

Mooring Guide and Riverbank Stabilisation Guide Consultation Responses
Report by Planning Policy Officer

Summary:	The existing guide (which is over 10 years old) has been reviewed and two draft guides were approved for consultation. Planning Committee and Navigation Committee approved the guides for consultation which ran from 14 July 2015 to 4pm on Friday 4 September 2015. Sixteen organisations responded to the consultation. All comments have been considered and a number of changes have been made.
Recommendation:	That the Authority adopts the Riverbank Stabilisation and Mooring Guides.

1 Introduction

- 1.1. The Authority has an existing guide for Riverbank Protection Works¹ which is over ten years old. As part of the Local Plan review process, the Authority has reviewed the guide with the intention of making the content more up to date to reflect current practice and lessons learned. The guides are intended to give would-be designers/ developers of riverbank stabilisation and moorings information to help inform the way forward with their design and highlight some of the common issues which such development needs to consider.

2 The Revised Guides

- 2.1 The original guide has been split into two guides to provide clarity between the issue of riverbank stabilisation and mooring and also to enable more information to be provided for the different structures to reflect their purpose.
- 2.2 An Officer group comprising representatives from navigation, design, access, recreation, heritage, communications, landscape, planning and ecology teams have worked together to provide the draft guides.
- 2.3 The guides will be hosted on the Broads Authority website and produced in paper format only on request.

3 Status of the Guides

- 3.1 The purpose of the guides is to provide would-be designers of riverbank stabilisation and moorings advice on issues to consider as well as information

¹ http://www.broads-authority.gov.uk/data/assets/pdf_file/0020/412832/Riverbank_Protection_Works.pdf

to help choose the most appropriate and relevant design for a particular location.

- 3.2 The guides are not Supplementary Planning Documents but have been produced in a similar way (e.g consultation and adoption by Full Authority).
- 3.3 The guides have been consulted on in order to give the guides more weight in determining planning applications and potentially at any subsequent appeals if required.

4 Consultation and Comments Received

- 4.1 The guides were presented to Planning Committee on 29 May 2015 and Navigation Committee on 4 June 2015.
- 4.2 The consultation ran from 14 July 2015 to 4pm on Friday 4 September 2015.
- 4.3 All organisations on the Local Plan contact database were contacted as well as other organisations with a particular interest in the subject of the guides. Boatyards and Marinas were contacted and officers attended the Broads Forum on 30 July 2015 to seek comments.
- 4.4 In total, 16 organisations/groups responded. Their comments and the proposed responses from the Broads Authority and proposed amendments to the guides are set out at Appendix A.
- 4.5 The amended draft guides are presented at Appendix B and C. Where changes have been made, the text is highlighted in pink.
- 4.6 The guides were presented to Planning Committee alongside the consultation responses on 9 October 2015. Planning Committee endorsed the guides for adoption by Full Authority.

5 Financial Implications

- 5.1 Officer time to date in producing the draft guides as well as finalising the guides following Full Authority.

6 Next Steps

- 6.1 If Full Authority is minded to adopt the guides:
 - (i) It is proposed that the tracked changes shown will be accepted and guides finalised and formatted
 - (ii) Copies of the responses made to the consultation, the Authority's response and the final guide will be sent to all who responded to the consultation.
 - (iii) The guides will be placed on their own webpage along with a summary of the process to date and the comments received.

- (iv) The guides will be used and signposted to those proposing moorings and riverbank stabilisation.

7 Conclusion

- 7.1 Having up to date guides will provide developers and landowners with useful guidance on the design of moorings or the protection of riverbanks.
- 7.2 The consultation event was far ranging and resulted in responses which have helped to improve and clarify the guides.
- 7.3 It is recommended that Full Authority adopts Riverbank Stabilisation and Mooring Guides.

Background papers: None

Author: Natalie Beal

Date of report: 8 September 2015

Broads Plan Objectives: NA1.5, TR2.2, NA5.2

Appendices: APPENDIX A - Comments received during consultation

APPENDIX B - Mooring Design Guide (with track changes) and APPENDIX C - Riverbank Stabilisation Guide (with track changes), please follow the link

<http://www.broads-authority.gov.uk/broads-authority/committees/broads-authority/broads-authority-20-november-2015>

Mooring Guide and Bank Stabilisation Guide Consultation (Aug-Sept 2016) RESPONSES

Barton Turf Adventure Centre

- (1) Typo - Mooring guide page 4, col 3 para 3, also page 10 col 1: – “waling” not “whaling” – AFAIK there are no whales on the Broads!
- (2) Stabilisation guide – suggest that it be noted somewhere that the use of geotextiles as bank reinforcement is not compatible with water voles as they cannot burrow through it.

Summary of response:

Typological error highlighted. Geotextiles prevent water voles from burrowing through.

Broads Authority response:

- (1) Whaling will be changed to waling.
 - (2) Agree. The BA install these at the water line so they are still effectively a soft edge to the water. Amend to say installed at or below water line.
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Broads Angling Strategy Group

After discussion at its last committee meeting 16th July it was agreed that these guides apply design principles that enable angling in a safe and appropriate manner and no further action was needed.

Summary of response:

These guides apply design principles that enable angling in a safe and appropriate manner.

Broads Authority response:

Support noted.

Broads Authority

Suggested amendments by Officers.

Broads Authority response:

Mooring Guide:

Page 2 - 'Please contact us for free advice about whether natural...'

Page 3 - '...the ends are directed in to the bank.'

Page 3 - '...erosion of natural edges in some areas. Returning then to the'

Page 4 - 'Alder for pole piling is available locally. It has...'

Page 4 - '...of your project. There should be no ecological impacts'

Page 4 - 'The additional horizontal timber will help disguise theless natural material'.

Page 10 - 'Timber capping and waling of steel or plastic...'

Page 10 - 'and areas of high tidal range'.

Riverbank Stabilisation:

Page 5 - '...softwood to be used, it should be pressure treated to provide a reasonable life in wet conditions'.

Page 7 - 'Appropriate for most locations in the Broads with medium or low tidal range'.

Page 7 - 'you could consider plastic or plastic coated mesh instead of steel wire'.

Page 8 - 'the nearer it is to the water, the lower the impact. However potential navigation hazard has to be considered.'

Broads Forum

Comments from Broads Forum at meeting on 30 July 2015:

- FSC timber is poor quality so using it is not cost effective.
- Vertical wear out posts to protect piling.
- Some boats do not have fenders which could impact piling.
- SSSI section uses the word 'claims'. Re word to 'has' or something similar.
- Natura 2000 sites section needs improving in similar way as reference to Wildlife and Countryside Act 1981.

Broads Authority response:

Regarding FSC:

- The durability of treated softwood timber typically sold has reduced. This is a result of some of the more harmful chemicals in the preservative being banned and lower quality timber on the market.
- FSC (Forest Stewardship Council) certification on timber refers to the management of the forestry where the timber is sourced. It has nothing to do with the quality, durability, type or treatment of the timber (you can get FSC pine, oak, ekki etc.).
- Whatever the timber we would recommend it has FSC certification to be confident it has come from sustainable forestry. We will amend the wording in the guides to "Timber should be from a sustainable source and should have Forestry Stewardship Council (FSC) certification".

With regard to wear out posts and boat fenders:

- The use of boat fenders is a matter for boat owners. Generally fendering on most moorings and on boats is to protect the vessel not hard piling.
- We will amend the text as follows "The design is suitable for most tidal ranges. However consider the use of vertical fenders / rubbing strips in areas of high tidal range".

With regards to SSSI wording:

- See later comment from RSPB.
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Environment Agency

We have considered these two documents and our detailed comments are as follows:

Flood Defence Consent:

The section on Flood Defence Consents could be a little more specific. The text we usually provide is below:

Under the terms of the Water Resources Act 1991, and the Land Drainage and Sea Defence Byelaws for Anglian Region, prior written consent of the Environment Agency is required for any proposed works or structures, in, under, over or within 9 metres of a main river or flood/sea defence.

The following could also be included to explain why Flood Defence Consent is required.

Any consent application should demonstrate that:

- There is no increase in flood risk either upstream or downstream
- Access to the main river network and sea/tidal defences for maintenance and improvement is not prejudiced.
- Works are carried out in such a way as to avoid unnecessary environmental damage.

Mitigation is likely to be required to control off site flood risk. We will not be able to issue our consent until this has been demonstrated.

Channel width: Where channel width is discussed it may be beneficial to mention that flow should not be restricted or channel capacity reduced as this could increase flood risk elsewhere. This would be considered as part of a Flood Defence Consent.

Water Framework Directive: There is no mention of the Water Framework Directive (WFD) in either document, for example it would be useful to include information on where a WFD assessment may be required, e.g. depending on length and type of works proposed an assessment may be needed.

Summary of response:

- Suggests better Flood Defence Consent text.
- Text about why Flood Defence Consent is required.
- Reference Water Framework Directive.

Broads Authority response:

- Agree. Flood risk will be mentioned in channel width section with impact on navigation.
- Agree. The potential requirement for a WFD assessment will be added to the EA section of the Permissions section of both guides.
- Agree. Guide text regarding consent will be amended to reflect this comment.
- In relation to why consent is required, this would reproduce lots of guidance in place. The changes to be made are adequate for this guide. Links to the EA webpages will be included in the guide.

Highways England

The areas where trunk roads and Broads Authority watercourses interact are relatively few and clearly our remit differs considerably. In this respect I do not feel that Highways England has a comment to make regarding your proposed policy documents.

Summary of response:

No comment.

Broads Authority response:

Noted.

Historic England

Draft Mooring Design Guide:

- The draft guide provides a useful overview of the design issues that need to be addressed by mooring proposals. We welcome the need for moorings to reflect and complement the character of the area, including heritage sites and conservation areas. The design, size and materials of any new mooring will need to be appropriate to the significance of heritage assets, which includes development within the setting of specific assets. The introduction of lighting

could impact on the significance of heritage assets, while there could be archaeological impacts from piling, dredging and the construction of trenches for services.

- We would advise that any proposal to replace old moorings should consider the significance of the existing mooring and whether it could be regarded as a heritage asset in its own right. In certain cases, there may be a need to conserve the existing mooring or at least ensure that it is recorded before removal.
- The archaeology section is rather short and could be expanded to mention built heritage and clarify that archaeological deposits can include paleo-environmental. Reference could also be made to the county historic environment records. We recommend that the guide requires proposals to assess whether there is potential for archaeological interest before the design is finalised, as this would be more proactive and prevent problems at the application stage. The current wording of the final sentence in this section implies a more reactive approach once proposals have been finalised and approved.
- The checklist at the end of the guide should make explicit reference to proposals needing to consider impact on heritage assets, including archaeology, before submitting a planning application.

Draft Riverbank Stabilisation Guide:

- As with the moorings guide, we welcome the need for stabilisation methods to reflect and complement the character of the area. The potential for impact on heritage assets through stabilisation methods, including impact on archaeological deposits, is considerable. Methods will need to minimise negative impacts and seek benefits for all aspects of the environment, including the natural and the historic.
- As with the moorings guide, the archaeological section is rather short and needs to promote a more proactive approach to the assessment of archaeological interest before stabilisation proposals are finalised.
- The checklist at the end of the guide asks planning applications to consider the archaeological and heritage characteristics of the location, but should go further and ask applications to consider the impact of development on such characteristics.

Summary of response:

Mooring:

- The design, size and materials of any new mooring will need to be appropriate to the significance of heritage assets, which includes development within the setting of specific assets. The introduction of lighting could impact on the significance of heritage assets, while there could be archaeological impacts from piling, dredging and the construction of trenches for services.
- We would advise that any proposal to replace old moorings should consider the significance of the existing mooring and whether it could be regarded as a heritage asset in its own right. In certain cases, there may be a need to conserve the existing mooring or at least ensure that it is recorded before removal.
- The archaeology section is rather short and could be expanded to mention built heritage and clarify that archaeological deposits can include paleo-environmental. Reference could also be made to the county historic environment records. We recommend that the guide requires proposals to assess whether there is potential for archaeological interest before the design is finalised, as this would be more proactive and prevent problems at the application stage.
- The checklist at the end of the guide should make explicit reference to proposals needing to consider impact on heritage assets, including archaeology, before submitting a planning application.

Stabilisation:

- Stabilisation methods will need to minimise negative impacts and seek benefits for all aspects of the environment, including the natural and the historic.
- Archaeological section is rather short and needs to promote a more proactive approach to the assessment of archaeological interest before stabilisation proposals are finalised.
- The checklist at the end of the guide asks planning applications should go further and ask applications to consider the impact of development on such characteristics.

Broads Authority response:

- Will amend introduction to landscape and wildlife to say 'Design of moorings should be appropriate to the location and reflect and complement the character...!'
- There are two issues here the impact that the outcome of the works might have on significance (setting) and also the potential physical impact (damage) on assets through the works.
- It is proposed to replace the archaeology section as follows. "Heritage and Archaeology. Heritage is a finite resource care should be taken throughout the design process to ensure that the physical and visual impact on both built heritage and Archaeology is minimised. The entire Broads is a site of exceptional waterlogged archaeology. This means there is potential for important discoveries during the course of carrying out work and you should be aware that archaeology may be uncovered. If planning permission is required it may be subject to an archaeological condition. Early advice should be sought from the Authority. Consulting the relevant Historic Environment record early in the process (LINK) will indicate any known heritage assets and help assess the likelihood of potential archaeology."
- This will be part of the assessment of any development that requires planning permission. But not all stabilisation and mooring development requires planning permission. There is general reference to heritage in the guide.
- Agree. Amend mooring checklist to say 'How does your proposal reflect the local character and how does it consider impact on heritage assets, including archaeology?'
- Agree. Amend stabilisation checklist to say 'What are the characteristics of the location and how does your proposal impact on/reflect/complement these characteristics?'

Homes and Communities Agency

Thank you for your email in connection with the above consultation the Broads Authority are undertaking. However, as this guide is unlikely to impact on the delivery of housing, the Homes and Community Agency does not intend to respond to the consultation, but we thank you for drawing this to our attention.

Summary of response:

No comment.

Broads Authority response:

Noted.

Knight, Mr J (Broads Authority Member)

Thanks for this. The guide is very useful and I fed most of my comments through at the Navigation Committee but am repeating some of them here, which I hope is helpful.

- (1) Much of the guidance is very prescriptive but is also subjective. For example 'surfacing behind moorings should be kept as natural as possible.' Why? Is this not simply a personal opinion rather than good practice?
- (2) Safety ladders and life rings - every 50m is excessive in my opinion within enclosed marinas, and certainly exceeds the requirements of The Yacht Harbour Association guidance. 50m may well be suitable for the rivers and I suggest that the guidance is modified accordingly.
- (3) Signage - the requirement for 50mm signage is unnecessarily prescriptive and appears entirely arbitrary as there are almost as many letter heights & styles currently in use as there are signs around the Broads

Summary of response:

- (1) Considers parts of the guide subjective. For example surfacing behind moorings.
- (2) Considers safety advice in moorings guide excessive.
- (3) Considers signing guidance overly prescriptive.

Broads Authority response:

- (1) Noted. In liaison with the Landscape Officer, suggested amendments to wording as follows:

'The type of surfacing behind moorings should reflect the environment within which the moorings are located. For rural environments the use of grass or bark provides a more natural feature. Grass can be reinforced to provide a firmer surface to allow access by, for example, wheelchairs and pushchairs. In more urban environments or areas of high use alternative surfacing may be chosen and local products which are cost effective include gravel (which can also be reinforced to make firmer) or hoggin.'

- (2) Noted. In liaison with the Head of Safety Management and the Rivers Engineer, the following amendments will be made:

- 'Safety ladders should be spaced at no more than 50m apart along the length of the mooring. There should also be a chain, rail or similar structure that someone in the water can grab onto in any tidal conditions. You should also complete a risk assessment to determine where public rescue equipment (for example lifebuoys or unlocked throw lines) should be located.'
- Another change to this section is also made. The Health and Safety Executive guide has 'docks' in its title, but it does relate to marinas. As such the following change is to be made:
- 'There is a free Health and Safety Executive code of practice www.hse.gov.uk/pubns/books/l148.htm relating to docks and moorings (including marinas).'

- (3) Comment noted. No change proposed however:

- Agree that there are many signing styles, but this guide refers to mooring related signage.
- AINA (Association of Inland Navigation Authorities) guide lines state that 50mm as a text height is viewable from 10m which we have judged to be a reasonable distance in which to react to the message of 'No public mooring' or succinct wording to that effect.
- A sign of this type will fit on the fascia or capping of a standard quay heading without the need for additional structures.
- White text on black is highly visible without causing glare from strong light.
- The guidance given in the guide is prescriptive, we felt this was preferable to a lengthy explanation of the reasoning and given that it only relates to one particular type of sign that it was not unreasonable.

Marine Management Organisation

Comments from our Marine Licensing team are as follows:

With regard to the mooring guide:

Within the checklist for submission of the planning application an additional question should be asked to confirm if the applicant has considered the need for a marine licence and if they have applied for one. As both authorities will be issuing a licence for these works it is important that we work together and having the applicant inform the authority, of their need for a marine licence, will help facilitate joint working, where required.

With regard to the Bank stabilisation guide:

- Reference should be made under the Permissions and notices section to the fact that for these works a Marine Licence from the MMO, under the Marine and Coastal Access Act 2009, is almost certainly going to be required for any works in a tidal area (i.e below Mean High Water Springs). I would suggest adding wording very similar to that used under the draft moorings guide.
- Within the checklist for submission of the planning application an additional question should be asked to confirm if the applicant has considered the need for a marine licence and if they have applied for one. As both authorities will be issuing a licence for these works it is important that we work together and having the applicant inform the authority, of their need for a marine licence, will help facilitate joint working, where required.

Summary of response:

With regard to the mooring guide:

Within the checklist for submission of the planning application an additional question should be asked to confirm if the applicant has considered the need for a marine licence and if they have applied for one.

With regard to the Bank stabilisation guide:

- Reference should be made under the Permissions and notices section to the fact that for these works a Marine Licence from the MMO, under the Marine and Coastal Access Act 2009, is almost certainly going to be required for any works in a tidal area (i.e below Mean High Water Springs).
- Within the checklist for submission of the planning application an additional question should be asked to confirm if the applicant has considered the need for a marine licence and if they have applied for one.

Broads Authority response:

- This issue is being considered at Full Authority on 25 September 2015. Dan Hoare. The resolution of Full Authority will inform the response to this comment which will be reported orally to Planning Committee. <http://www.broads-authority.gov.uk/broads-authority/committees/broads-authority/broads-authority-25-september-2015>.
- Agree. Amend so wording in stabilisation guide is similar to that of the mooring guide.
- Agree. Add marine licence to checklist or mooring guide.

Natural England

General comments:

- Natural England welcomes that both guides highlight the international and national importance of the landscape and wildlife within the Broads, the potential threats to these from mooring and riverbank stabilisation works and the due process that must be followed before any works can take place where there is potential for impacts to designated sites.
- We also welcome that page 3 of each guide encourages the exploration of enhancing or creating increased space for wildlife when assessing works options.

Suggested changes:

- We advise that Ramsar sites [Listed or proposed Wetlands of International Importance under the Ramsar Convention (Ramsar) sites are protected as a matter of Government policy. Paragraph 118 of the National Planning Policy Framework applies the same protection measures as those in place for European sites.] should also be listed on page 3 of each guide among the international site designations present within the Broads.
- On page 3 of the Draft Riverbank Stabilisation Guide, we advise that lesser reedmace *Typha angustifolia* should also be included within the list of recommended stabilisation species; this can effectively promote the growth of hover which is a very effective absorber of wave energy from boat wash.

Summary of response:

- We advise that Ramsar sites should also be listed on page 3 of each guide among the international site designations present within the Broads.
- On page 3 of the Draft Riverbank Stabilisation Guide, we advise that lesser reedmace *Typha angustifolia* should also be included within the list of recommended stabilisation species; this can effectively promote the growth of hover which is a very effective absorber of wave energy from boat wash.

Broads Authority response:

- Agree. Ramsar sites will be added to this section of the guides.
- Agree. Lesser reedmace *Typha angustifolia* will be added to the list.

Norfolk and Suffolk Boating Association

Draft Mooring Design Guide:

- Surfacing p 4: Large stone is clean on the boat but difficult for disabled people to walk on or for a wheel chair. Granite or stone chippings, which are used at some moorings, are easier for the disabled but the dust abrades the boat deck, cockpit and cabin sole. For this reason, we are strongly opposed to the use of stone chippings. Wood chippings rot over time but can be kinder to disabled people, and boats.
- Safety p 5: Where there are strong currents or a high tidal range most boats make for the ladders and moor up on them because they are easy and handy to attach the first mooring warp. If there was provision for 'vertical mooring' – vertical 2" rails that could be used instead of the ladders – the ladders could revert to being a safety feature.
- Signage p 7: The Authority's 'no mooring' signs on a piled edge are written in white on black. The remainder of the Authority's signs are written in black or some other colour on white.
- Timber staging p 9: Where staging is erected the vertical posts need to be on the outside of the structure such that the boat rides up and down on the vertical posts rather than getting caught under the staging (unless mooring poles are used to push the boat away from the mooring).
- Quay heading and piling p 9: We are wholly in favour of chamfered whaling. We note that this is not always used at the Authority's quay headings. Dome headed coach bolts should be countersunk into whaling and tightened onto the piling to avoid damage to boats
- Swing or trot p 10: In relation to the first paragraph on p 11, swing moorings are suitable for rivers provided there is a heavy enough weight and/or chain and there is sufficient room for the boat to swing without impeding the banks and other boats. This is demonstrated in countless other rivers and estuaries up and down the country.
- Dolphin p 11: The three legged dolphins that are at the North end of Breydon Water are positively dangerous for small sailing craft on a rising tide. They have no means of easily attaching a boat to them.

Bank stabilisation:

- Bank line protection p 7: The use of gabions is problematic. The rock filled gabions that have fairly recently replaced the steel piling in The New Cut are now clearly failing in parts.
- Matting p 8: Matting does not get caught up in boat engines – it gets caught up in boat stern gear.

Summary of response:***Draft Mooring Design Guide:***

- (1) We are strongly opposed to the use of stone chippings. Wood chippings rot over time but can be kinder to disabled people, and boats.
- (2) If there was provision for 'vertical mooring' – vertical 2" rails that could be used instead of the ladders – the ladders could revert to being a safety feature.
- (3) The Authority's 'no mooring' signs on a piled edge are written in white on black. The remainder of the Authority's signs are written in black or some other colour on white.
- (4) Where staging is erected the vertical posts need to be on the outside of the structure such that the boat rides up and down on the vertical posts rather than getting caught under the staging (unless mooring poles are used to push the boat away from the mooring).
- (5) Dome headed coach bolts should be countersunk into whaling and tightened onto the piling to avoid damage to boats
- (6) Swing moorings are suitable for rivers provided there is a heavy enough weight and/or chain and there is sufficient room for the boat to swing without impeding the banks and other boats. This is demonstrated in countless other rivers and estuaries up and down the country.
- (7) The three legged dolphins that are at the North end of Breydon Water are positively dangerous for small sailing craft on a rising tide. They have no means of easily attaching a boat to them.

Riverbank Stabilisation Guide:

- (1) The rock filled gabions that have fairly recently replaced the steel piling in The New Cut are now clearly failing in parts.
- (2) Matting gets caught up in boat stern gear.

Broads Authority response:

Mooring comments:

- 1: Noted. See changes to this section as detailed in response to James Knights' comments which address this.
- 2: Noted and agree to some extent. Amend guide to say 'Where moorings are proposed in areas of large tidal range, a vertical rail for ease of mooring at lower states of tide could be considered.'
- 3: Noted.
- 4: Agree. Drawing to be amended to take on board this suggestion.
- 5: Agreed, but this is a guide not a specification. However we will amend the example of piling drawing to extend the note on tie rods to read "Galvanised tie rod anchored to buried pile and bolted to waling with head countersunk".
- 6: This may be acceptable on wide rivers and estuaries, but swing moorings have the potential to impede navigation on most areas of our rivers. No change to guide.
- 7: Noted. Dolphins remain an option, we are not specifying the design. No change to guide.

Stabilisation comments:

1: The BA acknowledge there are issues in this area. This prompted the wording in the guide. No change to guide.

2: Agree. Replace 'engine' with 'boat stern gear'.

Norfolk County Council

Mooring Design Guide:

The County Council welcomes the draft guidance on Mooring Design and the sustainable principles which underpin the emerging Guidance. In particular the County Council welcomes the reference on page 2 to Landscape and Wildlife and on page 4 to Archaeology. In addition the County Council welcomes the reference on page 7 to Permissions and Notices.

Riverbank Stabilisation Guide:

The County Council welcomes the draft guidance on Riverbank Stabilisation and the sustainable principles which underpin the emerging Guidance. In particular the County Council welcomes the reference on pages 2 - 4 to Landscape and Wildlife and on page 4 to Archaeology. In addition the County Council welcomes the reference to Permissions and Notices on page 5.

Summary of response:

General support.

Broads Authority response:

Noted.

Norfolk Heritage Fleet Trust (Hunters Yard)

Broads Authority Mooring Design Guide:

- (1) A lot of space is taken up by considering the requirements of the environment, wildlife and archaeology but little on the requirements of the users of the mooring (boats). There is no guidance the best mooring design and arrangements for boats.
- (2) This guide has more relevance to private moorings than BA official moorings. Although the guide recommends grass, gravel, hoggin or bark for surfacing, many BA moorings still have fine grit for surfacing which is particularly damaging to boat decks.
- (3) A paragraph (Page 6) is devoted to Channel Width: new moorings must have no adverse impact on the navigation channel. "It is also not necessarily about the mooring itself, but the impact on channel width by the vessel that is to be moored". I know that this is a new guide and I have no access to the current guide but the recent moorings at How Hill and Womack Dyke have both reduced the navigation channel making it very difficult for tacking yachts.
- (4) Ways of mooring are covered on Page 7 - "In some locations double mooring or mooring stern on are more efficient ways of using space as long as there is adequate channel width". There are several places where there are stern-on moorings but the channel width is certainly not adequate, eg Horning New Inn, Horning Ferry and Martham - should they be allowed?

Broads Authority Riverbank Stabilisation Guidance:

- (1) The guidance on Page 4 about trees implies that trees are a good thing although it is mentioned in passing that they have a detrimental effect for sailing. It should be remembered that trees are a fairly recent addition to river banks. Early photographs of the Broads show very few trees (wherryman did not like trees) and, earlier than that, trees did not last to maturity as they were an important source of fuel. Should planting of new trees be encouraged if it alters the appearance of the area? The whole area is not a natural landscape but is the result of centuries of industrial and agricultural use.

- (2) Page 6 includes a section on re-profiling banks. There is no mention of the need to maintain some areas with vertical banks for informal mooring. The current scheme of sloping back all the banks removes any possibility of mooring and disembarking - this can also be a problem when Yard staff go to the aid of boats in trouble.

Again much emphasis placed on designs being beneficial to wildlife. All designs should be a compromise to meet the needs of every user, be it human or wildlife.

Summary of response:

Mooring Guide:

- (1) Little on the requirements of the users of the mooring.
- (2) Many BA moorings still have fine grit for surfacing which is particularly damaging to boat decks.
- (3) Recent moorings at How Hill and Womack Dyke have both reduced the navigation channel making it very difficult for tacking yachts.
- (4) There are several places where there are stern-on moorings but the channel width is certainly not adequate, eg Horning New Inn, Horning Ferry and Martham - should they be allowed?

Riverbank Stabilisation Guide:

- (1) The guidance on Page 4 about trees implies that trees are a good thing although it is mentioned in passing that they have a detrimental effect for sailing. Should planting of new trees be encouraged if it alters the appearance of the area?
- (2) Page 6 includes a section on re-profiling banks. There is no mention of the need to maintain some areas with vertical banks for informal mooring. The current scheme of sloping back all the banks removes any possibility of mooring and disembarking - this can also be a problem when Yard staff go to the aid of boats in trouble.
- (3) Again much emphasis placed on designs being beneficial to wildlife. All designs should be a compromise to meet the needs of every user, be it human or wildlife.

Broads Authority response:

- Surfacing comments noted. See comment in response to James Knight's comments which includes new wording.
- The moorings at How Hill were installed by BESL and were along the same section of frontage that mooring previously took place on (circa 2004). The new piling was installed in front of the previous pile line rather than removing the previous piling and repiling on exactly the same line. As the old piling had failed to the extent that it was a crinkle crankle wall the new pile line was some distance out from the previous pile edge and has resulted in a reduction in river width at this point. This was the subject of some debate at the time and is precisely why the Authority wanted the guidance to cover unacceptable encroachment on the available navigable width at any given location. No change to guide.
- Stern on comments noted. No change to guide. Comment will be referred to ranger team to consider and assess.
- Tree comments Noted. The guidance neither promotes or discourages trees. The existing text highlights the complex issue and reflects broadly the comments raised by Norfolk Heritage Fleet Trust. No change to guide.
- The current scheme being undertaken by EA involving removal of their own assets which were put in place for bank protection. The BA acknowledge that informal mooring contribute to the amount of mooring available in the Broads. Re-profiling banks is one of the various options discussed in the guide. The guide is not promoting removal of hard edges. Different options will provide different benefits in different locations. No change to guide.

- Agreed. The guides discuss design, cost, maintenance, safety, landscape impact amongst other issues to consider. No change to the guide.
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RSPB

- Having reviewed the proposal, the RSPB considers there is a lack of clarity regarding the information that should be presented to the Broads Authority and/or Natural England when undertaking works on moorings or riverbank stabilisation close to designated sites. The RSPB therefore recommends the document be strengthened to better reflect requirements to ensure adverse effect to Natura 2000 sites and Sites of Special Scientific Interest (SSSIs) are avoided. Under the 'permissions and notices' section of the guides (p.7 & p.5 respectively), a planning application is required for waterside development. It should be highlighted that projects likely to impact on a Natura 2000 site should be accompanied by sufficient information to enable the Competent Authority to complete a Habitats Regulations Assessment to determine the application(s) in accordance with the Habitat Regulations [The Conservation of Habitats and Species Regulations 2010]. The guides already note that Natural England will need to determine whether the project will require any consents, but greater clarity on what this will require would be helpful. Additional guidance on the information required to enable Natural England and the Broads Authority to consent works under the Habitats Regulations could be attached to penultimate paragraph on p.3 of the Mooring design guide and the final paragraph on p.3 of the riverbank stabilisation guide. The guides already provide information regarding the Wildlife and Countryside Act 1981 and the need to survey for European Protected Species; a similar statement clarifying assessment requirements for the wider designations would therefore be appropriate for completeness.
- The RSPB recommends that penultimate paragraph on p.3 of the Mooring design guide and the final paragraph on p.3 of the riverbank stabilisation guide be amended. The first sentence of both paragraphs starts "The Broads also claims 28 Sites of Special Scientific Interest (SSSIs)..." The Broads does have/supports the identified SSSIs and a stronger term than "claims" must be used. We suggest this paragraph be re-worded to say: "The Broads supports internationally important wildlife populations and habitats protected within Special Areas of Conservation (SACs) and Special Protection Areas (SPAs). These sites are underpinned at a national level by 28 Sites of Special Scientific Interest (SSSIs) that cover 24% of the executive area."

Summary of response:

- RSPB considers there is a lack of clarity regarding the information that should be presented to the Broads Authority and/or Natural England when undertaking works on moorings or riverbank stabilisation close to designated sites. The RSPB therefore recommends the document be strengthened to better reflect requirements to ensure adverse effect to Natura 2000 sites and Sites of Special Scientific Interest (SSSIs) are avoided.
- Under the 'permissions and notices' section of the guides (p.7 & p.5 respectively), a planning application is required for waterside development. It should be highlighted that projects likely to impact on a Natura 2000 site should be accompanied by sufficient information to enable the Competent Authority to complete a Habitats Regulations Assessment to determine the application(s) in accordance with the Habitat Regulations.
- Additional guidance on the information required to enable Natural England and the Broads Authority to consent works under the Habitats Regulations could be attached to penultimate paragraph on p.3 of the Mooring design guide and the final paragraph on p.3 of the riverbank stabilisation guide.
- The RSPB recommends that penultimate paragraph on p.3 of the Mooring design guide and the final paragraph on p.3 of the riverbank stabilisation guide be re-worded to say: "The Broads supports internationally important wildlife populations and habitats protected within Special Areas of Conservation (SACs) and Special Protection Areas (SPAs). These sites are underpinned at a national level by 28 Sites of Special Scientific Interest (SSSIs) that cover 24% of the executive area."

Broads Authority response:

Amend text in both guides to say:

'The Broads supports internationally important wildlife and habitats. Within the Broads are the Broads Special Area of Conservation (SAC), Broadland Special Protection Area (SPA) and Broads Ramsar site. These sites are underpinned at a national level by 28 Sites of Special Scientific Interest (SSSIs) covering 24% of the executive area. You will need written consent from Natural England for any proposed works that may impact a protected site. In some cases an appropriate assessment may be required under the Habitat Regulations to demonstrate that there will be no adverse impacts on the integrity of the protected site.'

Salhouse Broad

In response to your consultation notification, please note a few points on the Mooring Guide and Draft Riverbank Stabilisation Guide, as recognised by Salhouse Broad:

- Coir is mentioned but not explained that this is coconut fibre.
- Matting out of jute is suggested, but coir and hemp would also be suitable.
- Asphaltic matting is mentioned, this should be bitumen matting.

Mooring design guide:

- Terram is a brand, and should not be 'advertised'
- Piling example, should show appropriate finish, of woodchip / gravel / reinforced grass turf
- Piling example should show appropriate drainage, to stop puddle formation behind the piling.

Summary of response:

- Coir is mentioned but not explained that this is coconut fibre
- Matting out of jute is suggested, but coir and hemp would also be suitable
- Asphaltic matting is mentioned, this should be bitumen matting
- Terram is a brand, and should not be 'advertised'
- Piling example, should show appropriate finish, of woodchip / gravel / reinforced grass turf
- Piling example should show appropriate drainage, to stop puddle formation behind the piling.

Broads Authority response:

- Agree. Amend to 'coir (coconut fibre)'
 - Agree. Amend to 'natural fibres (e.g. jute, coir or hemp)'
 - Noted. Asphaltic is an accepted term. No change to guide.
 - Agree. Replace 'terram' with 'geotextile membrane'
 - It is difficult to show all three suggestions on one diagram. We discuss surfacing elsewhere in the guide. No change to guide.
 - The requirement to consider drainage is not standard on all piling schemes. Add a new bullet point relating to considering drainage.
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