



Enabling community maintenance for local flood risk management



Risk management authorities' guide to supporting community maintenance



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Jonathan Simm, Clare Twigger-Ross, Simon McCarthy,
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This guide (**C821b**) is part of a suite of three documents created to explore enabling community maintenance for local flood risk management.

It was produced for risk management authorities and describes the benefits of a positive collaboration with local groups to sustain flood risk assets.

Taking action (**C821a**) is aimed at local community groups who want to reduce flooding risk by maintaining drainage, watercourses and flood defences, but you don't know where to start

Lastly, the briefing note (**C821c**) was created for strategy/policy staff. The note traces a line through existing policies involving community groups in maintaining flood risk assets.

All three documents are available to download from
www.ciria.org/bookshop

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Glossary

Asset	A shorthand term for any physical feature (eg flood bund, flood wall, channel, drain or drainage system), whether made by humans or naturally occurring, which requires observation, monitoring and maintenance.		
Catchment	The total area of land from which water drains into any given river or reservoir.		
Climate change	Long-term changes in climate. While climate change can occur naturally, the term is generally used for changes due to human intervention in atmospheric processes, for example, through the release of greenhouse gases to the atmosphere from burning fossil fuels, the results of which may lead to increased rainfall and sea level rise.	Green space	An area set aside for the protection and enjoyment of nature.
Coastal defence	An overall term embracing both coast protection (measures that aim to prevent the coast from eroding) and sea defence (measures aimed at protecting low-lying coast and coastal hinterland against flooding caused by the combined effect of storm surge and extreme astronomical tides).	Habitat	A place where an organism lives.
Community group	A flood action group or other voluntary/ community group undertaking maintenance of flood defences, channels and drainage works.	Orphaned asset	Asset where the riparian owner is unknown.
Community maintenance	Activity by flood action or other voluntary groups affiliated to a geographical community (eg parish, town, village) designed to observe, monitor, maintain or sustain the performance of flood defences, channels and drainage works.	Riparian owner	The person or organisation, who owns or tenants land that contains or is next to a watercourse.
Culvert	A covered channel or pipe that completely encompasses a river or a burn	Sediment	Particulate matter derived from rock, minerals or bioclastic debris.
Flood risk management authority	Responsible for undertaking FRM over a defined area. They usually do not own the watercourses they may manage, and in such circumstances, they cannot have a legal duty to maintain them, which remain with the riparian owner. However, they do have permissive powers to undertake maintenance works on any watercourse and its assets and can take legal action to recover the costs from the riparian owner.	Stakeholder	Any individual, group, or organisation that has an interest in or is affected by a project, activity or issue. Stakeholders can influence or be influenced by the outcome of a project.
		Surface water	Rainfall that has landed on the ground and pools, soaks into or runs off ground surfaces.
		Watercourse	An umbrella term used in this guide to describe any channel, above or below ground, which moves water from one place to another. This includes rivers, streams, ditches, dykes, swales, lodes, culverts and piped watercourses. The process for classification of culverted watercourses is available from Water UK
		Weir	A wall built across a river to raise the water level upstream, it can also be for a mill, for navigation purposes on canalised rivers or used to control irrigation. Weirs can block the movement of fish.

Abbreviations and acronyms

CIC	Community interest company
DASH	Direct-action self-help
DWMP	Drainage and wastewater management plans
FCERM	Flood and coastal erosion risk management
FCRM	Flood and coastal risk management
FRM	Flood risk management
FRMA	Flood risk management authority
LLFA	Lead Local Flood Authority
MOU	Memorandum of understanding
NFM	Natural flood management
NWWM	North Worcester Water Management
RMA	Risk management authority
SUDS	Sustainable drainage systems
TCV	The Conservation Volunteers
TOR	Terms of reference

Introduction

1

1.1 Purpose of the guide

This guide is aimed at flood risk management (FRM) practitioners in the UK, specifically risk management authorities (RMAs), wishing to work with community groups who are planning maintenance activities relating to fluvial and drainage flood risk assets. (Note that this guide does not address the maintenance of coastal defence assets as this is usually carried out by the relevant coastal authorities.)

It is intended to be complementary to a longer practical guide prepared by CIRIA for the community groups entitled *Taking action. Reducing the risk of flooding in communities by maintaining drainage, watercourses and defences* (C821a), as well as a short document *Enabling community maintenance for local flood risk management. Briefing note for policy and strategy staff* (C821c), which sets community maintenance of FRM in its existing policy context.

C821a is written for local community groups and provides advice on group activities, including steps to carry them out, case studies and practical examples. RMAs are advised to review that guide alongside this document.

Riparian landowners (landowners with watercourses on or near to their property) can also access guidance such as that provided by the Environment Agency (2024b).

C821b is designed to help the various responsible parties (and others) collaborate to ensure that, given the limited resources available, efforts are best directed to mutual benefit. The principles and guidance outlined here are intended to inspire and empower RMAs to collaborate more effectively with community groups, fostering stronger partnerships to minimise the risks and impacts of flooding.

In doing so it is important to recognise the following:

- ◆ Flood action groups/communities are working as volunteers to contribute to risk reduction and/or benefit realisation, alongside the work of landowners and RMAs.

- ◆ Any work undertaken by community groups will not absolve RMAs of their existing responsibilities. The responsibilities of RMAs and landowners remain with those bodies.
- ◆ The guidance documents should be used to help support flood action groups/community volunteers initiating the idea of working alongside RMAs. They should not be used by RMAs to pressurise community groups into carrying out maintenance activities. Instead, the community groups may be working alongside RMAs and landowners to help reduce risk, realise benefits and improve local resilience to flooding.

As well as drawing on existing publications and research, this guide has been informed by:

- ◆ Workshops and consultation exercises with community and RMA representatives.
- ◆ Discussions with a range of existing community groups who are currently maintaining flood risk assets, including their reflections on what support they felt would have been useful in the early days of their community group.

Key outcomes of that consultation work included:

- ◆ Recognising that a key facilitation mechanism for both RMAs and communities is collectively recognising the challenges, which creates an aspiration to share the maintenance burden.
- ◆ Creating a process that ensures key points of contact are communicated and kept up to date.
- ◆ The importance of communicating with and involving communities within the local FRM framework – recognising the value in doing that, but also that there may be differences in appetite for supporting community work between different authorities, ie the water utility, local authority and highways department.

- Understanding that there may be limitations in how long a group may agree to maintain for and making sure there are processes in place for communities to let RMAs know that they are going to stop.
- Understanding that there are routes for ensuring risks associated with community group involvement in maintenance are managed effectively, and that insurance options are available.

“

The principles and guidance outlined here are intended to inspire and empower RMAs to collaborate more effectively with community groups

Box 1.1 Risk management authorities

RMAs, typically known by community groups as flood risk management authorities (FRMA), are various governmental authorities and organisations who are responsible for:

- flood warning systems
- flood risk assessments and FRM planning
- surface water management planning
- permitting of development proposals in areas at risk of flooding
- construction, operation and maintenance of FRM works
- permitting/consenting of works
- maintaining a register of FRM assets.

RMAs are obliged by law to co-operate with each other in the interests of FRM and may share information for this purpose. Chapter 4 provides further details on the different types of RMAs.

1.2 Defining community maintenance

In this guide, community maintenance of FRM assets is defined as:

“Activities by flood action groups or other volunteers affiliated to communities (eg parish, town, village) designed to observe, monitor, maintain or sustain the performance of flood structures, channels and basins.”

This definition covers the following:

1 Activities (...) designed to observe, monitor, maintain or sustain the performance

Across the whole of FRM, flood volunteers take action to reduce the risk of flooding in the community, reduce the effects of flood events and/or develop and maintain skills (eg through training) in the following ways:

- Knowledge focus:** encompassing activities such as surveying a river in a catchment walkover, checking river gauges, monitoring water quality, pollution monitoring and collecting data as part of a citizen science project.
- Campaign focus:** for example, raising awareness of flooding, taking part in flood planning, educational work with schools and promoting the uptake of local flood warden services.
- Physical focus:** such as embankment maintenance, habitat management, opening and

closing sea gates, and clearing drainage ditches and watercourses.

- Virtual focus:** remote monitoring or web-related action, for example documenting the groups’ activities and providing information on web pages (O’Brien *et al*, 2014).

Community maintenance activities primarily lie within the ‘physical focus’ category. However, there may be some activities that also fall into the ‘knowledge focus’ category (eg observation, monitoring or survey work) or possibly the ‘virtual focus’ category (eg checking data from remote sensors). In addition, some groups doing community maintenance are or wish to be involved in other types of flood volunteering.

Specific activities excluded from the remit of community maintenance for health and safety reasons are:

- subsurface and confined space flood management structures, for example culvert clearance, underground storage tanks
- activities when flood management structures are operating, for example trash screen clearance during storm events
- activities requiring specialist training or equipment, for example large repairs to embankments major desilting works, reinstatement of pipework
- lone working activities.

2 Volunteers

Volunteering is an altruistic activity that has the goal of providing “*help to others, a group, an organisation, a cause, or the community at large, without expectation of material reward*” (Musick and Wilson, 2008).

3 Affiliated to communities

Community maintenance is, or should be, linked to local community structures, for example the local council or neighbourhood community group. Community maintenance work is:

- a carried out by a group for the benefit of the wider community
- b undertaken with reference to and support from the relevant asset owner, rather than individuals acting alone.

4 The performance of flood defences, channels and basins

The types of assets that are covered by community

maintenance are predominantly physical assets, with some component of FRM associated with them. Assets such as flood warning systems are excluded. The types of assets covered by the guidance is restricted to inland FRM assets and includes those specific types listed in **Section 2.2**.

Types of assets to be excluded would be:

- a any underground feature (eg culvert) requiring access into a confined space
- b geocellular, modular and tank storage
- c pitched green roofs
- d highways, motorways and A-class trunk road drainage
- e assets close to and/or on railway land/infrastructure
- f reservoirs
- g coastal defences.

1.3 Principles behind community maintenance of FRM assets

Six principles, agreed in advance with stakeholders, have influenced the way this guide and the accompanying guide for community groups (**C821a**) have been written.

Principle 1

Be specific and realistic about local FRM situations

In delivering this principle, both guides:

- ◆ Discuss how the resources and skills available to the community group may be usefully deployed based on the needs identified and assessed by those groups so that any maintenance being contemplated reflects its strengths and weaknesses.
- ◆ Recognise relevant legal contexts and responsibilities (which may vary across the UK), including:
 - Riparian landowner and stakeholder responsibilities discussing issues such as insurance for volunteers and equipment that groups can explore. From the RMA perspective this involves informing community groups of routes that they can take to obtain insurance and possibilities for funding to obtain equipment.
 - Types of funding mechanisms likely to be available to groups. Funding streams can be very specific with dedicated timelines and individual funding routes are continuously changing. For this reason, this guide has only addressed the main sources, organisations and routes to funding.

Principle 2

Work together and communicate with others

In delivering this principle, the guides promote:

- ◆ A collaborative, supportive and partnership approach with community groups and other asset owners to decisions and activities, recognising the voluntary status of community self-help groups.
- ◆ Commitment and sustained communication between all relevant local stakeholders. Communication is central to any risk management strategy (eg ISO 31000:2018 and IRGC (2017) framework on risk governance) and management options such as flood asset maintenance.
- ◆ The recognition of relevant local stakeholder skills and resource abilities, and ways of supporting the development of community volunteers skills.
- ◆ A good understanding and recognition of roles and responsibilities.

In addition, the guides:

- ◆ Address the approach to permit and support community activity (including licensing) and how to support the empowerment of volunteers.
- ◆ Identify situations where a formal agreement between authorities (eg parish council and the Environment Agency) may be necessary to assist and support the activities of community self-help groups (eg flood gate maintenance and closures).

Principle 3

Ensure activities are relevant and actionable

In delivering this principle, the guides address:

- ◆ Making appropriate and relevant data and information relating to the flood management feature being maintained available to community groups, for example its definition (including functionality, any performance standards), maintenance plans, health and safety plans etc.
- ◆ The need to support a community group to gain an understanding of:
 - the performance requirements (outcomes) for each type of flood management structure
 - the overall performance requirements for the flood management structure portfolio, if appropriate, in their care (including relevant flood management structures maintained by others). (Note that liability for delivery of performance remains with the RMA or riparian owner and not with the community group.)

The guidance for community groups on the approaches to maintenance of the various flood management structures is based on the latest published technical guidance. This has included appropriate information on the form and frequency of maintenance, both regular and remedial.

The guides also discuss monitoring:

- ◆ (by the RMA) the achievements of community group activities and the challenges they experienced
- ◆ (by community groups) the delivery of sustained or improved performance because of the maintenance activity. This includes providing simple techniques for community volunteers to monitor the efficacy and effectiveness of their maintenance activities, based on the 'plan-do-check-act' cycle.

Principle 4

Care for the local environment

In delivering this principle, the guides:

- ◆ Provide a link to the implementation of local nature recovery strategies, which are aimed at both helping nature and improving the wider natural environment (Defra, 2023).
- ◆ Adopt available evidence and good practices for the protection of the environment when carrying out maintenance activities.
- ◆ Encourage enhancement of the local environment in terms of the natural processes and the utility of living in that environment for the community.
- ◆ Make recommendations on activities that will help to reduce pollution and flooding.

Principle 5

Manage risks to health and safety

In delivering this principle, the guides provide recommendations for ensuring (outside of normal FRM processes) the health and safety of those volunteers involved in the implementation and maintenance activities. This includes supporting community groups on simple risk assessments, helping them to understand characteristics of risk that could be encountered, and recommending mitigation or avoidance and principles of safe working such as avoiding lone working.

Principle 6

Support the long-term future of community groups

In delivering this principle, the guides address ways of supporting community groups to deliver their maintenance commitments sustainably in the long term. This includes encouraging the group to:

- ◆ sustain relationships with the local democratic body and gaining their endorsement
- ◆ be specific about requirements for financial and in-kind contributions including grants
- ◆ work with other groups to mutual benefit such as angling, environmental or heritage groups.

1.4 Overview of RMAs activities to support community groups

The checklist sets out the activities that RMAs should seek to undertake when assisting a community group in setting up and running a maintenance programme. It provides a summary of these activities, with pointers to sections of

the guide providing more detailed information. Activities are listed in the approximate order in which they are likely to be carried out, depending on the context. Some iteration between activities will inevitably be necessary.

Checklist of activities for RMAs to undertake to support community maintenance

- 1 Identify RMA aspirations for supporting community group maintenance (see **Section 3.1**).
- 2 Identify and co-ordinate with stakeholder organisations and individuals (see **Section 3.2**).
- 3 Co-ordinate relevant professional disciplines within RMA (see **Section 3.3**).
- 4 Set up communications with the community group(s) (see **Section 3.4**).
- 5 Identify and support actionable community group activities, including the ‘what?’, ‘when?’ and ‘how?’ (see **Section 3.5**).
- 6 Identify/establish funding routes for community groups (see **Section 3.6**).
- 7 Organise training for monitoring and maintenance activities (see **Section 3.7**).
- 8 Set up and operate processes for consenting community group activities (see **Section 3.8**).
- 9 Organise collaborative activities between RMA and community group, which includes mechanisms for community groups to escalate issues or activities to the RMA (see **Section 3.9**).
- 10 Set up processes for oversight of efficiency and effectiveness of community group activities (see **Section 3.10**).
- 11 Encourage/support long-term future of community group(s) and its activities (see **Section 3.11**).

Overview of community maintenance

2

2.1 Community maintenance for FRM

The effects of climate change and a growing population means that flood risk is increasing, and members of many communities have become worried about the flooding they do or may face. Many have actual experience of being flooded in the past and may have taken steps to protect their own property or make it more resilient. In some communities, there is a desire to ‘do something’ practical to further reduce the disruption caused by flooding. One approach that is being adopted or considered by many communities, is to participate in the maintenance of the banks, channels and drainage systems with the aim of sustaining flood risk reductions.

This guide will help a RMA work with their local communities to support them to do this in the most appropriate way.

In this guide, community maintenance is defined as *“activities by flood action groups or other voluntary/ community groups within a locality (eg parish, town, village) designed to observe, monitor, maintain or sustain*

the performance of flood defence assets”. Note that community activities will only support work that remains the responsibility of RMAs, other statutory or regulated bodies, or the riparian owner. Within this guidance, flood action groups and other voluntary/community groups undertaking maintenance are referred to as ‘community groups’.

Many community groups are already carrying out maintenance activities, but they (and any new groups) need guidance and support. This guide sets out the ways in which RMAs can engage and co-ordinate activities with existing or new groups and work with them to help reduce risk, realise benefits and improve local resilience. Community groups may wish to work together on some aspects of the maintenance currently being undertaken by the RMA, ie it is possible that some maintenance becomes a ‘shared’ activity.

Appendix A1 gives more detail on typical community group size, structure and activities.

2.2 Potential flood risk management activities supported by community maintenance

C821a for community groups explains, in simple terms, the nature of the main types of flood risk issues that may be addressed by community maintenance – from rivers, surface water flooding or groundwater. The actual situation on the ground may be more complex and the RMA and stakeholder organisations will need to work with the community group to make sure that the risks are understood – at least in qualitative terms. In this endeavour, the community group members may be able to provide useful input, because they are likely to have the local knowledge about flow paths during flood events and the flood depths that were experienced. The existence of a community group (or discussions about forming one) is usually a good indicator that community members have some idea about the local flood risks and motivating reasons.

The community group will only be able to address a subset of the issues that are contributing to the local flood risk. In general, if the flood risk assets should be reducing flooding in the local area but are not because of their deteriorated condition and maintenance by RMAs and partner organisations is not at the ideal level, then community maintenance may be one option to help improve the situation. If the main challenge is that the existing assets cannot deliver the necessary flood risk reduction, then community maintenance may not add much value, and more significant investment in new or upgraded assets may be required. If new infrastructure is needed, engagement with the community group may still be worthwhile to explore what options might work, both to reduce the flood risk and to meet local community needs.

C821a details the activities that the community groups might undertake and the type of assets those activities might be useful. They include:

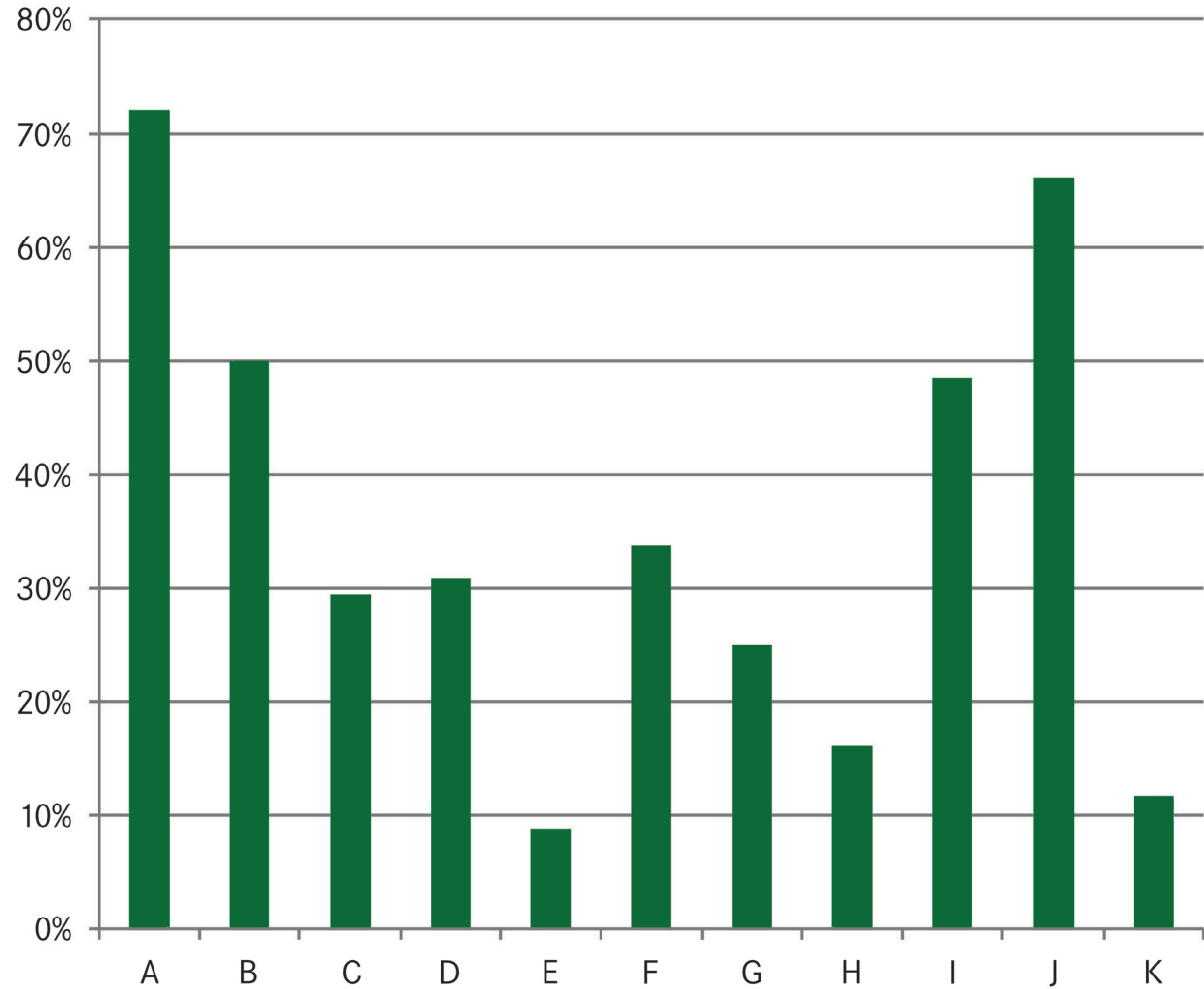
- ◆ debris/litter removal
- ◆ vegetation management (including managing invasive species)
- ◆ working with wildlife
- ◆ sediment and soil management
- ◆ waste management
- ◆ operation and maintenance of small gates and simple pumps
- ◆ observations and monitoring.

This mixture of activities reflects those identified in an online survey conducted in 2022 while preparing these guidance documents. 69 different individuals from

community groups in England and Scotland provided information on the activities that they were already undertaking, as shown in **Figure 2.1**.

The type of assets whose condition community groups may be able to maintain include:

- ◆ watercourses (streams, rivers, ditches etc)
- ◆ flow control structures (including weirs on watercourses and orifices in piped networks)
- ◆ short runs of pipes and culverts that can be cleared without entering a confined space, for example using rodding devices. This includes surface cleansing of gullies for road drains
- ◆ inlets and outlets, including small trash screens (eg grill covering opening) – subject to a risk assessment deeming this safe

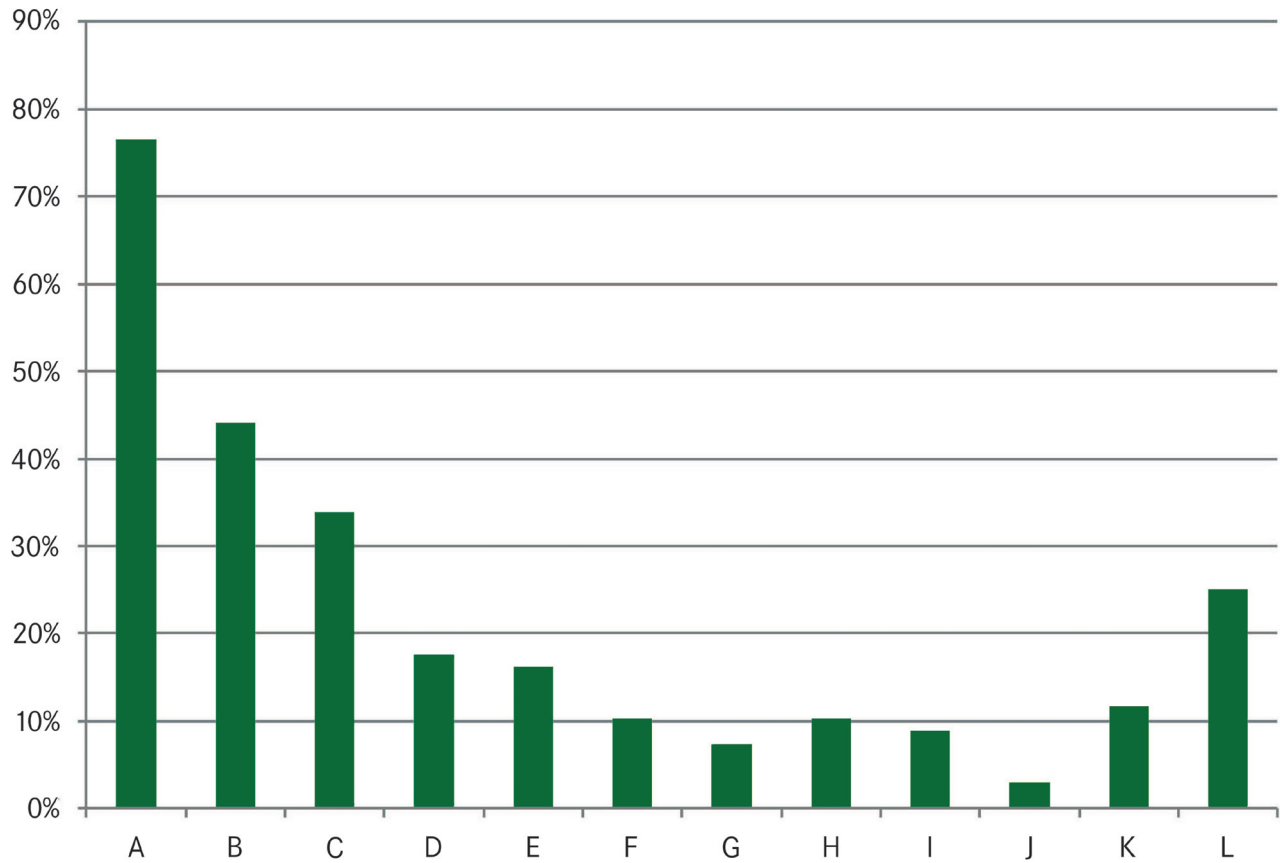


Key

- | | |
|--|---|
| A – Natural debris removal (eg woody debris, leaves) | G – Trash screen clearance |
| B – Rubbish removal (eg litter, larger domestic waste) | H – Pipe clearance |
| C – Cutting of grass/soft vegetation | I – Inspection to determine the extent of maintenance work required |
| E – Vegetation planting | J – Observing and reporting changes that need attention |
| F – Sediment/silt removal | K – Other |

Figure 2.1 Survey results for maintenance activities being undertaken by community groups

- ◆ vegetated channel (swale or shallow grassy channels designed to absorb and convey rainwater) and engineered channels (eg rills)
 - ◆ open water storage (eg basin, pond, field corner dedicated to storing flood water)
 - ◆ feature designed to help water to soak into the ground (eg soakaway, gravel trench, porous paving) limited to work at surface (eg sweeping, weeding)
 - ◆ raingarden (eg for road or domestic runoff)
 - ◆ small embankments or overflow structures used within sustainable drainage systems (SuDS)
 - ◆ woody dam
 - ◆ additional SuDS features
 - ◆ additional natural flood management (NFM) features
 - ◆ surface protection (eg grass/turf) to earthen embankment (if necessary, including small scale level adjustments of embankment fill to make crest levels more uniform)
 - ◆ life-saving equipment (ropes, rings etc)
 - ◆ fences, gates, signs etc linked to FRM assets
 - ◆ small flood gates (generally installed for pedestrian access)
- This list of assets reflects those that community groups are already maintaining as found in the 2022 survey (see **Figure 2.2**).
- Types of assets excluded:
- ◆ any underground feature (eg culvert) requiring access to a confined space
 - ◆ geocellular, modular and tank storage
 - ◆ pitched green roofs



Key

- | | |
|--|---|
| A – Steam, river, ditch (any type of watercourse) | G – Woody dam |
| B – Pipe, culvert (any underground channel) | H – Surface protection (eg grass, turf) to earthen embankment |
| C – Trash screen (eg grill covering opening) | I – Flow control structure (eg weir or orifice) |
| D – Vegetated channel (swale or shallow grassy channels designed to absorb rainwater) | J – Life-saving equipment (eg weir or orifice) |
| E – Open water storage (eg basin, pond, field corner dedicated to storing flood water) | K – Features not related to flood risk (eg fences, gates) |
| F – Feature designed to help water to soak into the ground (eg soakaway, gravel trench, porous paving) | L – Other |

Figure 2.2 Survey results for assets that community groups were maintaining

- ◆ highways, motorways and A-class trunk road drainage
- ◆ assets close to and/or on railway land/infrastructure
- ◆ reservoirs
- ◆ coastal defences.

The information provided in **C821a** is designed to help the groups understand how these assets work and common operation and maintenance issues they might be able to address. An important way in which an RMA or partner organisation may be able to assist community groups is to provide additional information on the nature and performance of the specific assets of interest.

Community groups should not be involved in activities that could pose any unacceptable risk to those involved, or any

risk to the performance of an asset during a subsequent event. Community groups should not be:

- ◆ undertaking complex work with equipment for which they are not fully trained
- ◆ accessing confined spaces
- ◆ proposing activities that include lone working
- ◆ working in or close to waterbodies with deep and/or fast-flowing water.

RMAs should support the community group in their development of a robust risk assessment to quantify and mitigate all risks associated with proposed activities.

2.3 Rationale for community involvement in flood asset maintenance

Awareness of the institutional and social aspects of FRM has greatly increased since 2007 (Pitt, 2008, Twigger-Ross and Colbourne, 2009, Medd *et al*, 2015). Directive 2007/60/EC (the EU Floods Directive 2007) sets a standard for the ‘active involvement’ of citizens together with its inclusion of governance aspects ensuring a focus on engagement and participation in FRM planning and delivery. Also, there has been an ongoing ‘social turn’ (Nye *et al*, 2011, Butler and Pidgeon, 2011) towards FRM approaches that emphasises multi-stakeholder governance and, specifically, engaging affected communities. This emphasis is echoed in England’s National Flood and Coastal Erosion Risk Management (FCERM) strategy and roadmap (Environment Agency, 2020, 2022) and Defra’s (2020) policy statement.

Citizens are volunteering in the UK and other countries, working with emergency responders, engaging in planning for adaptation to future floods, as well as engaging with RMAs in the maintenance of flood assets. A body of research has developed alongside, reflecting and systematising these policy and practice changes (eg Newig and Fritsch, 2009, Challies *et al*, 2016, Forrest *et al*, 2019, Twigger-Ross *et al*, 2021, Twigger-Ross and Orr, 2024) together with evidence of community involvement in emergency response and recovery (see Twigger-Ross *et al*, 2016, 2021).

The focus on improving resilience is shifting to a more proactive engagement, one that encourages communities to engage with mitigation and adaptation plans and activity. Certainly, the approach taken by the National Flood Forum is to engage with communities – not only to develop emergency responses but also to support local collaborative planning to mitigate and adapt to flooding

in the long term, which is vital in the context of climate change and increased flooding.

In addition to this strategic rationale, there are practical factors from both the RMAs and the communities as to why this involvement is important. RMAs have limited resources and decisions need to be made about what will be supported. The Environment Agency (2016a) will not continue to maintain certain assets if the costs outweigh the benefits. Community members often form groups to carry out maintenance works because public funding is limited or reduced, acting as a spur to local activity (Simm, 2015, Soetanto *et al*, 2017). However, the key catalyst for activity is when there has been a flood and there is a need to prevent further flooding and increase resilience; this was certainly the case for some groups interviewed for the research into this guide. This is likely to increase interest given the predicted rise in all types of flood risk due to climate change. In addition, many community members understand that there are activities that they can do more easily than the authorities because they are local to the issues. Finally, there are changes in terms of types of FRM approaches that point to greater community involvement. Specifically, increasing numbers of SuDS are being adopted to manage surface water on new development, re-development, and retrofit within the urban fabric. These aim to remove surface water from sewer networks as well as improve the liveability and climate resilience of towns and cities. These systems will create direct links between surface water management systems and local communities.

In the context described, the 2022 survey (see **Section 3.2**) confirmed the range of reasons why community groups wished to be involved in maintenance. These groups



Figure 2.3 Conceptual representation of relationship between a community group and its context (from Simm, 2015)

were typically worried about how big or often floods were happening. They noticed that the people or groups who should be taking care of things were not receiving enough help or money to do so. So, they wanted to make a difference to stop flood damage in their community by helping to maintain FRM assets.

However, carrying out maintenance was only part of the reason for them setting up their group. Some additional motivations related to other aspects of FRM:

- ◆ reducing the likelihood of their own homes getting flooded
- ◆ being a part of their community and helping others who were affected by floods
- ◆ supporting emergency or flood planning/preparedness/response/recovery within their local community.

Beyond these, further motivations included a desire to:

- ◆ maintain or improve the local environment and wildlife
- ◆ keep the environment healthy or make it even better
- ◆ increasing the take up of many loved recreational activities such as angling and outdoor swimming.

Figure 2.3 provides a conceptual representation of the relationship between a community group and its FRM asset maintenance. Communities experience various areas of change (those between the four arrow points in the figure). Negative issues include increasing flood risk arising from climate changes and shortage of funding, especially for small, isolated communities. Reductions in funding may arise where there are inadequate economic benefits to justify publicly funded interventions, and the aspirations of RMAs to reduce their expenditure where possible (eg by ‘de-maining’ rivers). More positive reasons for a community group relate to helping meet the aspirations of people having a strong sense of identity with their community and to steward the places in which the community exists. Community groups may even wish to deliver multiple community and environmental benefits, especially through nature-based measures for which community activity is particularly suited.

The response of the community group, once it is organised with a membership and leadership (dark blue circle), is to reach out (light blue star points) not only to maintain the flood and coastal risk management (FCRM) assets, but also with:

- ◆ imagination (or vision) about what their place might look like in the context of climate change
- ◆ engagement activities with their community members and with wider policies, plans and activities in their catchment
- ◆ alignment of their activities with the wider plans for their catchment in the context of climate change and population growth

2.4 Policy drivers for community maintenance

This section sets community maintenance activities of FRM assets in the context of the relevant policy and regulations, to ‘trace a line’ through relevant policy and regulatory documents making a case for sensitive collaboration – enabling and supporting communities, not delegating responsibilities.

A review of policy and strategy documents shows that involving local communities in FRM is not a new concept. It was a key focus of the Pitt Review (Pitt, 2008) following the devastating floods of 2007.

There are references to partnership working between RMAs and communities in the UK across specific flood issues in policy documents from England (Environment Agency, 2020, 2022), Northern Ireland (DRDNI, 2016) and Wales (HM Government, 2019) (Welsh Government, 2020). These cover a wide range of topics from nature-based solutions to becoming more resilient to flooding, showing how far community involvement is considered a key part of the governance of FRM.

In addition, there is a general endorsement of the role of flood volunteers, groups and general engagement with respect to community flood resilience (Defra, 2020, Scottish Government, 2019, Welsh Government, 2020). The FCERM strategy roadmap specifically mentions collaboration between **Communities Prepared** and the **National Flood Forum**. This partnership aims to enable volunteer flood groups “to grow and take a more active role in managing flood and coastal resilience in their local communities” (Environment Agency, 2022).

Finally, there is an aim to withdraw or reduce levels of management and maintenance by RMAs due to limitations in resources. In places, asset maintenance responsibility may have been transferred from a risk management authority to a local landowner, for example from water companies to riparian owners, and landowners may have acquired a responsibility to maintain such assets. Equally, a RMA may decide not to maintain an asset because the associated flood risk is sufficiently low and there may be insufficient resources to justify it. In such situations, developing a community group to carry out maintenance

of assets becomes an important option (see Environment Agency, 2016b). For example:

- ◆ The Environment Agency (2020) FCERM strategy describes setting up a community interest company (CIC) to raise funds to maintain the coastal defences along the wash. (Although the focus of community maintenance activity as discussed in this guide is not on coastal defences, the CIC does provide evidence of a formalised structure that could develop around this type of activity.)
- ◆ Within Northern Ireland’s long-term water strategy, there is reference to managing “future costs through innovative management of assets and infrastructure” (DRDNI, 2016), which also provides a possible space for community maintenance.

Overall, policy and regulations support community involvement in maintaining flood assets, in partnership with RMAs, landowners and members of the community who are riparian owners. These activities support a proactive, transformative approach in resilience to flooding, which is required given the likely increases in risks due to climate change.

Box 2.1 Policy related documents reviewed in preparing this section

England and Wales

- ◆ Defra (2020) *Flood and Coastal Erosion Risk Management. Policy statement*
- ◆ Environment Agency (2014) *Living on the edge: a guide to your rights and responsibilities of riverside ownership*
- ◆ Environment Agency (2018) *Natural flood management – minimising the risks, quick guide*
- ◆ Environment Agency (2020) *National Flood and Coastal Erosion Risk Management Strategy for England*
- ◆ Environment Agency (2022) *Flood and Coastal Erosion Risk Management. Strategy roadmap to 2026*
- ◆ Environment Agency (2024a) *Owning a watercourse* (includes links to guidance for Wales, Scotland and Northern Ireland)
- ◆ Environment Agency (2024b) *Your watercourse: rights and roles*
- ◆ Flood and Water Management Act 2010
- ◆ HM Government (2019) *Community resilience development framework*
- ◆ NRW (2023) *Owning a watercourse*
- ◆ Pitt (2008) *The Pitt Review*
- ◆ UK Government (2023) *The UK Government Resilience Framework, policy paper*

Scotland

- ◆ Flood Risk Management (Scotland) Act 2009
- ◆ Flood Risk Management (Scotland) Act 2009: local authority functions under part 4 guidance
- ◆ Scottish Government (2015) *Flood Risk Management (Scotland) Act 2009: local authority functions under part 4 guidance*
- ◆ Scottish Government (2019) *The Flood Risk Management (Scotland) Act 2009. Delivering sustainable flood risk management*

Northern Ireland

- ◆ DRDNI (2016) *Sustainable water. A long-term water strategy for Northern Ireland (2015–2040)*

2.5 Mechanisms for community action

Communities participate in FRM asset management activities in the following ways (Twigger-Ross *et al*, 2021):

- Members of the public who live in or near a place where flooding occurs, participating through a direct-action self-help (DASH) group, carrying out physical activities such as clearing streams or repairing FCERM measures co-ordinated or managed by the Environment Agency (Simm, 2015).
- Local communities, landowners and land managers participating in a strategic group as part of a NFM project. Their activities involve sharing knowledge, site visits, meetings and practical activities (Short *et al*, 2019).
- Local flood groups working with local councils to develop initiatives that avoid drains and channels becoming blocked, which lead to flooding (Twigger-Ross *et al*, 2015, Warwickshire County Council, 2015).

Most of these examples involved relatively small groups of people living close to the assets that they manage. It is evident that because they work at a very local level (eg a local brook or stretch of watercourse), volunteers are often very invested and motivated in the groups.

In terms of how many groups are involved in this activity, the 2022 survey (see **Section 3.2**) found that:

- 58 (85%) had been carrying out maintenance activities for over three years
- 21 (30%) had been carrying out activities for over 10 years showing the communities' commitment to this work.

Further details are given in **Appendix A1**.

Three approaches are evident from the research:

- Flood maintenance work is carried out along with wildlife conservation and forms part of a charity, looking for grants from different organisations, but largely operating independently.
- Community flood groups come under the auspices of parish councils as sub-groups.
- Community flood groups are not on any formal engagement but act more informally, liaising with authorities as needed.

In future, community activities will normally be proposed in relation to specific local flood assets likely to be owned

“

The focus of any community action should always be to carry out maintenance activities for the wider benefit of the people in that area

by a RMA (ie Environment Agency, Lead Local Flood Authority (LLFA), district councils, internal drainage boards, water and sewerage companies). However, there may be scenarios where maintenance obligations have been devolved to other organisations. Any obligations must then also be distinguished from maintenance work carried out by riparian owners. It is not anticipated that community groups will be carrying out maintenance work for riparian owners given that it is their responsibility unless the riparian owner is unable to carry out the maintenance or it is too complicated for one person to manage (and the owner fully authorises the supporting activities). The focus of any community action should always be to carry out maintenance activities for the wider benefit of the people in that area, rather than a specific owner or operator.

The circumstances under which communities carry out maintenance of local flood assets will vary but will include when RMAs have withdrawn maintenance or where there is an orphaned asset. Orphaned assets are those assets where the ownership is not known and no responsibility for maintenance assumed. This is a situation where community groups have, and may continue to, step in to ensure that the asset carries on functioning as intended (subject to legal advice on the implications of carrying out that action).

C821a is focused on encouraging groups towards more formalised relationships/organisations, both for themselves and with the relevant RMA. In the latter case a memorandum of understanding (MOU) or terms of reference (ToR) covering the proposed community activities will be helpful. Having specific structures and being part of the wider governance structures of FRM will enable volunteers to have greater influence and control over their local flood risk issues.

A riparian owner is someone who owns land alongside a watercourse, where a watercourse is defined as every river, stream, brook, ditch, drain, culvert, pipe and any other passage through which water may flow. A watercourse can be either natural or man-made. Watercourses drain the land, prevent flooding and assist in supporting flora and fauna (Surrey County Council, Riparian Ownership, FAQs).

Riparian owner

2.6 Reasons for supporting community groups

The extent of awareness by RMAs of community group maintenance activity can be variable. However, there are a few reasons why RMAs should consider supporting community groups:

- ◆ **Relationships.** It helps to establish long-term constructive relationships between the RMA and the community groups across a range of issues. It reduces miscommunication, misunderstandings and conflict. Involvement helps to ensure everybody understands each other's views, concerns and values, and increases mutual trust.
- ◆ **Knowledge.** Learning about local facts and issues that the community knows (eg local water flow paths or flood levels) to aid communications and building relationships. This supports better decisions for everyone involved.
- ◆ **Appropriateness of action.** Engages as many people as possible to influence and own the decisions and outcomes. Without modifying official responsibilities, it encourages issues to be jointly solved, and stakeholders action to take place.

- ◆ **Timeliness of action:**
 - When many residents have the same issue, it provides specific and more efficient communication through the officers of the community group.
 - Involvement with community groups will encourage early discussions of proposed interventions by the RMA and help to reduce delays.
 - Residents involved in the community group are on site most of the time. In the case of a few operational activities (eg closure of small flood gates discussed in [C821a](#)), it can be agreed in advance whether and how residents can safely and promptly act, should a flood event arise or be forecasted.
- ◆ **Budget.** Involvement of community groups helps when the RMA or riparian owner is faced with limited or reduced (maintenance) budgets.

In practice, the extent to which each of these reasons may apply will vary depending on the context and may be stimulated or constrained by legal obligations. However, the arguments for supporting community groups will generally be strong.

Box 2.2 Value of engaging with community groups in Worcester

A representative of North Worcester Water Management (NWWM), an organisation set up and funded by Wyre Forest, Bromsgrove and Redditch Council, commented that community maintenance groups add value by co-ordinating activities of various riparian owners and assisting those unable to manage these tasks themselves. They saw the community group as not doing work 'on behalf of' the council but engaging with the council via conversations – a pragmatic approach.

2.7 Risks and liabilities of community maintenance

A key concern for both RMAs and community groups is that of the legal liability for:

- ◆ damage that might occur directly because of maintenance activity
- ◆ personal injury suffered by members of the community group involved in the activity
- ◆ flooding resulting from maintenance activity ceasing or being carried out incorrectly.

It should be noted that there is no information on these aspects within current policy or guidance. Whether or not a community group is prepared to or should undertake activities without insurance is likely to depend on the types of activities being considered.

Some groups do get insurance that covers them for certain activities in case of accidents. Some have been able to be insured under a scheme made available through

The Conservation Volunteers (TCV) (Simm, 2015, CIRIA research). The groups may obtain their own insurance, or they may be covered by parish council insurance as a sub-group. This insurance tends to be limited to use of hand-held tools, as was recommended by an interviewee from the 2022 survey, which is a sensible limit for volunteers involved in community groups. Where there was a need for larger equipment, for example chainsaws, the group engaged local people who were qualified and insured to use those tools.

Several insurance companies offer not-for-profit insurance for community groups and charities – but the extent to which these would cover both personal and public liability for the types of activity relevant for FRM asset maintenance has not been established. The process for resolution of any potential disputes also requires clarification.

Community groups should also carry out and regularly review health and safety risk assessments of their activities and their plans for risk mitigation (see **C821a**). Risks covered should include drowning, hyperthermia, sun stroke, dehydration, cuts and scratches, infection from contact with soil or contaminated water, tetanus, and ill health due to ingestion of contaminated water or organisms etc. RMAs should consider supporting community groups in the development and review of their health and safety risk assessments.

The checklist provided in **Section 2.3** outlines the recommended process for RMAs to support new and existing community groups in designing and running their maintenance programmes. The following sections provide more details on each stage.

Process to support community groups carrying out maintenance

3.1 Identify RMA aspirations for supporting community group maintenance

Before engaging with community groups, RMAs (including all organisations that have some form of FRM responsibility) should work together (possibly as part of a local resilience forum partnership) to develop joint plans for engaging community groups. This includes identifying those groups who are already engaged directly or indirectly with maintenance (and may have contacted one of the RMAs) or might wish to be engaged in the future.

A database and/or map of the location and different types of groups can be a useful tool. This should ideally include all local flood groups (whether they are currently involved in maintenance) together with local environmental groups that may be working on the assets for other reasons.

After understanding the context, such as the history of flooding, stakeholders, local politics, and past interactions

with the community groups, RMAs may support a community group for several reasons:

- ◆ understand the flood risk issues affecting the community
- ◆ design a sustainable, affordable and implementable flood risk strategy that might be helped by sharing the maintenance burden
- ◆ implement the strategy to benefit the local environment and limit environmental impacts
- ◆ involve members of the community in local decision making to improve democratic process/equity.

It is recommended to document the reasons for engaging with community groups, the objectives of the engagement, and the target dates for achieving those objectives.

3.2 Identify and co-ordinate with stakeholder organisations and individuals

The community group may already have connections with relevant stakeholders, but the RMA might identify additional support opportunities from other organisations or broader stakeholder groups.

A good way to capture those people and organisations is by considering:

- ◆ sectors – public, private, voluntary, community
- ◆ functions – user, service provider, regulator, landowner, decision maker

With other wider stakeholder groups, also consider:

- ◆ geographies – for example living within a particular postal area or living within the flood risk area
- ◆ socio-economic backgrounds – income, age, disability, length of time living in area etc

- ◆ impacts – directly/indirectly affected, able to affect the work/issue
- ◆ understanding and/or experience of flooding, maintenance, volunteering and volunteering management etc ranging from none, low, medium, high and very high
- ◆ appetite for or against the idea of community maintenance.

Once a combined list of possible people and organisations has been identified, it can be prioritised by the level of involvement and interest in relation to the available resources. This should be revisited periodically to see if that classification has changed with local and group circumstances.

3.3 Co-ordinate relevant professional disciplines within the RMA

Identify colleagues in other parts of the organisation who are already working with relevant stakeholders and members of the community on other projects like flood schemes or environmental improvements. Their connections could be valuable.

Leverage the expertise of colleagues in FRM and natural assets management. Drainage engineers and community engagement specialists may also provide valuable insights.

3.4 Set up communications with the community group

Initial discussions should be held with community groups to start the relationship of support and to understand each other's perspective. This should include a site visit and walkover of the flood risk assets targeted for community maintenance work. Discussions should cover all relevant aspects discussed in this guide and in **C821a**.

The aim is to develop a mutual understanding of:

- ◆ what the members of the community want from the engagement
- ◆ the local flood risk issues, including how the various assets work and work together
- ◆ what can be achieved through collaboration with the community group and other stakeholders. For example:
 - more regular or more detailed gathering of information
 - more regular maintenance
 - care of assets from which the RMA may have withdrawn maintenance effort.

This will include identifying the types of observations, monitoring and maintenance activities the group may already be or might consider carrying out, including the 'what?' 'when?' and 'how?' (see example in **Figure 3.1**).

- ◆ health and safety issues (see **C821a**)
- ◆ related environmental management issues and potential related activities.

Early discussions are key to get agreement on clarifying needs and wants, such as:

- ◆ what the RMA may be able to provide. This might include:
 - funding for tools, equipment and materials
 - staff knowledge, experience and skills
 - training for the group in monitoring and maintenance activities

- ◆ what the RMA would like to obtain from the community group and or other RMA organisations or stakeholders. This might also include information, skills, knowledge, experience, people's time etc.
- ◆ any licences or permits the group might require.

It may be appropriate for the RMA to set up an agreement with the community group to define maintenance activities they could assist with.

For a community group to receive funding or enter into agreements, it may be necessary for them to be formally constituted in some way, which the RMA will advise on. **C821a** describes a range of options for this. This could include discussing how the group might manage its own sustainability (eg when group members are all retirees and there are no younger members to help).

As outlined in **Section 2.3**, it is important for the RMA to help the community group identify the key public or private sector organisations responsible for managing water and flooding in their locality. The following information will be helpful:

- ◆ Names and contact details for key contact persons in each of the partner organisations. If possible, these persons should be involved in the initial discussions and site walkover.
- ◆ The extent to which maintenance responsibilities fall on the various organisations and the relevant riparian owners. This will include any information on 'orphaned' assets where the responsible riparian owner is not known.
- ◆ Actions being undertaken or planned by each organisation, the expected timing of these actions and, if they are repeated, their expected frequency.

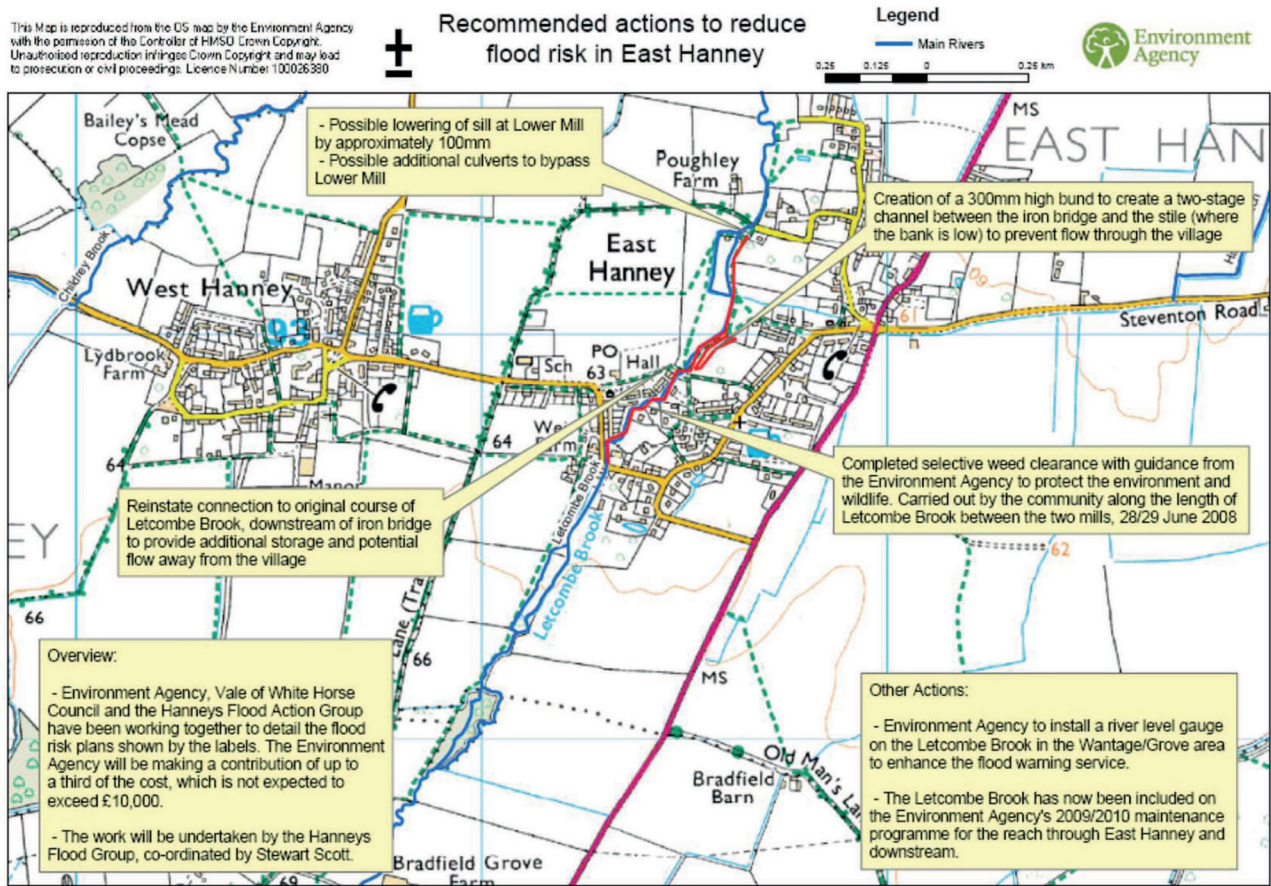


Figure 3.1 Plan of various recommended actions to be carried out by the Hanneys Flood Group and by other stakeholders (courtesy Environment Agency)

If there are multiple RMAs involved with assets in the community group area, then consider helping the groups by identifying a single point of contact who can co-ordinate communications and activities.

Consideration should be given to involving community groups in some way within existing RMA FRM collaboration groups, such as those set up to support wider catchment work or drainage and wastewater management plans (DWMPs).

Box 3.1 FRMA single point of contact – possible scope of role

- 1 Promote the potential for community maintenance groups:
 - a Proactively contact communities with known flooding issues to discuss potential maintenance activities.
 - b Conduct walkover of community area to identify issues and possible solutions.
 - c Continue to identify the capabilities of volunteers and their appetite for being involved in voluntary maintenance
- 2 Continue to identify and agree potential maintenance activities with the community group and their limitations
 - a Share relevant experiences with other groups including timescales and pitfalls.
 - b Manage expectations about what a community maintenance group can achieve given its available resources.
- 3 Understand actions being undertaken or planned by each community group and the relevant authority, the frequency of these, any conflicts and any collaborative opportunities.
- 4 Where possible, identify and release financial and/or practical resources needed by the community group. Also identify other ways of releasing public funding to the group.
- 5 Communicate with professional colleagues in their own (and other) organisations to justify and gain support for community group activities. This will include conservation and consenting officers.
- 6 Support community groups through any planning/consenting process.

3.5 Identify and support actionable community group activities

Once activities, roles and abilities have been identified, plans of action can be developed and supported by the community group members. This is likely to evolve over time, but it is good to start with an initial meeting to discuss potential activities. Keep to activities that are

actionable (ie able to be carried out) and make a plan with dates and timings. Work out what needs to happen in terms of training (eg health and safety) before the maintenance activities can be undertaken. **C821a** gives more details on this.

3.6 Identify/establish funding routes for community groups

Voluntary activities cannot happen without some (generally small scale) funding for materials tools and equipment, so the RMA may wish to consider direct funding for groups either from their own funds or using funds that they receive from government or other organisations. A specific funding stream and process within the RMA may be required to allow this to happen.

RMA can assist groups to identify and obtain other sources of funding (eg for insurance, materials and equipment). To receive funding the groups (or their sponsoring parish/town council) are likely to need to be legally constituted (see **C821a** for details). RMAs may also

be able to advise on the funding options available to the group. Example of funding routes include:

- ◆ Local charities focused on community or environmental benefit.
- ◆ National Lottery Community Fund, which supports a wide range of community projects that meet one or more of the following three objectives:
 - bringing people together and building strong relationships in and across communities
 - improving the places and spaces that matter to communities
 - helping more people to reach their potential, by supporting them at the earliest possible stage.

3.7 Organise training for monitoring and maintenance activities

RMAs could support community groups in training in the following areas.

Health and safety

While it need to be emphasised to community groups that they are responsible for ensuring their volunteers have adequate health and safety training, the RMA can help by offering training on understanding and adopting safe working practices (eg in or near water including limits on water depths flow rates) including:

- ◆ risk assessments
- ◆ avoiding and reducing safety risks to acceptable levels
- ◆ appropriate safety equipment.

Observation and monitoring

RMAs can help community groups build skills in understanding the water flow and flooding processes in the area (eg interpreting water level gauge records). This can inform the planning of maintenance by the group and enable the group to advise RMAs of any issues beyond its capability and/or capacity. **C821a** provides suggested observation and monitoring activities with asset specific features to monitor.

Maintenance

RMAs can support groups on how to carry out appropriate maintenance activities through training. **C821a** provides guidance including what to avoid and the reasons why.

Habitat management

RMA's can provide support and training to groups in the management of habitat to minimise impacts and maximise enhancements. Where activities affect habitats, communities will need guidance on basic principles, good practices, relevant legislation (including designations/protected species) and any RMA desires/objectives for habitats in that location.

External training

In addition to demonstrating key monitoring and maintenance activities (eg vegetation clearance), RMA's could identify other training resources, either in-house or externally and consider offering free places to members of community groups. Examples of these include the **River Stewardship Company** and **Thames 21**.

3.8 Set up and operate process for consenting community group activities

Consents/licences

The RMA can explain under what circumstances licences/permits are required. **C821a** provides an introduction, but more specific detail relevant to the location may be needed. It may be helpful to set up simplified licensing arrangements and proformas for community groups (see example in **Appendix A2**).

Agreements

It may be appropriate to set up a MOU between the RMA and the relevant parish or town council linked to the group whereby the group commits to certain activities under specific conditions. For example, communities on the Exe Estuary manually close flood gates when they receive flood warnings from the Environment Agency. This is described in a MOU.

3.9 Mechanism for community groups to report to the RMA

Within a MOU it is important to include a mechanism for the community group to escalate issues or activities to the RMA. This will be useful for reporting on maintenance needs that are beyond what the community group can conduct, for example:

- ◆ modifications to river flow control structures
- ◆ large scale silt/sediment removal
- ◆ flood embankment widening or raising
- ◆ co-ordinating large waste actions, collection or support
- ◆ where the need for greater management of increased risks arises because of health and safety associated with working in/near water, or the requirement for and use of heavy plant machinery
- ◆ where large scale works may have the potential to increase environmental risk and impacts.

3.10 Set up a process for oversight of the effectiveness and efficiency of community group activities

It is important to review and evaluate the community group's activities. Setting up a process with the group to assess their effectiveness and efficiency is recommended. This might include:

- ◆ attendance of a relevant member of staff from the RMA at one or more of the activities to see how it is undertaken
- ◆ an annual review of the activities undertaken to discuss what has/has not worked well.

The evaluation process will depend on the activities carried out. It should be supportive and can be partly done by the group themselves, with guidance from the RMA.

3.11 Encourage/support long-term future of community groups and their activities

The RMA could encourage the group to:

- be legally constituted and have the support of the local democratic body to be able to attract funding
- visibly support other community activities, including working with other community groups (eg on gardening, heritage or conservation), which may bring them further funding
- work with other flood groups (eg via the National Flood Forum)
- capture their experience and procedures for the next generation of members. These should contain

practical instructions and who to contact for advice, information etc.

More information on sustaining community groups can be found in the community groups guide (C821a).

There should always be a specific process for the community group to communicate any need/desire to stop any agreed maintenance activities in a timely manner, so that the RMA can make a longer-term plan for those.

3.12 Bringing groups together for mutual benefit

If the RMA oversees several community groups, it can bring them together for regular meetings. Ideally this should be held at least once per year. Arranging and supporting such meetings should help the following:

- Sharing experiences and exchanging information of interest to all parties. This should include recapturing formal and informal information and knowledge gained from flood action groups and other stakeholders that may have been lost due to changes in personnel or details that may not have been captured within, for example, Surface Water Management Plans.
- Confirmation of contact details for all stakeholders to communicate with one another during the coming year. This should apply to the community groups, as well as the various FRM organisations to help overcome the issue of staff changes in organisations. This can help to identify those responsible for different aspects (flood risk, environment etc).
- A celebration of the volunteer effort across a catchment or district.

Bringing groups together also offers a different way of evaluating the effectiveness and efficiency of community group activities, discussed in Section 3.10. RMAs could encourage groups to self-check against the experience of other groups to see whether they are achieving their desired objectives. This could include:

- What kinds of maintenance has each group managed to undertake?
- To what extent is annual or more frequent maintenance going to be needed to sustain the approach?
- To what extent has the maintenance been ‘task and finish’ (ie does not need to be repeated annually or at some other frequency)?
- Are there objectives which, for whatever reason, were not possible to achieve? Are there ways around this issue?
- Should the group change (part of) their focus to different activities?

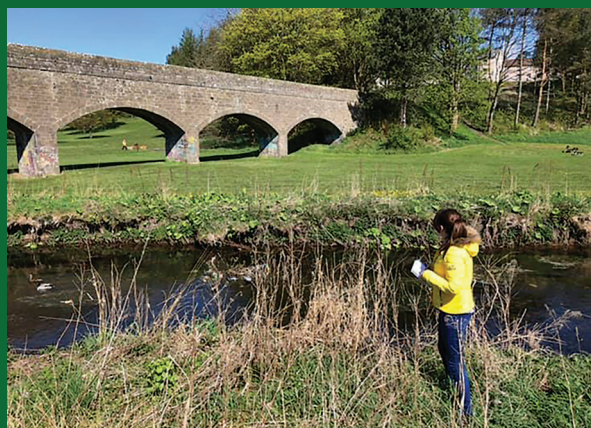
Box 3.2 Example of co-ordinating groups, Letcombe Brook Project

The Letcombe Brook Project (LBP) in Oxfordshire, which has primarily environmental objectives, also works with several community flood groups including the very active Hannys Flood Group (HFG). LBP has an employed part-time officer. Interactions include HFG helping to reduce invasive species on riverbanks and sowing native wildflowers, and LBP introducing:

- common approaches to supporting and permitting community maintenance groups and their activities
- moderating and co-ordinating enthusiasm of local flood groups within a catchment.

However, the approach taken to the co-ordination should recognise and respect that not all groups will work in the same way. The approach of the FRMA to individual groups should be tailored to the needs of each group.

**Box 3.3 Reducing flood risk, improving the environment and providing social value,
Dighty Connect group**



The Dighty Connect group is a volunteer-led project working along the Dighty Burn in Dundee, exploring ways to improve the green spaces along the burn through a mixture of conservation and cultural activities. The group carries out a broad range of activities to help local people engage with the burn and its surrounds. Activities range from maintenance of the water (eg cutting back brambles, removal of fly tipping, removing fallen trees), placemaking activities (planting orchids, snowdrops and bluebells at access points, and providing a base for local art and poetry classes). A diverse range of participants are involved including local schools, colleges and universities, high security prisoners, and local artist.

“

*Bringing groups together ... offers
a different way of evaluating the
effectiveness and efficiency of
community group activities*

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Flood Risk Management (Scotland) Act 2009 (asp 6)

Directives

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Standards

International

ISO 31000:2018 *Risk management – guidelines*

Websites

Communities Prepared: <https://www.communitiesprepared.org.uk/>

National Flood Forum: <https://nationalfloodforum.org.uk/>

River Stewardship Company: <https://www.the-rsc.co.uk>

Thames 21: <https://www.thames21.org.uk/natural-flood-management/nfm-resources/>

Typical community group size, structure and activities

A1

An online survey was conducted in 2022 while preparing these guidance documents with 69 different individuals from community groups in England and Scotland. The survey provided useful information on the features and aspects of the surveyed community groups:

- ◆ Groups are typically composed of between 5 and 20 people, but some are quite large with up to 35 people. The number of volunteers involved in a typical day of activity ranges between 2 and 20 people (see **Figure A1.1**). Where respondents provided the information, they were mostly retirees.
- ◆ Most groups surveyed had been carrying out maintenance activities for between 3 and 10 years (see **Figure A1.2**), and a few for much longer than this.

- ◆ There was a significant range in the amount of activity carried out by each group. Some groups worked on an ad hoc basis, whereas those groups that had established a programme of activity days, might be carrying out work for 20 days or more per year (see **Figure A1.3**).

Most of the difficulties that community groups had experienced (see **Figure A1.4**) can be overcome if RMAs follow the structured approach to support community maintenance described in **Chapter 3**.

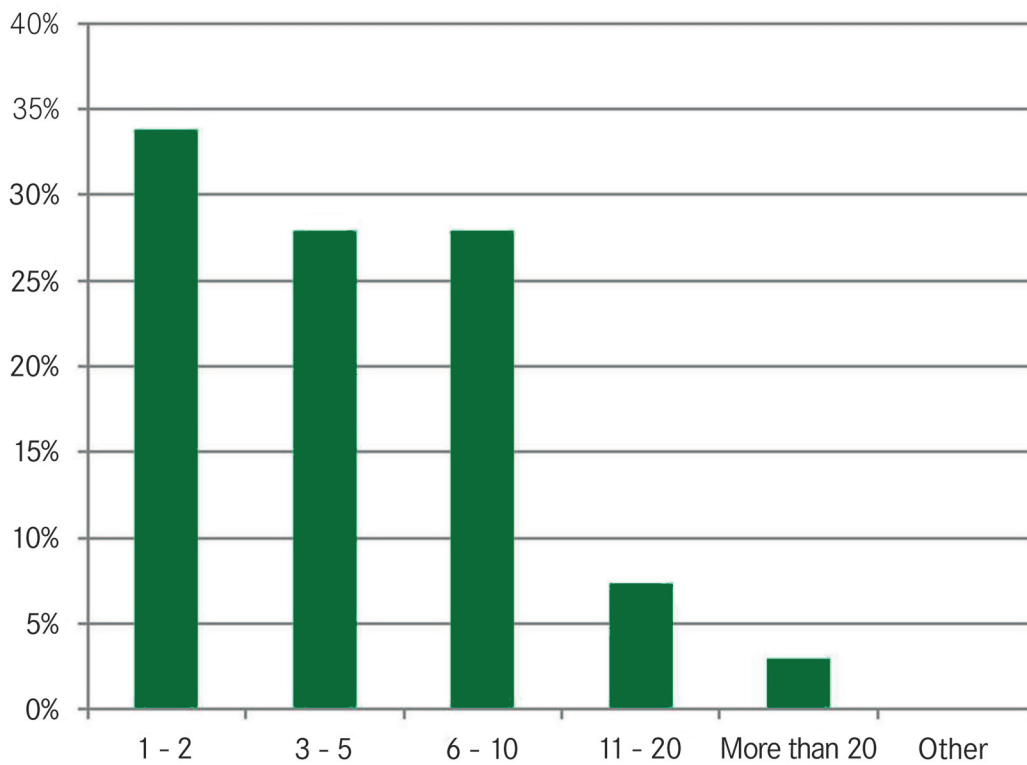


Figure A1.1 Number of people involved in a typical day of community group maintenance activity

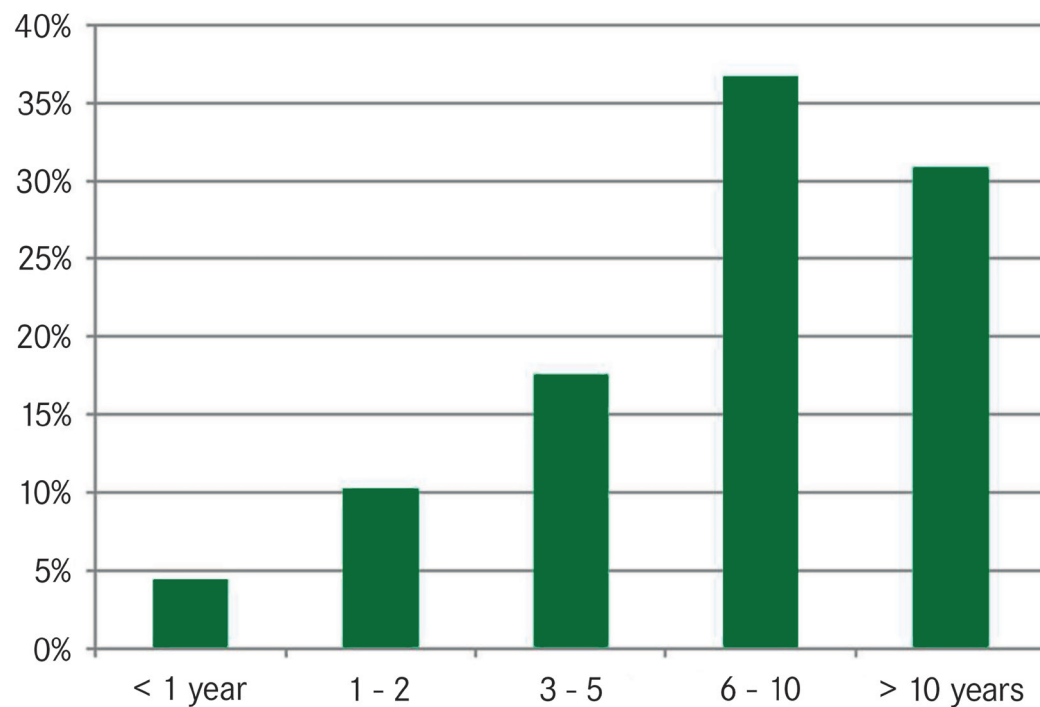


Figure A1.2 Length of time community groups have been carrying out maintenance activities

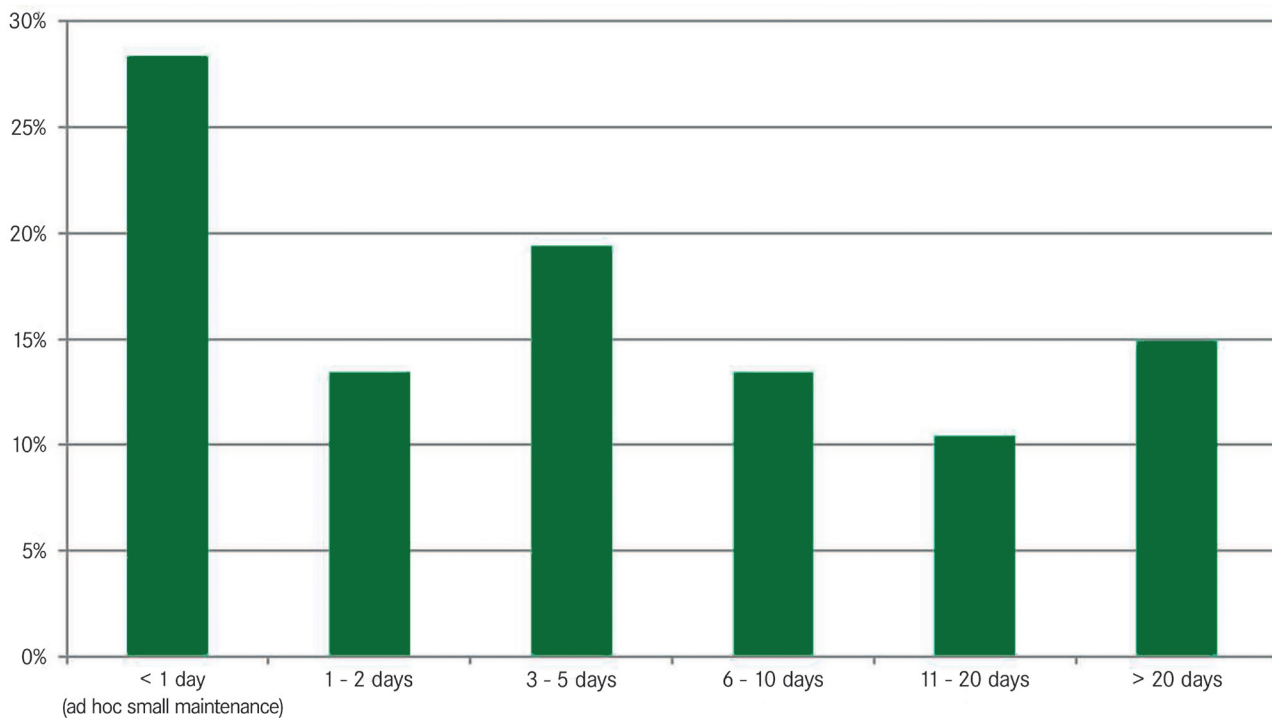
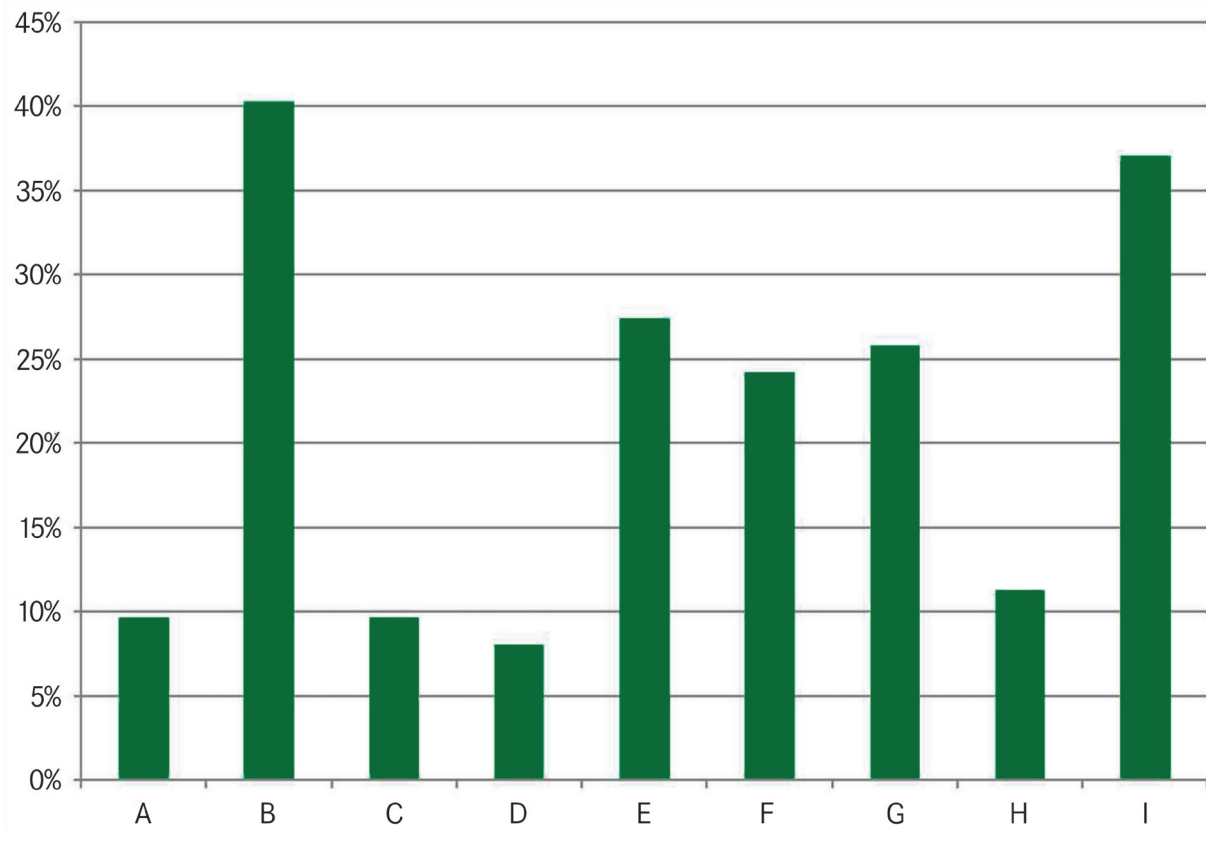


Figure A1.3 Number of days per year community groups are carrying out maintenance activities



Key

- | | |
|---|--|
| A – Difficulties in getting support from parish/town council/ residents association | E – Insufficient people to carry out effective action |
| B – Difficulties in finding out who is responsible for the various aspects of flooding and its mitigation | F – Lack of funding for materials and equipment |
| C – Difficulties in obtaining permits | G – Lack of support from key landowners (including tenant farmers) |
| D – Difficulties in obtaining insurance | H – Lack of leadership/co-ordination |
| | I – Other |

Figure A1.4 Types of barriers to carrying out maintenance activities experienced by community groups

Example consent application form for channel maintenance

A2

The following application form is used, with permission, from the Environment Agency

Thames Region, West Area, Flood Defence Consent guidance and application form for light maintenance of watercourse

Section 1: Introduction

We have introduced a separate application form for undertaking light maintenance works to make it easier to apply for works undertaken regularly. This guidance and application only applies to light maintenance works by mechanical means.

Important Note

If you wish to carry out more extensive maintenance, including the removal of material from the bed or bank of the watercourse, or any other works in or near a watercourse please contact:

Thames Region, West Area, Development and Flood Risk Team on

Email: twdfr@environment-agency.gov.uk or

Telephone: **01491 828 395** to discuss.

What is classed as light watercourse maintenance?

Light maintenance work includes partial removal of silt and clearance of vegetation from channel (retaining marginal vegetation) using mechanical means provided it does not disturb the bed or banks of the watercourse.

Maintenance undertaken using hand tools, including strimming and grass cutting of banks, removal of overhanging branches etc provided they do not disturb the bed or banks of the watercourse and works on non main rivers do not require Flood Defence Consent. Whether consent is required it is recommended that best practice techniques as outlined in the attached guidance document are followed.

Why is consent needed?

Under the terms of the Water Resources Act 1991 (and associated byelaws), the prior written consent of the Environment Agency is **legally required** for any proposed works or structures in, under, over or within **8 metres** of the brink of any main river or any works within the floodplain.

Main rivers can be viewed on our website by following this link and typing in your postcode in the Flood Map:

<http://www.environment-agency.gov.uk/homeandleisure/floods/default.aspx>

Or our External Relations team will be able to provide you with copies of this information. They can be contacted on 01491 828 307.

As a riparian landowner (next to a watercourse) you may be undertaking light maintenance on a regular basis. This guidance and application provides a streamlined application process, saving you time while still ensuring you are aware of all the relevant environmental and legal implications of the work.

How to apply for Flood Defence Consent to undertake light maintenance.

Please complete and sign the short application form in Section 3 of this document and return it to the address on the bottom of the form.

Each consent is valid for one maintenance operation. We recommend you keep a photocopy or electronic copy of the application form to make applying for subsequent consents for the same work even easier.

Section 2: Guidance

Background

There are more than 43,000km of main river in England and Wales. Riparian land owners are legally responsible for the maintenance of these watercourse. Although the Environment Agency do have powers to undertake work on these rivers due to limited resources we are only able to undertake selective watercourse maintenance on a risk based approach, normally in urban areas where this work will provide the greatest benefit in helping to reduce the impacts of flooding on people and property. In all other areas we rely on riparian landowners fulfilling their responsibilities, with consent from ourselves.

Key principles

Little and often

When undertaking watercourse maintenance we recommend that works are undertaken using a 'little and often' approach. This will allow the watercourse to provide a free passage for water to drain through and will help avoid over silting, which would result in the need for more extensive removal of material from the river channel. Typically this type of clearance would be undertaken on an annual basis.

When clearing in channel vegetation the marginal vegetation (along the edges of the channel) should be left as this provides an important habitat for wildlife, including protected species. We recommend that in a heavily overgrown channel approximately **20% of the vegetation is left undisturbed**. This will still significantly improve the flow capacity of the channel.

Work with others

This approach to watercourse clearance will be most effective if it is undertaken in cooperation with upstream and downstream landowners – there will be limited benefit in maintaining a stretch of watercourse if flows are restricted by a heavily weed choked and silted channel up or downstream.

Be aware of other legislation

Protected Species

The following species are often associated with watercourses and are protected from disturbance by current UK and/or European legislation. Their disturbance may constitute an offence unless appropriate mitigation and/or licensing is in place before works commence:-

Water-voles (and their burrows), bats (and their roosts), otters (and their holts and resting sites), spawning fish (and their eggs and spawning habitat) & nesting birds.

NB. This list is not exhaustive and applicants are advised to consult suitably a experienced ecologist for further information and advice to ensure that an offence is not committed. The Environment Agency's Conservation Team, or staff from Natural England are also available to give further advice on protected species and associated legislation.

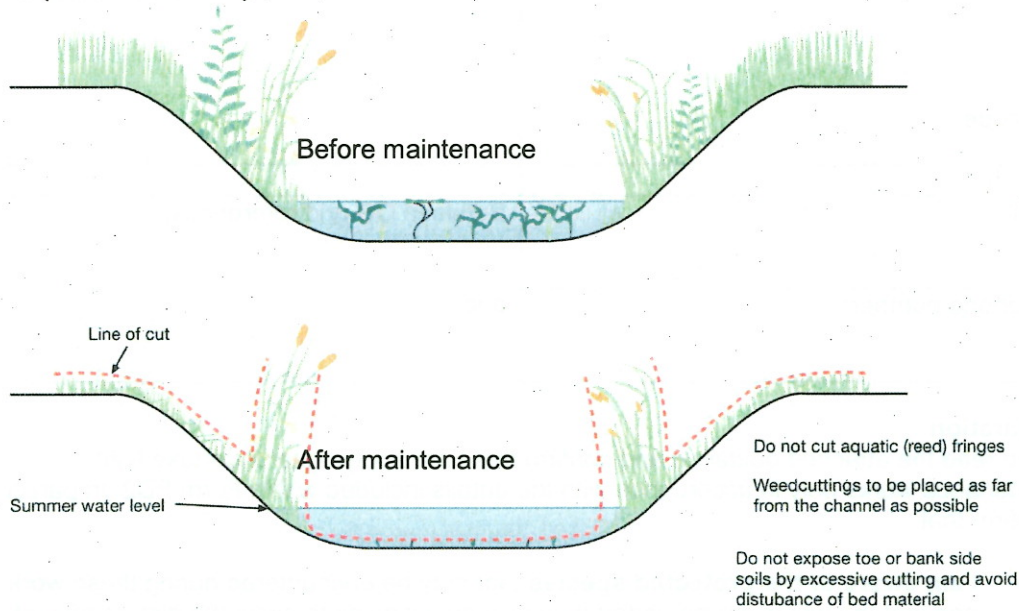
Removal of Silt

Light maintenance should not involve the removing of material from the bed or banks of the watercourse, as this can alter the way in which the watercourse operates and increase flood risk and damage the riparian environment.

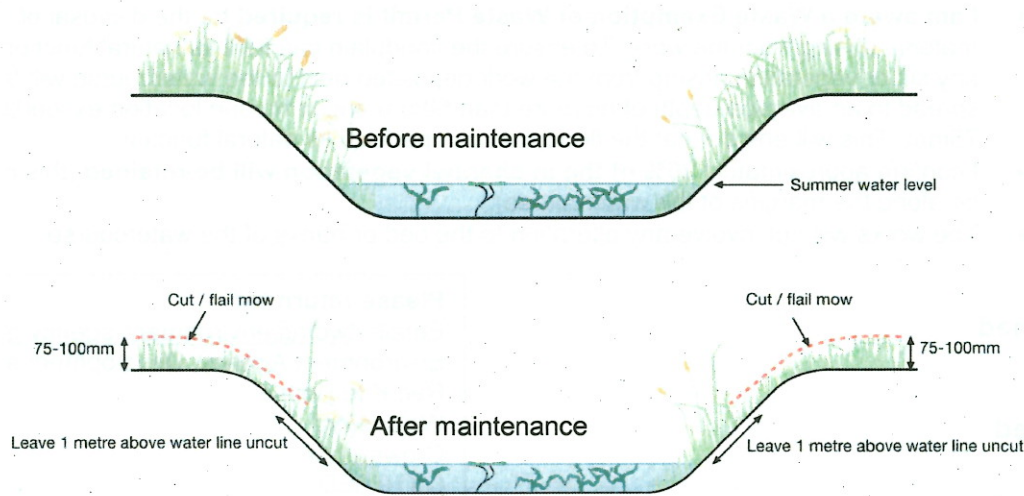
Maintenance may include the removal of loose silt material from the channel. Any silt or vegetation which is removed from the channel should be spread thinly as far away from the bank top as possible to avoid raising the height of the banks or the surrounding land. As this may increase flood risk to surrounding land and down stream. Any silt or material removed from a watercourse is treated as waste. Before this can be deposited on the banks, a waste exemption license must be obtained from the Environment Agency. Or to remove it off site a Waste Permit must be obtained. Contact our National Permitting Centre on 0845 6033113 for further details.

It is important to ensure that any structures such as culverts, bridge crossings or sluices/weirs etc are in good condition and are kept clear of debris and excessive silt.

Example of watercourse maintenance where Flood Defence Consent is required
This work involves the removal of silt and vegetation from the channel. The bed and banks (black solid line) of the watercourse are left untouched.



Example of watercourse maintenance where Flood Defence Consent is not required – best practice techniques



Section 3: Application Form

Please read and fill in the details below, then sign the declaration. This application should be read in conjunction with Sections 1 and 2 of this guidance document.

This letter represents an application for Flood Defence Consent to undertake light maintenance to main rivers by mechanical means, as required under the terms of the Water Resources Act 1991 (and associated byelaws).

Applicant details	Location of works
Name:	Name of watercourse:
Address:	Description of location:
Postcode:	
Email:	Between OS grid references:
Telephone number:	and

Declaration

I have read the attached guidance and confirm that I am applying to undertake light maintenance works only in accordance with the details included within Form FD2. In particular I confirm that:

- **I am aware of the protected species** that may be encountered during these works and that the works will be undertaken in such a way as to avoid the disturbance of any protected species or their habitat. This may include changing the timing or method or extent of the works for example to avoid fish spawning season, or birds nesting.
- If during the works evidence of protected species is discovered I shall stop works and contact the Environment Agency for further advice.
- **I am aware a Waste Exemption or Waste Permit is required** for the disposal of material arising from the work. To ensure the floodplain can fulfil its natural function any silt or vegetation arising from the work deposited next to the watercourse will be spread to an average depth of no more than 50mm and in no one location exceeding 75mm. This will ensure that the floodplain can perform its natural function.
- I confirm approximately **20% of the in channel vegetation will be retained** (this can be along the margins of the watercourse).
- The works will not involve any alteration to the bed or banks of the watercourse.

Signed

Dated

Please return to:

Email: twdfr@environment-agency.gov.uk

Environment Agency, Development and Flood Risk
Red Kite House,
Wallingford
Crowmarsh
OX10 8BD

CIRIA members

ABG Geosynthetics
 Accolade Measurement
 Adler and Allan
 AECOM
 Arup Group
 AtkinsRéalis
 Autodesk
 Balfour Beatty
 BAM Nuttall
 BES Group Strainstall
 Binnies (Black & Veatch)
 Bristol City Council
 Buckinghamshire Council
 BWB Consulting
 Central Bedfordshire Council
 Centremaps
 City University of London
 Civil-Tek Products
 Concrete Canvas
 Costain
 COWI UK
 Curtins Consulting
 Darcy Products
 Department for Transport
 Durham County Council
 East Sussex County Council
 East West Rail
 Environment Agency
 Frankische UK
 Genuit Group
 Geobrug AG
 Geofem
 GeoShield
 Geotechnical Consulting Group
 GreenBlue Urban
 Hahn Plastics
 Heathrow Airport
 Henderson Thomas Associates
 High Speed Two
 HR Wallingford
 Hydro Water Management Solutions
 Imperial College London
 JBA Consulting

John Grimes Partnership
 Keynvor Morlift
 Laing O'Rourke Civil Engineering
 London Borough of Richmond upon Thames
 London South Bank University
 London Underground
 Maccaferri
 Marshalls
 Ministry of Justice
 Morgan Sindall (Infrastructure)
 Mott MacDonald Group
 National Highways
 Network Rail
 Newcastle University
 North East Lincolnshire Council
 Northumbrian Water Limited
 PDC Engineering
 Peabody Housing Trust (Thamesmead Team)
 Rail Safety and Standards Board
 Richard Allitt Associates
 Scottish Water
 SDS Limited
 Sir Robert McAlpine
 Slough Borough Council
 SLR Consulting
 Southend-on-Sea Borough Council
 Southern Water
 SPEL Products
 Stantec
 Stuart Michael Associates
 T&S Environmental
 Temple Group
 Tesco
 Transport Scotland
 Thrive Sciences
 United Utilities Group
 University of Hertfordshire
 University of Salford
 University of the West of Scotland
 WSP
 YK Engi Ltd
 Zero Waste Scotland

This guide (C821b) is part of a suite of three documents created to explore enabling community maintenance for local flood risk management. It is aimed at flood risk management (FRM) practitioners in the UK, specifically risk management authorities (RMAs), wishing to work with community groups who are planning maintenance activities relating to fluvial and drainage flood risk assets.

This guide describes the benefits of a positive collaboration with local groups to sustain flood risk assets. Alongside this, *Taking action* (C821a) is aimed at local community groups who want to reduce flooding risk by maintaining drainage, watercourses and flood defences, but don't know where to start, and a briefing note (C821c) for strategy/policy staff.

