

**Flood Risk section update****May 2017**Introduction

This paper seeks to bring together comments received on the Preferred Options version of the Local Plan, in relation to flood risk. It discusses the new Flood Risk Supplementary Planning Document (2017) and includes an improved flood risk section for the Publication version of the Local Plan.

Comments on the Flood Risk section of the Preferred Options Local Plan

In response to the Preferred Options consultation, many comments were received on the topic of flood risk. These are included at Appendix A.

The Flood Risk Supplementary Planning Document (SPD) (2017)¹

The purpose of this SPD is to increase awareness of the nature of flood risk in the Broads area, give advice to developers and others about the Authority's approach to the issue of development and flood risk, and stress the need to maintain a high standard of design in new waterside development.

It is not the intention for the flood risk section of the Local Plan to copy verbatim the SPD, but the content of the SPD has informed the improved flood risk section of the Publication Local Plan.

Please note that on adoption of the Local Plan, it is envisaged that the SPD will need to be updated to reflect the new flood risk policies.

Conclusion

In light of comments received on the flood risk section of the Preferred Options Local Plan as well as to take into account the adoption of the new Flood Risk SPD (2017), the flood risk section of the Publication version of the Local Plan has been improved.

The new flood risk section for the Publication Local Plan has been produced in liaison with the Environment Agency and Norfolk County Council as Lead Local Flood Authority for the majority of the Broads Authority Executive Area.

¹ <http://www.broads-authority.gov.uk/planning/planning-policies/development/current-documents/supporting-documents-and-evidence>

Appendix A: Comments received at the Preferred Options consultation on the Draft Flood Risk policies.

POSP4 - Flood Risk

Broads Reed and Sedge Cutters Association

There is nothing in the Broads Local Plan to address the ongoing problems with the Broads floodplains not being able to function naturally and correctly owing to many sites having their access dykes from the main rivers blocked off. This also impedes natural water flow on and off sites resulting in stagnation and decline.

BA summary: There is nothing in the Broads Local Plan to address the ongoing problems with the Broads floodplains not being able to function naturally and correctly owing to many sites having their access dykes from the main rivers blocked off.

BA comment: The control of water level and flows on individual floodplain fen sites is a matter for landowners and site managers. This occurs in liaison with Natural England if these sites are protected by natural conservation designations sites or are in receipt of agri-environment payments that prescribe management of fen. This routine management does not require planning permission. Where new or modified water control structures require planning permission the Local Plan already specifies that the Flood Risk Assessment 'It would not negatively impact on water quality of surface water and ground water'.

Knight, J (BA Navigation Committee Member)

There is some question as to whether floating holiday accommodation is considered to be a water compatible use. Common sense dictates that it must be, as it is no different to a boat. Floating lodges or camping pods would for example be a popular extension to the Broads Tourism offering - especially with anglers - but have been resisted on the basis that they do not comply with the NPPG definition of 'water compatible'. Arguably, however, they could be considered to fall under the heading of 'docks, marinas and wharves' and consideration should be given to encouraging this form of development.

BA summary: Comments regarding floating holiday accommodation and floating angling platforms and flood risk compatibility.

BA comment: Noted. It is not clear if this is a proposal for something for the local plan to consider, or general thoughts on the matter. We will get in touch with Mr Knight to understand more.

PODM4 - Flood Risk

Waveney District Council

The Council supports the policy but questions whether it ought to apply to all areas with at least a 1 in 1000 year risk of flooding. The Environment Agency's flood zones only show the extent of flood risk today. Flood risk identified in a Strategic Flood Risk Assessment to support a Local Plan should consider the future risk of flood risk over the lifetime of a development taking into account climate change. The extent of areas of flood risk once climate change has been modelled can vary significantly from the Environment Agency's flood zones. Waveney District Council has commissioned a Strategic Flood Risk Assessment which will cover the River Waveney. It is expected that this work will be complete in Summer 2017.

BA summary: The Council supports the policy but questions whether it ought to apply to all areas with at least a 1 in 1000 year risk of flooding.

BA comment: The policy includes requirements for development within "EA flood risk zones". This means Flood Zone 3 & 2; Flood Zone 2 includes areas at risk of up to the 0.1% or 1:1000 annual probability flood event. So the policy does apply to all areas with a 1 in 1000 year risk of flooding. The proposed policy does require an FRA to consider flood risk for the lifetime of the development. Once the full BESL model is available, the current SFRA for the BA area will be able to be updated with the revised (fluvial) climate change flood outlines. When such mapping has been completed, a

Local Plan could reference/highlight that there are areas that will become at increased risk of flooding, and that proposals in those areas should therefore give some consideration to that future flood risk. However, the EA would not be a consultee for any such applications if they are outside the current FZ2&3, so an LPA would need to be comfortable reviewing any submitted flood risk considerations.

Norfolk County Council

The second paragraph detailing that development will only be permitted in EA Flood Zones 2 and 3 should include references to 'all sources of flood risk' as this is the description of the NPPF para 100 otherwise you are narrowing its scope. Under evidence used to inform this section it should include references to The EA Risk of flooding from Surface Water maps as well as the Norfolk Local Flood Risk Management Strategy. Under monitoring indicators it should also state permissions granted contrary to the advice of the Lead Local Flood Authority.

BA summary: The second paragraph detailing that development will only be permitted in EA Flood Zones 2 and 3 should include references to 'all sources of flood risk' as this is the description of the NPPF para 100 otherwise you are narrowing its scope. Under evidence used to inform this section it should include references to The EA Risk of flooding from Surface Water maps as well as the Norfolk Local Flood Risk Management Strategy. Under monitoring indicators it should also state permissions granted contrary to the advice of the Lead Local Flood Authority.

BA comment: Noted and will make these amendments.

RSPB

The penultimate paragraph/sentence of the policy text needs to be amended to state "...habitats of national or local importance." There are no site designations of regional importance and the policy should accurately reflect the hierarchy for protected areas: international, European, national and local sites of importance.

BA summary: The penultimate paragraph/sentence of the policy text needs to be amended to state "...habitats of national or local importance."

BA comment: Will amend.

Environment Agency

We agree with policy PODM4 on flood risk and the majority of the requirements of the Flood Risk Assessment (FRA). We recommend that the policy is amended to also include the requirement for a Flood Response Plan to be included within the FRA. This is particularly important as policy PODM4 part n) requires the FRA to demonstrate safe access and egress from the site, which will not be possible for many sites within the Broads during a flood event due to unsafe flood depths. Therefore the safety of people will need to be managed through a Flood Response Plan which advocates evacuation in advance of flooding or remaining in situ within an appropriate refuge. The NPPG requires flood response plans to be included and considered as part of a Flood Risk Assessment. Unless point n) of the policy requiring safe access requires new development to have safe access during the peak of a flood (flood depths less than 250mm) and does not allow the lack of safe access to be managed through submission of a Flood Response Plan. If this is the case, then this should be clearly stipulated within the policy to avoid any confusion. Page 41 states 'For the purposes of this policy, footprint will be defined as the ground floor area of the existing buildings, excluding temporary buildings, open spaces with direct external access between wings of a building, and areas of hardstanding'. It is unclear from this whether the 'open spaces with direct external access between wings of a building, and areas of hardstanding' are included or excluded from the footprint. This requires clarification in the report.

Environmental Permitting Regulations 2010: We recommend that flood risk policy PODM4 makes reference, either in the policy or the explanatory text, to the need to obtain an Environmental Permit from us, for flood risk activities for work or structures in, under, over or within 16m from a

main river and from any flood defence structure or culvert. The EPR are a risk-based framework that enables us to focus regulatory effort towards activities with highest flood or environmental risk. Lower risk activities will be excluded or exempt and only higher risk activities will require a permit. The works may fall under either one or more of the below: 'Exemption', 'Exclusion', 'Standard Rules Permit', 'Bespoke permit'. New forms and further information can be found at:

<https://www.gov.uk/guidance/flood-risk-activities-environmental-permits>. Anyone carrying out these activities without a permit where one is required, is breaking the law.

Access and Maintenance: We will always seek an undeveloped margin between built development and the top of bank or rear edge of river wall/defence as a starting position when we are advised about any proposals close to a main river watercourse. We would also highlight that maintenance of the area close to and within a watercourse, out to the centreline of the channel, is a riparian responsibility. More details about this are in our 'Living on the Edge' document which can be found at : <http://www.environment-agency.gov.uk/homeandleisure/floods/31626.aspx>

BA summary: Many comments on the detail of the flood risk section.

BA comment: On adoption of the new Flood Risk SPD, this section will be thoroughly checked to reflect that SPD as well as to reflect this comment. EA's assistance in checking the section may be useful.

Knight, J (BA navigation Committee Member)

There is some question as to whether floating holiday accommodation is considered to be a water compatible use. Common sense dictates that it must be, as it is no different to a boat. Floating lodges or camping pods would for example be a popular extension to the Broads Tourism offering - especially with anglers - but have been resisted on the basis that they do not comply with the NPPG definition of 'water compatible'. Arguably, however, they could be considered to fall under the heading of 'docks, marinas and wharves' and consideration should be given to encouraging this form of development.

BA summary: Comments regarding floating holiday accommodation and floating angling platforms and flood risk compatibility.

BA comment: Noted. It is not clear if this is a proposal for something for the local plan to consider, or general thoughts on the matter. We will get in touch with Mr Knight to understand more.

Policy PUBSP4: Strategic Flood Risk Policy

All new development will be located to minimise flood risk, mitigating any such risk through design and management measures, and ensuring that flood risk to other areas is not materially increased.

All new development will incorporate appropriate surface water drainage mitigation measures, and will implement sustainable drainage (SuDS) principles, to minimise its own risk of flooding and to not materially increase the flood risk to other areas.

Particular care will be required in relation to habitats designated as being of international importance in the area and beyond which are water sensitive, as well as habitats designated for regional or local importance.

Development proposals that would have an unacceptable adverse impact on flood risk management will be refused.

Reasoned Justification

Flooding can cause damage to property and infrastructure. The threat of flooding can also cause fear and distress to people and in some cases, flooding can lead to injury² and even loss of life. Risks relate not just to property but also to essential infrastructure and utilities required to facilitate and support development. Flooding can also precipitate pollution, which could have a significant and detrimental impact on the nature conservation interest of the Broads, and the duty of the Authority to protect this resource is an important consideration. On the other hand, flooding is also a natural process within a floodplain. In some circumstances it can be beneficial to wildlife.

Approximately 95% of the Broads Authority area is at some risk of flooding. This includes more than 2000 properties and almost 30,000 hectares. The Broads Authority boundary is tightly drawn around the edge of the floodplain. The extent and nature of flood risk, with significant areas of 'functional floodplain', mean that flood risk is a major constraint on development in the Broads.

The flood risk in the Broads is mainly from both fluvial and tidal sources and the whole character and development in the Broads over many hundreds of years has been closely associated with the water environment and flood risk. Much of the Broads area is defended by flood defence embankments, which are maintained by the Environment Agency to reduce flooding. The flood defences, where they exist, only reduce the risk of flooding and will never eliminate it; the risk of overtopping or a breach of defences remains. This has been the historic case within the Broads.

While the current Broadland Flood Alleviation Project will provide protection to 1995 levels, and future mitigation measures and technological innovation may improve on this, there remains uncertainty regarding the magnitude of future risk and a precautionary approach is appropriate.

² There is a residual risk from all water, especially if it is moving (a flood, at certain velocity and above 4-6cm in depth) which would sweep people and things before it.

Policy PUBDM4: Development and Flood Risk

Development within the Environment Agency's flood risk zones will only be acceptable when it:

- i) Is compatible with national policy and when the sequential test and the exception test, where applicable, have been satisfied;
- ii) a site specific Flood Risk Assessment, where required, demonstrates an acceptable flood risk and/or suitable flood protection mitigation measures are incorporated into the proposals, where necessary, which can be satisfactorily implemented; and
- iii) Would not affect the ability for future flood alleviation projects to be undertaken.

The Site Specific Flood Risk Assessment will need to meet the requirements of the NPPG and demonstrate/assess the following:

- a) That the development is safe for its lifetime taking into account the vulnerability of its users and climate change;
- b) Whether the proposed development will make a significant contribution to achieving the objectives of the Local Plan;
- c) Whether the development involves the redevelopment of previously developed land or buildings and would result in environmental improvements over the current condition of the site;
- d) Whether appropriate measures to ensure resilience to potential flooding have been incorporated into the development;
- e) Whether appropriate measures to reduce the risk of flooding (on and offsite), including sustainable drainage systems have been incorporated;
- f) Where the proposal involves the replacement of an existing building, whether the replacement building is located and/or designed without increasing flood risk and, where possible, to reduce the risks and effects of flooding;
- g) Demonstrates an acceptable flood risk and/or suitable flood protection mitigation measures are incorporated into the proposals, where necessary, which can be satisfactorily implemented;
- h) Whether the risk of flooding is not increased elsewhere and, wherever possible, is reduced;
- i) Demonstrates that the integrity of existing coastal and river defences are not undermined;
- j) Do not reduce the potential of land used for current or future flood management;
- k) Are compatible with the appropriate Catchment Flood Management Plan or Shoreline Management Plan;
- l) Use development to reduce the risk of flooding through location, layout and design and incorporate sustainable drainage systems to minimise surface water run-off and avoid pollution (see PODM5);
- m) Demonstrate that sites at little or no risk of flooding are developed in preference to areas at higher risk;
- n) Safe access and egress from the site;
- o) Management and maintenance plans for flood protection/mitigation measures, including arrangements for adoption by any public authority or statutory undertaker and any other arrangements to secure the operation of the scheme throughout its lifetime;
- p) It would not negatively impact on water quality of surface water and ground water; and.
- q) Includes a Flood Response Plan (FRP).

The relocation of existing development to an undeveloped site with a lower probability of flooding will be permitted where:

- r) The vacated site would be reinstated as naturally functioning flood plain;
- s) The benefits of flood risk reduction outweigh the benefits of leaving the new site undeveloped; and
- t) The development of the new site is appropriate when considered against the other policies

of the Local Plan.

In the case of the replacement of an existing residential property in flood zone 3a, the replacement dwelling must be on a like-for-like basis, with no increase in the number of bedrooms, on the same sized footprint³ and wherever possible being relocated in a less vulnerable part of the site.

Any required additional or enhanced flood defences should not conflict with the purposes and special qualities of the Broads.

Particular care will be required in relation to habitats designated as being of local, regional, national or international importance in the area and beyond which are water sensitive.

Reasoned Justification

According to the National Planning Practice Guidance (NPPG), “flood risk” is a combination of the probability and the potential consequences of flooding from all sources – including from rivers and the sea, directly from rainfall on the ground surface and rising groundwater, overwhelmed sewers and drainage systems, and from reservoirs, canals and lakes and other artificial sources.

Flood Zones refer to the probability of river and sea flooding, ignoring the presence of defences. They are shown on the Environment Agency’s Flood Map for Planning (Rivers and Sea)⁴ and defined in the NPPG. They are also shown in a Strategic Flood Risk Assessment (see text later). It is evident that the causes of flooding in the Broads are complex, and that flooding will continue to be a significant risk in much of the Broads in the foreseeable future. Developers should be aware of this situation. The risk of flooding must continue to be a material consideration in dealing with Broads’ planning applications. It may be a reason for refusal of planning permission in some cases. In the context of the uncertainty about the nature and extent of flood risk in the Broads, it is open to developers to commission their own risk assessment regarding the potential for flooding at a particular site. Risks relate not just to property but to essential infrastructure and utilities required to facilitate and support development, and to the ability of emergency services to respond to an event.

Flood alleviation and preparing for the impact of climate change are key issues in the Broads, and there are a number of approaches that could be taken to address this. It will also be essential to ensure that measures to minimise the risk of flooding from all sources of flood risk to new development do not themselves lead to development which, by virtue of its scale, layout or design, is visually damaging to its surroundings. Therefore, even though the principle of development may be acceptable, acceptability in terms of design, landscape character, and impact on the environment must also be addressed.

All developments should be located in areas identified as being at the lowest risk of flooding. Development proposals of one hectare or greater and all proposals for new development in Flood Zones 2 and 3 will be accompanied by a site specific Flood Risk Assessment (FRA) (except those covered by Environment Agency standing advice). This FRA should demonstrate how flood risk from all sources of flooding to the development itself and flood risk to others would be managed. It will also be expected to take climate change into account, identify flood reduction measures that will be

³ The “footprint” is the aggregate ground floor area of the existing on site buildings, including outbuildings which affect the functionality of the floodplain but excluding temporary buildings, open spaces with direct external access between wings of a building, and areas of hardstanding.

⁴ See the flood maps here: <http://maps.environment-agency.gov.uk/wiyby/wiybyController?x=357683.0&y=355134.0&scale=1&layerGroups=default&ep=map&textonly=off&lang=e&topic=floodmap>

incorporated into the development (including the use of Sustainable Drainage Systems) and provide an assessment of any residual risk. The FRA should be proportionate to the level of risk and the scale, nature and location of the development. The checklist as set out in the NPPG⁵ should be used to produce an FRA but the FRA should also address the additional considerations as set out in the policy.

To assist the production of Flood Risk Assessments for householder development and other minor extensions in Flood Zones 2 and 3, the Authority, in liaison with the Environment Agency, has proposed a Ticksheet template⁶.

In accordance with national policy, development in Environment Agency Flood Zones 2 and 3 will only be permitted when the sequential test and the exception test, where applicable, have been satisfied. The Sequential Test will be carried out by the Authority drawing upon information submitted by the applicant. Where an exception test is necessary, the applicant's FRA must include sufficient information to enable this assessment to be undertaken. For the purposes of this policy, footprint will be defined as the aggregate ground floor area of the existing on site buildings, including outbuildings which affect the functionality of the floodplain but excluding: temporary buildings, open spaces with direct external access between wings of a building, and areas of hardstanding.

Part n) requires the FRA to demonstrate safe access and egress from the site. Where it has been demonstrated that this would not be possible due to unsafe flood depths on or surrounding the site, the safety of occupants will need to be managed through a Flood Response Plan (FRP). The FRP should demonstrate that occupants will be kept safe and not exposed to flood hazards. This may be through evacuation in advance of a flood and/or remaining in situ within an appropriate refuge. The Authority has produced a Flood Response Plan template⁷ for applicants to use. The acceptability of the plan and its ability to keep occupants safe will be assessed as part of the planning application.

With regards to replacement dwellings in flood zone 3a, replacement dwellings are required to be on a like for like basis as any increase in size is likely to expand into functional floodplain (flood zone 3b) thus putting more property and possible more people at risk of flooding. The change to the functional floodplain could increase flood risk elsewhere.

Surface water run-off proposals should address the requirements of the Flood and Water Management Act 2010.

Sustainable Drainage Systems (SuDS) are an alternative to traditional drainage systems that attempt to reduce the total amount, flow and rate of surface water run-off. There is a range of possible SUDs techniques that can be utilised. However, not all techniques will be appropriate for individual development sites. See separate policy on SuDS. See policy **PODM5**: Surface water run-off.

Given the importance and relevance of flood risk issues to the Broads applicants should, in developing proposals, have regard to National flood risk guidance and policy as set out in the NPPF and NPPG.

⁵ <http://planningguidance.communities.gov.uk/blog/guidance/flood-risk-and-coastal-change/site-specific-flood-risk-assessment-checklist/>

⁶ http://www.broads-authority.gov.uk/_data/assets/word_doc/0006/917862/Appendix-F-Flood-Risk-Assessment-Tick-Sheet.doc

⁷ http://www.broads-authority.gov.uk/_data/assets/pdf_file/0007/917863/Appendix-D-Flood-Response-Plan-Guidance-and-Structure.pdf

The Government also states in the NPPG that '*Local authorities and developers should seek opportunities to **reduce the overall level of flood risk in the area and beyond***'. The policy seeks opportunities to reduce the overall level of flood risk.

Environmental Permitting Regulations 2010

Applicants should be aware that there is a need to obtain an Environmental Permit⁸ from the Environment Agency, for flood risk activities for work or structures in, under, over or within 16m from a main river and from any flood defence structure or culvert. The works may fall under one or more of the following categories: 'Exemption', 'Exclusion', 'Standard Rules Permit', 'Bespoke permit'. Anyone carrying out these activities without a permit where one is required, is breaking the law.

Status of the 2017 Flood Risk Supplementary Planning Document on adoption of the Local Plan.

The Broads Authority have a Flood Risk Supplementary Planning Document (SPD)⁹. That is based upon the Development Management Policy DP29 which this policy replaces. Consequently, on adoption of this Local Plan, the SPD is out of date. The Authority will review the SPD immediately after adoption, but in the meantime (between adoption of the Local plan and adoption of the revised SPD), we will still refer to the SPD (albeit along the lines of guidance) as there is much detail to flooding in that document.

Strategic Flood Risk Assessment (SFRA)

SFRAs are very important for the production of Local Plans. Work is currently underway to provide up to date SFRAs for most of Norfolk together as well as separately in Waveney (as at May 2017). However a large area of the Broads Authority Executive Area will not be assessed as part of this work because the model needs to be purchased and updated by the Environment Agency and the model run to produce SFRA equivalent information. It is intended that this will be completed by around June 2018. Please see the Position Statement between the Broads Authority and Environment Agency¹⁰.

Evidence used to inform this section

- Flood Risk SPD (2017) for the Broads.
- Environment Agency Flood Zones and Risk of flooding from Surface Water maps
- The NPPG and NPPF.
- Strategic Flood Risk Assessment (2007) and Draft 2017 version.
- SFRA Position Statement, EA and BA (2017)
- Norfolk Local Flood Risk Management Strategy

Monitoring Indicators

- Permissions granted contrary to Environment Agency Flood Risk advice.
- Permissions granted contrary to the advice of the Lead Local Flood Authority.

⁸ New forms and further information can be found at: <https://www.gov.uk/guidance/flood-risk-activities-environmental-permits>.

⁹ http://www.broads-authority.gov.uk/_data/assets/pdf_file/0006/917844/Broads-Flood-Risk-SPD-Final-March-2017.pdf

¹⁰ xxx