfer Vessel (CTV) operators for offshore wind will be unwilling to berth to the west of the proposed bridge The former Shell Base is no longer seen as being an acceptable construction coordination/O&M facility in the future The bridge creates sterilisation of approx 180-200m of quay which could potentially be used for Crew Transfer Vessel (CTV) berthing There is no explanation for these assumptions in the Edge Economics report; hence in the absence of justification of such fundamental assumptions, the Applicant reasonably questioned the analysis therein. With respect to the first two points above, it is noted that the BVG report states at section 6 (it is assumed it is from this that the Edge Economics assumptions were derived) as follows: <p><i>Having determined the proposed new bridge would require opening for some CTVs (and therefore increase vessel journey times), ABP held interviews with offshore wind customers to understand the willingness of investors to take berth space to the west of the proposed SCC bridge. It was found that appetite for sites to the west of the new bridge would be substantially depressed due to the risk of CTV delay caused by bridge lifts. We have independently investigated this issue through discussion with our own industry contacts and have arrived at the same conclusion as ABP</i></p> It is not clear whether either ABP or BVG presented the reality of the Scheme of Operation with respect to its relationship with the existing operation of the Bascule Bridge in the context of these discussions, and thus the relative effect of the Scheme given existing circumstances in the Port. For the reasons explained above, the Applicant does not consider the Scheme will result in a complete moratorium on development west of the Scheme, which ABP seems to be suggesting. The Applicant would reaffirm that the proposed Scheme of Operation increases the restricted period by 15mins in the AM and PM periods, both within the hours that already have restrictions within them. Additionally the Applicant is not proposing to have a midday restriction. There is therefore not an increase in hours arising from the Scheme, rather an increase in <u>minutes</u> in the relevant hours. This is discussed further in the section above. With respect to Edge Economics' third assumption that the bridge sterilises up to 200m of quay which could be used for CTVs, this is inconsistent with other evidence presented by ABP, namely

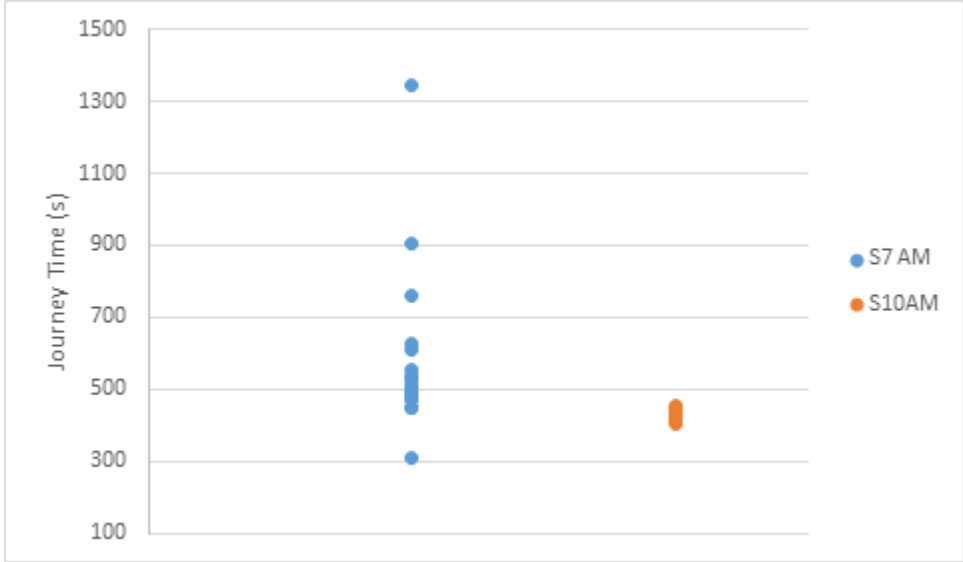

Reference	Extract / Summary	Applicant's response
		<p>that:</p> <ul style="list-style-type: none"> ○ ABP has argued that there is a 165m direct loss of berthing associated with the Scheme, and notwithstanding that this is in itself contradictory to how ABPmer has subsequently undertaken its berth utilisation study (see below), is somewhat less than the 200m referred to here. ○ In the ISH, the Harbour Master explained that the berths with suspended deck (i.e. those affected by the Scheme) are not suited for CTV berthing • The Applicant therefore contests the assumptions used in the Edge Economics Report, which in turn rely on anecdotal evidence presented in the BVG report, which the Applicant considers presents an overly pessimistic outlook, having regard to the relative impact of the Scheme on the existing operating conditions for CTVs in the Inner Harbour • As a minor point, the comment on the “remoteness” of the Shell Quay was in comparison to the other CTV berths in Lowestoft i.e. in the outer harbour, these berths are significantly closer to the sea and therefore more attractive to operators. • The number of current movements at the Port is discussed under the vessel survey items below. • Finally, the Applicant notes the ABP circulated a press release at the ISH regarding a “new joint government-industry Offshore Wind Sector Deal”. The Applicant notes this is a sector based deal and as such does not have known implications for the Port of Lowestoft, rather it serves to confirm the Government remains committed to offshore wind, which was anticipated, including in the BVG report, which considers further offshore development subsequent to Round 3.
Veracity of Vessel Survey		
<p>Response to the Impact of the Scheme on the Port of Lowestoft Report (REP5-023)</p> <p>Paragraphs 3.1-3.8 and 3.18</p>	<p>Variability</p> <p>ABP notes that:</p> <ul style="list-style-type: none"> • the Vessel Survey has limited value as it is a point in time and doesn't take account, for example, of new tenants such as Peterson and general upwards trends; • ABP's detailed figures at Deadline 4 show the most accurate and contemporaneous account; • it mischaracterises its own results: the reduction in CTVs during Autumn 2018 was a result of the Galloper Windfarm operation, based at Shell Quay, completing its construction phase; and • DfT figures are limited in their use given they rely on vessels over 100GT. 	<ul style="list-style-type: none"> • The vessel survey recorded activity within the Port to provide a baseline for the environmental assessments. This was undertaken primarily because ABP had stated that they could not supply the Applicant with the information required. • The Applicant accepts that the port is a dynamic environment and numbers of vessel movements will change, uplifts over numbers of observed openings have been factored into future scenarios for this reason. • With respect to Galloper, the Applicant was simply recording that James Fisher who operated boats on behalf of Galloper transferred its operations away from Lowestoft, because as ABP has noted, it had completed its construction work. • The Applicant noted in the Port Impact Report at paragraph 3.2.10 that DfT statistics are limited to certain types of vessels and as stated therein was used to provide some contextual background only. • Technical data sheets for the Severn Provider (a vessel recorded with 195 movements within the vessel survey) (Damen FCS2610 CTV) shows a tonnage of 168GT, this class of vessel should therefore be recorded within DfT statistics. Commercial vessels with a tonnage of less than 100GT are less likely to require a Scheme bridge lift due to their size.

Reference	Extract / Summary	Applicant's response
<p>Response to the Impact of the Scheme on the Port of Lowestoft Report (REP5-023)</p> <p>Response to the Impact of the Scheme on the Port of Lowestoft Report Annex 4 (REP5-029)</p>	<p>Methodology</p> <p>ABP questions the methodology of the Vessel Survey querying:</p> <ul style="list-style-type: none"> that there is no information provided to evidence how the camera equipment was measures or calibrated ((i.e. for example, the accuracy of the height of the cameras mounted on street lighting columns cannot be evidenced) (para 3.61); that it appears that the survey incorrectly recorded a number of these vessels that fall outside of the 'discouraged vessels' in its survey data (i.e. those vessels that have approached the bridge in anticipation of a bridge lift, and are milling about in the harbour in close proximity to the bridge) (para 5.8); that it appears highly likely that the data was unable to differentiate between these vessels waiting for a A47 Bascule Bridge once the restrictions had ended (i.e. those waiting within the Port in the line of site of the camera), and those actually transiting the bridge as part of a "bridge lift", particularly given the method of recording during the vessel survey periods (para 5.9); that the Applicant's camera was positioned to the south-west of the A47 Bascule Bridge, which is where vessels are corralled within the harbour awaiting the end of the restricted period. ABP also notes that the camera appears to be set back some way from the A47 Bascule Bridge, and the camera utilised a wide angle lens to provide a large field of vision. As such, although these vessels are likely to have 'cut the beam' of the Vessel Survey camera, it appears they were not physically transiting through the bridge during the restricted period – this position aligns with the Bridge Lift Record Book (Annex 4) (para 5.10); and as discussed above, the appropriate air draught safety clearance margin has not yet been established (para 5.26). 	<ul style="list-style-type: none"> ABP have misunderstood the methodology used in the vessel survey. The camera took photographs every 10 seconds regardless of the presence of a vessel and the photographs clearly show the state of A47 Bridge, as can be seen in the example below.  <ul style="list-style-type: none"> The photographs were used to identify the transiting vessels, by name for most commercial vessels and type for recreational vessels. The Applicant appreciates that ABP has provided data from its Log book which shows a large discrepancy with the Applicant's figures, this is discussed in more detail below. The Applicant is in discussion with ABP to identify the reasons for the discrepancies in vessel movement information.
<p>Response to the Impact of the Scheme on the Port of Lowestoft Report (REP5-023)</p> <p>Paragraphs 5.3 – 5.20</p>	<p>Results</p> <p>Given the above, ABP questions the veracity of the Vessel Survey results (and thus the basis of the potential impacts of a peak hour restriction) as, based on the results provided in its Deadline 4 submissions and Annex 4:</p> <ul style="list-style-type: none"> there we 7, not 76, occasions when the A47 Bascule Bridge had to be opened during the discouraged periods; there were 104 additional lifts that occurred within 5 minutes of the restriction times, which took account of the 'buffer period' that ABP provides; Table 8 is therefore incorrect; 	<ul style="list-style-type: none"> The Port Impact Paper (paragraph 5.2.8) stated that there were 48 Bascule Bridge (not 76) openings during the discouraged periods allowing 76 vessels to pass. Discussions are ongoing with ABP over the reasons for the differences in the figures; one aspect will be the accuracy of the timing device used by ABP to confirm the restriction window. The Applicant has used a more restrictive definition of 'tidally restricted' in the compilation of the scheme effects to ensure that a conservative assessment of the potential impacts is made, not all causes for a vessel to be restricted are identifiable from the vessel survey photographs and therefore it has been assumed that those which "could" be restricted were counted as "not" restricted. The proposed Scheme of Operations provides for other navigational issues in its definition.

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	<ul style="list-style-type: none"> the Applicant has used an incorrect restrictive definition of tidally restricted as the term may include a vessel that by virtue of a Navigational Risk Assessment needs to enter port over a slack water period (when no or minimal tidal flow is experienced), and not just on the basis of available water depth. 	<ul style="list-style-type: none"> The Applicant has suggested drafting with respect to the Scheme of Operation (Document Reference SCC/LLTC/EX/41, PINs Reference REP3-033) as follows: <i>For the purposes of this paragraph, a vessel is tidally restricted and thus may only be given an opening during peak hours if, due to its sailing draught or other navigational restriction, it is unable to proceed safely on that tide at a time outside of peak hours.</i> ABP in commenting on the Scheme of Operation (Document Reference SCC/LLTC/EX/41, PINs Reference REP3-033) suggested this definition "<i>is too prescriptive and narrowly defined, and must be broadened to include other, as yet unspecified, circumstances</i>", but did not suggest any particular drafting. The Applicant is willing to consider alternative drafting, though the Applicant notes that the Scheme of Operation also has an emergency response clause. It is acknowledged that ABP would prefer the peak hour restrictions to be removed in their entirety.
<p>Response to the Impact of the Scheme on the Port of Lowestoft Report (REP5-023)</p> <p>Paragraphs 5.21 – 5.27</p>	<p>Peak Hour Openings</p> <p>ABP contends that:</p> <ul style="list-style-type: none"> The Applicant's statement that the A47 Bascule Bridge "is being opened with some regularity, which would be expected to increase if activity in the Port were to increase" is misleading, as it is based on an analysis of bridge openings during what it considers to be the "full peak hours of traffic" (i.e. a 60 minute period). This is not how the A47 Bascule Bridge has been historically and currently operated (i.e. by reference to a 'restricted' 45 minute period), and as such, this analysis is irrelevant and the implication drawn by the Applicant as to how ABP operates the bridge is unsubstantiated. By the Applicant's own omission, the Vessel Survey shows that the vessel movements within the periods immediately following the A47 Bascule Bridge restricted time periods are "proportionately higher" – this is because a number of vessels are often waiting in the harbour for the bridge to open in accordance with its authorised operating procedures. This is also substantiated by the Bridge Lift Record Book data which is extracted at Annex 4. ABP agrees with the Applicant's observation that the Harbour Master seeks to mitigate the effects on peak hour traffic. The ExA should note, however, that the 15-minute windows are not "excluded from the peak traffic hour". On the contrary, they have never formed part of any formal hour long traffic period, as the 45 minute restriction during peak traffic periods have been in place for well over 30 years. The statement in paragraph 5.2.17 of the Ports Impact Paper that "<i>vessels (including CTVs) are able to adjust their transit (plan their journey) to avoid the discouraged periods</i>" is not agreed as the (incorrect) figures set out in Table 9 and Table 10 do not provide any evidence that vessels can adjust 	<ul style="list-style-type: none"> The Applicant refers to its previous comments as to the accuracy of the vessel survey, and thus the basis of its conclusions on the operation of the existing bridge. As was discussed at the ISH, the operating regime for the existing Bascule Bridge has been in place since at least 1987 and was (as is explained in the Port Impact Paper) borne from engagement with port users at that time. The Applicant acknowledged in the Port Impact Paper at paragraph 4.6.5 that currently the 45-minute period is more relevant and therefore based its substantive analysis in chapter 5 on that premise. However, the Applicant considers it relevant to also record the number of openings that vehicular traffic has to contend with during what are the typically recognised peak traffic hours of 8:00 to 9:00 and 17:00 to 18:00 by way of indication of the impact of the operation of the Bascule Bridge on traffic in Lowestoft today. ABP suggests that the rationale for the timings in the 2018 Notice is <u>not</u> based on an aim to mediate between competing demands of road and maritime traffic but rather to support the local economy. It is not clear whether ABP has considered the economic costs of congestion and delay in that context, which are the impacts that the Applicant is seeking to safeguard through its Scheme of Operation. It therefore remains unclear as to how the windows in the Notice were, and continue to be, judged to be the most appropriate option to 'support the local economy', given this results in regular openings of the bridge in peak hours (the Bascule Bridge lifts on average once every 5 weekdays in the AM Peak and once every 3 weekdays in the PM peak, see paragraph 5.2.16 of the Port Impact Paper). The current relevance of the 30-minute lunch time restriction to the objective of supporting the local economy is also not clear. In summary the Applicant considers it is appropriate to have regard to the existing operating regime of the Bascule Bridge in considering the proposals for the Scheme of Operation, but that a contemporaneous judgment should be made on the most appropriate windows of restriction for the Scheme having regard to prevailing traffic conditions. As set out in preceding section, the Applicant does not consider that the implementation of the Scheme of Operation would result in a significant escalation to the current restrictions in the Port for vessel movements during peak hours. The Applicant would also note that as recorded in the Statement of Common Ground with Highways England (document reference REP4-011) the parties are agreed that in including peak hour restrictions on lifting the Scheme bridge, the maximum relief to the Strategic Road Network is provided when it is most needed.

Reference	Extract / Summary	Applicant's response
	their transit periods.	<ul style="list-style-type: none"> The Applicant notes that ABP disputes the contention in the Port Impact Paper that CTVs are able to adjust their transit. The fact that movements peak before the AM restriction and after the PM restriction is circumstantial evidence that they in fact can (see Table 7 in the Port Impact Paper). This position was also supported by the Harbour Master who explained in the ISH how CTVs are corralled and asked to hold station in advance of a bridge opening (as discussed above). As a minor point, the 1970 agreement between the British Docks Board and the Minister of Transport (appended to the Port Impact Paper, Appendix B) does indeed state that the existing swing bridge "is no longer adequate for the traffic wishing to use it". As such, while there may have been maintenance issues with it, the bridge was required to improve capacity in the highway network.
Operation of Existing Bascule Bridge		
<p>Response to the Impact of the Scheme on the Port of Lowestoft Report (REP5-023)</p> <p>Part 4 and Para 5.2</p>	<p>ABP disagrees with Part 4 of the Applicant's Ports Impact Paper. In particular it:</p> <ul style="list-style-type: none"> disagrees with the assertion that the scheduled openings in the 2018 Notice are not wholly compatible with the 1969 Order; states that the current bascule bridge operating procedure has developed by custom and practice over the past approximately 50 years, and has been in operation by ABP without any complaint from Highways England or similar statutory authorities during this time; that the timings in the 2018 notice match with practice since at least 1987; the Harbour Master operates the bridge in accordance with Schedule 4 of the 1969 Order; suggest that table 5 of the Applicant's submission is incorrect and that openings that were undertaken by the Harbour Master during restriction times for the vessel survey period, were either to accommodate an emergency situation or for tidally constrained vessels; and that no justification or factual evidence has been provided to support the inference that ABP would not adopt the same approach to the operation of the LLTC. <p>At the hearing the Harbour Master further explained:</p> <ul style="list-style-type: none"> that he was unaware of the 1969 Order and the bridge is opened in accordance with the 2018 Notice and in accordance with the duties of the SHA; that tidal restrictions don't just relate to the level of water; it also includes the weather, the dimensions of the vessel involved, and their manoeuvrability. 'discouragement' is particularly relevant for smaller commercial vessels which are not tidally restricted and are highly manoeuvrable and therefore would be unable to qualify for an 'exceptional' lift during the restricted periods 	<ul style="list-style-type: none"> The Applicant would note again its comments above on the veracity of the vessel survey data. It is acknowledged that the Applicant cannot provide factual evidence of how the Harbour Master <u>might</u> open the bridge in the future, but the vessel survey data collected by the Applicant appears to contradict ABP's claim that the bridge is <u>currently</u> only opened during the restricted period for specific reasons, though the matter is under discussion with ABP The Applicant maintains that there is a difference between the Notice and the Order and that there has been a change in emphasis over time. As an example, with respect to commercial vessels, the 1969 Order simply stated that no vessels were permitted to pass at the relevant time periods unless in an emergency or tidally restricted. The Notice states that large commercial vessels can request an opening on demand though are discouraged at certain periods of time.

Reference	Extract / Summary	Applicant's response
Justification of Scheme of Operation		
Response to the Impact of the Scheme on the Port of Lowestoft Report Annex 6 (REP5-031)	<p>Response to Justification for Scheme of Operation</p> <p>ABP criticises the Applicant <i>Justification and Traffic Effects of draft Scheme of Operation</i> paper submitted at Deadline 4 (REP4-016) as follows:</p> <ul style="list-style-type: none"> Tables 1 and 2 of the paper confusingly refer to a 5 mins and 10 mins closure in the 2016 base year, whereas the TA also assesses 6 mins and 10 mins closures. These tables also refer to a 2016 Base Year whereas the TA, at Section 7.3, only considers 2022 base. As such, it is unclear on which assessment the Applicant wants the Scheme to be considered. On that basis, ABP asks that the Applicant provide further clarity in this regard, so that a proper assessment against consistent standards can be undertaken. The argument made by the Applicant (i.e. that longer bridge closures will mean longer journey times, and consequently, less reliability) does not amount to evidence that justifies the restrictions stated in the draft SoO. The Justification Report approaches the position in a wholly binary manner and does not properly assess all the benefits and dis-benefits of the proposals. To do that, the Applicant should have assessed all the closure impacts and reviewed that against the Webtag assessment, to determine whether its restrictions imposed still meets the value for money test or not. This assessment only partly seeks to justify whether various opening scenarios will impact on BCR. In short, it concludes that the BCR will remain "high" and drop from 3.99 – 3.90 and has the same "reliability" cost for both scenarios. As such, rather than supporting the restrictions set out in the SoO, this analysis completely undermines the Applicant's analysis set out in section 3 of the Justification Report. <p>At the Hearing ABP went on to explain:</p> <ul style="list-style-type: none"> their concern is that a non tidally restricted vessel coming inwards through existing bridge just before the 8.15 restriction kicks in on existing bridge, would get through, and then be stuck unable to pass under the Scheme bridge for fifteen minutes, leading to cost and safety issues. The highlighted that the biggest impact to this is in the AM period. their concern that the Justification note is all modelled for the Scheme bridge, combined with the real world of the existing bridge; as such optimism and pessimism bias needs to be taken into account; their view that on the basis of the Justification, and the Applicant's responses at the hearing, that the traffic data shows that the peak hour restriction is not justified; and that if a vessel was forced to wait outside the bascule bridge to avoid the risk, they would be waiting at sea for an hour which would be commercially and practically impossible. 	<ul style="list-style-type: none"> Tables 1 and 2 in Section 2 of the Justification and Traffic Effects of draft Scheme of Operation paper are intended to demonstrate the impact of the lifting of the Bascule Bridge based upon current traffic conditions, in terms of delays and journey time reliability/variability. Section 3 of the paper is intended to demonstrate the impact of the Scheme compared to the Do Nothing with reference to the Scenarios identified in Table 7.1 of section 7.3 of the TA. The appraisal presented was based upon one peak hour opening of the Scheme Bridge and also one opening of the Bascule Bridge. This showed the Scheme gave High value for money. If an economic appraisal was carried out assuming the Scheme Bridge remained open to traffic during the peak periods (with the assumptions for Bascule Bridge unchanged) then benefits would be higher. Two traffic models have been used to assess the impacts of the Scheme. The SATURN model used for economic appraisal is a strategic model. Since delays to traffic are directly proportional to duration of bridge closure i.e. delays do not increase at an exponential rate the longer the duration of the lift, it makes no difference to the Scheme economics, whether it is one lift of 10 minutes or two lifts of 5 minutes. The VISSIM model used for the operational assessment is a traffic microsimulation model. Unlike SATURN, this model is more detailed as it enables the time of the lift to be specified. It also takes account of the build-up of flows within the peak period, whereas SATURN is based upon average hourly flows. Consequently, the timing and the duration of the bridge lift will have a more critical bearing on the predicted delays within the VISSIM model. The opening time of the Scheme will be between 6 and 12 minutes, depending on how many and what type of vessels are passing through. A slightly longer lifting time (6 minutes versus 5 minutes) has been estimated for the Scheme due to it having a large single leaf. The operational assessment of the traffic impacts of the Scheme presented in Sections 7.5 and 7.6 of the TA, assume lifts of either 6 or 10 minutes for the Scheme Bridge and lifts of either 5 minutes or 10 minutes for Bascule Bridge, to provide a range of assessments within the most likely opening durations. From the data available from existing vessel surveys, a 12 minute lift duration will be an unusual situation and would occur infrequently. As the Applicant explained at the ISH, the principal purpose of the peak hour restriction is to provide reliable journey times during those peak periods. Journey time reliability is an objective of the Scheme particularly with respect to ensuring an effective and efficient infrastructure around the Port of Lowestoft and it was also heavily referenced in the consultation with businesses undertaken in advance of the OBC (document reference APP-110). An analysis of the impacts of lifting the Scheme Bridge on journey time reliability during peak periods is described in Section 3.4 of 'Justification and Traffic Effects of draft Scheme of Operation' (document reference REP4-016). The figures presented below (reproductions of Figures 10 and 11 in that report) compare the predicted journey times for Scenario 7 (with a 10 minute lift of Scheme Bridge and 10 minute lift of Bascule Bridge) and Scenario 10 (with Scheme Bridge fully open and 10 minute lift of Bascule Bridge), based upon 20 runs of the VISSIM microsimulation model for the AM peak.

Reference	Extract / Summary	Applicant's response
		<ul style="list-style-type: none"> Microsimulation takes into account day to day variability in traffic conditions, for example through the use of monte-carlo simulation to release individual trips onto the network. This means that, no single model run will be identical and reflects the day to day variability that will typically occur in practice. <p>Distribution of Journey Times 08:45 to 09:00 (Northbound A to B A12 Tom Crisp Way to A47 Jubilee Way)</p>  <p>Distribution of Journey Times 08:45 to 09:00 (Southbound B to A A47 Jubilee Way to A12 Tom Crisp Way)</p>  <ul style="list-style-type: none"> The above figures demonstrate the significant range in journey times over the 20 model runs in

Reference	Extract / Summary	Applicant's response												
		<p>Scenario 7 (when the Scheme bridge is lifted for 10 minutes in the AM Peak). For example in the northbound direction, journey times range between 300 and 1350 secs. By contrast, journey times for Scenario 10 with the Scheme Bridge open to traffic, show little or no variation ranging between 400 and 475 sec.</p> <ul style="list-style-type: none"> It is also noted that forecast interpeak period flows for the Scheme Bridge are very similar in volume to the peak flows. This is illustrated in the Figure below that presents the 2 way forecast flows for the Scheme Bridge for 2022 and 2037. While the focus of the operational transport assessment has been during the peak hours, in accordance with guidance, operational assessments of the interpeak hours may not therefore be dissimilar to the peak periods. <div data-bbox="1543 701 2442 1241"> <p>The chart, titled 'LLTC Forecast Traffic Flows', displays two-way flow in passenger car units (pcus) on the y-axis (0 to 3000) against three modelled time periods on the x-axis. For each period, two bars are shown: a blue bar for 2022 and an orange bar for 2037. In the AM Peak (0800-0900), the 2022 flow is approximately 2250 pcus and the 2037 flow is approximately 2550 pcus. In the Inter Peak (Avg Hr 1000-1600), the 2022 flow is approximately 2350 pcus and the 2037 flow is approximately 2700 pcus. In the PM Peak (1700-1800), the 2022 flow is approximately 2450 pcus and the 2037 flow is approximately 2700 pcus.</p> <table border="1"> <thead> <tr> <th>Modelled Time Period</th> <th>2022 (pcus)</th> <th>2037 (pcus)</th> </tr> </thead> <tbody> <tr> <td>AM Peak (0800-0900)</td> <td>~2250</td> <td>~2550</td> </tr> <tr> <td>Inter Peak (Avg Hr 1000-1600)</td> <td>~2350</td> <td>~2700</td> </tr> <tr> <td>PM Peak (1700-1800)</td> <td>~2450</td> <td>~2700</td> </tr> </tbody> </table> </div> <ul style="list-style-type: none"> However, in the interests of the respective requirements of the Port and highway users, maintaining a two hour restriction on the Scheme bridge is considered a proportionate response to the traffic benefits that such a restriction would secure. That interpeak flows are not substantially different to peak flows should not be interpreted that peak hour flows are therefore somehow less important, but rather that further restrictions could be justified throughout the day in the interest of journey time reliability. The Applicant therefore accepts that the economic benefits of the Scheme would <u>survive</u> peak hour openings, but the consequences are demonstrable in the operational model which shows negative effects on reliability of journeys in those hours where bridge openings occur. In respect of the relative frequency of bridge openings, the opening and closing sequence times and opening frequency for all three crossings are presented in Table 4.1 of the TA, based on analysis from the vessel survey, and included below. 	Modelled Time Period	2022 (pcus)	2037 (pcus)	AM Peak (0800-0900)	~2250	~2550	Inter Peak (Avg Hr 1000-1600)	~2350	~2700	PM Peak (1700-1800)	~2450	~2700
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PM Peak (1700-1800)	~2450	~2700												

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		<table border="1"> <thead> <tr> <th>Bridge</th><th>Time of Opening and Closing Sequence</th><th>Full and Average Times Opened per Day</th></tr> </thead> <tbody> <tr> <td>A47 Bascule</td><td>5 – 10 minutes</td><td>14</td></tr> <tr> <td>Mutford Bridge</td><td>2 – 4 minutes</td><td>2 – 4</td></tr> <tr> <td>Scheme</td><td>6-12 minutes</td><td>5</td></tr> </tbody> </table> <ul style="list-style-type: none"> The Applicant would also refer to Tables 11 and 12 of the Port Impact Paper which set out estimated numbers of Bascule Bridge and Scheme bridge openings in the peak hours based on current levels of activity within the Port and with an increased level of growth. In that context, the Harbour Master expressed a particular concern at the ISH with the Scheme of Operation and its effect on inbound vessels in the AM peak, suggesting that if they transited the Bascule Bridge at 08:10, they would then be waiting in the Inner Harbour a Scheme bridge lift until 09:00. Based on analysis of the vessel survey, the Applicant estimates that this could have affected 9 vessels based on the current level of activity (Table 10) and 19 vessels based on a future level of activity (Table 11) for a 175 day weekday period (i.e. equivalent to the survey period). However, those figures are derived from analysis of passage of vessels through the Bascule Bridge for the entirety of the hour 08:00 to 09:00, i.e. not only those that 'squeezed' through the Bascule Bridge before the AM peak restriction began, as such it would be an overestimate of the likely frequency of occurrence of that of concern to the Harbour Master. Nevertheless, based on 19 vessels being affected, this would mean a vessel could be affected by this scenario approximately once per fortnight on average. This should be balanced against the benefits to journey time availability in the AM peak which increases up to four fold with a bridge lift, as shown in the figures above. Additionally, though, the Applicant would suggest that, as has been outlined elsewhere in this paper, a vessel operator would not intentionally create a situation of having to mill around in Lake Lothing awaiting a Scheme bridge lift, rather it would ensure that it transited the Bascule Bridge with sufficient time available to also transit the Scheme bridge before its restriction began. Consequently, in this particular scenario, once a fortnight rather than passing through the Bascule Bridge at 08:10, a vessel would need to pass through at approximately 07:50 to ensure the opening sequence of the Scheme bridge was completed by 8am. 	Bridge	Time of Opening and Closing Sequence	Full and Average Times Opened per Day	A47 Bascule	5 – 10 minutes	14	Mutford Bridge	2 – 4 minutes	2 – 4	Scheme	6-12 minutes	5
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Navigational Risk														
Response to the Impact of the Scheme on the Port of Lowestoft Report (REP5-023) Paragraphs 7.4-7.6	Approval of NRA ABP reaffirms its previous submissions that the Scheme NRA must be approved by ABP.	<ul style="list-style-type: none"> The DCO changes made at Deadline 5 provide for ABP to approve the final Scheme NRA. As noted previously, there is considerable precedent for preliminary NRAs being submitted as part of an application for statutory authorisation, with later approval of a final NRA by the SHA or similar bodies after the DCO has been made – this was done on the Silvertown Tunnel and Thames Tideway DCOs, for example. 												

Reference	Extract / Summary	Applicant's response
<p>Response to the Impact of the Scheme on the Port of Lowestoft Report (REP5-023)</p> <p>Paragraphs 7.7-7.9 and 7.18</p>	<p>Veracity of Vessel Simulation Report</p> <p>ABP claim that until operational cycle times are known the reliance of the simulation exercise must be limited.</p> <p>It also suggests that the Applicant's assertion that simulators are unable to accurately assess the impact of external factors, such as wind shear effects, is factually incorrect.</p> <p>It notes that any further vessel simulation must be based on the actual parameters of the LLTC scheme, including accurately simulating the effects of wind shear, wind sheltering, cycle times and meteorological impacts, as it is likely these factors will impact the conclusions of the initial Vessel Simulation Report. It is also imperative that the correct modelling must be undertaken with peer review and used to inform the required NRA.</p>	<ul style="list-style-type: none"> The requirement for further simulations as the design progresses is accepted by the Applicant, provision for this is included within the pNRA. The Applicant acknowledges that wind shear was not able to be fully simulated accurately using the Kongsberg system as installed at Lowestoft College; however, through the NRA approval process established by the DCO, this would be able to be dealt with for the final NRA. In the absence of this facility the Applicant has considered a comparative assessment of the Scheme bridge against the existing A47 Bascule Bridge when raised, as the raised A47 leaves present a similar sheltered width and height as the fullest extents of the Scheme bridge piers indeed in closer proximity to the centreline of the navigation channel, it is considered reasonable to suggest that the sheltering effect will be less. The Scheme bridge leaf when in the raised position would be approximately 22m above HAT, only 4 vessels identified during the vessel survey were higher than this figure. Requirement 11 of the DCO provides that the vessel simulation must be updated prior to updating the pNRA, and that this must be done in consultation with the harbour authority. Ultimately ABP must also approve the final NRA under this Requirement so will be able to ensure it is content with the updated vessel simulation report. Through the draft Agreement with ABP, the Applicant has suggested a protocol for the development of the NRA, to enable it to be an iterative process between the parties and the NWG.
<p>Response to the Impact of the Scheme on the Port of Lowestoft Report (REP5-023)</p> <p>Paragraphs 7.10-7.17</p>	<p>Marnis Software</p> <p>ABP suggests that the Applicant is wrong to suggest that ABP's NRA system which utilises the MarNIS software is a bespoke application, given that it is used by five different port groups across the UK, not just ABP.</p> <p>As such it should be considered an independent commercial operational risk management system.</p> <p>Notwithstanding the above, ABP also asserts that the Applicant is not in a position to assert that ABP's methodology would not change the assessment of the risks associated with the Scheme. Further, any changes required would be 'minor amendments', as it is not an expert in navigational risk.</p>	<ul style="list-style-type: none"> The Applicant's comments on the MarNIS system were based on the details provided to it by ABP and the demonstration of the specific system at Lowestoft. As ABP have stated the system is for "operational" risk management, to be suitable for assessment of construction related elements of the scheme additional mitigation measures would need to be implemented within the programme, the Applicant was not shown that this aspect could be covered by the software in its current form.
<p>Response to the Impact of the Scheme on the Port of Lowestoft Report (REP5-023)</p> <p>Paragraphs 7.19 – 7.23 and 7.26</p>	<p>Emergency Berth – Applicant Approach</p> <p>ABP continues to assert that an Emergency Berth is required and suggests that the Applicant's reasoning to date for not offering one is flawed because:</p> <ul style="list-style-type: none"> a vessel destined for Shell Quay that cannot turn or go back through the A47 bridge will have nowhere to go; to solve this, the Harbour Master only has discretion for a simultaneous lift if it follows the sequential flowchart, and as set out at Deadline 4, he proposed sequential risk mitigation flowchart is not operationally practicable; it relies on failures taking place in optimum operating conditions and not instances where full navigation control may not be possible; as such a lack of mitigation may give rise to serious safety concerns. <p>ABP goes on to note that, if an emergency berth were provided, though it may not be possible for a vessel to reverse back to the proposed location of the emergency berth on every occasion, however, this location provides a safer option than</p>	<ul style="list-style-type: none"> The assessment of individual vessel transits and the implementation of sequential risk mitigation are dynamic and could be changed by the Harbour Master and pilot at any point during a vessel's approach. For example, if during approach to the Port the pilot discovers the vessel is not as responsive as anticipated and therefore could not safely turn in the prevailing weather conditions the mitigation approach to the transit could be altered. Most of the factors referenced in the flowchart would be known (or at least predicted) prior to the commencement of the vessels approach, e.g. berth occupancy, weather forecast, tidal conditions, so an initial assessment would be possible, which could be adjusted if the situation changed.

Reference	Extract / Summary	Applicant's response
	attempting to back through a narrow bridge opening in most cases where turning a vessel is not possible.	
Response to the Impact of the Scheme on the Port of Lowestoft Report (REP5-023) Paragraphs 7.24	Emergency Berth – Risk Scenarios ABP questions the technical basis of the Applicant's analysis of risk scenarios that may arise from a bridge failure on the following basis: <ul style="list-style-type: none"> The Applicant has not provided any evidence to substantiate that the "industry recognised precedent for measuring reliability is to target a reliability of 99.99%". ABP requests the Applicant to provide further information to verify this claim. It is not clear how the risk probabilities quoted (i.e. 1 in 5,000 failure and 1 in 2,000 worst-case scenario) are calculated. ABP's technical advisors have been able to follow the method and values through to a 1 in 1,000 failure rate. Hence a 1 in 5,000 is either based on a different reliability measure, or is specifically due to the 'lifting mechanism'. Based on the limited information provided, however, this is currently unclear. The methodology contained in PIANC is comprehensive and covers ship/bridge interaction. It appears, however, that the Applicant has only used a very small aspect of the PIANC methodology (i.e., the probabilistic multiplication). As far as they have used the method, it is broadly consistent with that identified in PIANC Report WG19, however isolating the methodology to such a small aspect may have consequential impacts on the assessment undertaken. The analysis fails to recognise that many vessels that use berths maintained at 3.7m are actually deeper-draughted than this value because they are able to safely sit on the lake-bed at low water (known as "NAABSA" – Not Always Afloat But Safely Aground). This is relevant to berths with a soft silty harbour bed such as the majority of those in Lowestoft. The 'Risk rating' and the subsequent conclusion that the risk of bridge failure is not 'intolerable' are entirely subjective, which are based on the pNRA risk matrix. ABP considers that this risk analysis cannot be undertaken until the Applicant has completed a formal and robust NRA that has been approved by ABP. 	<ul style="list-style-type: none"> As the Port Impact Paper stated; <i>The industry recognised precedent for measuring reliability is to target a reliability of 99.9% [not 99.99%] and this is the target that the Applicant is basing the Scheme design upon.</i> In terms of comparative information, the Applicant's contractor has advised that the following availability has been prescribed elsewhere: Birkenhead Rolling bascule required 99.5%; Montgomery Street at Canary Wharf at 99.5% and Lower Hatea Crossing at 99%, outlining that designing to this standard is common practice. Consequently, the Applicant estimates that the bridge may be unavailable (to vessel traffic) approximately 8 hours per year on average. This 8 hours could be in one block of 8 hours or 8 blocks of 1 hour or 16 blocks of 30 minutes or any combination which totals 8 hours per year. This 8 hour period includes unavailability that may derive from a variety of reasons such as planned maintenance, CCTV failure, general control systems fault, barrier fault, hydraulic circuit fault, as well as failure of the bridge mechanical system. Clearly, therefore a proportion of the unavailability of the bridge is therefore planned and can be mitigated for in navigational terms. Separately, the Applicant's contractor has estimated a 1 in 5,000 failure rate of the bridge mechanical system. As noted in the Applicant's previous submissions there is no 'database' as such which catalogues observed failures however it is the professional opinion of the Applicant's contractor that this is a reasonable assumption to make, having regards to the modern design standards being adopted for the Scheme. The Applicant notes the PIANC report on ship impacts with bridges covers all aspects of ship bridge interactions and focuses on vessel aberrance rates and the probabilities of impact and subsequent structural damage as a result. The issue under consideration in this section relates to mechanical bridge failure so these aspects are not appropriate. The key point is that for a vessel to get alongside the berth there has to be sufficient water for them to navigate, once safely moored they would ground on the falling tide if they were of deeper draught than the water available. Therefore if the vessels have a draught greater than that available at the vacant berths at low water, the Applicant would not expect these vessels would be directed to such berths. As noted above, the Applicant has now agreed that ABP will be able to approve the final NRA for the Scheme.
Port Security		
Response to the Impact of the Scheme on the Port of Lowestoft Report (REP5-	Temporary Restricted Areas ABP state that it is not correct to say that any berth within the Port of Lowestoft can	<ul style="list-style-type: none"> The Applicant's statement here was based on general conversations with ABP as the Port Security Plan is a restricted document and therefore not available to the Applicant.

Reference	Extract / Summary	Applicant's response
023) Paragraphs 8.1-8.2	<p>be designated as a Temporary Restricted Area if required by the presence of a vessel to which the ISPS Code applies.</p> <p>This is because ABP cannot accommodate ISPS vessels on all berth areas at Lowestoft, as not all areas of the Port are designated as ISPS under ABP's Port Facility Security Plan.</p>	<ul style="list-style-type: none"> The Applicant does not consider that this clarification materially alters the rest of the assessment, as the effect of the Scheme would be limited to ABP possibly having less scope to accommodate ISPS vessels that would have otherwise used North Quay 2. It is not a complete inability to operate from the areas and therefore berth sterilisation. The Applicant considered the prevalence of ISPS vessels in the Port in paragraphs 8.2.3 – 8.2.4 of the Port Impact Paper. However, as the Applicant has no way of knowing or finding out which berth areas are or are not in the Security Plan it is impossible for it to definitively report the effect of the Scheme in this respect.
<p>Response to the Impact of the Scheme on the Port of Lowestoft Report (REP5-023)</p> <p>Paragraphs 8.3-8.11 and 11.11</p>	<p>Impact of Scheme</p> <p>ABP considers that the Applicant has not properly considered the security risks to the Port arising from the Scheme, noting:</p> <ul style="list-style-type: none"> the risks of persons undertaking reconnaissance/surveillance and infiltrating the Port from the bridge; additional staff may also be required above and beyond fencing and CCTV; the Applicant has not considered objects being thrown onto the quay (rather than vessels); 25m is not the appropriate distance to consider, that is 50m, as agreed by DfT; there is no existing precedent within the Port for an elevated highway within 5 metres; and that ultimately the DfT has agreed the measures to be taken and as the relevant statutory authority, their views should be what are considered. 	<ul style="list-style-type: none"> Persons gaining access to the port from the bridge would be difficult given the height of the structure. The necessity of any mitigation required is under discussion and the Applicant has proposed a mechanism for the agreement of how the Port Security Review will be undertaken as part of the draft Agreement between the parties, and has committed to paying for mitigation measures where they are shown that review to be necessary as a result of the Scheme. The Applicant has considered the practical difference between the situation with the elevated scheme when compared to the current situation of a highway with public access at ground level in proximity to a quay perimeter. The Applicant understood that preliminary discussions between ABP and DfT had taken place but has not seen any formal advice from DfT and it is noted clear to what extent the DfT has been informed of the Applicant's proposals in this regard.
Characterisation of Serious Detriment Test		
<p>Response to the Impact of the Scheme on the Port of Lowestoft Report (REP5-023)</p> <p>Paragraphs 2.1 - 2.7 and 2.14 – 2.20 and 12.5 – 12.6</p>	<p>Basis of Test</p> <p>ABP suggests that the Applicant has created an additional test for serious detriment – that future growth is reasonably likely; and suggests that the key point arising from the <i>Hinkley</i> and <i>Richborough</i> projects is that current and future growth should be considered on the basis of properly qualified and technically competent evidence.</p> <p>It notes that where the applicant has not provided any witnesses with relevant qualifications to show that no detriment would result, the applicant will have presented its case in an evidential vacuum.</p> <p>The question as to whether any detriment is important or significant, has to be judged having regard to how the statutory undertaker conducts its business. Any answer to the question must take into account how the affected body fulfils the duties and standards that apply to it as a statutory undertaker.</p> <p>ABP's undertaking is made up of many statutory instruments and the Applicant has</p>	<ul style="list-style-type: none"> The Applicant agrees with ABP that the statutory test should be read on the face of the words on the statute, i.e. that the detriment must be serious. The judgement of what is serious or not is just that – a judgement. The Examining Authority and Secretary of State must therefore take the evidence presented to them by each party as to the detriment that is caused both currently and would be in the future. However, in respect of the future, clearly no party can say with 100% certainty what will happen. As such the judgement of detriment to that future growth will include a judgement of the likelihood of the future growth scenario put forward by both sides and a judgement of the level of detriment caused, based on the evidence put forward by the relevant experts – this is what the <i>Hinkley</i> and <i>Richborough</i> cases did. Whilst accepting that it is a matter for judgement rather than a matter of law, the Applicant considers that if growth is not at least reasonably likely to occur in the absence of the Scheme, common sense would suggest that any effects of the Scheme which might inhibit the achievement of that growth would be unlikely to amount to serious detriment to the carrying on of the undertaking. In short, the loss of a mere possibility is not likely to cause serious detriment. The Applicant was making the point that, in making that judgement on future growth the Examining Authority and Secretary of State will, ultimately be judging what scenario is considered reasonably

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	<p>failed to understand this; and indeed has mischaracterised by the test by referring to ABP's ability or not to comply with its statutory duties.</p> <p>At the Hearing ABP clarified its view that 'carrying on the statutory undertaking' it is important to note that the size of the land affected does not matter, it is the effect of the undertaking arising from it. This is important given that the Port of Lowestoft is a nationally significant piece of infrastructure in itself.</p> <p>That phrase should mean that consideration should be given to the effect of the operation of the bridge on vessel movements and potential business operations to the west of the bridge.</p> <p>ABP also set out their view that 'carrying out the statutory undertaking' should include ABP's duties and powers as statutory harbour authority, but also the commercial aspects which flow from those responsibilities. As such, it would be dangerous to exclude impact on tenants when considering the impact of the Scheme on its statutory undertaking.</p>	<p>likely and the level of detriment against it, but the Applicant agrees that this in itself is not the overarching test that is to be considered.</p> <ul style="list-style-type: none"> • The Applicant would also note that the quotes from <i>Hinkley</i> at paras 12.5 and 12.6 of ABP's REP5-023 are not quotes from the ExA's view on the arguments made – they are instead a summary of the case made by the parties involved themselves (paragraphs 8.4.175 and 8.4.138 of that report respectively) - the Applicant and Bristol Port Company. As such whilst helpful; their status should not be over-emphasised. In that case the Panel made a decision which balanced both parties' evidence provided, i.e. a judgement; which reflects the Applicant's position as stated above. • The point in relation to statutory duties was made because ABP in its written representation indicated that the Scheme would cause it to suffer an inability to meet its statutory duties meaning that it would be unable to effectively carry out its statutory undertaking, thus forming part of the case that a serious detriment would be caused to that statutory undertaking. • However, it is the Applicant's position that for that element of the serious detriment case to be made out, ABP would have to show that there would in fact be sufficient impediment in ABP's ability to perform its duties such that the detriment is caused. The Applicant's case is that, with the DCO controls in hand, ABP would only need to adapt and change the way it meets its plethora of statutory duties (including those set out in its written representation), and that a <u>change</u> in and of itself is not a detriment. ABP has not identified any particular statutory duties the performance of which would be seriously impeded by the construction, existence, or operation of the Scheme. • In respect of the evidence provided, the Applicant notes ABP's comments throughout its submissions relating to its concern that the Applicant has not received appropriate technical advice. The Applicant can confirm that it has had marine advice throughout this process, as set out in the CVs presented in Appendix B of SCC/LLTC/EX/93. • Regarding the proper interpretation of the serious detriment test, as the Applicant explained at the hearing in response to ABP's commentary on the scope of the 'carrying on of the statutory undertaking', in considering the matter of serious detriment, caution needs to be exercised to ensure that different language is not inappropriately substituted for the specific terms of the statutory test for serious detriment. • It is often the case that Parliament sets out a phrase (e.g. 'serious detriment') but does not define it, leaving decision-makers to endeavour to apply the statutory language; and this is when the temptation to substitute the statutory wording with alternative formulations may arise. However, that temptation should be resisted. The Applicant understands that it is in this context that consideration of the terms 'important' and 'significant' (as discussed at the hearing) has arisen. However, the consideration of these terms is merely a means of assisting in the interpretation of the serious detriment test and the terms in question ('important' and 'significant') should not be substituted for the wording of the statutory test itself, which, to be clear, simply requires the decision-maker to satisfy him/herself that the proposed compulsory acquisition would not cause serious detriment to the carrying on of the statutory undertaking. Accordingly, the test requires consideration of, and a judgement to be made in respect of, the effect on the carrying on of the undertaking of all of the relevant impacts arising from the scheme. When forming that judgement, and looking at the seriousness of any effects, it is necessary also to consider what constitutes the undertaking. • At the hearing, the Applicant also explained its view of what should be taken to be ABP's statutory

Reference	Extract / Summary	Applicant's response
		<p>undertaking, for the purposes of the serious detriment test. The Applicant has previously set out its understanding of the scope of ABP's statutory powers and duties in its Statement of Reasons (APP-007) at paragraphs 6.1.20 to 6.1.29 (including Table 6-2) and therefore does not repeat them in detail here. The key points to note, however, are that the statutory powers available to ABP are wide-ranging, and no particular distinction is drawn between the powers available to ABP for the purposes of regulating activities taking place within its ports and harbours and the powers available to it for the purposes of making effective use of its port facilities. However, it is necessary to keep in mind that what is to be considered are the effects on the carrying on of the statutory undertaking by ABP rather than the effects on parties which are not ABP.</p> <ul style="list-style-type: none"> It is the Applicant's view that a line should be drawn at a point which excludes impacts on parties with whom ABP has entered into contracts, in particular, for example, with tenants of the port. The justification for this view is that carrying on its statutory undertaking enables ABP to exercise its powers and comply with its duties (to the extent that such duties are a function of its statutory authority, rather than enforceable duties in the ordinary sense of the term - see paragraphs 6.1.23 to 6.1.27 of the Applicant's Statement of Reasons (Document Reference 4.1, PINS Reference APP-007)). The carrying on of ABP's undertaking does not (and should not, in the Applicant's view) extend so far as to encompass the success or failure of its tenants' businesses. By way of further explanation: if the impacts of the Applicant's scheme were to preclude the use of an area of port land by a particular occupier, without affecting ABP's ability to use that land for some other beneficial purpose, or without affecting the ability of another occupier or tenant to use that land instead, then the carrying on of ABP's statutory undertaking would not, in those circumstances, suffer serious detriment. It follows, therefore, that as a general principle, the impacts of the scheme on ABP's tenants (in contradistinction to the impacts on ABP itself) would be outside the ambit of ABP's statutory undertaking, and, accordingly, would not cause serious detriment to the carrying on of ABP's statutory undertaking. The Applicant's view is that its position, as set out above, should be applied as a general principle. The Applicant also acknowledges that with that general principle in place, it would still be necessary to consider the impacts on each tenant to ascertain whether or not, consequentially, the impact on a particular tenant would, or would not, as a matter of fact, actually affect ABP's ability to carry on its statutory undertaking.
<p>Response to the Impact of the Scheme on the Port of Lowestoft Report (REP5-023)</p> <p>Paragraphs 2.8 – 2.13</p>	<p>Relationship with existing Bascule Bridge</p> <p>ABP suggests that the Applicant has failed to appreciate the fundamental difference between the existing A47 Bascule Bridge and the current proposal for a third crossing. The two crossings are entirely separate and serve entirely different functions. The first is a historic inevitability around which the Port has grown – the second, if constructed, would be a historical anomaly around which the Port will diminish.</p> <p>As such, it must be the case that as the LLTC contemplates the addition of a second opening bridge over the Port, it follows that any other schemes that the Applicants purports are 'precedents' must involve an assessment of constraints arising from two bridges over a statutory harbour port, in order to provide a comparable baseline of assessment of the serious detriment caused. The Applicant has failed to do so, the only relevant precedent is Newport where the Welsh</p>	<ul style="list-style-type: none"> The Applicant does not deny that the Scheme imposes a new bridge on users of the Port of Lowestoft. The point being made was that the question of whether a serious detriment arises from the Scheme's land take and operation cannot be seen in isolation. The question is whether there is a serious detriment to the statutory undertaking. ABP's statutory undertaking is a Port which includes the existing Bascule Bridge. The constraints created by the existing Bascule Bridge including its operating regime are therefore part of the statutory undertaking, and so the impact of the Scheme must be measured against that starting point. The Applicant notes that the scenario at Newport is not wholly consistent with Lowestoft - the constraint there is a lock at the dock entrance, which provides a different form of restriction for vessels to deal with in conjunction to the new bridge.

Reference	Extract / Summary	Applicant's response
	Government accepted that a serious detriment would be caused.	<ul style="list-style-type: none"> The Applicant would also note that the Poole bridge scheme involved the creation of a second bridge when a first bridge already existed within the harbour area, and that the Hungerford Bridges in London were additions to the many existing bridges already in London (albeit non-opening), as such these Schemes are relevant in considering precedent.
<p>Response to the Impact of the Scheme on the Port of Lowestoft Report (REP5-023)</p> <p>Paragraphs 2.21-2.27</p>	<p>Relationship with ABP's PD rights</p> <p>ABP sets out that there is a critical difference between developments which the Port has chosen to pursue, compared with a development that is imposed on the Port by a third party, the impact of which will be to limit the flexibility and future development potential of the Port.</p> <p>Development at the Port is undertaken by ABP as and when required with a view to enhancing its commercial operations, thereby positioning itself so as to accommodate both existing and future business opportunities and enabling it to respond to market demand. Such developments do not adversely impact ABP's ability to carry out its statutory undertaking.</p> <p>The reality is that the Applicant is attempting to impose the LLTC on the Port without any consideration being given to its seriously detrimental impact on ABP's statutory undertaking.</p>	<ul style="list-style-type: none"> This point was simply made by the Applicant to explain that ABP and its customers react and adapt their statutory duties to take account of on-going development of the Port, of which there is wide scope given the Port's PD powers. In the same way, ABP and its customers will adapt to the existence of the Scheme. The fact that those behaviours will change does not, in itself automatically mean that a detriment is caused, never mind a 'serious' one. The case needs to be made that such changes cause a detriment.
Justification for, and effects arising from Compulsory Acquisition and Temporary Possession Powers		
<p>It is worth noting in respect of all land issues that ABP has the ultimate say over the use of land powers through the controls in the Protective Provisions, including imposing any conditions it (reasonably) sees fit, although this is of course ultimately subject to dispute resolution through arbitration. Therefore many of the measures ABP requests will be able to be resolved as part of that approval process.</p> <p>As indicated below, the Applicant's view is that the mechanism presents no impediment to the implementation of the scheme, because, first, with consent for the scheme having been granted, the principle that land will be needed to deliver the scheme is also, at that point, established; and, secondly, statutory undertakers having the benefit of protective provisions are expected to act with a degree of reasonableness: indeed, in relation to the Applicant's scheme, the Protective Provisions for the benefit of ABP provide at paragraph 53(4) that the consent of the harbour authority "must not be unreasonably withheld". This is the standard approach.</p> <p>In order to provide greater certainty on these points for ABP however, the Applicant is seeking to agree a draft Side Agreement to establish an additional framework for these matters to be resolved in detail in due course and to give the Examining Authority confidence that the project will be able to be brought forward without undue delay.</p>		
<p>Post Inquiry Note in Respect of CA Matters (REP5-024) Paragraphs 13 to 14</p> <p>Response to the Impact of the Scheme on the Port of Lowestoft Report Annex 7 (REP5-032) Para 9.10-9.13</p>	<p>Construction Compound – Plot 02/22</p> <p>ABP considers that this plot is unnecessarily large and that its size is not justified.</p> <p>It notes that this parcel includes an area which has a suspended quay. In order to provide adequate and continuing access to the quay it will be necessary for a zone 15m deep along the length of the quay to avoid the suspended quay (5m deep) and 10m for any port activity and movements including mobile equipment such as mobile cranes. As presently required by the Applicant, this would sterilise the use of that part of the port including the quay and any moorings over the entire extent of the temporary possession land sought.</p> <p>It also notes that the plot will cause a conflict between the proposed construction compound and Dudman's operations. For example, it is the case that up to 20 to</p>	<ul style="list-style-type: none"> Please see Appendix A of this document providing additional justification and setting out the rationale for the extent of temporary possession powers sought in the Order for the purposes of providing construction compounds and working areas.

Reference	Extract / Summary	Applicant's response
	30 HGVs can be waiting to tip their load, and the weighbridge forms a small part of the overall marshalling process. It is not just access to the weighbridge that is important, but additionally access to the silo's grain reception facility and an adequate HGV marshalling area – ABP considers any space adjacent to Commercial Road to be insufficient, and potentially dangerous.	
<p>Post Inquiry Note in Respect of CA Matters (REP5-024) Paragraphs 16, 18 to 21</p> <p>Response to the Impact of the Scheme on the Port of Lowestoft Report Appendix 7 (REP5-032) Paragraphs 9.3 – 9.9</p> <p>Response to the Impact of the Scheme on the Port of Lowestoft Report (REP5-023) Paragraph 11.12</p>	<p>Use of Commercial Road</p> <p>ABP considers that the Applicant's land proposals (through the use of temporary possession powers in respect of plots 2-20, 2-22, 2-32, 2-33 and 2-34), without agreement with them, will mean that the western end of the Port would be severed without a diversionary route being put in place; particularly given there is no temporal restriction on the use of the power.</p> <p>ABP notes that the application does not provide space for a diversionary route within the Order limits.</p> <p>It sets out that discussions of the detail of a Traffic Management Action Plan (TMAP) are required with the Applicant.</p>	<ul style="list-style-type: none"> The Applicant considers that it was the correct approach not to impose a set diversion route within the Order limits, as to do so and to facilitate such flexibility would have required a larger swathe of the Port's land to be included within the proposed temporary land take, causing more concern to ABP. ABP's Protective Provisions prevent the exercise of the Applicant's temporary possession powers over land within the Port without the consent of ABP, which may be granted subject to the imposition of conditions, which could include conditions relating to the provision of an alternative route for Commercial Road. The Applicant is therefore seeking to reach an agreed position with ABP to ensure mechanisms are put in place for adequate diversions to be provided, and that their tenants can continue to operate whilst such a diversion route is in place, and that tenants west of the Scheme will not be severed. Whilst the detail of a TMAP will not be possible until the detailed construction methodology is known, the draft Side Agreement provides a 'Heads of Terms' for such a plan against which the detailed plan would need to be developed against. It is also important to note that, irrespective of the position created by the application of the Protective Provisions, the Order does in fact include measures which address ABP's concerns about access to the western side of the Port via Commercial Road. Indeed, the Applicant's Interim Code of Construction Practice ('ICoCP'), Appendix 5A to the Environmental Statement (document reference SCC/LLTC/EX/61, PINS Reference REP4-017) provides (at paragraph 2.4.7 thereof) that the layout of the compounds must ensure that access is maintained for port operations at all times along Commercial Road (with alternative arrangements being subject to the protective provisions for the harbour authority) and that such access must allow all likely plant and vehicle movements to take place. These measures are secured by way of Requirement 4 in Schedule 2 to the draft DCO, which provides that the Applicant must produce a Code of Construction Practice ('CoCP') prior to the commencement of the authorised development (or any part thereof). Any CoCP produced for any part of the authorised development must be in accordance with the ICoCP. As such, the Applicant has already committed to preserving access to the western side of the Port via Commercial Road during the construction of the Scheme.
<p>Response to the Impact of the Scheme on the Port of Lowestoft Report Appendix 7 (REP5-032) Paragraphs 9.7 and 9.8</p>	<p>Mobile Crane</p> <p>ABP queries how the Scheme proposals will enable the use of mobile cranes in the future by Peterson or any other tenants.</p>	<ul style="list-style-type: none"> The Applicant is not aware that ABP currently has a requirement for harbour mobile cranes in multiple locations. The presence of the Scheme would only present an issue whereby a mobile crane was required on quays either side of the Scheme and could not transit beneath it. At the ISH the Harbour Master indicated that owing to the suspended quay, large cranes are not typically used on the quays adjacent to the Scheme Notwithstanding the above, the Applicant is willing to discuss the port's crane requirements with ABP and how they may be affected by the Scheme and suggests this matter could be satisfactorily resolved through the proposed Side Agreement, as relevant. It is also a matter that would be

Reference	Extract / Summary	Applicant's response
		potentially be covered by the Compensation Code applied by the DCO if the Side Agreement was not ultimately completed.
Response to the Impact of the Scheme on the Port of Lowestoft Report Appendix 7 (REP5-032) Paragraphs 9.7 and 9.8	Shed 3 – 02/23 ABP is concerned that the compulsory acquisition of plot 2-23, and any temporary diversion of Commercial Road would mean that Shed 3 would not be able to be accessed. It is also concerned that significant adjustment works will be needed to the Shed door, and that this hasn't been properly considered by the Applicant.	<ul style="list-style-type: none"> The Applicant has provided tracking information to ABP to show that Shed 3 could be accessed without impediment once the Scheme is constructed. During construction the east door will be inaccessible for a period of time. The effect of that would be dependent on the requirements of the occupier. It is understood that is currently a single party and there are other doors to the shed, but the effect of the loss of this door would be dictated by the occupier's requirements. The Applicant has suggested a meeting with Petersons to discuss further. The shed is a steel portal frame; the scale of works would need to be reviewed in light of occupier requirements and a survey of the building. A framework for the potential inclusion for mitigating these impacts is included in the Side Agreement.
Post Inquiry Note in Respect of CA Matters (REP5-024) Paragraph 15 Response to the Impact of the Scheme on the Port of Lowestoft Report Appendix 7 (REP5-032) Paragraphs 9.17 to 9.19	Temporary Possession of Lake Lothing - 03/01 and 03/10 ABP is concerned about the scope of the powers sought by the Applicant, as temporary possession of these plots would preclude the use of the Port and the quay for port activity and for moorings over the entirety of the use of that area, in effect sterilising it, during the period of time provided for by the Order. In addition, it would have the effect, by reason of the temporary possession, of severing the western part of the inner harbour from the remainder of the Port. It considers that no justification has been given as to why such an extensive area of the port is required	<ul style="list-style-type: none"> The temporary possession powers sought over these plots need to be considered alongside the powers granted by article 20 of the Order, as the Applicant would need to utilise both if it wanted exclusive possession of any areas where the rights of navigation are required. In any event, ABP will approve the use of both powers, so together the parties will be able to mitigate any impact to the Port's undertaking, including in relation to severance. Further information is justification is provided in Appendix A.
Post Inquiry Note in Respect of CA Matters (REP5-024) Paragraphs 9 and 26	Acquisition of plots 2-23, 03-04, and 03-05 ABP suggests that this appears to be a much larger parcel of freehold land which is sought to be acquired than for the purposes either of the deck or the piers which are proposed to be installed for the purposes of supporting the deck within this parcel. Whilst the scheme design is apparently still to be finalised by SCC the indicative drawing at Document 2.9 shows 8 piers within this location. A summary review by ABP indicates that the extent of land sought to be acquired permanently is more extensive than that which is necessary for the purposes of constructing the bridge as proposed within the identified corridor. ABP also suggest that they would prefer a long lease of 120 years (design life) or imposition of a covenant. At the hearing ABP went on to explain: <ul style="list-style-type: none"> that they object to all compulsory acquisition powers and suggest that a long leasehold approach should be taken instead; they are concerned that they can't receive land back if bridge is lost, or if they do, it will happen without their PD rights; that although they understand why the Applicant would wish to do so, the 	<ul style="list-style-type: none"> In response to ABP's suggestion that the area of freehold land which is proposed to be acquired is much larger than is necessary for the purposes of delivering the bridge deck or its supporting piers, the Applicant offers the following explanation: <ul style="list-style-type: none"> The areas proposed to be subject to powers of compulsory acquisition are based on a reference design; this preliminary design work will be developed as the scheme is taken forward to the detailed design stage. In the meantime, powers of compulsory acquisition are sought in the DCO on the basis of accommodating that future detailed design; and therefore they necessarily provide for a degree of flexibility beyond what is shown as the reference design. This flexibility is reflected in the 'limits of deviation' provided for in article 5 (limits of deviation) of the draft DCO. The areas of land shown on the Land Plans (APP-016 to APP-021) include provision for the limits of deviation set out in article 5. In addition, it should be understood that the area of land proposed to be acquired will need to accommodate not just the bridge piers, but also the foundations supporting those piers, which will of course extend beyond the piers themselves – hence the extent of the area shown pink on the Land Plans at the location of the bridge piers. In terms of the specific plots queried by ABP:

Reference	Extract / Summary	Applicant's response
	<p>need to 'clean title' in acquiring the land needs to be proven, and isn't in any event a compelling case in the public interest for taking the land;</p> <ul style="list-style-type: none"> that they are concerned about use of compulsory acquisition powers over plots 03/02, 03/05 and 03/07 and that the SHA won't be able to use their SHA powers if the Applicant acquires the land. 	<ul style="list-style-type: none"> The acquisition of land in Plot 2-23 is required for the construction (and subsequent operation and maintenance) of Pier 6 together with part of the bridge deck above it and the foundations below it, as is shown on the Mainline Long Section (drawing) Sheet 2 of 2 (document reference REP4-019), which is comprised in the Applicant's Engineering Section Drawings (document reference 2.9). This drawing shows the reference design for the Scheme; as outlined above, the area of land comprised in Plot 2-23 is effectively an 'envelope', based on this reference design, together with a limit of deviation applied around it, to accommodate the development of the detailed design within the envelope of the plot. As such, the area of the plot as shown on Sheet 2 of the Land Plans (APP-018) presents a 'worst case' scenario in terms of the area of land which might need to be acquired. The acquisition of land in plots 3-04 and 3-05 is required for piers 5 and 4, identified (as 'support 5 and support 4') on the Mainline Long Section drawing (as referenced above), together with the fendering (for impact protection) around them. These plots (and the elements of the bridge structure which are proposed to be constructed within them) are located within Lake Lothing. The areas shown have been drawn on the basis described above - i.e. on the basis of the reference design, to which limits of deviation have also been applied in order to accommodate future detailed design work. As such, they also represent a 'worst case' scenario in terms of the area of land which might need to be acquired. Whilst the 'worst case' acquisition scenario is presented on the Land Plans, the DCO is drafted in terms which enable the Applicant to exercise a lesser power – being a power of temporary possession (which is not acquisition) – to enable the construction to be carried out first, with acquisition taking place subsequently, such that only the land actually needed permanently for the Scheme is that which is ultimately acquired. Indeed, the Applicant does not seek, and would derive no benefit from seeking, to acquire more land than it needs for the scheme. The Applicant's position on this point is evidenced by the terms in which it has drafted the DCO: article 22 (compulsory acquisition of land) imports into its paragraph (1) terminology from the 'test' in section 122 (purpose for which compulsory acquisition may be authorised) of the Planning Act 2008 ('PA 2008'), which provides that the authorisation of compulsory acquisition is conditional upon the land in question actually being 'required for the development' or 'required to facilitate' or being 'incidental to that development' (see section 122(2) of PA 2008). This DCO drafting – and the additional 'test' (akin to an internal second 'check and balance') that it sets for the Applicant at the point of acquisition – has numerous precedent including in the made Order authorising the ongoing A14 improvements (The A14 Cambridge to Huntingdon Improvement Scheme Development Consent Order 2016) and has been used successfully in the implementation of that scheme. Like the Lake Lothing Third Crossing scheme, the A14 scheme was promoted, at the consenting stage, on the basis of a reference design. On making the A14 DCO, the Secretary of State accepted that the drafting in the A14 equivalent of the LLTC scheme's compulsory acquisition article (dDCO article 22) was a test which the Applicant would have to go through before exercising its powers of compulsory acquisition in respect of each and every plot of land required for the scheme. As noted above and as discussed at the hearing, it is not the Applicant's intention to acquire any more land than that which is specifically necessary to accommodate the scheme, once that area of land can be properly and accurately ascertained. Furthermore, as ABP is aware, the Protective Provisions included in the draft DCO for the benefit of the statutory harbour authority preclude the Applicant from acquiring ABP's land without ABP's consent, and accordingly, a draft Side Agreement is currently in the process of being prepared and negotiated, with the objective of

Reference	Extract / Summary	Applicant's response
		<p>providing a 'vehicle' for the granting of ABP's consent in this context.</p> <ul style="list-style-type: none"> • The 'mechanism' outlined above, essentially comprises a DCO (in draft at this stage) including powers of compulsory acquisition, together with Protective Provisions constraining the exercise of those powers of compulsory acquisition and a Side Agreement (again, in draft at this stage, but with the Applicant's intention being that it is finalised prior to the close of the examination if possible), being the vehicle providing consent to acquisition of the land (in place of the exercise of the powers in the DCO). • This tried and tested mechanism is extremely well-precedented in other (made) DCOs and also in other statutory consenting regimes, such as transport and works act orders and local Acts. For instance: <ul style="list-style-type: none"> ◦ in terms of <i>development consent orders made under the Planning Act 2008</i>, the Applicant notes that ABP agreed to a similar provision in relation to Tidal Lagoon Swansea Bay, Hornsea One and Hornsea Two; ◦ this builds on numerous other examples in DCOs such as the Silvertown Tunnel Order 2018 includes Protective Provisions for the benefit of National Grid, which preclude the acquisition of land for the Silvertown Tunnel scheme without the agreement of National Grid; and the A14 Cambridge to Huntingdon Improvement Scheme Development Consent Order 2016 which includes Protective Provisions for the benefit of National Grid, Network Rail and for the benefit of electricity, gas, water and sewerage undertakers, with each set of Protective Provisions precluding the acquisition of land (or apparatus) for the A14 scheme without the agreement or consent of those parties; ◦ in terms of <i>harbour revision/empowerment orders</i>, the London Gateway Port Harbour Empowerment Order 2008 includes provisions for the protection of Network Rail which preclude the acquisition or use of Network Rail's land for the Port scheme without its agreement; ◦ in terms of <i>orders made under the Transport and Works Act 1992</i>, the London Underground (Northern Line Extension) Order 2014 includes protective provisions for the benefit of Network Rail, and for the benefit of electricity, gas, water and sewerage undertakers, where the acquisition of land (or apparatus) for the NLE scheme without the agreement or consent of those parties is not permitted; and ◦ in terms of <i>local Acts</i>, the Crossrail Act 2008 includes Protective Provisions for the benefit of the British Waterways Board and for the benefit of electronic communications code network operators, where land use powers in the Act are curtailed by the terms of those Protective Provisions; and, the Dartford-Thurrock Crossing Act 1988 contains Protective Provisions for the protection of the Port Authority and River Users, and for the protection of Network Rail, which, respectively, set limitations on the exercise of the land use powers in relation to land within the area of the Port; and over land owned by Network Rail. • The range of examples given above (which is not an exhaustive list), shows the mechanism included in in the Applicant's DCO has precedent spanning over 30 years across a range of infrastructure consenting regimes. This supports the Applicant's view that (notwithstanding ABP's statements to the contrary), the mechanism referred to above is neither novel nor unusual in the

Reference	Extract / Summary	Applicant's response
		<p>field of infrastructure consenting.</p> <ul style="list-style-type: none"> • ABP made comments at the hearing about the operability (or otherwise) of a mechanism which puts statutory undertakers in a position to grant consent to the acquisition of their land, pursuant to the Protective Provisions, post-granting of development consent by the Secretary of State. In response to those comments, the Applicant's view is that the mechanism presents no impediment to the implementation of schemes, because, firstly, with consent for the scheme having been granted, the principle that land will be needed to deliver the scheme is also, at that point, established; and, secondly, statutory undertakers having the benefit of protective provisions are expected to act with a degree of reasonableness: indeed, in relation to the Applicant's scheme, the Protective Provisions for the benefit of ABP provide at paragraph 53(4) that the consent of the harbour authority "must not be unreasonably withheld". • In the context of the scheme, the same mechanism (as outlined above) is being applied in relation to Network Rail. Like ABP, Network Rail is also a statutory undertaker, having operational land, which it uses for the purposes of carrying on its undertaking, which is proposed to be traversed by the scheme. Network Rail is therefore similarly subject to the need for interests in its land to be acquired by the Applicant, should the DCO be made in the form applied for. Incidentally, as a statutory undertaker familiar with the mechanism outlined above and its exercise in practice in relation to its assets, Network Rail is currently positively engaged in negotiations with the Applicant for the acquisition by the latter of the specific land interests needed for the scheme. • In response to ABP's other points on the question of whether or not the acquisition of all interests (sometimes referred to as 'outright acquisition') in the above-mentioned plots is necessary or justified, the Applicant's responses are as follows: <ul style="list-style-type: none"> ○ In response to ABP's suggestion that the Applicant could acquire a leasehold interest to accommodate certain elements of the scheme: the Applicant acknowledges that this is a proposal which could be explored in the context of the Side Agreement. That said, the starting point for the Applicant is that the DCO must be drafted in terms which, in the absence of any other arrangements, enable the Applicant to deliver the Scheme. For this reason, powers of ('outright') compulsory acquisition are sought over the land on which the highway elements of the scheme are proposed to be constructed. For land to become a highway it needs to be dedicated as such. Only a person having control of the freehold interest in the land is in a position to dedicate that land in perpetuity as highway. If the Applicant acquired only a leasehold interest, it would not be able to dedicate the land as highway. Therefore, the DCO includes powers of compulsory acquisition in respect of land which is proposed to become highway. Should an arrangement be arrived at by agreement (outside the DCO) which put the Applicant in an equivalent position – i.e. where it was agreed that the relevant land would be dedicated as highway, then this could present a feasible alternative to 'outright' acquisition of the land in question. Such an 'alternative' could potentially include the acquisition by agreement of a leasehold interest, with dedication of the freehold interest by the freehold owner. The Applicant notes ABP's suggestion that a 125 year lease would cover the anticipated 120 year operational lifespan of the new bridge and would be prepared to discuss this further with ABP. ○ In response to ABP's concern about the Applicant's proposed acquisition of plots 3-04 and 3-05 and an ensuing scenario in which emergencies might occur within the water between the fenders and piers (within each of those plots), the Applicant's position is that it does not


Reference	Extract / Summary	Applicant's response
		<p>accept that the exercise of ABP's powers is limited only to land of which it is the freehold owner. As such, the Applicant does not consider that its acquisition of the land in these plots (which are within the water) would prevent ABP from exercising its statutory powers or performing its statutory duties within the land in these plots, to the extent that it was relevant or necessary for ABP to do so with the scheme in place. Indeed, as things stand, there is a part of Lake Lothing, in the immediate vicinity of the scheme proposals, which is not owned by ABP in any event: plots 3-02, 3-06, 3-07, 3-08, 3-37 and 3-51 (all 'water plots') are owned by Waveney District Council and, as far as the Applicant can ascertain, this existing ownership position does not appear to interfere with ABP's ability to carry out its statutory undertaking in this part of the lake.</p> <ul style="list-style-type: none"> ○ In response to ABP's concern about the extinguishment of its permitted development rights over land acquired by the Applicant, the Applicant's view is that as it would only wish to acquire land on which it proposes to erect physical structures to support the new bridge (or acquire airspace within which the new bridge deck would be located), there would be no practical sense in which any of ABP's permitted development rights could continue to be exercised in respect of such land (or airspace). Conversely, in respect of land over which the Applicant acquired only new rights (including a right to impose restrictive covenants for the protection of the new bridge), ABP could continue to exercise its permitted development rights where their exercise was compatible with the new rights created and acquired by the Applicant for the purposes of the scheme. It is the Applicant's view that if it had acquired land for the purposes of the scheme, and then, subsequently, it no longer required that land because the scheme was either no longer extant or no longer required, then the Applicant would have no interest in or requirement to continue holding that land. As such, it could be returned to ABP (or a relevant successor body) at that stage and the reinstatement of ABP's permitted development rights would follow. ○ As the Applicant explained in the hearing, its rationale for seeking to acquire land for the scheme includes the objective of ensuring that the delivery of the scheme is not precluded by conflicting subsisting interests in the relevant land – a practice commonly referred to as 'title cleansing'. However, as the Applicant also explained in the hearing, such an objective is distinct from the issue of justification for the area of land proposed to be acquired for the scheme. As such, justification for the practice of title cleansing hinges on the importance of the title cleansing exercise to the degree of certainty pertaining to the Applicant's ability to deliver the scheme, which itself has a bearing on the justification for the Applicant's proposal to acquire the land. In this context, the Applicant is of the view that its aspiration to secure a 'clean title' to help safeguard the delivery of the scheme is both proportionate and justified. • The Applicant is prepared to discuss all of the above with ABP with the aim of agreeing a way forward on land acquisition matters wherever possible.
Compulsory Acquisition Hearing	<p>'Airspace' Plots – 2-32, 2-33, 3-33, 3-34 and 3-35</p> <p>At the Hearing, ABP raised concerns about the Applicant seeking to acquire airspace and take rights below (e.g. plot 03-34), and that ABP would potentially not, for example, be able to carry out repairs to the quay, or, in the water, dredging.</p>	<ul style="list-style-type: none"> • By way of explanation, Plots 2-32, 2-33, 3-33, 3-34 and 3-35 are all shown hatched pink and blue on the Land Plans (see Sheet 3 of 5; document reference APP-019). The pink and blue hatching denotes 'split plots', in which the Applicant seeks to acquire both airspace (pink) and new rights (blue) at different levels. This concept is illustrated in Figures 11-1 to 11-3 in section 11 (Purpose for which the compulsory acquisition and temporary possession powers are sought) of the Applicant's Statement of Reasons (document reference APP-007).


Reference	Extract / Summary	Applicant's response
		<ul style="list-style-type: none"> As Figures 11-1 to 11-3 show, and as paragraph 11.1.14 of the Statement of Reasons explains, the Applicant seeks to acquire airspace to accommodate the deck of the new bridge element of the scheme (where it passes above ABP's land (and also above Network Rail's land)). Below that notional 'corridor' of airspace, the Applicant seeks powers to acquire new rights over the (remaining) airspace and land beneath the new bridge structure (for the purpose of providing a protection zone for the new bridge structure). As is also explained in paragraph 11.1.14, such new rights would extend down to and would include the surface of the land below the airspace, and the subsoil beneath it. Figure 11-3 is a long section drawing illustrating the Applicant's proposals to acquire airspace (shaded pink) and rights below (shaded blue). As the Note to Figure 11-3 explains, the long section drawing should be read in conjunction with Schedule 8 to the draft DCO. In respect of each of the plots hatched pink and blue on the Land Plans (Document Reference 4.1, PINS Reference APP-019), Schedule 8 specifies, by reference to Ordnance Datum, on a plot by plot basis, the height at and above which the acquisition of airspace (pink) would be required, and (correspondingly) the point at which and below which new rights (blue) are sought. Both Schedule 8 and Figure 11-3 should be read in conjunction with article 26 of the draft DCO, which provides a power for the compulsory acquisition of airspace or subsoil. As Figure 11-3 illustrates and as article 26 provides, where rights are proposed to be created and acquired beneath the airspace (the 'starting height' of which is as set out in column (3) of Schedule 8), they may be acquired on a plot by plot basis from the lowest level of the airspace in that plot, down to and including the level of the surface of the land. The DCO makes provision for the acquisition of airspace and of rights below that airspace, as explained above. However, the Applicant is prepared to discuss any of the above matters with ABP, with a view to including any necessary terms regarding the acquisition of land and/or new rights in the draft Side Agreement and its accompanying Deed of Covenant which is proposed to deal with the detail of any new rights and restrictive covenants proposed to be acquired or imposed respectively. In the meantime, as has been explained above, in relation to the rights (and power to impose restrictive covenants) sought in the Order, it is not the Applicant's intention to preclude all of ABP's activities within the 'blue' land comprised in the 'split' plots. The Applicant expects to agree a sensible conclusion with ABP as to the compatibility (or otherwise) of the parties' respective activities in those areas with the scheme in place and to document what has been agreed in the Side Agreement or its accompanying draft Deed of Covenant.
Post Inquiry Note in Respect of CA Matters (REP5-024) Paragraph 17 Paragraphs 23-25	Maintenance – 02/21 and 02/34 ABP sets out its view that these plots are too wide in scope, and that agreement should be reached such that they are limited to those necessary for maintenance. There should also be a sharing of costs in respect of wear and tear.	<ul style="list-style-type: none"> As mentioned above, the Applicant has set out in a draft Deed provided to ABP the intended scope of rights and restrictions sought in these plots to protect the structure of the bridge and highway users and it is willing to discuss the detail further with ABP, having regard to its own requirements, for example quay wall maintenance. It is the Applicant's position that placing a restriction on activities does not mean that ABP cannot control and use the land for its statutory undertaking. As such, it should not be considered as a 'loss' to be included as part of a claim that 'serious detriment' would arise. With respect to plot 2-34, there will be a distinction between rights and restrictions sought on the

Reference	Extract / Summary	Applicant's response
		section of the plot on Commercial Road, compared to that immediately adjacent to the structure.
Post Inquiry Note in Respect of CA Matters (REP5-024) Paragraph 17	<p>Mooring (Plot 03-52)</p> <p>ABP considers that no adequate justification has been given for why this pontoon area is required for the purposes of the Scheme – and will in any case be of no practicable utility to commercial traffic. ABP also query why this plot needs to be acquired.</p>	<ul style="list-style-type: none"> The pontoon is being provided as a facility to allow recreational craft (as opposed to commercial vessels) to moor while awaiting a scheme bridge lift; the need for such a facility was identified as part of the NWG consultation and subsequently in the pNRA. The need for the facility is driven by the imposition of restrictions on bridge opening times for recreational craft. While the pontoon would be designed to accommodate small commercial vessels, the scheme of operation is such that this use is not considered likely to be necessary. The area of land identified for the purposes of providing this recreational vessel waiting facility (plots 03-52 and 3-53) is proposed to be subject to powers of compulsory acquisition in order to ensure that the Applicant will be capable of delivering the pontoon, should acquisition of the relevant land by agreement prove impossible within the necessary timescale, noting that it is in the ownership of two different parties (ABP and Nexen). However, in the event that acquisition by agreement is possible, the need for compulsory acquisition powers would fall away and the Applicant would undertake not to exercise such powers in respect of the plot(s) in question. In addition, the Order is drafted in terms which would permit a lesser interest (e.g. a right) to be taken over the plot(s) in question, should such an arrangement prove adequate for the purposes of providing the pontoon.
<p>Post Inquiry Note in Respect of CA Matters (REP5-024)</p> <p>Response to the Impact of the Scheme on the Port of Lowestoft Report Appendix 7 (REP5-032)</p>	<p>Alternatives – Western Crossing</p> <p>ABP suggests that:</p> <ul style="list-style-type: none"> the Applicant's 2015 Option Assessment reached wrong conclusion because it did not include proper assessment of costs and that the modelling input to it was not (on the face of it) credible, and the 2018 review was flawed because it did not revisit all of the options. the Applicant has not properly considered alternatives under various regulatory frameworks, notwithstanding NPSNN para 4.27; it is not clear how the costs in Table 8 of the Applicant's Deadline 4 submission on this point were derived; there is only a £8m different in cost between the central and western options but mitigation/compensation for western option would be less; reducing the cost gap; and the Western Option has a significant additional benefit on Mutford Lock and that the reduction in flows on Bascule Bridge has doubled since the OAR work. This supports the conclusion that the modelling was incorrect the first time round. It is still not clear from the assessment what inputs we made with respect to closure times of bridges, and ABP requests further information from the Applicant in this regard. 	<ul style="list-style-type: none"> The Option Assessment Report did not reach the “wrong conclusion”. The Applicant disagrees that a “proper assessment of costs” was not undertaken. Costs for the scheme were prepared by qualified Quantity Surveyors and engineers. Furthermore, costs were also subject to the application of cost-risk adjustment through a Quantified Risk Assessment and Monte Carlo analysis (as noted within the Outline Business Case (OBC): Economic, Financial and Management Cases). In addition, the costs were also subject to an additional uplift of 23% associated with Optimism Bias (the “demonstrated, systematic, tendency for project appraisers to be overly optimistic”) within the Economic Case in line with DfT guidance. As these figures are used within the economic appraisal, scheme costs could rise significantly (ie the risks materialising and thus being translated into actual scheme costs) before there was any erosion of scheme benefits. Scheme costs were also carefully scrutinised by DfT during the assessment of the business case. DfT were satisfied and awarded the scheme Programme Entry. In post-submission discussions, DfT stated that were pleased that the scheme cost estimate included such a healthy proportion of risk-adjustment (compared to other schemes with Programme Entry in their portfolio). The Applicant also disputes that the option assessment process was flawed because it did not revisit all the options. The central crossing was chosen as the preferred option across a range of different criteria including alignment to scheme objectives, feasibility, affordability, public support and value for money (which includes a cost benefit analysis). The option assessment process was revisited for the central and western crossing options, as set out within the western crossing report, and the assessment reached the same conclusions, when using the older 2015 model or newer 2018 model, that the central crossing was best overall option. On the process of reconsidering options, the Applicant considers ABPs interpretation to be inaccurate. The NPSNN does not indicate that option testing needs to be continually or retrospectively applied once a preferred option is selected. It states “All projects should be subject to an options appraisal”. An option appraisal process was summarised in the OBC and Options

Reference	Extract / Summary	Applicant’s response																																		
		<p>Assessment Report (OAR). It has also been reconsidered in the western crossing report (2019). The NPSNN also states “Where projects have been subject to full options appraisal in achieving their status within Road or Rail Investment Strategies or other appropriate policies or investment plans, option testing need not be considered by the examining authority or the decision maker. ...<u>It is not necessary for the Examining Authority and the decision maker to reconsider this process</u>, but they should be satisfied that this assessment has been undertaken”</p> <ul style="list-style-type: none">ABP make reference to WebTAG, the Green Book and EIA regulations all requiring a review of all alternatives. The Applicant agrees these guidance documents advise / require option alternatives to be tested. The OAR does test these options satisfactorily, and the western crossing report revisits those assessments and confirms the central option is still the best overall option.ABP is unclear how the costs have been derived for the western crossing option, including how the different road infrastructure / junction costs were calculated. The costs were prepared on the same basis as the other options, by qualified Quantity Surveyors and engineers. These are provided below: <table><tr><td></td><td>2018</td></tr><tr><td>Construction Contract</td><td>£60,970,250.00</td></tr><tr><td></td><td></td></tr><tr><td>Statutory Undertakers</td><td>£3,200,000.00</td></tr><tr><td></td><td></td></tr><tr><td>Land</td><td>£4,224,334.00</td></tr><tr><td></td><td></td></tr><tr><td>Design. Supervision etc</td><td>£11,860,000.00</td></tr><tr><td></td><td></td></tr><tr><td>Total Cost</td><td>£80,254,584</td></tr><tr><td></td><td></td></tr><tr><td>Quantified Risk</td><td>£17,919,416.00</td></tr><tr><td></td><td></td></tr><tr><td>Adjustment to outturn inflation inc construction inflation above GDP</td><td>£9,370,000.00</td></tr><tr><td></td><td></td></tr><tr><td>Scheme Out turn cost</td><td>£107,544,000.00</td></tr><tr><td></td><td></td></tr></table> <ul style="list-style-type: none">On the point about the £8m difference in costs between the central and western options, it is ABPs opinion that the costs of the western option could be reduced if the design was further refined. It is more likely that costs would increase as they did for the central option (and as is typically expected by DfT and HM Treasury, hence the requirement to include risk-adjustment and optimism bias in scheme costs and appraisal to counter cost increases) as ground investigation work, land negotiation, professional fees and other risk items materialise. Once any new information like this became available, as would have occurred had the scheme become the preferred option, the western option would have needed a full quantified risk assessment (using Monte Carlo analysis), and subsequent cost-risk adjustment (uplift) applied to the scheme costs.The changes to traffic flows on Mutford Lock between the original 2015 model and newer 2018 model do not support a conclusion the modelling was “incorrect first time around”. The model		2018	Construction Contract	£60,970,250.00			Statutory Undertakers	£3,200,000.00			Land	£4,224,334.00			Design. Supervision etc	£11,860,000.00			Total Cost	£80,254,584			Quantified Risk	£17,919,416.00			Adjustment to outturn inflation inc construction inflation above GDP	£9,370,000.00			Scheme Out turn cost	£107,544,000.00		
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Reference	Extract / Summary	Applicant's response
		<p>passed the relevant validation criteria (it achieved WebTAG requirements for flow validation, GEH, journey time validation and screenline calibration), confirming its suitability for use to assess the scheme. The model and supporting documentation were also scrutinised by the DfT and deemed acceptable to allow the scheme to be awarded Programme Entry. Furthermore, the updated 2018 model also indicated the central crossing performs better than any other option.</p> <ul style="list-style-type: none"> • Additionally, whilst the western crossing option does provide greater congestion relief to Mutford Lock, it provides less congestion relief to the A12 / A47. It was a scheme objective to reduce traffic volumes on the A12 / A47, part of the Strategic Road Network which experiences air quality problems, and severe congestion. It was not a scheme objective to specifically reduce traffic flows on Mutford Lock. • The closure times for both bridges in the assessments were 5 mins for the A47 BB and 6 mins for the Scheme Bridge. The different opening times for the two options arise from the different nature of the two bridges. The Bascule Bridge is a double leaf bridge and a 5 minute lift time has been assumed whereas the Scheme Bridge is proposed as a single leaf bridge with an assumed lift time of 6 minutes.
Effect on Berthing		
<p>Response to the Impact of the Scheme on the Port of Lowestoft Report (REP5-023)</p> <p>Paragraphs 6.1 – 6.6</p> <p>Post Inquiry Note in Respect of CA Matters (REP5-024) Paragraph 17</p> <p>Paragraph 26</p>	<p>Port Sterilisation – parcels 3-03, 3-36 and 3-55</p> <p>ABP posits that as the plan at Annex 6 to the ABP Written Representations identifies, the Applicant seeks a total cross-sectional distance of 72m including 5m on either side of the bridge for the purposes of protection of the bridge (i.e. parcels 3-03, 3-36 and 3-55). With respect, if that land is to be the subject of compulsory acquisition so as to control rights of access to that land (both on land and over the water) it necessarily restricts and inhibits the extent of both the harbour and the quay which are available for the purposes of harbour activity including the berthing of vessels both to the east and west of the proposed bridge.</p> <p>In particular ABP asserts that the space is not available for any type of mooring of vessels or associated tying of ropes, as the presence of vessel and mooring ropes within this area would therefore conflict with the specific purpose for which the Applicant states the rights are required. As such, ABP could not risk utilising this area for any purpose.</p>	<ul style="list-style-type: none"> • The rights sought on the 5m access strips are to allow access for inspection and maintenance operations, it is not the Applicant's intention that this should prevent the use of mooring equipment at all times. This is provided for in the draft Deed mentioned above. • The principal activities that SCC is seeking to restrict are those that could directly and physically interfere with the structural integrity of the structure, for example breaking of ground or create significant risks, for example activities that may be associated with storage of certain types of materials. The Applicant does not intend to unnecessarily limit day to day operation of the Port in this area. • ABP has taken a worse case approach in assuming that these plots are a complete loss to its statutory undertaking, which is not the case.
<p>Response to the Impact of the Scheme on the Port of Lowestoft Report (REP5-023)</p> <p>Paragraphs 6.10 – 6.15</p> <p>Response to the Impact of the Scheme on the Port of Lowestoft Report Annex 5 (REP5-030)</p>	<p>Port Sterilisation – To take account of Mooring and Mooring Lines (and thus berth space lost)</p> <p>ABP sets out that:</p> <ul style="list-style-type: none"> • the 10m allowance for mooring lines is the minimum acceptable distance and the minimum safety margin for vessel lateral movement during manoeuvring and also an allowance for ranging; • the Applicant's assumption regarding berth lines (i.e. that all berths lose 20m in length for mooring lines) is incorrect – it is customary for vessels at 	<ul style="list-style-type: none"> • The Applicant's mooring proposal was not suggested as suitable for all vessels, in particular large vessels, and as shown in the ABPmer appendix would not be needed for those vessels to continue using berths 1 and 2. • The plan below shows the extent of berths 1 and 2 outside the Scheme's proposed fender line which the Applicant believes will remain available for operations, this shows that there will be 12 mooring bollards available for use, considering the mooring arrangements outlined by ABP, namely 10m separation with crossing lines, the berths would be able to accommodate a 60m and a 45m vessel concurrently.

Reference	Extract / Summary	Applicant's response
	<p>the Port to berth ten metres apart with their ropes crossing within the 10m mooring zone;</p> <ul style="list-style-type: none"> the mooring proposal put forward by the Applicant is not acceptable as it would not be acceptable to vessel masters or harbour masters, given the tidal nature of the Port; it does not provide for a head and stern line in compliance with the BS code; the mooring proposal would also require at least 6 bollards to be built over a suspended deck. <p>Annex 5 goes on in further detail to explain that the Applicant mooring proposal:</p> <ul style="list-style-type: none"> would not be practical to deploy as it uses a single line to simplify what would be a multi-line system; it is in reality not practical to use just one bollard at the bow and one at the stern, this would impose excessive loadings on the mooring equipment, as a vessel rises and falls on the tidal cycle or as cargo is loaded or discharged; would provide extremely limited holding powers and would at times mean the ropes would be nearly perpendicular to the horizontal plane; shows spring lines that are in fact unlikely to be used; doesn't take account of the fact that mooring decks can be above quay level (providing an example at Lowestoft); overly simplifies the reality of mooring within a port. The spacing of bollard, relative to the vessel's fairleads is very important. Unless the berth has been designed specifically for the vessel, with mooring points aligned to fairleads, it is necessary for vessels to deploy lines along the quay, with due regard to the rated capacity of the line, bollard and vessel mooring equipment; is consistent with typical mooring systems used in tidal ports, illustrated by examples from across the country. <p>Appendix A to ABP's Annex 5 sets out potential mooring arrangements that could work following construction of the Scheme.</p> <p>This proceeds on the assumption that the footprint of the bridge at the point it crosses the berth is approximately 25 m wide. In addition, it assumes that there will be a 10 m safety margin either side of the bridge, where vessels will not be permitted to berth. These margins will therefore extend to around 33 m either side of the carriageway, giving an overall footprint width for the bridge and safety areas of 91 m.</p>	
<p>Response to the Impact of the Scheme on the Port of Lowestoft Report (REP5-023)</p> <p>Paragraphs 6.16 – 6.22 and 6.28-6.29</p>	<p>Port Sterilisation – Berth No.4E</p> <p>ABP considers that once the 5m sterilized buffer strip is removed from Berth No. 4E, and the 10m for mooring lines on either end of the vessel are taken into consideration; and that Berth No. 4E will have physical constraints on either end of the quay (i.e. on the western end is a fence that reaches the edge of the quay, and on the eastern end is the LLTC), so that there is no ability to 'cross' mooring ropes with any vessels on adjoining quays this will leave 19.5m of quay space on Berth</p>	<ul style="list-style-type: none"> The Applicant considers that with some modifications to existing infrastructure the residual length of Berth 4E could retain a level of utility, specifically the fence could be relocated (at the Applicant's expense). It is not clear whether ABP has considered this option. As can be interpreted from the below photograph, by moving the fence as shown, berth 4E could continue to be used by a vessel of 33m LOA (as seen in the photograph) utilising a spread of the 5 existing bollards.

Reference	Extract / Summary	Applicant's response
	<p>No. 4E. As such, ABP considers that this remaining space cannot be utilised by any commercial vessel that currently uses the Port, due to factors including the lack of bollards, the suspended quay, height of the tide, etc – these points are considered in further detail below.</p> <p>ABP also considers that it would not be acceptable for smaller vessels to use this space as:</p> <ul style="list-style-type: none"> the 'alternate mooring arrangement' proposed by the Applicant is inadequate and inappropriate, particularly for small vessels. Due to their size, small vessels require long head and stern lines to safely moor them to the quay – 19.5m is simply not enough space to moor a vessel and accommodate the mooring lines necessary to securely moor the vessel; berth 4E is located on a suspended quay, and only provides 1 existing bollard to tie a vessel onto. The existing bollard must be located in its particular position over the support beams of the suspended quay, due to the structural integrity of the quay. As such, ABP is unable to either move the position of the bollard, or add new bollard within the quay area; the vessel's Master must leave some room to manoeuvre the vessel – this is similar to the 'car park' concept, where a vehicle requires sufficient additional room to manoeuvre in and out a car park. For example, a 19.5m berthing space cannot accommodate a 19.5m vessel (without even taking into consideration the additional space required for mooring ropes); the infrastructure of the quay means that it is unsuitable for smaller vessels in that such vessels may be located between 2 – 4m below the quay line due to the water level in the Port. This gives risk to the risk that a small vessel or part of its structure could be become wedged and consequently damaged beneath the suspended quay; Smaller vessels require increased protection, such as the use of 'sausage fenders' (around 12m long and 1m in diameter) and a large spread of mooring lines (i.e. 20-30m lines) in order to address the rise and fall of the tide. Additionally, with large differences between quay height and vessel decks, smaller vessel gangways are not long enough to reach the quay, which means there is no access between the vessel and the quay; and Best practice is for small vessels to be moored alongside solid quay berths or pontoons. <p>Accordingly, by reason of the above factors, it is clear that Berth 4E will be effectively sterilized as a result of the Scheme, as it will be unusable for Port operations. As such, this berth becomes a direct loss to ABP</p> <p>ABP also explains that a 129.6m space (which is what would be left between the Scheme fenders and the Knuckle) is not a safe and suitable berth for a vessel of 125m LOA.</p>	 <ul style="list-style-type: none"> The Applicant was not intending to suggest that the berth was suitable for a 125m vessel, during vessel simulations it was agreed that the berth would be suitable for vessels up to 100m LOA.
Response to the Impact of the Scheme on the Port of Lowestoft Report (REP5-023)	<p>Port Sterilisation – Summary and effect of berth loss</p> <p>ABP remains of the view that 165m of quay length is rendered unusable as a result of the LLTC, when measured in whole berths (i.e. North Quay 2, 3 and 4E). Although ABP notes that a small part of North Quay 2 would retain some minor</p>	<ul style="list-style-type: none"> Annexes 1 and 2 were only submitted by ABP at Deadline 5, therefore this information was not available to the Applicant during the preparation of the Port Impacts Paper. The Applicant is therefore now considering its previous conclusions and what ABP says the commercial effect of the Scheme has on berth occupancy. The Applicant is seeking clarification

Reference	Extract / Summary	Applicant's response
Paragraphs 3.9 – 3.17, 6.23 – 6.36 Annex 1 and 2 (REP5-026 and REP5-027).	<p>functionality, this cannot be practically utilised without combining this quay length with North Quay 1 for use by large commercial vessels. As such, in real operational terms, the whole of North Quay 2 is lost as an independent berth space within the Port as a result of the Scheme.</p> <p>ABP notes that this should be seen in the context of both current occupancy (closer to 42% than the 35% quoted by the Applicant) with its recent changes with the arrival of Peterson, and future occupancy, as suggested in Annex 1 (Berth Utilisation Report) and 2 (BVG Report) – given, for example that there will be a 100% increase in large commercial vessels within the Port within 2018 and 2019 just as a result of the Peterson deal.</p> <p>ABP considers that the Applicant is therefore incorrect to say that no additional information was available to the Applicant in preparing the Port Impacts Paper.</p>	<p>from ABP in respect to the calculations that site behind Tables 3-6 in the berth utilisation report.</p> <ul style="list-style-type: none"> The Harbour Master at the ISH confirmed that berthing allocations in the Port are historic and essentially have a referencing function. The actual mooring positions of vessels vary with vessel size and are rather dictated by bollard positions, with decisions made dynamically according to berth availability. As shown in the above figures, with slight alterations the remaining lengths of berth 4E and the whole of berth 2 could remain operational. As such it is irrelevant to measure the effect of the Scheme in 'whole berths' as ABP suggests, berthing loss should be measured by the remaining availability of bollard positions, taking account of the fact that, as the Harbour Master confirmed, mooring lines can be crossed, and the Applicant's acceptance that mooring lines can be laid across the rights strip. Therefore, the Applicant maintains that the direct loss of berth is 62m.
Response to the Impact of the Scheme on the Port of Lowestoft Report (REP5-023) Paragraphs 6.37 – 6.45	<p>Significance of Berth Loss and Serious Detriment</p> <p>ABP considers that, having regard to the <i>Hinkley</i> and <i>Richborough</i> decisions, this berthing loss must be seen in the context of the other effects of the Scheme on ABP's undertaking to indicate that a serious detriment arises from the Scheme.</p>	<ul style="list-style-type: none"> The Applicant agrees that the serious detriment test needs to consider all aspects of Scheme impact on ABP's statutory undertaking. In this case, this is made up of three broad headings: Navigation issues, Operational Issues and berth loss. In relation to each and all of these issues, the Applicant's position in the Port Impact Paper remains unchanged following ABP's Deadline 5 submissions - as such the Applicant considers that serious detriment would not be caused to ABP's statutory undertaking by the Scheme.
Environmental Statement Methodology		
Response to the Applicant's Response on Environmental Statement Matters (REP5-022) Section 2	<p>ABP suggests that the Applicant has failed to properly apply DMRB whereby the overall significance of an effect is formulated as a function of the receptor value and the magnitude of the impact. In particular it notes that the Applicant did not rebut ABP's proposition that it is a receptor of high value and that the magnitude of impact of the Scheme would be of major magnitude.</p> <p>At the hearing, ABP also noted their view that the Applicant had not taken into account the Secretary of State's Scoping Opinion on the same point.</p>	<ul style="list-style-type: none"> The DMRB has not been used for every aspect of the assessments within the Environmental Statement as alternative approaches have been used where it is appropriate to do so. For example, the Cultural Heritage chapter uses an assessment that draws upon both DMRB and guidance from Historic England and therefore it cannot be said that the Applicant has no flexibility to apply alternative approaches where it is appropriate to do so. It is of note that the DMRB, or any other published guidance, does not provide a distinct methodology for the assessment of impacts on Private Assets. The Applicant therefore prepared a methodology that drew upon the guidance within the DMRB Volume 11, Section 3, Parts 6 and 8 and IAN 125/15 as stated in Paragraph 15.3.1 of the ES. The Secretary of State in the Scoping Opinion advised in paragraph 3.14 that the methodology and criteria to be used should be "described in a discrete ES chapter, and any departure from that should be described in individual topic chapters as appropriate." With this in mind, the Applicant has proposed in Table 15-2 of the ES a methodology that is consistent with the Scoping Opinion and one that draws upon relevant aspects of the guidance referred to above. It is also of note that a very similar methodology for assessing impacts on private assets was proposed and accepted by the Examining Authority in considering the Norwich Northern Distributor

Reference	Extract / Summary	Applicant's response
		<p>Road ('NDR'), a DCO scheme that was granted consent in 2015. The Applicant applied similar criteria to that given in Tables 13.1 and 13.2 of the NDR ES in the ES for the Scheme but has used the IAN and DMRB guidance to further inform suitable criteria for the urban context of the Scheme.</p> <ul style="list-style-type: none"> The purpose of the EIA is to identify the relevant factors and set out a judgement on the likely significant effects of the development - the EIA Regulations do not prescribe a methodology for doing so. With regard to the assessment upon Private Assets a methodology has been proposed that is considered to be appropriate to assess the impacts upon all Private Assets, including both private and commercial interests. This methodology has been applied consistently across all assets within the assessment – this is important to note as it was not the role of this chapter to define likely significant effects solely for ABP. The effect to ABP can be contrasted with, for example, Motorlings, where the land take as a percentage of their ownership is significantly greater than the percentage of the Port that is taken for the Scheme. Furthermore, Motorlings makes use of their entire plot for exhibiting cars that are for sale whereas ABP, as indicated in the assessment, have significant capacity within the Port to relocate activities. Sensitivity and magnitude was therefore not defined in the same way as under DMRB.
Response to the Applicant's Response on Environmental Statement Matters (REP5-022) Paragraph 3.2	ABP notes that there is no basis for the various criteria given in ES Table 15-2 of the ES.	<ul style="list-style-type: none"> In light of the above, the Applicant considers that there is no legal or policy requirement which prevents it from being able to propose a methodology within an assessment that it considers is appropriate to determine whether a significant effect is likely or not and the Applicant believes that they have proposed significance criteria that are appropriate for this purpose.
Response to the Applicant's Response on Environmental Statement Matters (REP5-022) Section 3	ABP suggests that the Applicant misapplied its own methodology in its Deadline 4 submissions, and that by its own definitions in table 15-2 of the ES, the effect should have been given as moderate adverse (although ABP posit that it should actually be substantial adverse).	<ul style="list-style-type: none"> The Applicant's assessment has concluded a slight adverse impact because, with the information that was available to the Applicant at the time that the DCO application was submitted, it was considered that the land take from the Scheme in both the construction and operational phases is not used for any purposes that cannot be relocated to another area within the Port. Therefore, again given the Applicant's knowledge of the use of the Port, the Port is not compromised in its use as the use of the area taken for the Scheme can be relocated. The Applicant acknowledges that ABP has now submitted information which suggests that this may not now be the case in the long term future. However, the Applicant notes that the test of <u>likely</u> significant effects in EIA terms is not the same question as serious detriment under section 127. A judgement will need to be made by the decision maker on the basis of all information provided to it. However, on the evidence presented at Deadline 5, and given the responses set out in this document, the Applicant considers its conclusions still to be correct in terms of the <u>likely</u> significant effects of the Scheme in relation to navigation and berthing on the basis of the current use of the Port.
Response to the Applicant's Response on Environmental Statement Matters (REP5-022) Section 4	ABP considers that there is a lack of a clear and precise definition of the study area for the assessment – that stating 'directly adjacent' land parcels is not sufficient.	<ul style="list-style-type: none"> The Applicant can confirm that the entirety of the Port estate is accounted for within its assessment and hence all assessment was based upon, as stated above, the Applicant's understanding of the Port at the time of the assessment, including that sufficient alternative unused land in the Port is available.

Reference	Extract / Summary	Applicant's response
Response to the Applicant's Response on Environmental Statement Matters (REP5-022) Section 5	ABP suggests that it is somewhat surprising that the Applicant's assessment contained within the ES does not appear to consider the implications of the application of such rights (permitted development) within the Port.	<ul style="list-style-type: none"> Put in simple terms, the Port's PD rights are the development of operational land for the purposes of shipping and in connection with the embarking, disembarking, loading, discharging or transport of passengers, livestock or goods at a dock, pier or harbour or with the movement of traffic by canal or inland navigation or by any railway forming part of the undertaking. It can be appreciated that these are all activities that could be carried out at the berthing space loss assessed by the Scheme, or would involve navigation, which is also assessed. As such, any use of those rights is caught by the assessment of those aspects more generally – they do not need to be considered specifically and separately.
Funding		
Post Inquiry Note on Funding (REP5-025) Paragraph 6	ABP considers that it is not known whether the DfT funding grant is time limited, as this information has not been provided by the Applicant and that the Applicant should clarify the position.	<ul style="list-style-type: none"> Document reference: 4.2 Funding Statement, Appendix B Cabinet Report 17 May 2016. Para 13 states that Government funding has been secured from DfT's local major transport schemes budget. The Council has been advised that this funding is available until the end of the period 2020/21. The Applicant confirms that this is still the case and pending the outcome of the DCO application process the project is still on programme for the drawdown of funding from DfT.
Post Inquiry Note on Funding (REP5-025) Paragraphs 8 and 9	ABP suggest that the uncertainty of where the £8.3m of project funding earmarked to come from 'local contributions' will actually come from raises a greater level of attendant uncertainty than would be expected from a scheme of this sort and at this stage in the process.	<ul style="list-style-type: none"> The funding picture for the Scheme has now been simplified and clarified in Appendix 1 to the Applicant's Oral Summary of Case at the Compulsory Acquisition Hearing (Document Reference SCC/LLTC/EX/76, PINs Reference REP5-010).
Post Inquiry Note on Funding (REP5-025) Paragraphs 10 to 14	These paragraphs outline ABP's concern that various Council documents muddy the picture as to what the total cost of the Scheme is and what figure is 'missing', what would potentially need to be funded by the Council, and whether the Funding Statement can be considered to be correct. They suggest that further clarity is needed from the Applicant.	<ul style="list-style-type: none"> This explains how the various figures should be interpreted and how the Council has committed to underwriting the budgeted costs as necessary.
Post Inquiry Note on Funding (REP5-025) Paragraph 15	<p>ABP set out their view that:</p> <p>No detail has been provided to date to indicate whether any consideration has been made for financial provision to cover any costs of compensation and mitigation. With respect, rather more vaguely, the Applicant initially made provision for £3.6 million and has now purported to increase this to £8 million in respect of property acquisition. Self-evidently, property acquisition does not equate to mitigation and compensation. In other words, even the apparent "additional £8 million budget pressure" has not been adequately, let alone robustly, identified as being sufficient to provide for the funding of the Scheme.</p> <p>The Section 151 Officer's letter, and for that matter other reports, do not appear to suggest anything in the nature of a "blank cheque" indemnity for any (unspecified) figure representing the costs of the Scheme. That does not appear to be an approach consistent with the Government guidance related to procedures for the compulsory acquisition of land under the 2008 Act, in particular paragraphs 17 and 18.</p>	<ul style="list-style-type: none"> The Applicant considers that it is a mischaracterisation of the MHCLG Guidance to say it calls for a 'blank cheque'. In particular the Applicant notes that paragraph 17 states: "<i>It may be that the project is not intended to be independently financially viable, or that the details cannot be finalised until there is certainty about the assembly of the necessary land. In such instances, the applicant should provide an indication of how any potential shortfalls are intended to be met. This should include the degree to which other bodies (public or private sector) have agreed to make financial contributions or to underwrite the scheme, and on what basis such contributions or underwriting is to be made.</i>". This is what the Applicant has produced and shown.
DCO Drafting		

Reference	Extract / Summary	Applicant's response
Written Summary of Oral Submissions at DCO ISH (REP5-021)	Article 3 - disapplication of Port Byelaw 36. ABP set out that the harbour master will need to know when diving is to take place, and that this will need to be on the day that diving is to take place, so that known vessel movements can be taken into account.	<ul style="list-style-type: none"> The Applicant has agreed to the removal of this byelaw from article 3 – this was taken forward at Deadline 5.
Written Summary of Oral Submissions at DCO ISH (REP5-021)	Article 20 – Temporary suspension of navigation within Lake Lothing in connection with the authorised development. ABP sets out that the role of the NWG within this article is inappropriate and unnecessary as it is an ad hoc group and ABP already carries out its own consultation in carrying out its statutory duties.	<ul style="list-style-type: none"> The Applicant has brought forward the DCO proposals with a continuation of the role of the Navigation Working Group to ensure that it is consulted, as a change to the scheme of operation may not necessarily be a navigational safety issue. The Applicant does not have control of ABP's consultations under the Port Marine Safety Code, and has brought forward this article in recognition of its duties as a public authority and scheme promoter, which are relevant above and beyond ABP's statutory duties as harbour authority.
Written Summary of Oral Submissions at DCO ISH (REP5-021)	Article 21 – Removal of vessels ABP suggests amends to this article to aid clarity.	<ul style="list-style-type: none"> The Applicant brought forward changes of this type to this article at Deadline 5.
Written Summary of Oral Submissions at DCO ISH (REP5-021)	Article 40 – Scheme of operation ABP considers that this article needs to be seen in the context of its wider concerns in relation to the Scheme to be discussed at the March hearings. ABP refers to its ongoing concerns regarding the drafting of Article 40, and its detailed comments regarding the draft Scheme of Operation, both of which were submitted at Deadline 4.	<ul style="list-style-type: none"> The issues as to the effects of the Scheme itself are set out above. In respect of the drafting of article 40 itself, given that it will relate to the Scheme in whichever form it ends up in at the Examination, the Applicant considers that the parties are not too far apart. However the Applicant's position as to the need for it to retain control of the SofO, the role of the NWG and the Secretary of State and the nature of ABP's consent remain as set out in the Written Summary of the DCO Hearing (Document Reference SCC/LLTC/EX/75, PINS Reference REP5-009).
Written Summary of Oral Submissions at DCO ISH (REP5-021)	Article 41 – Extinguishment of right of navigation within Lake Lothing in connection with authorised development Essentially ABP is concerned to ensure that it, or other relevant bodies, will have the ability to access the water between the bridge pier and the quay side in time of emergency – accident, pollution etc.	<ul style="list-style-type: none"> The Applicant brought forward changes to this article at Deadline 5.
Written Summary of Oral Submissions at DCO ISH (REP5-021)	Article 44 – Protection against dredging ABP accepts that its position on this matter has changed, but is concerned that the wording of this article is impractical. This is because the harbour master is given limited notice that dredging is to take place, and that there will be occasions when ABP will require dredging to be undertaken at short notice. This should be seen in the context that ABP could not undertake a dredging campaign of the harbour without including the limits of dredging. ABP therefore suggests that it should only notify the Applicant of dredges, and that such notification should align with the 5 day period it has for the same process with the MMO.	<ul style="list-style-type: none"> The Applicant brought forward changes in this regard at Deadline 5. It appreciates ABP's concerns and has made changes of the nature suggested by ABP in respect of ABP's continuous maintenance dredge programme. However, the Applicant will require to consent to any capital dredging (as provided for in the article) within the limits of dredging as this will be an unusual activity, and has the most scope to affect the new bridge.
Written Summary of Oral Submissions at DCO ISH (REP5-021)	Article 45 – Byelaws ABP considers that requiring the Applicant's consent to make byelaws is a fetter on its duties and unnecessary given the byelaw making process. It also notes that Highways England does not have the same power sought in respect of the existing Bascule Bridge.	<ul style="list-style-type: none"> The Applicant's position on these matters remains as set out in the Written Summary of the DCO Hearing (Document Reference SCC/LLTC/EX/75, PINS Reference REP5-009).

Reference	Extract / Summary	Applicant's response
Written Summary of Oral Submissions at DCO ISH (REP5-021)	Requirement 3 ABP considers that this requirement is wide, vague, non-specific and inappropriately general. It also considers that the design of the authorised development must be tied to the environmental statement ("ES"). The ES forms an important and significant part of the statutory process, and the DCO authorised is underpinned by this document. In addition, the ES is a blunt instrument, with which compliance is required.	
Written Summary of Oral Submissions at DCO ISH (REP5-021)	Requirements 4, 6 and 7 ABP sets out that ABP should be noted in these requirements as being required to be consulted given its duties as SHA.	
Written Summary of Oral Submissions at DCO ISH (REP5-021)	Requirement 11 ABP considers that this requirement needs to be seen in the context of its wider concerns in relation to the Scheme to be discussed at the March hearings. ABP refers to its ongoing concerns regarding the drafting of the requirement which were submitted at Deadline 4.	<ul style="list-style-type: none"> The Applicant's changes to requirement 11 and ABP's protective provisions reflect the Applicant's position that ABP should approve the final NRA for the Scheme. Although the Applicant does not accept the need for an emergency berth, if one were determined to be necessary by the Secretary of State, it would not be precluded by the wording of this requirement, and would need to be dealt with elsewhere. As such, the Applicant would hope that ABP can agree to the wording of this requirement.
Indemnity		
Written Summary of Oral Submissions at DCO ISH (REP5-021) Paragraphs 10.2-10.4	Unique ABP has made clear that due to the "unique" circumstances of this case, the offered indemnity is "not fit for purpose". This is because the standard indemnity is not designed to accommodate the type of fundamental risk and hazard which the Applicant now proposes to introduce into the middle of the operational statutory undertaking. The standard wording does not indemnify ABP for those new risks and hazards – as detailed below – and which extend to the potential actions or failures of not just the Applicant but a wide variety of third parties. Without an indemnity, ABP could find itself corporately liable for the actions of others over whom it has no control.	<ul style="list-style-type: none"> The Applicant does not deny that it is creating a new structure within the existing port, but considers that the dispute between the parties rests on the extent that it is a 'hazard' to Port users. This should be seen in the context of the pNRA which concludes that navigation risk will be as low as reasonably practicable following the implementation of mitigation measures. The Applicant recognises that aspects of this new bridge create risks beyond those contained within 'standard' indemnities in DCOs, but considers that this still needs to be considered through the lens of what additional risks are created during the construction, maintenance and operating of the bridge, as opposed to the fact that it will itself exist. Essentially, the Applicant has accepted the need to indemnify for the risks that derive from the way the bridge works (and made changes at Deadline 4 and 5 to provide for this), but not the fact that it is there, or the fact that third parties will have to change behaviour to account for its existence. This is for the reasons set out in the Port Impacts Paper and expanded upon below. In relation to the existing bridge, whilst the history that ABP sets out may be correct, clearly there would have been an expectation at the time that the Port would grow through the bridge, otherwise there would have been no need for the indemnity.
Written Summary of Oral Submissions at DCO ISH (REP5-021) Paragraphs 10.7-10.9	New Safety Hazard ABP considers that it cannot be argued that the LLTC does not result in the introduction of a new safety hazard into the Port resulting in increased risk.	
Written Summary of Oral Submissions at DCO ISH (REP5-021) Paragraphs 10.10-10.14 and part 11	Precedents ABP queries the applicability of the precedents provided by the Applicant in its Port Impact Paper, including the existing Bascule Bridge Agreement, noting that, in the case of the latter, the circumstances are entirely different in that historically, the Port of Lowestoft effectively grew "through" the bridge, i.e. the crossing was there first and for Lake Lothing to gain access for the sea, port traffic had to pass under the existing crossing.	

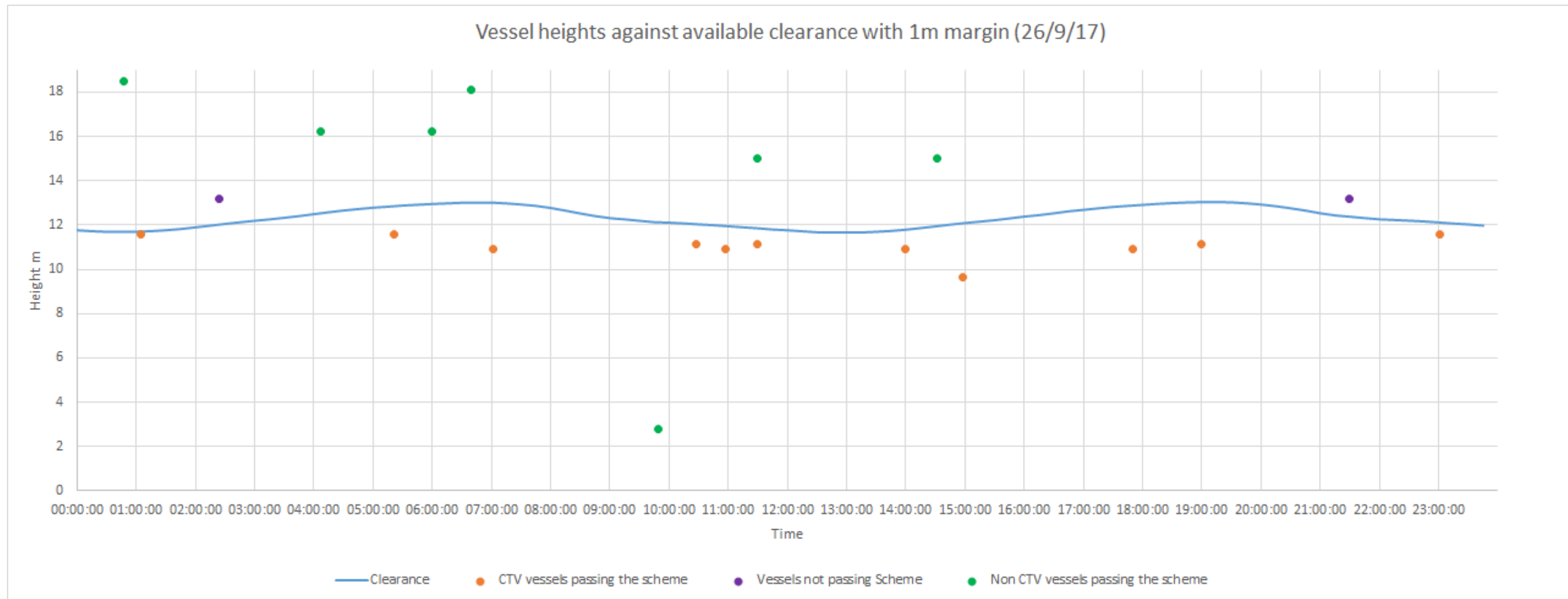
Reference	Extract / Summary	Applicant’s response				
Written Summary of Oral Submissions at DCO ISH (REP5-021) Paragraphs 10.15-10.17	<p>Compensation Code</p> <p>ABP contends that simply relying on the Compensation Code does not address the impact the LLTC will have on ABP's ability to carry out its statutory undertaking in circumstances where ABP may incur losses first, which far exceed the loss in value or disturbance to its property which actually falls within the remit of the Compensation Code and secondly, losses which are not even contemplated by the Compensation Code.</p> <p>In simple terms, ABP cannot be expected to be responsible for and bear liability for the risks that will follow if the bridge is constructed and operated by the Applicant – both as statutory undertaker and landowner.</p>	<ul style="list-style-type: none">The Applicant was not implying that the Compensation Code covers all potential risks and losses otherwise it would have suggested no indemnity at all. That is why the Port Impacts Paper discusses other issues in relation to the indemnity.However, the Applicant is unclear as to what ABP means by 'bearing liability' in this context - in particular, what grounds is it suggesting that a third party would make a claim against ABP for?ABP will be able to carry out its statutory duties to take account of the bridge and as long as it does so properly, no claim could be made against it on the basis that the bridge itself is present.A parallel can be drawn with the case of <u>Great North Eastern Railway Ltd v Hart</u> [2003] EWHC 2450 (QB) It concerned the Great Heck/Selby rail crash of 2001 where a driver left the M62 just prior to its crossing of the railway and crashed onto the railway, whereupon his car was then hit by a train and there was a major derailment, causing fatalities and damage. The driver’s insurers admitted liability to the train operator and to Network Rail for their losses but sought a contribution from the SoS for Transport (as highway authority) for negligence in constructing roadside barriers that were said to be too short in the relevant location. The claim failed on the facts but Morland J did say that there was no reason why a highway authority would not owe a duty of care in such a case – including to the users of the railway that was crossed by the bridge.It can be seen that that case involved the nexus of one statutory undertaking crossing another dealing with a third party claim; and where the liability arises because of the failure of the bridge, at this <u>location</u> over another undertaking, then the bridge owner would have a duty of care.Such a scenario would equally apply to the new bridge at Lowestoft.				
Written Summary of Oral Submissions at DCO ISH (REP5-021) Paragraphs 12.3-12.5	<p>Public Policy Position</p> <p>ABP considers that the 'public policy' position of general entitlement to compensation arising from the use of public works is not relevant as ABP is not a person using a public work.</p> <p>ABP's concern relates to liability for issues that arise by virtue of ABP undertaking its normal port operations (i.e. operation that would have been undertaken in absence of the bridge) but with the imposition of the LLTC bridge through the middle of its statutory port estate.</p> <p>As such, ABP considers that the Applicant must indemnity it for any loss, damage, etc suffered by ABP which would not have otherwise occurred but for the construction, location and/or operation of the LLTC.</p>	<ul style="list-style-type: none">The Applicant does not suggest that ABP is a person using a public work. The point was that ABP is not at any increased liability risk from a claim arising from the fact that the public work now exists within the harbour - the users of those public works will have relevant claims against the party at blame.Once the statutorily authorised bridge is present, ABP and its tenants, occupiers and visitors will need to react to it in the way that they act and in the way that statutory duties are carried out. These acts and duties are not carried out in a vacuum of an apparent non-changing world, and so must adapt accordingly.ABP has not set out any legal basis for its argument, and indeed it has now added the word 'location' to its list of terms that must form part of the indemnity – this is unprecedented.				
Written Summary of Oral Submissions at DCO ISH (REP5-021) Paragraphs 12.9-12.10	<p>Missing Risks</p> <p>ABP sets out a list of examples of activities that it considers should be covered by an indemnity from the Applicant.</p>	<p>On this list, the Applicant responds as follows, noting that paragraph 62(1)(d) refers to a list as 'including but not limited to':</p> <table><tr><th>Risks arising from the location of the Scheme</th><th>Applicant's Response</th></tr><tr><td>Collisions or crashing (a)-(c)</td><td>Where they derive during construction or the maintenance period, or as a result of failure, these risks would already be covered by the indemnity.</td></tr></table>	Risks arising from the location of the Scheme	Applicant's Response	Collisions or crashing (a)-(c)	Where they derive during construction or the maintenance period, or as a result of failure, these risks would already be covered by the indemnity.
Risks arising from the location of the Scheme	Applicant's Response					
Collisions or crashing (a)-(c)	Where they derive during construction or the maintenance period, or as a result of failure, these risks would already be covered by the indemnity.					

Reference	Extract / Summary	Applicant's response		
				In any other scenario, if a car crashes into the Port, the Port or tenant can sue that driver. If a vessel crashes into it, as long as it has been suitably notified of its existence, the master could not sue ABP in any event.
			Disruption to road, rail or marine traffic and damage to its rail equipment (e), (f) and (l)	<p>Such events during construction or the maintenance period, or as a result of failure would already be covered by the indemnity; although the Applicant notes that delay would in any event be able to be mitigated through ABP's approvals through paragraph 54 of the PPs.</p> <p>Once the Scheme is built, these risks cannot be accepted as part of the indemnity, as all vessels and drivers would be aware of the Bridge's existence. All traffic would be aware of its existence, and couldn't then sue ABP just because the bridge now exists as its existence would be a reasonably foreseeable event.</p> <p>Any such risk caused by a bridge failure is already covered by the indemnity.</p>
			Dropping of objects (g)	<p>This would be covered during construction, maintenance or failure by the existing indemnity.</p> <p>Any claim for dropping of objects outside of those periods could be brought against the person who dropped the object. If adequate security measures are put in place (which could be insisted upon by ABP as part of its plan approval under paragraph 54, notwithstanding that the Applicant has committed to do so in any event), no claim could be brought against the Applicant.</p>
			Pollution (d) and (h)	<p>This would be covered during construction, maintenance or failure by the existing indemnity and in some cases the Compensation Code.</p> <p>Any claim after that should rightly be made against any vessel owner who had not adequately discharged their relevant environmental obligations cognisant of the bridge's existence.</p>
			Disruption of Port radio communications by e.g., LLTC bridge structure, malicious act of radio interference on LLTC, effect of	This will be avoided as part of ABP approving the lighting and design of the bridge. It should not be for the Applicant to indemnify ABP for

Reference	Extract / Summary	Applicant’s response														
			<div>contractors' radios. (i)</div> <div>Disturbance or difficulty occasioned by background lights, e.g. LLTC carriageway lighting disrupting or conflicting with navigation lights, or causing glare to vessel masters (j)</div> <div>Terrorism or malicious acts and lightning strikes (k) and (m).</div>	<div>not doing this effectively.</div> <div>Whilst the Applicant considers these unlikely, these cannot be accepted for an indemnity as they would be uninsurable, being force majeure events.</div>												
Written Summary of Oral Submissions at DCO ISH (REP5-021) Paragraphs 12.11-12.14	Missing Losses ABP sets out a list of losses that it considers should be covered by an indemnity from the Applicant, and notes that Silvertown Tunnel and Thames Tideway both referred to 'operation' in their indemnity.	<div>In the context of the points made above (i.e. that the losses must arise from the construction, maintenance, failure or relating to the operating of the bridge) the Applicant responds as follows:</div> <table><tr><th>Loss</th><th>Applicant's Response</th></tr><tr><td>Direct, indirect and consequential financial loss, including loss of profit, loss of use, loss of reputation, loss arising from business interruption.</td><td>Already covered by para 62(1) of the Protective Provisions.</td></tr><tr><td>Loss of or damage to vessels, vehicles, equipment, plant, machinery and port infrastructure (including loss or damage to cargo and cargo transhipment costs)</td><td>Already covered by para 62(1)(d)(ii) of the Protective Provisions</td></tr><tr><td>Loss or damage to the LLTC and costs of repair and/or reinstatement, including the costs of repair or reinstatement of port facilities, and/or the LLTC.</td><td>No loss would be incurred by ABP as a result of damage or repair to the LLTC. Port facilities are covered by the item above.</td></tr><tr><td>Loss caused by pollution</td><td>Already covered by para 62(1)(d)(i) of the Protective Provisions</td></tr><tr><td>Loss caused by delay, loss of life, personal injury or occupier's liability</td><td>Not accepted for the reasons given above, such claims could be made under general law against the relevant party who would likely be the Applicant.</td></tr></table>			Loss	Applicant's Response	Direct, indirect and consequential financial loss, including loss of profit, loss of use, loss of reputation, loss arising from business interruption.	Already covered by para 62(1) of the Protective Provisions.	Loss of or damage to vessels, vehicles, equipment, plant, machinery and port infrastructure (including loss or damage to cargo and cargo transhipment costs)	Already covered by para 62(1)(d)(ii) of the Protective Provisions	Loss or damage to the LLTC and costs of repair and/or reinstatement, including the costs of repair or reinstatement of port facilities, and/or the LLTC.	No loss would be incurred by ABP as a result of damage or repair to the LLTC. Port facilities are covered by the item above.	Loss caused by pollution	Already covered by para 62(1)(d)(i) of the Protective Provisions	Loss caused by delay, loss of life, personal injury or occupier's liability	Not accepted for the reasons given above, such claims could be made under general law against the relevant party who would likely be the Applicant.
Loss	Applicant's Response															
Direct, indirect and consequential financial loss, including loss of profit, loss of use, loss of reputation, loss arising from business interruption.	Already covered by para 62(1) of the Protective Provisions.															
Loss of or damage to vessels, vehicles, equipment, plant, machinery and port infrastructure (including loss or damage to cargo and cargo transhipment costs)	Already covered by para 62(1)(d)(ii) of the Protective Provisions															
Loss or damage to the LLTC and costs of repair and/or reinstatement, including the costs of repair or reinstatement of port facilities, and/or the LLTC.	No loss would be incurred by ABP as a result of damage or repair to the LLTC. Port facilities are covered by the item above.															
Loss caused by pollution	Already covered by para 62(1)(d)(i) of the Protective Provisions															
Loss caused by delay, loss of life, personal injury or occupier's liability	Not accepted for the reasons given above, such claims could be made under general law against the relevant party who would likely be the Applicant.															
Written Summary of Oral Submissions at DCO ISH (REP5-021) Paragraphs 12.15-12.8	Acts or Omissions ABP considers that the 'acts or omissions' paragraph within the existing indemnity is insufficient and should reference operation of the bridge, as it does in the Poole, Hungerford, Gateshead and Silvertown schemes.	<ul style="list-style-type: none">The Applicant made amendments to this provision at Deadline 5 which relate to the operation of the bridge, but not its existence. It welcomes any further comment from ABP on this.														
Written Summary of Oral Submissions at DCO ISH (REP5-021) Paragraphs 12.19-12.21	Closure of Navigational Channel ABP explains its position that the indemnity should cover losses suffered as a result of the close of the navigational channel, noting that the closure will impact on a 'private right'.	<ul style="list-style-type: none">Whilst the Applicant does not agree that such a loss would be an impact on a private right as ABP does not 'own' the public right of navigation through Lake Lothing.However the Applicant does appreciate that during a complete closure west of the bridge would be severed from the rest of the Port. The Applicant is therefore discussing (through the draft Side Agreement) provisions in respect of how this would be compensated.														
Written Summary of Oral Submissions at DCO ISH (REP5-021) Paragraphs 12.22	Insurance ABP sets out that the Applicant should be required to take out sufficient commercial insurance to cover its potential liabilities.	<ul style="list-style-type: none">The Applicant will, as a responsible public body, have sufficient commercial insurance to cover its potential liabilities arising from the Scheme, however the scope of matters that ABP considers that insurance should cover is not agreed as it is beyond what the Applicant considers reasonable or necessary.														

Reference	Extract / Summary	Applicant's response
Written Summary of Oral Submissions at DCO ISH (REP5-021) Paragraphs 12.23-12.28	<p>Newport</p> <p>ABP sets out that it wants a separate indemnity from the DCO, and that the only relevant precedent is the M4 Newport Scheme. It notes that the indemnity for that Scheme is subject to a legal confidentiality clause, but that ABP has provided a detailed summary of its contents.</p>	<ul style="list-style-type: none"> In any event, as set out at the DCO hearing, an indemnity is only as good as the insurance behind it, whether it forms part of the DCO or not. In preliminary enquiries the Applicant's insurance team has advised that there is not an insurance product on the market which would provide for the full suite of losses and liabilities suggested by ABP in its 'summary' of the Newport indemnity, indicating that such an indemnity is so broad as to be potentially uninsurable.

Figure A : Height of vessels accessing the port on 26/9/17



Appendix A: Justification for temporary possession of certain plots within the Port of Lowestoft

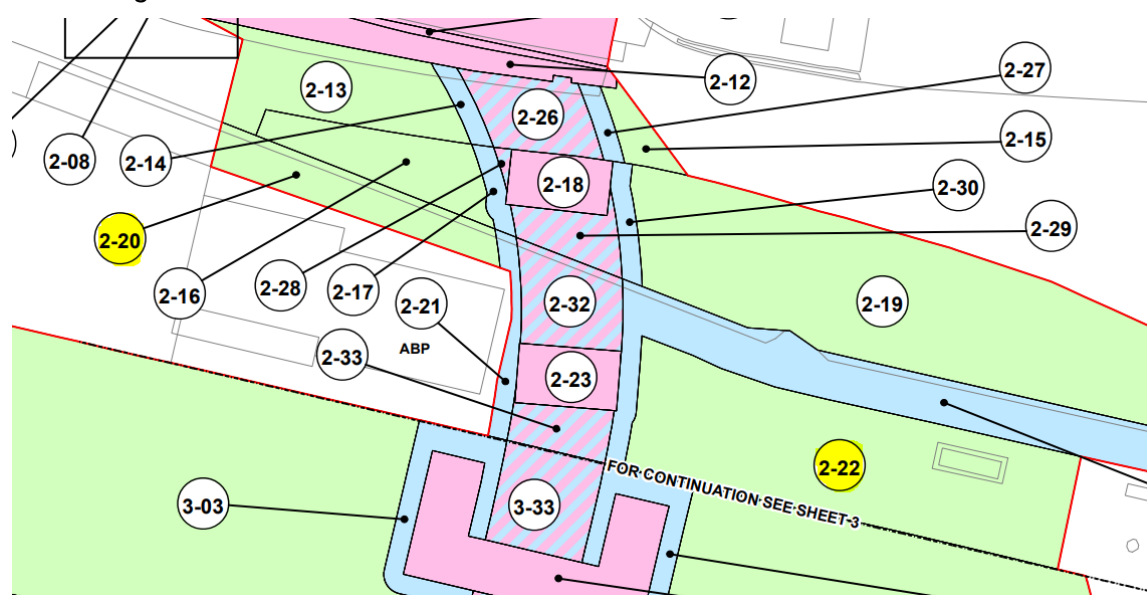
1.1 Introduction

- 1.1.1 At the Compulsory Acquisition Hearing ("CAH") on 8 March 2019, the Examining Authority indicated that further information supporting the geographic extent and purpose of the temporary possession plots would be of assistance in understanding the rationale behind the Applicant's proposals. This short note addresses the two principal issues; that associated with land on the North Quay, and that associated with Lake Lothing itself.
- 1.1.2 The nature of construction activities and their sequencing are set out in section 5.6 of the Environmental Statement (Document Reference 6.1, PINS Reference APP-136). Paragraph 5.65 therein confirms that construction compounds will include site offices and car parking, and that the total area of the compound which includes land owned by ABP is approximately 1.2ha. Figure 5.4 (Document Reference 6.2, PINS Reference APP-139) of the Environmental Statement illustrates the location of this construction compound covering part of North Quay and the Network Rail maintenance yard to the north of Commercial Road.
- 1.1.3 The Applicant continues to work with its contractor to develop the construction methodologies and construction programme for the project. At the conclusion of that process, there will be clear visibility over the nature and timing of activities for the entire construction period. This information will then be shared with relevant stakeholders including ABP, to enable forward planning/integration with port activities/requirements.
- 1.1.4 In the meantime, the Interim Code of Construction Practice, Appendix 5A to the Environmental Statement (Document Reference SCC/LLTC/EX/61, PINS Reference REP4-017) provides (at paragraph 2.4.7) that the layout of the compounds must ensure that access is maintained for port operations at all times along Commercial Road (with alternative arrangements being subject to the DCO's protective provisions for the harbour authority); that such access must allow all likely plant and vehicle movements to take place (in that area); and that the orientation of the compound activities must, as far as reasonably practicable, be arranged to reduce environmental effects on the users (or occupiers) of land adjacent to the compounds.

1.2 North Quay: Plots 2-20 and 2-22

- 1.2.1 These plots are highlighted below on an extract from Sheet 2 of the Land Plans (Document Reference 2.3, PINS Reference APP-018).

Figure 1- Extract from Land Plans



1.3 Plot 2-20

- 1.3.1 Plot 2-20 covers Commercial Road up to the western end of Shed 3. This plot is included because the Applicant is considering a construction methodology that would involve the Network Rail span of the bridge being constructed at right angles to the main alignment (i.e. parallel to Commercial Road) and then being rotated in to place.
- 1.3.2 In this arrangement this span would oversail Commercial Road in the location of plot 2-20, and therefore, after allowing for positioning of cranes, temporary supports, traffic management (to avoid vehicles traveling from the west being 'trapped' behind Shed 3), and appropriate safety clearances, plot 2-20 has been included in the DCO's proposed temporary possession limits.
- 1.3.3 This construction methodology is illustrated in the Design Report Appendix 2 - OAIP for Approach Span (Document Reference 7.5, PINS Reference APP-125). An extract is provided below showing how the span is constructed parallel to the railway tracks on pier number 7, before being rotated in to place. This construction methodology is being considered to minimise the duration of any possession of the railway.
- 1.3.4 If the Applicant did not proceed with such a methodology as set out above, either the Applicant would not seek to take temporary possession of such land, or alternatively it would review its requirement, depending on the need for crane positions, to instead lift in this section of deck. The DCO's protective provisions for the harbour authority would allow a re-examination of the Scheme requirements in the context of the prevailing construction methodology.

Figure 2 - Extract from Design Report – plan view of rotated section

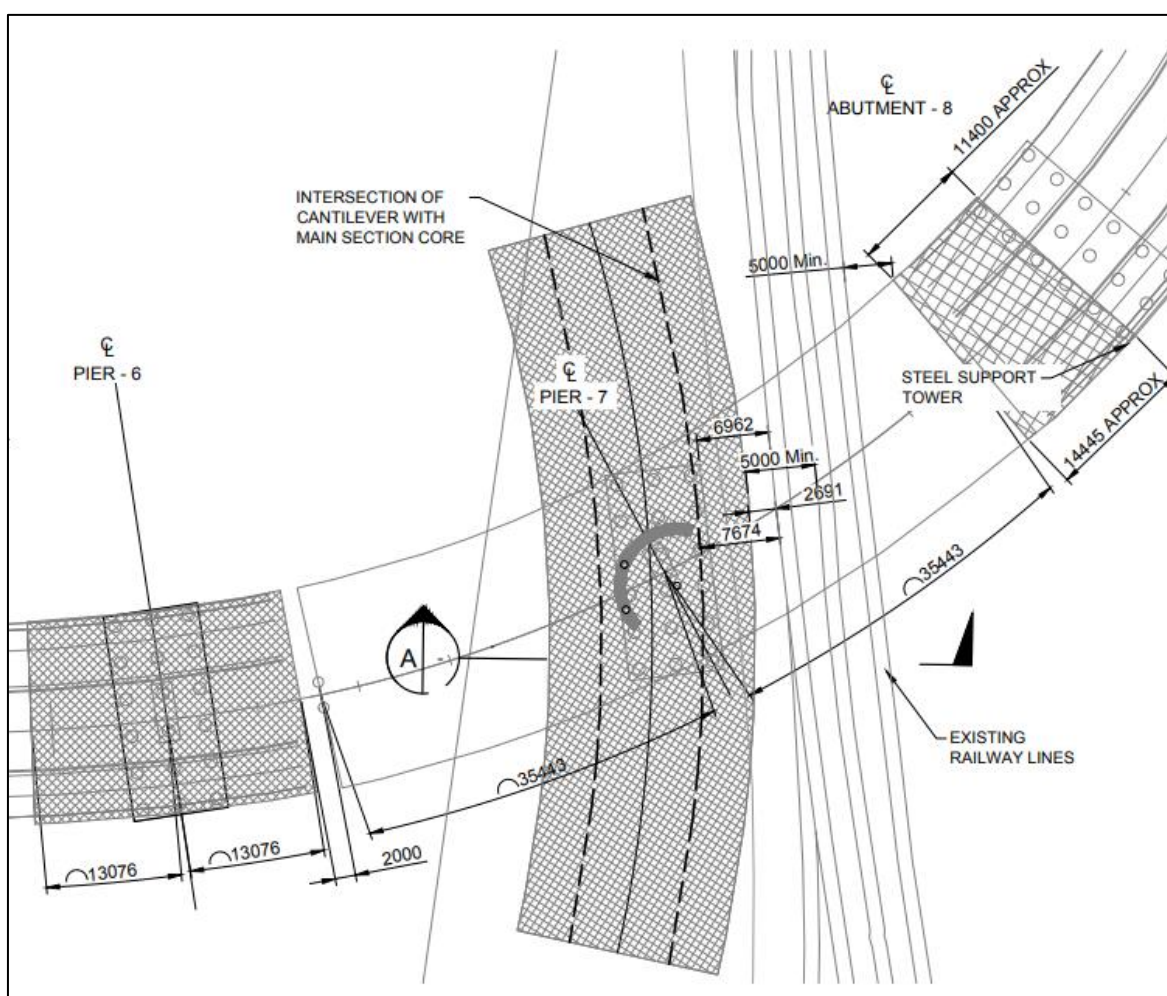
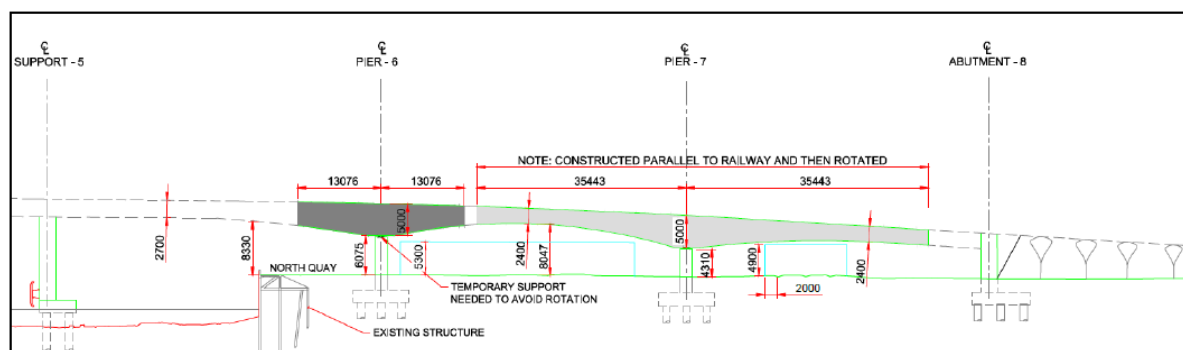


Figure 3 - Extract from Design Report - long section of rotated section



1.4 Plot 2-22

- 1.4.1 Plot 2-22 borders North Quay 1, North Quay 2, North Quay 3 berths. It does not front Silo Quay, which is further to the east and is where the grain vessels berth. Therefore, temporary possession of quay space adjacent to berthing grain vessels is not sought by the Applicant.
- 1.4.2 The Book of Reference records that plot 2-22 is approximately 3374m². It is approximately 30m deep (north to south) and 112m m long (east to west). It is fronted by a 4m depth of suspended deck, which imposes a 4 tonne axle weight limit on vehicles using this area. There are no buildings in the plot. The plot is bisected by railway lines, but these are not currently in use.
- 1.4.3 ABP has suggested that a 15m set back from the quay to the construction compound boundary is required to maintain quayside operations (allowing 5m for the suspended quay and 10m for port operations). ABP has also noted that this area is used as a marshalling area for HGVs associated with Dudman's grain operations, noting that up to 30 HGVs may be waiting at any one time.
- 1.4.4 An adequately sized compound in this location is critical to an efficient and timely construction programme. As can be seen from the mainline long section sheet 1 of 2 (Document Reference 2.9, PINS Reference APP-040) there is approximately 50m from centre of pier to centre of pier, as such this is the nominal length of beams that will be required for these spans. The deck is approximately 20m wide in this location.
- 1.4.5 It may well be the case that full sections (i.e. sections of deck from pier to pier) are required to be assembled before being lifted in to place in a single lift. In that instance there is therefore a section some 50m long by 20m wide that would first need to be assembled in plot 2-22 and then lifted in to place. There are at least two sections that would need to be assembled/lifted in to place from plot 2-22, those being the sections north and south of pier 6 (refer to Figure 3 above for the position of pier 6).
- 1.4.6 Typically, such sections would be assembled in preparation of lifting in to place to a similar time frame to enable an efficient construction programme and in particular to minimise costs associated with the use of the very substantial cranes required for such a lift.
- 1.4.7 In this scenario, therefore, two 50 x 20m sections of deck could be required to be assembled concurrently within plot 2-22, occupying therefore the vast majority of this space, accounting for the need to avoid the suspended deck and ancillary requirements of site offices and car parking.

- 1.4.8 Cranage is a key consideration for the Scheme. It is likely a 500t crawler crane would be required to lift sections of deck. An example of such a crane is shown below⁵. This particular example has a footprint of the crawler tracks of approximately 7.6m by 10m.

Figure 4 - Example of 500t crawler crane (Liebherr LR 1500)



- 1.4.9 Consequently, the Applicant considers that the temporary possession of plot 2-22 is necessary for the construction of the Scheme and proportionate to the scale of the activities envisaged.
- 1.4.10 The Applicant recognises there are competing requirements for this land from ABP, though would note the following:
- Construction activities by their nature are phased and as such requirements for space vary through time. There is no advantage to the Applicant in occupying more land than it requires at any given time where there is a cost in occupying that land. As such the full extent of plot 2-22 is unlikely to be required throughout the entire construction process and the Applicant will seek to scale its footprint accordingly.
 - A lack of space could have the consequence of elongating the construction process through inefficiencies, which is not advantageous to any party.
 - The Applicant cannot agree to a 15m set back from the quay at all times due to the space requirements as outlined above. The Applicant therefore recognises that there will be times when sections of the quay are unavailable to ABP. This has been assessed in the Environmental Statement (see paragraph 15.5.10 *et seq*). The Applicant does not consider that the recently produced berth utilisation information provided by ABP as part of its Deadline 5 submissions (document reference REP5-026) alters the conclusions of the Environmental Statement with regard to the unavailability of this quay for the construction period. The Applicant considers that this data in fact supports its contention that there remains sufficient berthing availability within the Port to accommodate any displaced activity during construction. Given the nature of operations currently typically conducted from this quay, the Applicant considers the quay could remain operable with less than 15m set back, depending on a vessel's particular requirements. For example, allowing a 2m margin for a vessel gangway, 1m clearance, then two running lanes (one for parking one for passing traffic), this would equate to approximately 10m. ABP noted the prevalence of survey vessels alongside this type of quay at the Issue Specific Hearing which do not need heavy operations alongside but need a lot of technicians on board and small parts delivered. ABP also noted that the use of mobile cranes is complicated by the suspended deck in this location and cranes would typically be used elsewhere in the Port on a solid quay.

⁵ Sourced from <https://www.liebherr.com/en/gbr/products/mobile-and-crawler-cranes/crawler-cranes/lr-crawler-cranes/lr-1500/lr-1500.html#lightbox>

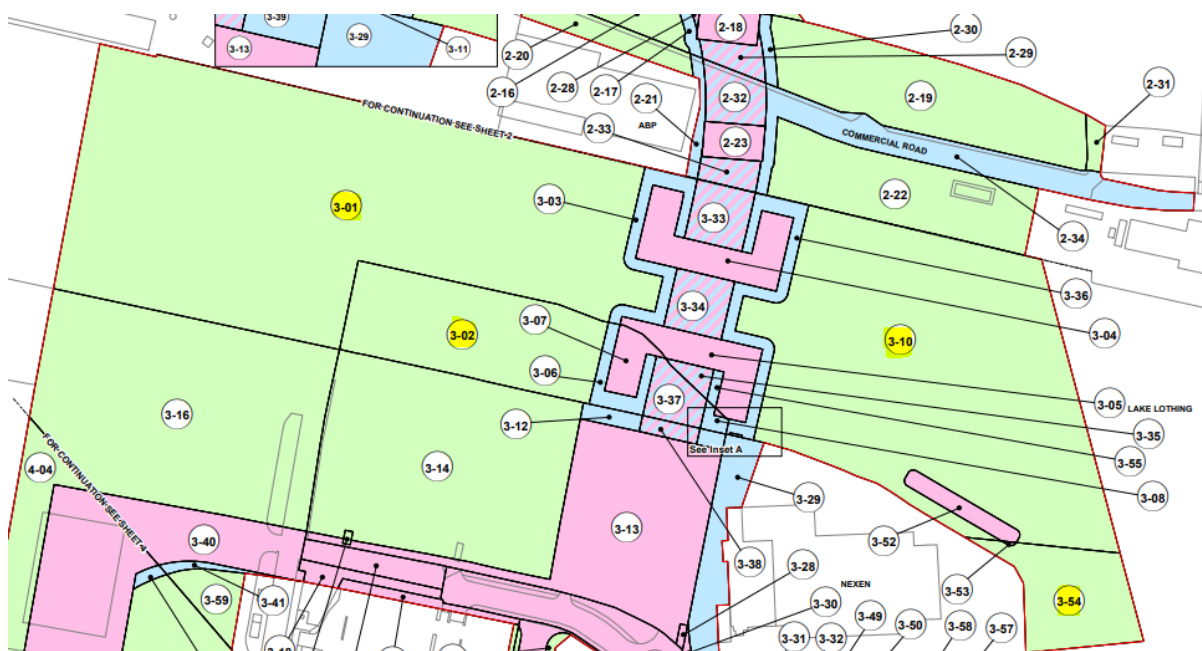
- d. The Applicant recognises that the area encompassed by plot 2-22 is used to marshal HGVs for Dudman's in anticipation of the weighbridge and grain reception facility. To inform further discussions, the Applicant has provided vehicular tracking information to ABP to indicate the space that may be required for HGVs to approach these facilities. However, the Applicant remains of the view (as set out in the Port Impact Paper (document reference REP4-015, paragraphs 9.3.2-9.3.3)) that a practical solution either by 'reserving' sufficient space for HGVs or identifying alternative marshalling areas within the available land within the Port (notably to the west of the Scheme) should be feasible. The Applicant would welcome further dialogue with ABP on this matter. The Applicant also notes that in the Issue Specific Hearing the Harbour Master stated that he generally has a good idea of when grain vessels are arriving, as such there remains a further opportunity to mitigate the impacts of the Applicant's occupation of this land by enabling the respective parties' requirements to be discussed in 'real time'.

1.4.11 As was discussed at the Compulsory Acquisition Hearing, ABP will benefit from and be protected by protective provisions in the DCO which provide that the Applicant cannot temporarily possess land from the harbour authority without its consent, such consent not to be unreasonably withheld, although consent can be given subject to reasonable conditions (see paragraph 53 of Schedule 13 to the draft DCO (document reference REP5-003)).

1.4.12 Such conditions might, for example, require the Applicant and the contractor:

- to make available all land to ABP when not occupied by the contractor as expeditiously as possible;
- not to close or obstruct Commercial Road until an alternative means of access to land west of the Scheme is agreed with ABP;
- not to obstruct access to Dudman's weighbridge; and/or
- to coordinate the closures of the navigation channel to minimise coincidences of berth unavailability east and west of the scheme.

1.5 Lake Lothing: Plots 3-01, 3-02, 3-10, 3-54



1.5.1 The above plots have been included within the Order to enable the range of construction equipment required to construct the Scheme to be accommodated within its immediate vicinity (including proposed pontoon) in a safe and efficient manner.

1.5.2 Such equipment is likely to include spud barges and piling equipment, illustrative examples of which are shown below.

1.5.3 Figure 6 below shows the Mersey Gateway Bridge under construction. This is a balanced cantilever design constructed by a moving formwork traveller (evident as a yellow structure at either end of the sections of deck). This is a type of construction that has been considered by the Applicant. The figure shows the scale of cranes, temporary supports and temporary jetty which is required to support the construction.

Figure 5 - Spud barge⁶

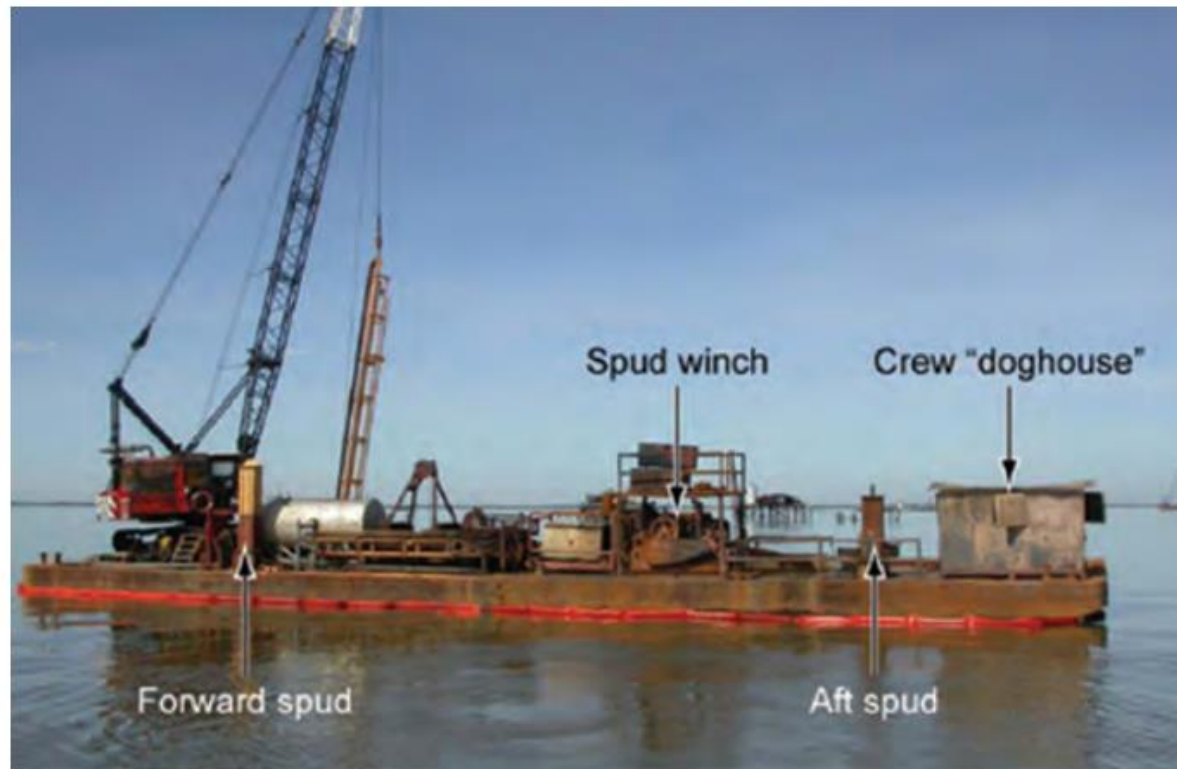


Figure 6 - Construction of Mersey Gateway Bridge (SCC photo)



- 1.5.4 This equipment will be required to move around the construction area in the environs of the Scheme and wherever possible to keep the navigation channel clear to minimise the interference with transiting vessels as much as possible, as is required by article 20 of the DCO - *Temporary suspension of navigation within Lake Lothing in connection with the authorised development*.
- 1.5.5 The Applicant recognises that the Port is a dynamic environment and berthing requirements will vary and as such the extent of the temporary possession area provides a degree of flexibility for the Applicant to manoeuvre around ABP and its tenants' requirements.
- 1.5.6 For example, at certain points in time ABP may require the Applicant's vessels to moor east of the Scheme, adjacent to the construction compound, and on other occasions west of the Scheme; as such, powers of temporary possession have been sought to accommodate this eventuality. Equally, when the navigation channel is closed, the Applicant will need to mobilise equipment on both sides of the Scheme.
- 1.5.7 As with the land-based plots, these plots remain subject to the DCO's protective provisions for the harbour authority, and additionally article 20 of the DCO, and so will require ABP's consent to be given before they can be utilised.
- 1.6 Summary**
- 1.6.1 In setting out the above, the Applicant has sought to provide evidence to the Examining Authority that the land subject to powers of temporary possession is required for the Scheme and proportionate, as it is necessary to facilitate its construction in a timely, efficient and economic manner.
- 1.6.2 Evidence is also before the Examining Authority in respect of the anticipated impact of this occupation, in terms of the unavailability of quay space and impact on operations of existing tenants.

⁶ <https://www.osha.gov/Publications/factsheet-spud-barge-safety.pdf>

- 1.6.3 The Applicant considers there remains a compelling case for including the above plots in the application for the Scheme and there are mechanisms in the form of the protective provisions for the harbour authority to require ABP to give its consent to the use of these plots and which would also allow ABP to place reasonable conditions on the occupation of this land (potentially through a licence or lease arrangement) to avoid any undue interference with the carrying on of its statutory undertaking.
- 1.6.4 The Applicant considers that such detail is better resolved with the harbour authority in full knowledge of the construction methodology and programme and as such deferred to later consideration between the parties which is the purpose of providing for such an arrangement through the DCO's protective provisions. This is standard practice in the case of affected statutory undertakings.

1.6.5

