RIVER CHESS AT SCOTSBRIDGE

BYPASS CHANNEL

COMMUNITY ENGAGEMENT DOCUMENT

Countryside Management Service

Environment Agency

1. INTRODUCTION

The River Chess at Scotsbridge bypass channel project will contribute to the restoration of the River Chess, a globally rare chalk river. The project is being delivered in partnership between the Environment Agency, Hertfordshire County Council's Countryside Management Service and key landowners including Three Rivers District Council.

We are seeking comments from stakeholders and the public on the proposals set out below. The engagement period will run from **27th January to 16th February 2025**. This document is intended to support the community engagement process:

- Section 2 explains why we are planning a bypass channel at Scotsbridge.
- Section 3 sets out the details of the bypass channel proposal.
- Section 4 describes the stages of the project and how we plan to engage with the local community.
- Section 5 provides contact details to enable stakeholders to comment on these proposals or to request further information.

2. WHY ARE WE PLANNING A BYPASS CHANNEL AT SCOTSBRIDGE MILL?

The River Chess is a chalk stream that rises in Chesham in Buckinghamshire and runs through the Chess Valley to Rickmansworth, Hertfordshire, where it meets the River Colne. Chalk streams are renowned for their fast-flowing, crystal-clear waters, clean gravels and stable water chemistry and temperature, associated with their link to groundwater. They support a wide variety of in-channel plants, which in turn sustain a diverse wildlife community.

As well as being a characteristic and attractive feature of the local landscape, the river Chess represents a globally rare habitat. It is one of only 283 chalk streams in the UK, which accounts for around 85% of the global total.

The Chess is home to many important and protected species, such as water vole, brown trout and stream water-crowfoot, and the stretch at Scotsbridge is no exception. It is also a popular area for visitors: much of the river at this location is flanked by a public open space, as well as a public footpath following the route of the Chess Valley Walk.

However, the river at Scotsbridge suffers from a range of issues. These can be linked to historic changes to the river when it was redirected into its current channel to power the mill and support adjacent watercress beds. Problems that have arisen because of these changes include:

- The section of the channel leading up to the weir at the mill (currently within the Miller & Carter restaurant) is higher than the floodplain next to it (perched), making it vulnerable to channel breaching and difficult for floodwaters to dissipate back into the river. Associated flooding events, in particular in 2014, have caused flooding of properties and closure of Park Road. The river suffers from river bank erosion typical of stretches with public access where people and dogs cause erosion at points of entry, further exacerbating the risk of channel breaching.
- Silt accumulation on the channel bed due to the impoundment of flows caused by the weir at the mill.

- Loss of habitat connectivity caused by the physical barrier of the weir, including the prevention of the natural movement of fish and eels along the river.
- Unnatural shape of channel (in particular over-deep) on the approach to the weir, lacking the characteristic features of a chalk stream.

In November 2020 the project partners completed a feasibility study which explored options to address these issues, working within the constraints of the site. Through this study a bypass channel was confirmed as the preferred option by the project partners and landowners. Other options that were considered at the time included a longer bypass channel, which was determined to be unfeasible due to land ownership constraints, and more limited modifications to the weir at the former mill to enable fish passage, which would not have achieved the flood risk or habitat objectives of the project.

Outline designs for the preferred option were produced at the conclusion of the study in 2020. We now plan to prepare more detailed designs to enable consents to be secured and construction of the bypass channel to take place.

The project is one of many along the river Chess which are associated with the River Chess Smarter Water Catchment partnership, aiming to help protect and enhance the river Chess and its catchment. It is primarily funded by the Environment Agency, and is managed by Hertfordshire County Council's Countryside Management Service, with support from Three Rivers District Council as a landowner.

3. DESIGN OF THE BYPASS CHANNEL

A bypass channel around the weir at Scotsbridge will achieve five main objectives:

1. To reduce local flood risk by relieving the pressure on the banks of the section of channel which sits above the flood plain.
2. To create good habitat conditions for chalk stream species.
3. To remove the barrier to the movement of fish and eels along the river.
4. To reduce the overall maintenance burden to the landowners and the Environment Agency.
5. To improve the public green space alongside which the river flows.

The location and design of the proposed new channel are shown on the maps in Figures 3 and 4 (p8-9). It will split from the current main channel to the north of the playing fields, joining a minor channel and utilising an existing culvert to pass under the restaurant car park and rejoin the current channel just south of the mill.

The main section of the bypass channel will be designed to appear as natural as possible (see Figure 1 for an example). The bypass channel will have a natural gradient along its length which allows it to develop the characteristics of a chalk stream, with a natural chalk bed with gravels. The banks will also be designed to have a natural gradient and will be planted with native marginal vegetation. Features will be included to create diverse flow conditions and aid the movement of fish, including localised widening and narrowing.

Figure 1. Example of a bypass channel designed to replicate a natural channel, River Great Ouse, Stony Stratford, Buckinghamshire (photo – Five Rivers).

The design and control of the flow split from the current main channel is of great importance to ensure the project meets its objectives. The approximate location of the flow split is shown in Figure 2.

Figure 2. Approximate flow split location, river Chess, Scotsbridge Open Space.

The flow split will include two main structures. A bank height structure will be created within the main channel to narrow the channel, and an inlet to the bypass channel will be constructed in the same location. In combination these will control the flow split. In low flows, they will ensure that sufficient flow passes down each of the channels to enable fish passage in the bypass channel and maintain the waterfall feature at the weir. In high flows, they will ensure that flow in the bypass channel does not exceed the capacity of the culvert under the restaurant car park.

The final design of the flow split will balance the need to ensure its long term stability with the need for it to fit within the local landscape, making maximum use of natural materials and native wetland planting.

Dedicated flood modelling has been undertaken to confirm that the project will have an overall positive effect on local flood risk by providing additional channel capacity and relieving the pressure on the current channel, greatly reducing the risk of breaches in the bank.

Further modelling will be undertaken by a consultant appointed to the project as part of the detailed design phase to support further refinements to the design and

maximise the flood risk benefit. This will include determining the requirement for flood storage within the site, which is not yet confirmed. The modelling will therefore influence how Scotsbridge Open Space can be managed and how it is used by the public in the future.

Batchworth Footpath 029 will be diverted immediately to the west of the new bypass channel, maintaining public access to the existing channel of the river Chess north of the project area. As part of the project and following construction of the bypass channel, this footpath will be surfaced with a crushed granite surface. This will bring it up to the standard of the remainder of the footpath from Loudwater Lane to Croxley Green Footpath 001, improving access to the area.

The west bank of the new bypass channel will be accessible to the public as it passes through Scotsbridge Open Space and will become an attractive new feature of the site.

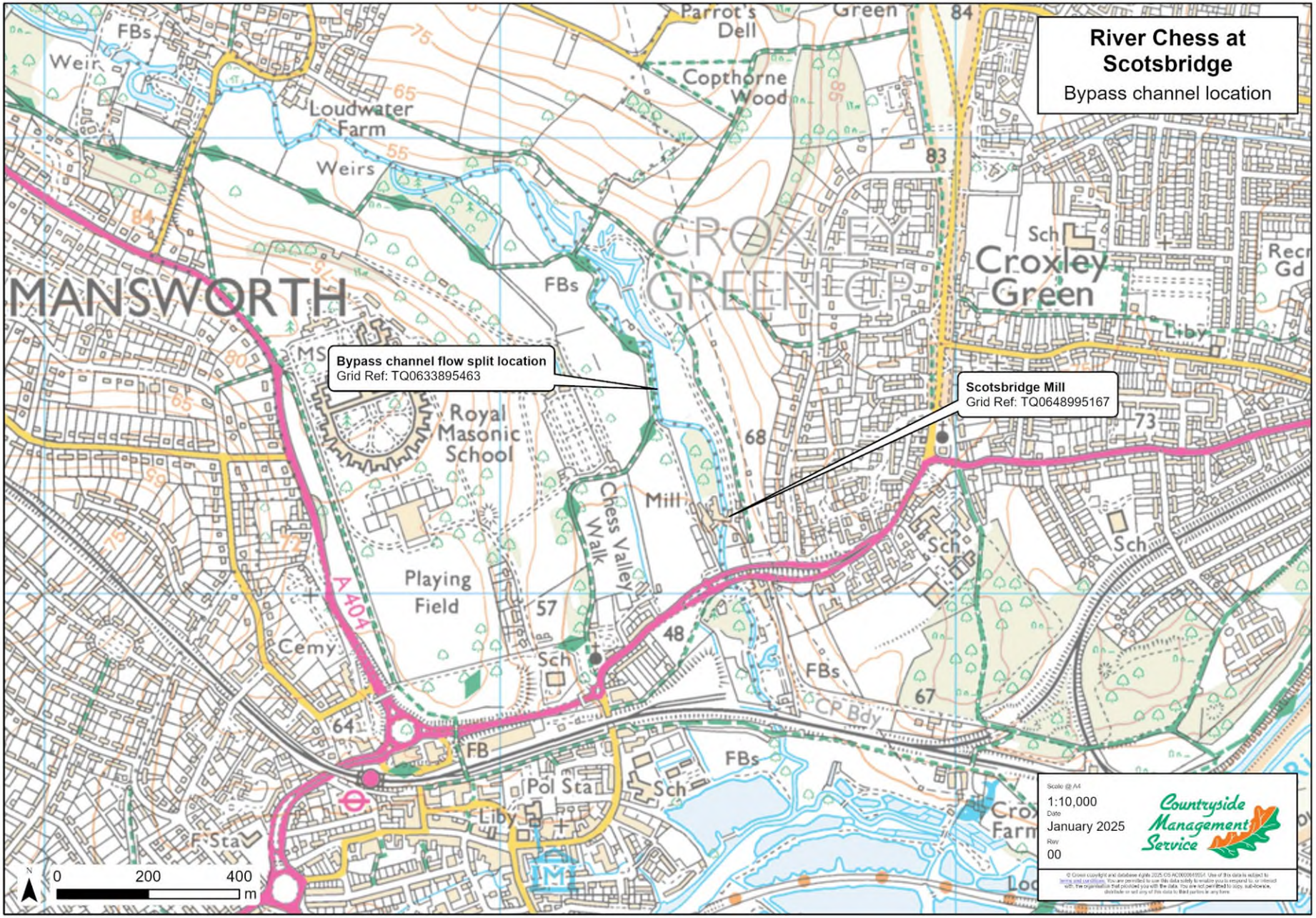

Figure 3. Location of bypass channel project.

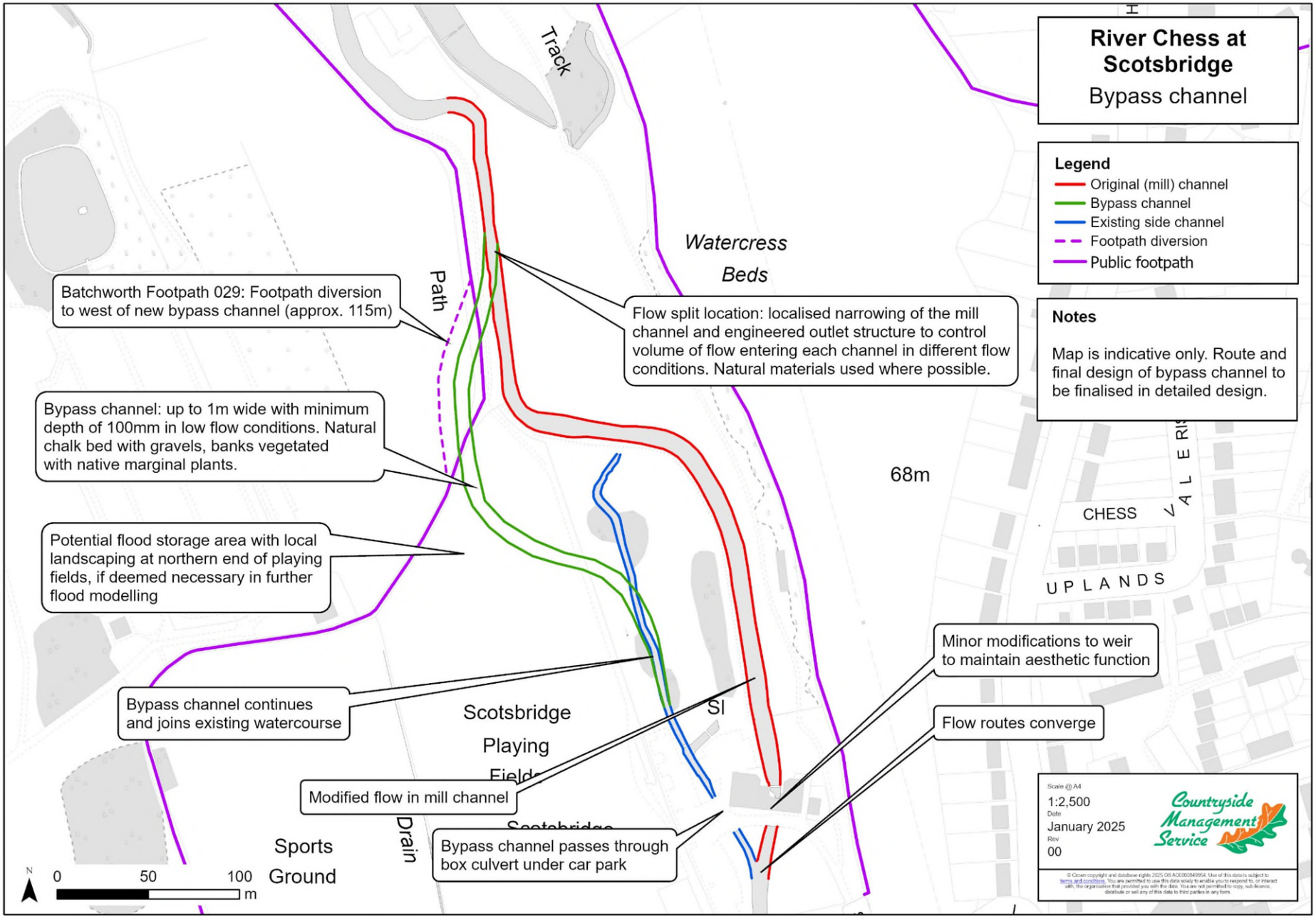

Figure 4. Design of proposed bypass channel.

4. COMMUNITY ENGAGEMENT PROCESS

Community engagement is integral to the development of projects such as this, to ensure that stakeholders are fully aware of and able to interact with designs as they emerge.

Due to the complexity of land ownership in the area, initial engagement on this project was focused on landowners and key stakeholders. This allowed us to confirm the viability of our preferred option.

We are now seeking comments on the outline design for the project. Following this stage, we will confirm details of the design, working towards an application for planning permission in 2026 and construction in 2027 at the earliest.

Please be aware that we will not respond individually to comments received through the public engagement; instead, we will produce a summary of comments, noting any amendments made to the design as a result. The engagement response document will be published online alongside this document. We will retain contact details only for the purpose of keeping respondents informed about the plan development process. Updates on the project will be automatically provided to respondents unless requested otherwise.

4.1 Stages of project development

Project stage	Timescale
Feasibility study and development of initial options	2017
Landowner and key stakeholder engagement on initial options	January 2018
Finalisation of outline design	November 2020
Funding secured for detailed design	November 2024
Public and stakeholder engagement on outline design	27th January to 16th February 2025
Final design confirmed – further publicity	June 2026
Application for planning permission	June 2026
Anticipated project delivery subject to funding	Summer 2027

4.2 Stakeholders

- Landowners (Three Rivers District Council, Mitchell and Butlers (Miller and Carter restaurant), Royal Masonic Trust, one private landowner)
- Relevant Hertfordshire County Council officers and members (including rights of way and flood risk management)
- Relevant Three Rivers District Council officers and members
- MP for South West Hertfordshire
- Relevant Environment Agency officers and specialists
- Batchworth Community Council
- Rickmansworth and District Residents' Association
- Rickmansworth Society
- Colne Catchment Action Network
- River Chess Association
- Chilterns Chalk Streams Project
- River Chess Smarter Water Catchment
- Hertfordshire and Middlesex Wildlife Trust
- Colne Valley Fisheries Consultative
- Thames Water
- Affinity Water
- Hertfordshire Local Access Forum
- Ramblers
- Rickmansworth Sports Club
- Croxley Green FC
- Chorleywood Common Youth FC
- Neighbouring and local residents

5. STAKEHOLDER FEEDBACK

Thank you for taking the time to read this document. We are keen to receive feedback from you on our proposals for the River Chess at Scotsbridge bypass channel.

Please return your comments using the contact details below by **Sunday 16th February 2025** at the latest.

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