



The countryside charity
Norfolk

Measure, Monitor, Mitigate

Taking Action to Reduce Flooding in your Local Area

A Toolkit for Parish Councils



Created by CPRE Norfolk

May 2024

Introduction

Everyone who lives and works in Norfolk will be aware of, and have almost certainly been affected by, the increase in flooding incidents in recent years due to climate change and increased pressures on land use and our infrastructure. While for some it may simply be a temporary inconvenience, for those whose home or business has been flooded, the experience is costly, disruptive and distressing.

While increased flood risks are not confined to Norfolk, our geography, topography, farming practices and settlement patterns pose unique challenges requiring a multi-agency approach, including by parish councils. By building your knowledge base about flood risks in your area, understanding causation and potential solutions, parish councils will be better able to respond to planning applications and consultations, to identify suitable interventions and have the evidence to support larger infrastructure or environmental improvements.

Parish councils, particularly when working with local landowners, have a vital role to play in reducing the likelihood and impact of flooding and by producing this toolkit we at CPRE Norfolk hope everyone is informed and inspired to take action.

Chris Dady, CPRE Norfolk Chairman



Contents

Pages 3-8:	Building Your Knowledge Base
Pages 9-10:	The Role of the Planning System
Pages 11-13:	Taking Action
Page 14:	Further Sources of Information

Building Your Knowledge Base



Having an in-depth understanding of your parish, about past and present flooding incidents, about stakeholders and landowners and local infrastructure is essential before undertaking any flood management activities.

It will help identify possible causes of the flooding, who might be responsible and who you may need to consult/work with to carry out any flood mitigation measures.

It will also provide valuable and unique evidence when responding to planning applications for new developments in your area or if you are developing/updating a Neighbourhood Plan. This section identifies some of the information and activities needed to build your knowledge base.

If your parish council already has this information, check that it is all recorded in one document/folder and it is up to date.

Your Parish

1. Check the Flood Zone of properties in your parish using the Environment Agency's Interactive Flood Map. <https://flood-map-for-planning.service.gov.uk/> . Properties are categorised depending on their risk of flooding from rivers, the sea and tidal sources.
 - Zone 1 (low probability),
 - Zone 2 (medium probability),
 - Zone 3a (high probability), and
 - Zone 3b (functional floodplain).

Use the EA website to also check the long-term flood risk to properties, which considers other sources of flooding, such as from surface water.

Caveat: While these maps are undoubtedly helpful, they are based on postcode areas, rather than specific properties, and do not reflect the precise location of buildings on a site. Individual buildings may be at greater or lesser risk from flooding depending on where they are located and how they are built so, if possible, assess each property on a case-by-case basis.



2. Where are the ditches, drainage channels, culverts and ponds? Walk the parish to note the condition they are in. Are they wet or dry? Are they overgrown? Are there any potential hazards or hindrances developing which could lead to future problems, e.g. damage to a riverbank, fallen trees, build-up of detritus.

3. Compare current and historic maps. Have old ponds been filled in or built over? Have rivers been widened or straightened? Unless there has been a determined effort to design or engineer water away from an area, it will often find its way back to its natural path/level. Sources of maps include:

- MAGIC, DEFRA's Multi-Agency Geographic Information for the Countryside, is an interactive dataset of geographic information about the natural environment, covering rural, urban, coastal and marine environments across Great Britain. <https://magic.defra.gov.uk/home.htm>
- Norfolk County Council's Historic Norfolk Interactive Map Explorer. View historical maps alongside historical aerial survey data and modern-day Ordnance Survey maps. Overlay maps to pinpoint changes in the geographic landscape of the County, population and housing growth in urban areas <http://www.historic-maps.norfolk.gov.uk/>
- National Library of Scotland has an extensive online collection of historical maps from across the UK. <https://maps.nls.uk/>
- District, Borough or City Council Offices

Flooding Incidents

1. When and where is flooding happening? How severe is the flooding: minor, moderate, major? Record dates and locations, take photos and videos to build up your body of evidence.
2. Identify the cause of the flooding. Is it:
 - Built Infrastructure Failure: when the carrying capacity of foul and surface water sewers is exceeded. This may be due to any one or a combination of the following:
 - frequent or heavy rainfall
 - new developments
 - debris or blockages in pipework
 - lack of maintenance
 - reduction in natural drainage solutions due to e.g. non-permeable road surfaces, driveways
 - sustained periods of periods of dry weather before a storm which hardens the soil and prevents water soaking in
 - Field run off
 - River Flooding: due to persistent heavy rainfall combined with high tides which prevents water flowing downstream.
 - Rising groundwater
 - Changes to water extraction activities
 - Occasional / accidental 'flooding', e.g. burst pipes



3. Talk to older residents about their experiences of flooding in the parish. Where did it occur? Has it changed over time?

4. What is happening in neighbouring parishes, up and downstream? Investigate whether any flood defences are planned upstream of your parish which could increase flow towards your village. Reciprocally, inform any neighbouring parishes of planned flood management activities in your village which might affect waterflow up or downstream.
5. Start a Citizen Science project in your village, perhaps involving your local school, recording local rainfall. This data will feed into your understanding of when and why floods occur. The cause of and solution to flash floods in the summer, for example, may be different to winter flooding caused by high water tables.

Infrastructure

1. Identify any critical infrastructure which could be damaged or compromised because of flooding. This could include water treatment plants, electricity substations, telecommunications and broadband lines, key village roads for access and egress and access to vulnerable members of your parish.
2. Locate your water infrastructure assets. Water and water recycling infrastructure assets owned by Anglian Water can be obtained from <https://www.anglianwater.co.uk/developing/drainage-services/locating-our-assets/>. There is a charge for this service.
3. Assess your drainage capacity. Parish councils concerned about the impact of a proposed development can ask Anglian Water to assess a drainage strategy on a planning application. While Anglian water cannot provide site specific information, they will carry out a drainage capacity assessment on their network and send a formal response to the Local Planning Authority. Contact the Planning Liaison Team on 07929 786955 or email planningliaison@anglianwater.co.uk outlining your concerns and provide the Local Authority name along with the planning application reference number.

Local Stakeholders

1. Who owns and is actively responsible for the land in your parish? This may not be the same person, i.e. if there is a tenancy in place. Arrange to meet them to discuss their experiences of and attitude to flooding. Are they already, or planning, to take action? Are there any obstacles, challenges that need to be addressed? Would they be amenable to working with your parish council and the Environment Agency on the creation of a Flood Management Plan?
2. Identify who has Riparian Rights*. Does the relevant landowner need any advice, guidance or practical or financial support to fulfil their riparian obligations?

** Any landowner whose land abuts a natural watercourse or where natural water runs through or under their land has Riparian Rights, and with those rights come certain responsibilities and obligations. These include allowing the water to flow naturally; not increasing the risk of flooding and erosion for neighbouring landowners; and maintaining the bed and banks, and any trees and vegetation on the banks.*

Statutory Stakeholders

Responsibility for flooding is a complicated relationship between numerous stakeholders, including:

- Norfolk County Council, in their capacity as:
 - Lead Local Flooding Authority
 - Highways Authority NCC are responsible for maintaining public roads in Norfolk (excluding the A11 and A47). They are also responsible for the drains and gullies on roads and pavements.
- Anglian Water: Responsible for water supply and public sewers. They are not Statutory Consultees to planning applications but will often respond to major developments.
- District and Borough Councils: In their role as Planning Authorities, they influence the quantity and design of new developments.
- Broads Authority: The Broads Authority is the Local Planning Authority within the Broads area.

- Internal Drainage Boards. Statutory bodies set up to manage water levels in low-lying areas of the UK. There are 7 IDBs in the Eastern Region, with their area of responsibility based on river catchments. <https://www.wlma.org.uk/>
- The Environment Agency has a strategic overview of all sources of flooding and coastal erosion and is also responsible for flood and coastal erosion risk management activities on main rivers and the coast. They are Statutory Consultees to planning applications. <https://www.gov.uk/government/organisations/environment-agency>

The Norfolk Strategic Flooding Alliance brings together all partners and agencies involved in planning for and responding to flooding in Norfolk. This includes the Environment Agency, Anglian Water, the Association of Drainage Authorities, the Water Management Alliance, Water Resources East, the Norfolk Resilience Forum, the Broads Authority and Norfolk's County, Borough, City, District and Parish Councils. <https://www.norfolk.gov.uk/article/39295/Norfolk-Strategic-Flooding-Alliance>

Action: Identify the statutory stakeholders for your area and, if possible, establish who within the organisation has responsibility for your parish/area. If appropriate, invite them to visit your parish to discuss any areas of concern.

Read more about Roles and Responsibilities at:

<https://www.norfolk.gov.uk/article/38648/Types-of-flooding>.

<https://www.local.gov.uk/topics/severe-weather/flooding/local-flood-risk-management>



Record, Monitor and Review

However you choose to record the information you have gathered in the initial fact-finding process, make a note of the date you collected the evidence and when you intend to review it.

The Role of the Planning System

National Level

The National Planning Policy Framework (NPPF, 2023) sets out the Government's planning policies for England and how these are expected to be applied by Local Planning Authorities and decision-makers, both in drawing up plans and making decisions about planning applications.

Section 14 of the NPPF sets out how the challenges of climate change, flooding and coastal change will be approached through planning and development. Paragraphs 165-175, specifically relate to flood risk.

<https://www.gov.uk/guidance/national-planning-policy-framework/14-meeting-the-challenge-of-climate-change-flooding-and-coastal-change>

The main points to note:

- Planning authorities are required to apply a sequential test, directing development away from areas at highest risk (whether existing or future).
- Where development is deemed necessary in such areas, the development should be made safe for its lifetime without increasing flood risk elsewhere.
- When determining any planning applications, local planning authorities should ensure that flood risk is not increased elsewhere. Where appropriate, applications should be supported by a site-specific flood-risk assessment. <https://www.gov.uk/guidance/flood-risk-assessment-for-planning-applications#when-you-need-an-assessment>
- Major developments should incorporate sustainable drainage systems (SuDS) unless there is clear evidence that this would be inappropriate.

The interpretation of the NPPF is supported by the Planning Practice Guidance (PPG) which sets out how the government's planning policies are expected to be applied in England. The flood risk and coastal change section of the PPG advises how to take account of and address the risks associated with flooding and coastal change in the planning process.

<https://www.gov.uk/guidance/flood-risk-and-coastal-change>

Local Level

Local Plans (or Local Development Frameworks) created by Local Planning Authorities (LPAs) detail how national planning policy will be implemented in their area. LPAs may also issue Advisory Notes and Supplementary Planning Documents, which provide further detail to the policies in the development plan and further guidance for development. These may apply to all planning applications in their authority, or they may be site specific advisory notes, which address specific topographical or environmental concerns, in a small geographical area. The Broads Authority, for example, have a Flood Risk Supplementary Planning Document. https://www.broads-authority.gov.uk/_data/assets/pdf_file/0019/236404/Broads-Flood-Risk-SPD-2020.pdf

Action: consult your local plan or contact your local **planning** authority to check whether there are additional policies and guidance relating to flood risk that particularly affect your parish.



Neighbourhood Plans

Parish councils can establish flood mitigation policies and ambitions through the creation of a Neighbourhood Plan (although Neighbourhood Plans must still be in accordance with higher level planning policy and Local Plans.) Neighbourhood Plans can be used to identify sites for development using the Sequential Test and sites for Natural Flood Management Schemes.

Statutory Consultees

Planning authorities must consult the Lead Local Flood Authority and the Environment Agency for planning applications of certain sizes and/or in certain locations.

Taking Action

When you have built your knowledge base about the causes, frequency and possible solutions to flooding incidents, you will be in a better position to take action. This might include:

Creating (or updating) a Neighbourhood Plan

The information you have gathered will help you identify sites in your parish which are more suitable for development using the Sequential Test together with sites and opportunities for Natural Flood Management Schemes. Your Neighbourhood Plan will provide detailed evidence of flood risk which planning authorities must consider when deciding an application.

Responding to Local Plan Consultations

Local plan consultations will include a ‘call for sites’ to help planning authorities identify sites which might have the potential for development and could be considered for an allocation in the Local Plan. Your local flood risk knowledge will help identify suitable sites and, if appropriate, challenge unsuitable proposals.

Responding to Planning Applications

Do not assume that Statutory Consultees will respond to a planning application and, even if they do, they may not have detailed and up to date local knowledge about flood-related incidents and activities in your parish. The evidence you collect through your knowledge-gathering exercise will ensure your response to a planning application provides another layer of accuracy, helping planning authorities make better, more-informed decisions.



Undertaking Physical Environmental Activities

- **Ditch clearance and maintenance**

This will need to be done with consent of the landowner who has Riparian Rights (see page 3, for more information about riparian rights). You will also need to be mindful of the impact any ditch clearance will have on water flow up and downstream. The Environment Agency may need to grant licences for any clearance, to ensure that there is no environmental damage to the site and wildlife. Any clearance should only take place during winter months, November to January.

- **Drain maintenance, repair and clearing**

Norfolk County Council is responsible for maintaining drains and gullies on roads and pavements. To report an issue, go to <https://apps.norfolk.gov.uk/highwaysdefect/?s=road&t=flood>

Anglian Water is responsible for maintaining public sewers (generally, drains coming from privately owned properties are the owner's responsibility). You can report issues connected to public sewers at: <https://www.anglianwater.co.uk/your-local-area/report-an-issue/>

- **Natural Flood Management Plans**

The most comprehensive and effective solution to reduce the risk of flooding is the implementation of Natural Flood Management (NFM) plans. NFM involves working with nature to reduce flooding risk, using techniques to protect, restore, and mimic the natural functions of rivers, catchments, floodplains and the coast to slow and store water. Techniques include hedgerow and tree planting schemes, buffer strips, leaky dam installation and bund creation.

In almost all cases, parish councils wishing to undertake a Flood Management Scheme will need the consent and co-operation of local landowners. Fortunately, there is increased recognition of the importance of NFMs within the agriculture and farming communities with central government providing a range of financial support and incentives.

The Environment Agency can help your parish create a Natural Flood Management Plan, liaise with the landowner and identify sources of funding to carry out the work.

Don't start landscaping works without careful consideration and discussion; they may not be the best solution to the problem and some interventions may require certain permissions.

Action: Get in touch with the Environment Agency to discuss whether your parish council could benefit from a Flood Management Plan. The process can be time-consuming, so the sooner you start the ball rolling the better.

Every little helps!

We all have a role to play in making our communities flood-resilient, so encourage and support residents to:

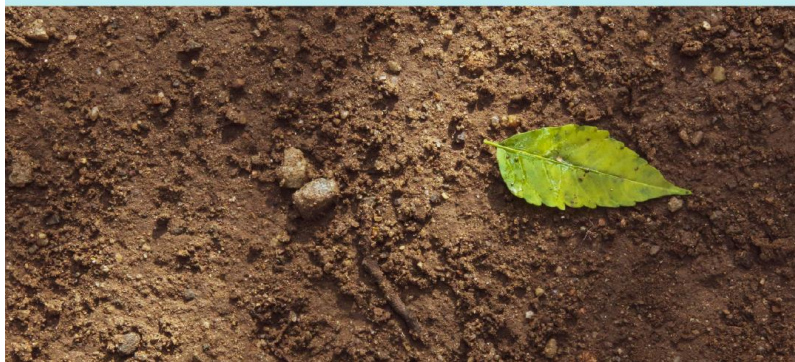
- Check their drains for any blockages such as mud, leaves and stones.
- Install rainfall harvesting systems.
- Consider changing garden planting to help decrease risk of flooding. Flood Re, the insurance industry/government initiative has a section on their website around flood-resilient gardening, including planting plans. <https://www.floodre.co.uk/flood-resilient-garden/>
- Install permeable pavements/driveways. Remind them that planning permission is needed for traditional, impermeable driveways over 5m² if the water does not run to a permeable area.

In higher risk areas, residents might also want to:

- Consider flood protections installations such as flood doors and barriers, self-closing air bricks and non-return valves as well as toilet bungs and other elements which are designed to keep as much water out of the property as possible. <https://www.floodre.co.uk/buildbackbetter/>
- Source sandbags to divert rising water if necessary.

Did you know?...

One hectare of soil can store one and a half Olympic swimming pools full of water. In the UK our soil stores more water than all our lakes and rivers combined.



Slide Source: FloodRe

Further Sources of Information

- **Norfolk County Council:** <https://www.norfolk.gov.uk/article/38551/Flood-and-water-management>
- **Norfolk Strategic Flood Alliance:** <https://www.norfolk.gov.uk/article/39295/Norfolk-Strategic-Flooding-Alliance>
- **The Flood Hub:** A one stop shop for flood information and resources to support householders, businesses and communities to become more flood resilient. While it is focused on the North West, it has a very useful Knowledge Hub which is relevant to all parts of the UK, including sections on Planning and Development.
<https://thefloodhub.co.uk/knowledge-hub/>
- **Anglian Water:** <https://www.anglianwater.co.uk/services/sewerage/flooding/>
- **The Environment Agency:** <https://www.gov.uk/browse/environment-countryside/flooding-extreme-weather>
- **Department for Levelling Up, Housing and Communities and Ministry of Housing, Communities & Local Government:** Flood risk and coastal change in the planning process. <https://www.gov.uk/guidance/flood-risk-and-coastal-change#Site-Specific-Flood-Risk-Assessment-checklist-section>
- **FloodRe:** While primarily focused on the insurance aspects of flooding, its website includes sections on how to make properties more flood resilient.
<https://www.floodre.co.uk/be-flood-smart/>

Acknowledgements:

Toolkit Contributors: Tom Williamson, Barbara Adamski, Michael Rayner

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