

A user's guide to being river and lake friendly

Funded by:



Supported by:



Objectives

To help water users to identify and understand the:

- Importance of the different areas of the river environment
- Potential threats and impacts to the river environment and
- How to help reduce that threat or impact



Why do I need to know?

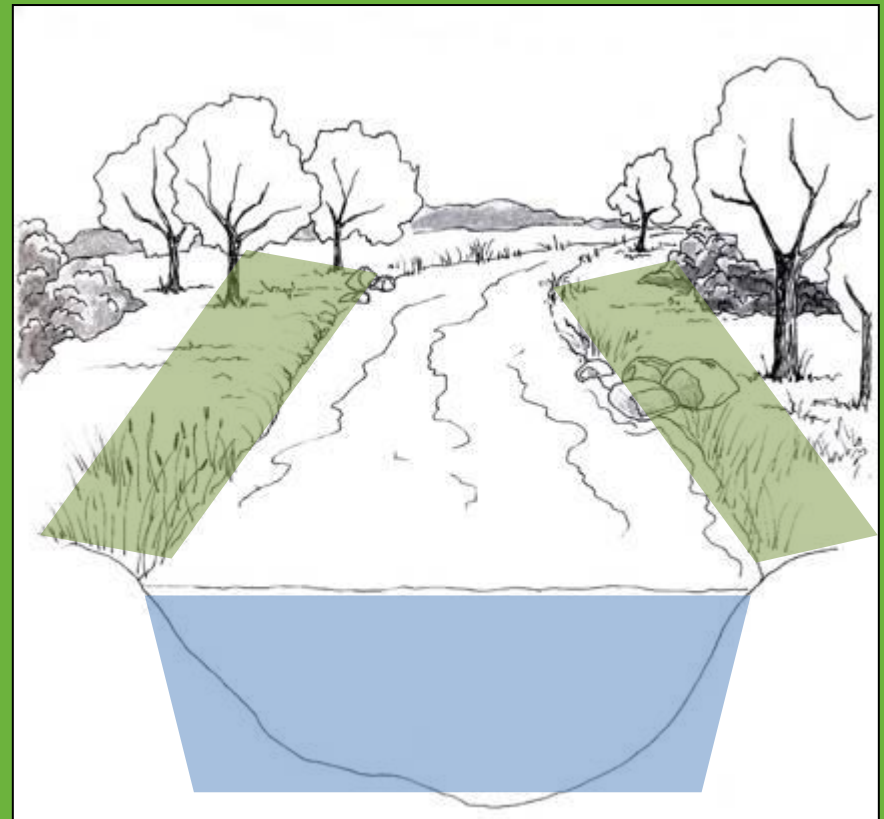
- Ensure sustainable use of the river
- Protect our native wildlife
- Work in partnership with all river users
- To ensure that you are following good practice and legislation and prevent you getting in to trouble
- Reduce costs to the tax payer for clearing invasive non-native species



The importance of the river environment

There are 2 distinct areas of the river environment which are of particular importance :

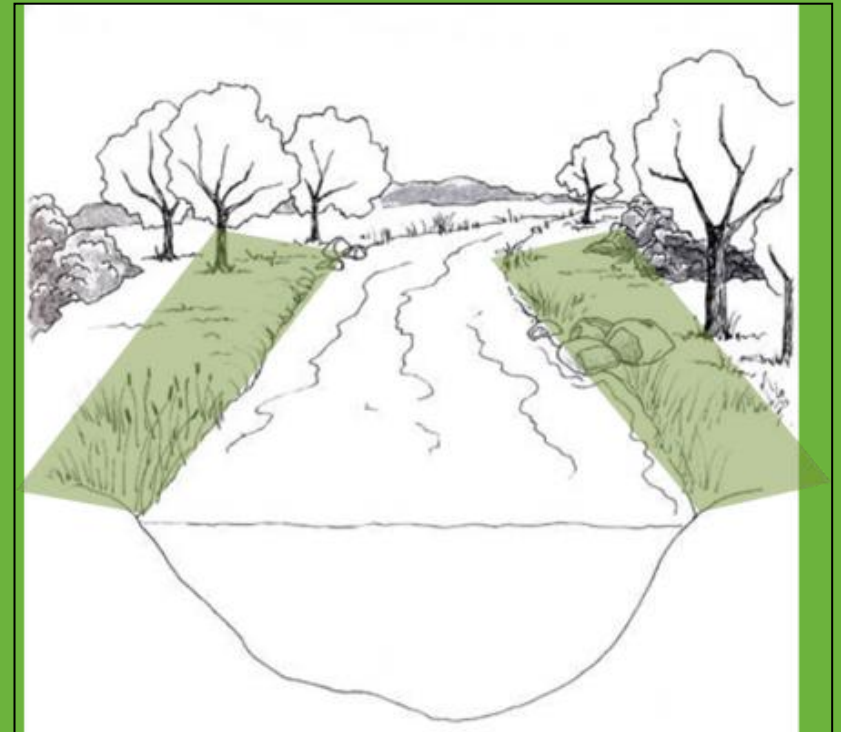
- Riparian zone or river margin
- River channel



The riparian zone

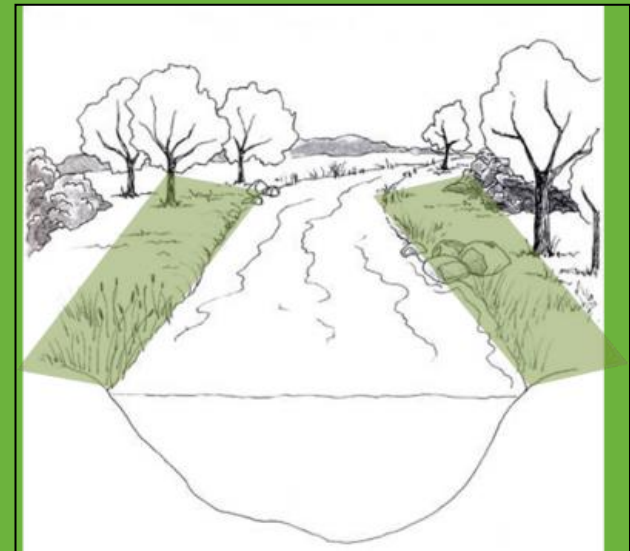
River sides, lake shores, marshes and reed-beds are some examples of a riparian habitat. This zone is particularly important for:

- Wildlife and habitats
- Bank stability
- Water quality
- Access to and along the water body



The riparian zone – wildlife and habitats

- Provides a corridor for wildlife to move along
- Supports a greater variety of plants and animals
- Provides shaded areas for water animals
- Act as buffer strips protecting rivers from surrounding land use



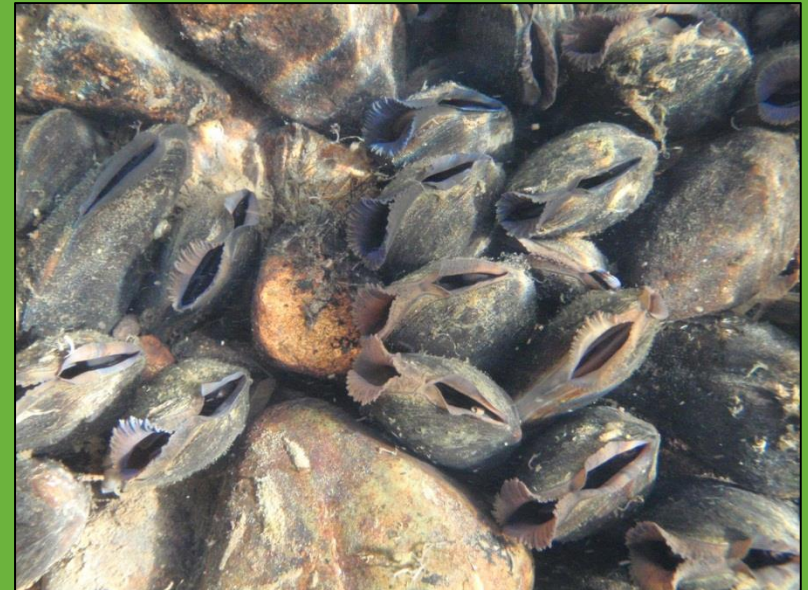
The riparian zone – bank stability

- Absorbs surface runoff - reduces rate at which water enters the river channel, contributing towards flood control.
- Helps to reduce water energy - reduces soil erosion and contributes towards flood management.
- Traps sediments - reduces the amount of suspended solids within the water contributing to replenishing soils and building up stream banks.



The riparian zone – water quality

- Filters out pollutants carried within the surface runoff (bio-filtration).



Freshwater pearl mussels

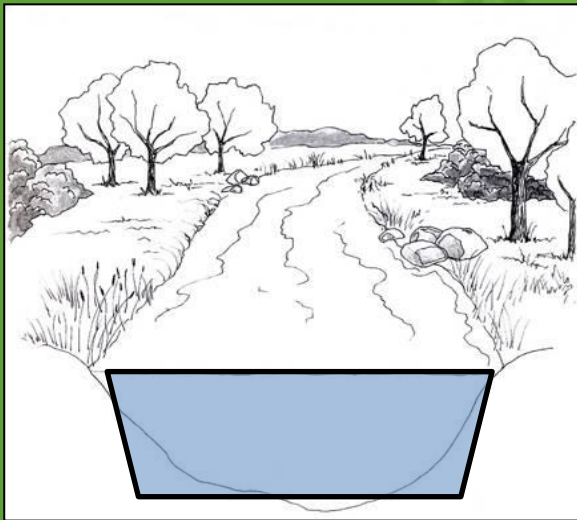
The riparian zone – access

Provides access for:

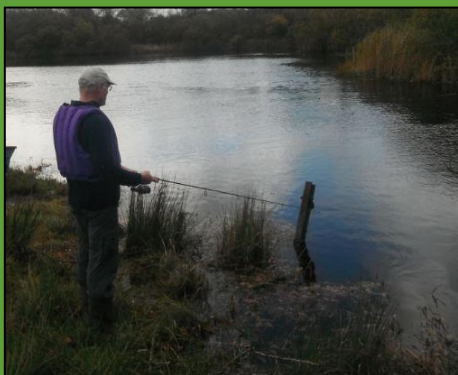
- recreation use
- utilities
- conservation and habitat improvements
- channel maintenance for flood risk management

The river channel

The river channel is particularly important for invertebrate and fish populations. Both these utilise the gravels, sediments, vegetation and other species for feeding and breeding.



Potential threats and impacts – user groups



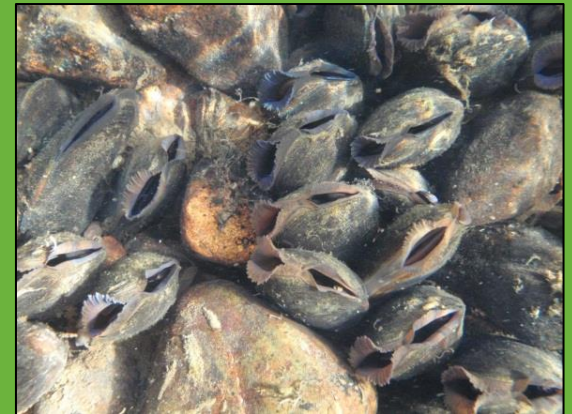
Potential threats and impacts – large boat users

All water based activities pose a potential threat to the river environment, to both the channel and the riparian zone – some of which are more widely known than others which include:

Bank erosion

Deterioration to
water quality

Impact and
disturbance to
wildlife and habitats



Potential threats and impacts – bank erosion

Impacts:

- Destruction and wearing away of vegetation
- Exposure and wearing away of bare soil

Caused by:

- wash
- Concentrated footfall at launch / landing spots for dingy
- Damage to walls and fences allowing stock to access the river banks and lake shores



Potential threats and impacts – bank erosion

Solutions:

- Use designated launching and landing points where possible
- Identify and report areas in need of management to reduce erosion
- Avoid climbing over walls or fences
- Keep to an appropriate speed to keep wash to a minimum



Potential threats and impacts – deteriorate water quality

Caused by:

- Detergents
- Effluent spills
- Oil and fuel spills

- WR Greener Boating
- RYA The Green Blue

Potential threats and impacts – disturbance to wildlife

Rivers and lakes support a rich variety of bird, mammal, fish, invertebrate and plant species. Many sites are of ecological importance and hold conservation status - SSSI, SAC, SPA, NNR, LNR, NIA and more.

Potential impacts include:

- Disturbance and damage to protected landscapes and habitats.
- Disturbance and damage to nesting, breeding or feeding sites.
- Disturbance and damage to rare or protected species.



Potential threats and impacts – disturbance to wildlife

Potential causes include:

- Anchors
 - Launching and landing locations
 - Litter
-
- Solutions:

Potential threats and impacts – disturbance to wildlife

If you are planning to carry out any river improvement works or river clean-ups you will need to consider the following:

- Permission from the land owner.
- Permission from the appropriate Authority or organisation such as Natural England or Environment Agency (EA), particularly if on a legally protected site.
- The EA **usually** restrict in-river and bank side improvements to the period 1st June and 30th September (active fish spawning season).
- Work in or within 8m of a main river require Flood Defence consent from the EA.



Potential threats and impacts – Invasive non-native species

Colonisation of native species

- Following the ice age 10,000 years ago
- Slow colonisation of plants and animals from mainland Europe
- Retreat and melting of ice
- Established species now **NATIVE SPECIES**



The introduction of

invasive non-native species (INNS)

- Globalisation and improved trade routes break down the natural barriers (oceans and mountain ranges) to migration
- Species introduced deliberately or accidentally by humans outside of their natural range = **NON-NATIVE SPECIES**
- Not all introduced species are bad – only **minority** have **serious negative** impacts on native species, the economy, our health and the way we live
- These are called:

INVASIVE NON-NATIVE SPECIES

Potential threats and impacts – Invasive non-native species

INNS can be introduced and spread, often unknowingly via contaminated equipment and clothing left in damp conditions.

Potential impacts of INNS include:

- Outcompete native species for light, nutrients and space
- Reduce biodiversity
- Damage infrastructure
- Expose soil to erosion
- Destabilise river banks
- Carry disease fatal to native species
- Increase flood risk



- **Reduce recreational and amenity use**

Potential threats and impacts – Invasive non-native species

The main culprits:

Himalayan balsam



Floating pennywort



Giant hogweed



Japanese knotweed



American skunk
cabbage



New Zealand
pigmy weed

Potential threats and impacts – Invasive non-native species

The main culprits:

Killer shrimp



Chinese mitten crab



American signal crayfish



Zebra mussel



Parasites, fungal spores
and disease



Fish outside their
natural range

Potential threats and impacts – Invasive non-native species

Biosecurity

CHECK

CLEAN

DRY

Check all your equipment and clothing for living organisms and plants fragments.

Pay particular attention to areas that are damp and hard to inspect.



Potential threats and impacts – Invasive non-native species

Biosecurity

CHECK

CLEAN

DRY

Clean and wash all equipment, clothing and footwear thoroughly.



Wash down on site and leave any organisms or plant fragments at the water body where you found them OR on a hard standing or grass area away from a water source or drain system.

Potential threats and impacts – Invasive non-native species

Biosecurity



Completely dry out all equipment and clothing before going to a new site - particularly effective at killing crayfish plague fungal spores. Some species can live for many days in damp conditions.

Make sure you don't transfer elsewhere.

If this is not possible, disinfecting wet kit between sites can help reduce the risk of transferring diseases.

Potential threats and impacts – Invasive non-native species

What else can be done:

Report sightings: What species?

Where? – grid reference and land ownership if possible

When?

Contact:

Your local Rivers Trust

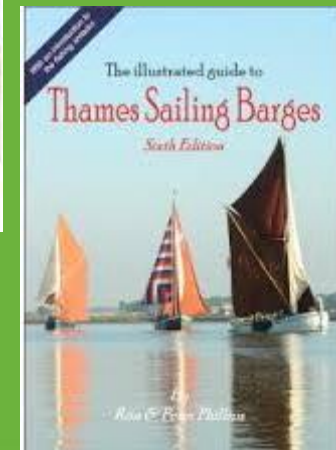
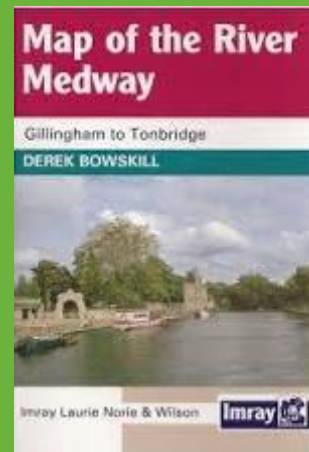
Invasive Species Local Action Group

Environment Agency

OR use the Plant Tracker app.

Consider where you would like to sail:

- High risk areas
- Moving between water bodies
- Multiple waterbodies on consecutive days or the same day



Summary

How you can become river and lake friendly:

- Consider your movements on the river bank to reduce erosion and disturbance to wildlife and habitats.
- Consider water levels to reduce disturbance to spawning gravels.
- Incorporate biosecurity measures and sustainable good practice into your activities.

Further Information

South Cumbria Rivers Trust: www.scrt.co.uk

Cumbria Freshwater Invasive Non-Native Species Initiative:

www.scrt.co.uk/cfinns

Canoe England:

www.canoe-england.org.uk/waterways-and-environment

Environment Agency:

www.environment-agency.gov.uk

Non-Native Species Secretariat:

www.nonnativespecies.org

The Rivers Trust:

www.theriverstrust.org

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