

Great Yarmouth Third River Crossing
Report by Head of Planning

Summary:	The Broads Authority has been consulted on the proposal to construct a third river crossing across the lower Yare at Great Yarmouth. This report describes the proposals and sets out a brief commentary.
Recommendation:	That the Broads Authority support the proposal in principle, subject to detailed comments as outlined.

1. Introduction

- 1.1 There are currently two crossings of the River Yare in Great Yarmouth. The Breydon Bridge provides a crossing at the western edge of the town, linking between Runham Vauxhall and Cobholm Island/Southtown, which enables traffic to move between the A47 and A12 as well as access the commercial development in the southwest part of the town. The Haven Bridge, further downstream, provides a link from the quay area and the town centre to the Gapton Hall roundabout at Southtown, where it links to the A47 and A12. The Haven Bridge tends to function for local and town-bound vehicle movements rather than through traffic. There is no direct route across the river to either the port or the commercial areas at South Denes and all traffic accessing these areas has to pass over either the Breydon or Haven Bridge and then through the town. Both structures are opening bridges.
- 1.2 Both routes suffer significant congestion, especially at peak times, and there has long been an aspiration for a third bridge to provide a more direct link to the port and commercial areas, which would take this traffic away from the town centre.
- 1.3 In 2007 Norfolk County Council undertook a Stage 1 options exercise to investigate the constraints and options for the construction of a third river crossing. These were developed further in a study in 2009, which identified and considered a number of possible solutions before selecting the preferred option, which has been developed into the current scheme. Subsequently, £98M funding towards the scheme was secured from Department for Transport in 2017.
- 1.4 The planning application for the third river crossing is being developed by Norfolk County Council and this is the final stage of consultation prior to submission. Development of this nature constitutes a Nationally Significant Infrastructure Project (NSIP) so the application must be submitted to and determined by the Planning Inspectorate.

2. The proposed river crossing

- 2.1 The scheme, which has been developed proposes a third river crossing to be located towards the southern end of Great Yarmouth, crossing the River Yare approximately 1 kilometre to the south of the Haven Bridge. The access would be off the Harfrey's roundabout and then via a new roundabout to the slip road to the bridge, which would pass over Southtown Road before rising over the river. On the eastern side, the bridge would link to South Denes Road to the north of the port area.
- 2.2 The bridge is proposed as a double leaf bascule bridge, although the design has not been finalised. Two options are being considered, with the differences being around the opening mechanism. Option 1 would involve counter weights below the bridge deck, which would result in a simpler appearance and two bascule leaves each with an opening height of 40.90m AOD. Option 2 involves counter weights above the bridge deck with two bascule leaves each with an opening height of 44.5m AOD and steel balance beams and concrete piers having a height of 24.28m in the closed position. Both options require a substantial control tower. The height of the bridge deck would give a clearance of 4.5m above HMWL, but the width of the bridge hole would depend on which design is selected.
- 2.3 For information, it should be noted that the dimensions of the existing bridges over the Rivers Yare and Bure are as follows:

Bridge	Height at average HWL (metres)	Width (metres)
Breydon (fixed span)	3.96	24.0
Breydon (opening span)	3.50	23.0
Haven (opening)	2.9	26.80
Vauxhall (fixed)	2.06	30.40
Yarmouth, road (fixed)	2.13	21.30

3. Consultation responses

- 3.1 Navigation Committee: Details of the consultation have been circulated and the views of the Members will be reported orally.
- 3.2 NSBA: The NSBA has concerns about safety and amenity of leisure boating uses within the Great Yarmouth Port area. Passage through the Port along the River Yare between Bure Mouth and the open sea for yachts and motor cruisers is affected by strong tides, the workings of the commercial Port and the existing Haven Bridge. Considerable hazards are presented to leisure users in the absence of suitable lay-by moorings for leisure craft at the Haven Bridge, on occasions when there is a wait between arriving, for instance from a North Sea crossing and the opening of the bridge to river traffic.
- 3.3 The Third Consultation brochure shows the proposal to have lay-by moorings both up and down river of the bridge. It states that based on existing patterns

of use, the bridge can be expected to open to river traffic 15 times a day. The latest proposals are for an air draft when closed of only 4.5m at high tide, comparing very unfavourably with the proposed Lake Lothing third crossing and requiring a bridge opening for a larger proportion of all craft. However, from the perspective of leisure boat users, the most important consideration in the scheme is the inclusion of lay-by moorings immediately upstream and downstream, suitable for leisure users' motor cruisers and yachts. On the basis of the Third Consultation proposals, and the incorporation and maintenance of suitable lay-by moorings adjacent, the NSBA will support the scheme.

3.4 Broads Authority Head of Navigation: The development would need to include layby moorings for visiting leisure boats while waiting for the bridge to open. Any plans for opening the bridge would need to be considered alongside the other bridges in the area, particularly Haven Bridge, to ensure leisure boats can transit easily through the port in a coordinated way.

3.5 One third party representation: Requests two new pontoons:

- (1) downstream of the new bridge to enable yachts pass through all Yarmouth bridges with mast down, and then have a safe location in which to raise it;
- (2) upstream of Breydon Bridge to provide facility for yachts coming from Rivers Waveney and Yare to lower mast before passing through all Yarmouth bridges. Notes that the existing dolphins are difficult to use at some tidal states.

3.6 The correspondent comments that it is possible to book or request a bridge opening to enable passage through, but this is not always possible quickly and the opening of the bridge(s) will affect traffic flows.

4. Assessment

4.1 In responding to the consultation on this proposal it is appropriate to consider the principle of the scheme, and whether the Authority supports it, as well as the impact of the scheme on the Broads, including on the navigation.

4.2 Looking first at the principle of the scheme, the issues of traffic congestion and poor access to the port are recognised. Traffic congestion contributes to a poor local environment and impacts adversely on the local economy through increasing costs, which in turn is detrimental to social and economic wellbeing. The development of the port, particularly in recent years through the growth of the off-shore industry, has presented a very significant opportunity to improve the economic performance of the town. The scheme proposed seeks to address both pre-existing traffic problems and respond to the growth in both vehicular and waterborne traffic by improving access across the town, including, particularly, to the port and associated employment areas. This is to be welcomed in principle.

- 4.3 It is the case that typically visitors to the Broads do not have much interface with the town of Great Yarmouth or indeed the lower Yare beyond its confluence with the Bure. There are very few moorings available to facilitate access into the town, and, in any case, hire vessels are prohibited from the port area. The majority of public moorings that are available are at the Great Yarmouth Yacht Station operated by the Broads Authority and experience there indicates that a high proportion of the visitors to the facility are in transit between the northern and southern rivers, and do not necessarily intend to visit the town. On this basis, the introduction of a bridge across the lower Yare is unlikely to have a direct impact on the majority of Broads users.
- 4.4 For those Broads users, however, who do visit Great Yarmouth from the Yacht Station or other moorings, the traffic congestion and resulting poor environment will impact adversely on the visitor experience after arrival as well as discouraging future visits. Whilst Great Yarmouth is not part of the Broads, there is a strong and historically functional relationship between the two and development which makes the town more attractive to Broads users (by removing disincentives) is welcome.
- 4.5 Whilst the introduction of a new bridge may not impact directly on Broads users who stay within the Broads, there is the potential for it to affect users coming in or leaving the Broads system via the North Sea. The construction of a third river crossing would introduce an obstruction within the port area and this would inevitably have an impact on navigation as passage through the waterbody would be impeded. It is the case, however, that to access the Broads such users will already need to pass through either two existing structures to access the Rivers Yare and Waveney (ie the Haven and Breydon Bridges) or three structures to access the River Bure (ie the Haven, Vauxhall and Yarmouth road bridges). Reference to the table at 2.3 above indicates that the proposed new crossing has been designed to have a deck height which, at 4.5m, is significantly higher than that of the existing bridges, so constitutes a lesser obstruction and one which therefore allows passage for both a larger size and number of vessels than the existing bridges. This notwithstanding, there would be an impact, particularly for those larger vessels which could not pass through the closed bridge and which would therefore need to wait. Indicative provision is made in the scheme for layby moorings, but it is not clear how these would be provided, or precisely where or what provision they would offer and this is an omission of concern. These issues are raised by the Head of Navigation and it is considered that the scheme needs to be clarified to ensure that appropriate and sufficient provision for leisure boaters is incorporated at the design stage scheme.
- 4.6 In regard to this, it is also noted that the third party representation received in respect of the proposal raises the issue of layby moorings (both here and on Breydon Water) and it would be appropriate to raise this in response to the consultation.
- 4.7 It is also worth noting that whilst the proposed structure is an opening bridge, the arrangements for the opening should be clarified, principally whether this will be scheduled or 'on demand'. The Head of Navigation notes that the

opening of bridges could usefully be coordinated to enable vessels to pass through all the bridges sequentially without having to moor, and this should be considered when the operational plan is being developed.

- 4.8 The proposed new bridge is a substantial structure, however, the extent of the impact will depend on which design is selected. The visual impact of the design of Option 1 would be broadly local when the bridge was in the closed position (ie with traffic flowing over it) as there would be no structural vertical elements other than the control tower, and the structure would not be visible from the Broads area. The design of Option 2 involves significant vertical supports at a height of 24.28 AOD and which, as an integral part of the bridge structure, would be permanently visible whether the bridge was in an open or closed position. When open (ie with vessels transiting the river) the height of the raised bridge decks would be 40.90m AOD for Option 1 and 44.5m AOD for Option 2.
- 4.9 The draft planning application, ie the document which is the subject of this consultation, does not appear to include a full assessment of the visual impact of the proposal, although it makes it clear that this will be done for the formal submission stage. This should be in accordance with best practice and recognised guidelines and include a Zone of Theoretical Visibility (ZTV) with viewpoint locations in the Broads. This will enable the impacts on the Broads to be assessed. Whilst the further detail that will be included in the Development Consent Order application will be considered in due course, it is clear from the information provided to date that the impacts of Option 1 will be significantly less than the impacts associated with Option 2 and it would be useful to indicate a clear preference for Option 1 in the response.
- 4.10 The consultation document identifies that the scheme offers opportunities to create and improve routes for pedestrians and cyclists and the indicative plans illustrate these. It is noted that the off-carriageway routes proposed on the western side are better developed than those on the eastern side, where provision is very limited. The scheme offers a good opportunity to provide a more attractive cycle route from the north to the south of the Broads, including providing a link to and through the town, and modest engineering works could easily facilitate this. It is noted that Lowestoft is the UK's starting point for the North Sea Cycle Route (Sustrans national route 1) and there are links to this from Great Yarmouth which would be significantly improved by minor works here.

5. Conclusion and recommendation

- 5.1 The proposal to construct a third river crossing in Great Yarmouth is a scheme which can be welcomed in principle as it would help to address the issues of congestion and poor environmental quality which impact adversely on the use and development of the town. The views of the Navigation Committee are currently awaited, but subject to their being satisfied that the proposal would not have an adverse impact on navigation, the Authority's response can be submitted as follows:

- (i) The Broads Authority can confirm its 'in principle' support for scheme;
- (ii) The Broads Authority has a strong preference for Option 1, due to the reduced visual impact;
- (iii) The following matters should be taken into account and addressed in the development of the final scheme:
 - Adequate layby moorings in the form of fixed pontoons to be provided upstream and downstream of the proposed new bridge;
 - Pontoon mooring to be provided upstream of Breydon Bridge to provide facility for yachts coming from Rivers Waveney and Yare to lower mast before passing through all Yarmouth bridges;
 - Arrangements for the opening should be identified in the scheme, with provision made for the opening of all Yarmouth bridges to be coordinated to enable vessels to pass through them sequentially without having to moor;
 - A Townscape and Visual Assessment (TVIA) should be provided and should include viewpoints from within the Broads area (to be agreed with the Broads Authority) and, where impacts are identified, should include suitable mitigation to reduce or avoid significant impact; and
 - Provision for off-carriageway routes for pedestrian and cyclists be incorporated into the scheme, including improvement of links to the town centre and to the south to reinforce the historic and functional connections with the wider hinterland.

Background papers: None
Author: Cally Smith
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Appendices: None