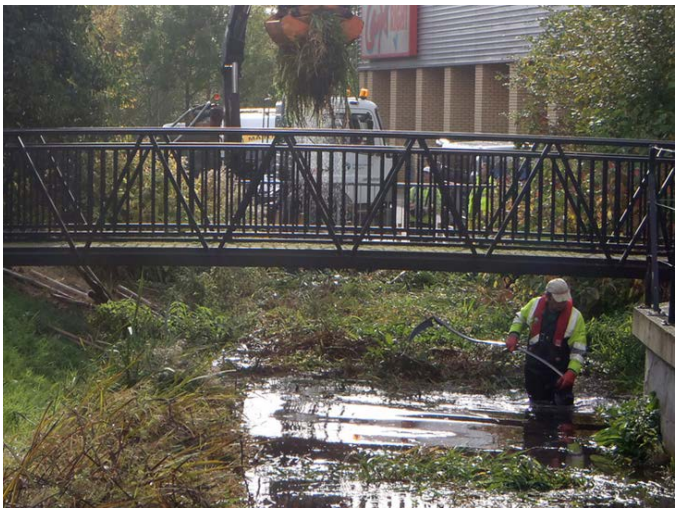
The Channel Management Handbook

Project Summary SC110002/S



A new handbook promoting good practice channel management has been developed by a team led by Royal HaskoningDHV. Written for flood risk management authorities, the handbook brings together over 10 years' worth of research and practice in channel management with the aim of improving the process of deciding when and how to carry out channel management for flood risk and land drainage purposes.

Why does channel management matter?

Ensuring a channel is able to convey flow during a flood is often an important element in the management of flood risk in an area. This ability to convey flood flow is influenced by a variety of factors such as sediment, vegetation and debris.

The objective of land drainage is to allow the free flow of water through the soil to the depth of the root of a typical crop. Water levels in the channel must be managed to a level below the field drain outfall level. The ability to drain surrounding land may be restricted if connecting channels are constricted or blocked.

However, flood risk management and land drainage are only two of a number of the valuable functions provided by channels. Good channel management can also support a broad range of ecosystem functions and services including fisheries, navigation and amenity, habitats, biodiversity, landscape and water quality. The handbook defines good channel management as 'a course of action that achieves the requirement to manage flood risks and/or land drainage, and the requirement to promote the natural form and environment of the channel'.

Our audience

The handbook's main aim is to advise on how to manage a channel for land drainage and flood risk benefits. The handbook is therefore written and structured with flood risk management authorities in mind. Land owners adjacent to watercourses with an interest in channel management will also find the handbook useful.

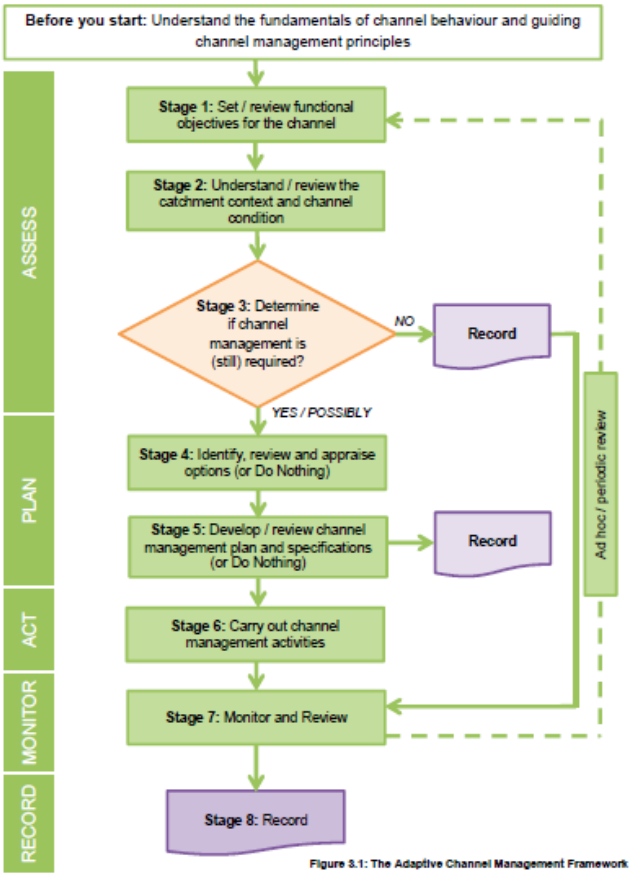
The scope of the handbook

The handbook presents the good principles of management and the underpinning scientific concepts so channel managers can make informed decisions.It develops an effective process to ensure good channel management based round a framework for adaptive channel management (see figure overleaf).

The handbook does not tell you which management technique to implement within a channel. It is expected that, by following the processes presented in the handbook, you will be able to make informed and appropriate decisions on channel management.

The handbook uses the term 'channel' to define the part of a watercourse system which includes the bed and banks of both natural and artificial watercourses. It does not discuss estuaries or those channels affected by tidal regimes, though much of the handbook is relevant to such situations.

The handbook recognises that channel management encompasses routine maintenance that takes place within a bigger programme of channel management and on/off, reactive and periodic maintenance. It also presents good practice examples of rehabilitation, restoration and modification works to a channel.



The Adaptive Channel Management Framework

The handbook and supporting products

An interactive checklist tool has been developed to be used in conjunction with the handbook. The checklist takes you through a logical decision process, linking to the appropriate sections of the handbook for guidance at each stage. The checklist also acts as a template for recording your decisions and the supporting evidence you've considered. The checklist makes reference back to the specific handbook sections for further information.

The handbook is supported by a technical report which details possible management techniques and discusses their applicability to different river typologies.

How will the handbook help me?

The purpose of the handbook is to help guide you. It will help you to:

- balance channel performance with the need to promote natural form and environment (that is, consistent with good channel management)
- select an appropriate approach to managing a channel, including whether intervention or review of current maintenance practice is necessary
- develop an evidence base to support the decision to carry out or cease channel maintenance
- understand the legislative framework governing channel management
- understand the potential implications of various management techniques (for example, through case study examples)

The handbook also signposts you to sources of supporting good practice and further information.

How is the Environment Agency using this research?

Following publication of this handbook the Environment Agency will be working closely with its area teams to review how the handbook is being used in practice.

This summary relates to information from Project SC090039, reported in detail in the following output(s):

Report: SC110002/R
Title: Channel Management Handbook

March, 2015

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This project was commissioned by the Environment Agency's Evidence Directorate, as part of the joint Environment Agency/Defra Flood and Coastal Erosion Risk Management Research and Development Programme.

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