

River Enhancement Technical Note

Land West of Westbury Road,
Warminster

November 2025

Ecology | Green Space | Community | GIS

Unit 1, Brassmill Lane Enterprise Centre | Bath | BA1 3JN

01225444114 | info@ethosep.co.uk

www.ethosep.co.uk



Report Produced for **BDW Trading Ltd.**

Written by: **Becky Morris, Senior Ecologist**
Checked by: **Sarah Forsyth, Principal Ecologist**

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1 INTRODUCTION

- 1.1 Ethos Environmental Planning (Ethos) have created this River Management Plan Technical Note for Land West of Westbury Road, Warminster hereafter referred to as the 'site' as shown in Figure 1 below.



Figure 1 Site location

- 1.2 There is good evidence to suggest that the watercourse on the site is a winterbourne stream. Winterbournes are rare chalk streams which are groundwater fed and only flow at certain times of the year as groundwater levels in the aquifer fluctuate. This watercourse sits on the West Melbury Marly Chalk formation (Figures 2 and 3) at the upper reaches on the Hampshire Avon catchment as a tributary to the River Were. The flow of water is seasonal with water only present when there has been high rainfall events, for much of the year the channel is dry.
- 1.3 Winterbournes can be ecologically important as when they are in good condition, they support a range of specialist wildlife adapted to this unusual flow regime, including a number of rare or scarce invertebrates.

- 1.4 This winterbourne would be classified as a 'Cinderella Winterbourne' as it has been degraded by agricultural activities and land drainage amongst other activities so that it no longer looks like or functions as a winterbourne.

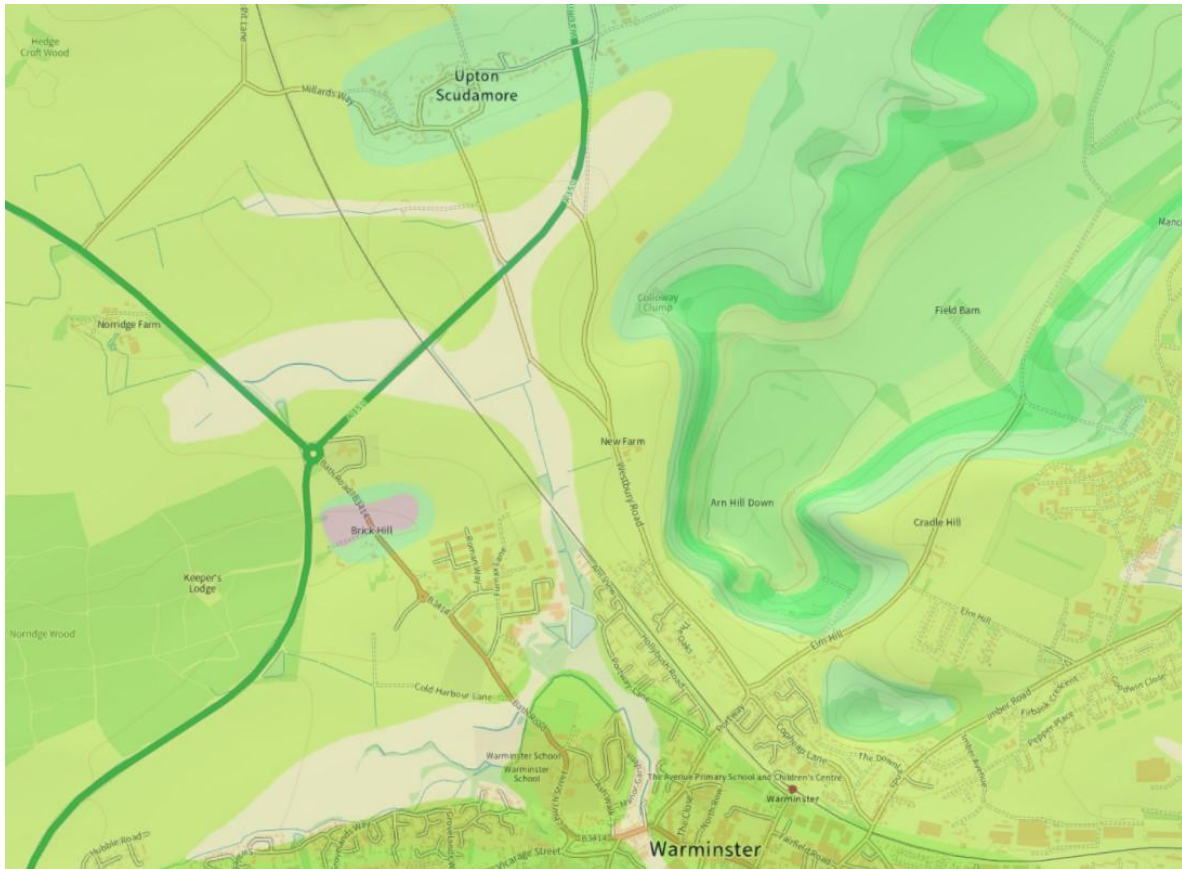


Figure 2 Geology map from GBS showing the River Were upper catchment

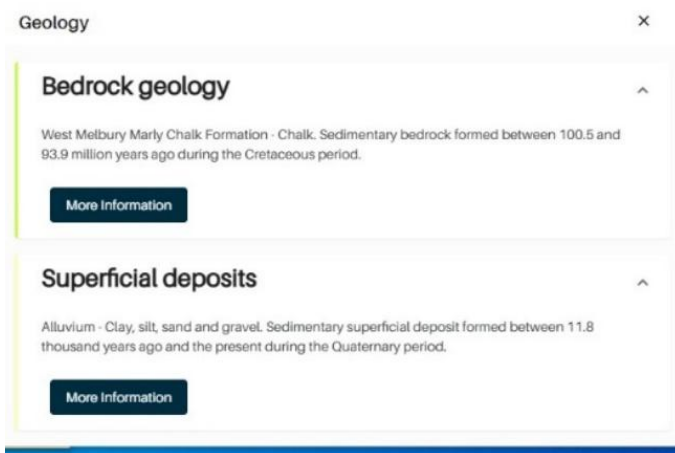


Figure 3 Geology map key



Photo 1 Watercourse in September 2025



Photo 2 Ditch infield linking to watercourse Sept 2025



Photo 3 Watercourse in winter 2021



Photo 4 Watercourse in winter 2021 with flow

- 1.5 The watercourse shown in photo 1, shows an over deepened channel which is functioning as a drainage ditch. The channel has some aquatic species with water mint (*Mentha aquatica*) dominating. The channels were dry at the time of the survey.
- 1.6 Photos 3 and 4 show the watercourse in Winter 2021 showing the channel full of water.

1.2 Enhancement and delivery of net gain watercourse units

- 1.2.1 The watercourse can be enhanced so that it can function as a natural winterbourne stream through a range of measures outlined below.
- 1.2.2 The site offers the opportunity to create a new meandering channel, shallower profile which could interact with its floodplain. Pools, riffles, wet berms and depositional bars could be incorporated into the new profile by adding gravels and other depositional materials. Where appropriate marginal planting of riparian plant species will provide additional habitat opportunities.
- 1.2.3 The ideal habitat area for this would be in the northwest of the site, to the west of where the channel currently flows along a hedge.

- 1.2.4 Other areas of the watercourse could be enhanced to a more natural form by reprofiling the bank sides so that the sides are more varied creating areas which are more gently sloping as well as steep. Pools and riffles can be created within the channel bed by adding gravels, woody material and other natural substates which would raise the bed allowing it to interact with the banks as well as creating a more varied habitat within the stream. Aquatic marginal planting will create additional habitat opportunities for a range of species.

1.3 Conclusion

- 1.3.1 The river restoration recommendations within this technical note can provide enhancements to the ecological features; creation of a priority wildlife habitat; delivery of over 10% net gain in biodiversity of watercourse units; whilst contributing to climate change resilience by allowing the watercourse to recreate natural geomorphic process and reconnect to its floodplain.
- 1.3.2 The restoration of this ecologically valuable habitat will also positively benefit local wildlife, including invertebrates, reptiles, amphibians, birds and bats.