

Course Outline

Day 1. Understanding River Restoration: processes and planning for design

Facilitator: Jenny Mant, River Restoration Centre

9.30 Overview of course.

Rationale and how it all fits together

- Examples of what happens if you don't get it right.

Presentation >>

Facilitator: Jenny Mant, River Restoration Centre

10.00 Fluvial processes within river restoration design.

This session will cover aspects of fluvial geomorphology, sediment process and hydrology within this context. It will be backed up with exercises to demonstrate the need to understand associated parameters (e.g. slope, roughness, sediment type, cross-sectional type) and associated simple calculations. Components will include:

- The importance of understanding fluvial geomorphology in design
- Return periods and channel forming discharge
- Sediment continuity/connectivity
- Implications of differing bed and bank material

The session will incorporate practical elements based on the above.

Presentation >>

Hand-out >>

Hand-out >>

Exercise >>

11.00 Coffee break

Session continues

13.15 Lunch

14.15 *Facilitator: Karen Fisher, Independent Consultant* Hydrology

Presentation >>

Hand-out >>

Exercise >>

Spreadsheet >>

Graphs >>

16.00 Tea break

Session continues

Facilitator: Andy Gill, Cranfield University

16.30 Linking Ecological and Fisheries aspects of river restoration and importance within design.

The aim is to provide an understanding of biological communities and habitats in rivers and the processes that determine ecological status. The aspects covered will include:

- How to assess ecology and biodiversity



- Flow regime requirements
- How to determine functional habitats
- Fisheries habitats
- Indicator species
- How to assess ecology and biodiversity
- Flow regime requirements
- How to determine functional habitats
- Fisheries habitats
- Indicator species

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Presentation >>

18.00 Question and answer session

18.30 Formal close

19.30 Course Dinner

An opportunity to talk to the course facilitators

Day 2. Tools – what can you use and how and when is it appropriate

This day will consist of a series of short sessions aimed at encouraging participants to think about what data is needed to establish restoration potential and how this can be interpreted. In each case key tools will be discussed that are appropriate for different scenarios and project sizes. This will be supported by technical examples of how this can help you to understand your watercourse and work towards appropriate restoration. Each session will be interactive with time for discussion.

Facilitator: Andy Gill, Cranfield University

9.00 Linking Ecological and Fisheries aspects of river restoration and importance within design (continued from Day 1)

Presentation >>

10.30 Coffee

Facilitators: Kevin Skinner, Jacobs

11.00 Linking Ecology and Fluvial Geomorphology in river restoration design.

Presentation Part 1 >>

Presentation Part 2 >>

Hand-out >>

Hand-out >>

Hand-out >>



Facilitator: Vaughan Lewis, Windrush AEC

12.30 A Practitioner's View

Presentation 1 [>>](#)

Presentation 2 [>>](#)

Presentation 3 [>>](#)

Presentation 4 [>>](#)

Exercise [>>](#)

Site Report [>>](#)

13.20 Lunch

14.05 Classroom exercises

An example will be given with data, specific questions and project objectives – The groups will need to work together to establish points such as:

- What the data provided can tell you?
- What data is missing?
- What are the necessary next steps?
- Can the objectives be delivered or if not why?

[Exercises will be conducted in small groups with facilitators to provide guidance]

(Coffee/tea during this period)

15.45 Discussion of Classroom Exercise

16.20 Summary, feedback and final questions

16.30 Departure

[Reference List](#)

