

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?

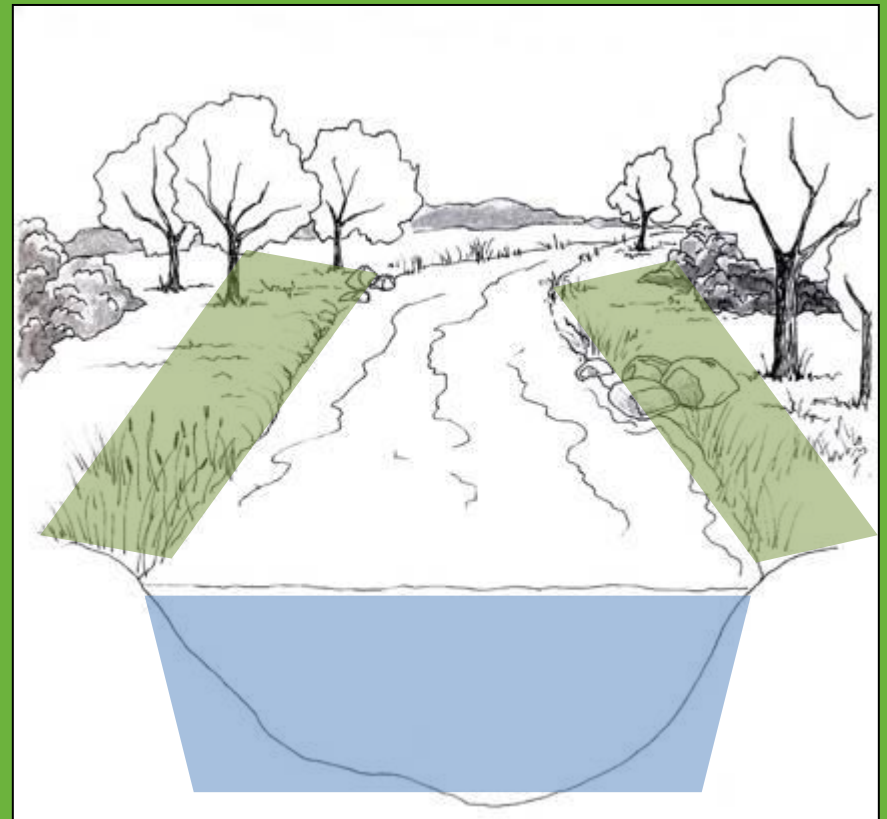
- Ensure sustainable use of the river
- Protect our native wildlife
- Work in partnership with all river users
- To ensure that you are following good practice and legislation and prevent you getting in to trouble
- Reduce costs to the tax payer for clearing invasive non-native species



The importance of the river environment

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

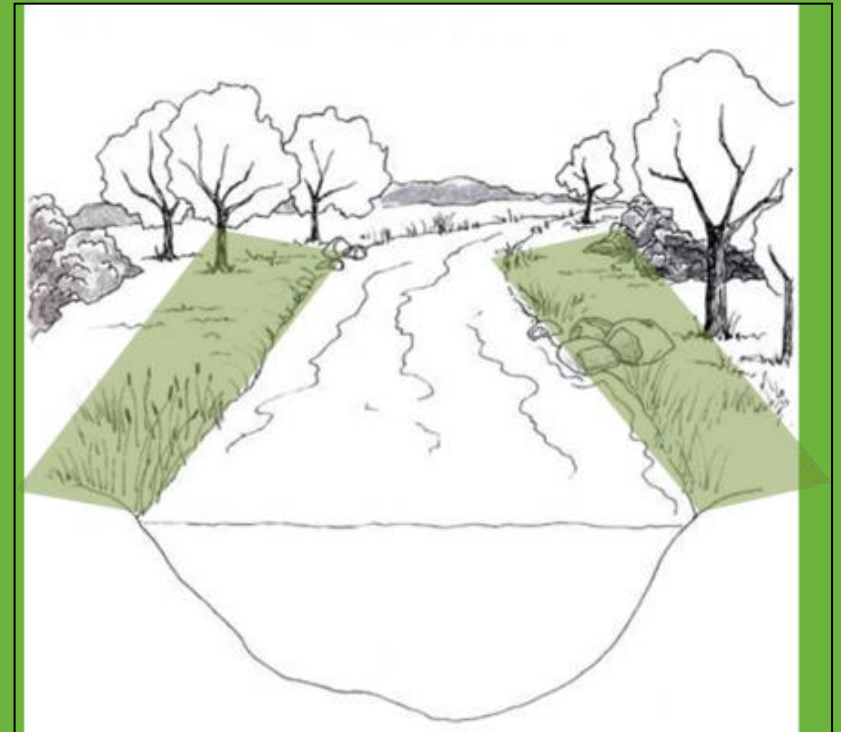
- Riparian zone or river margin
- River channel



The riparian zone

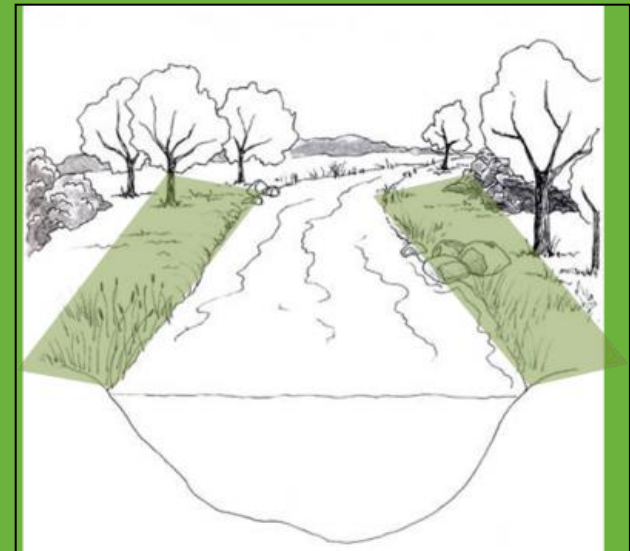
River sides, lake shores, marshes and reed-beds are some examples of a riparian habitat. This zone is particularly important for:

- 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



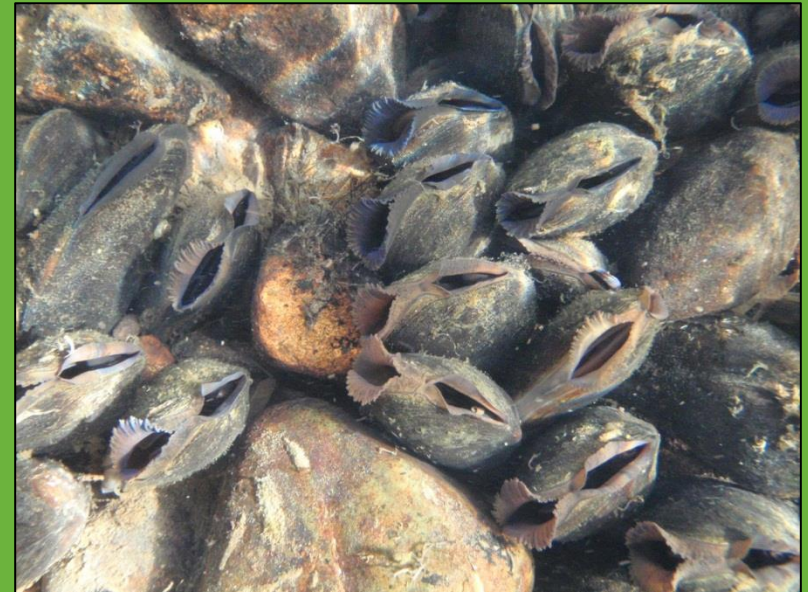
The riparian zone – bank stability

- 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

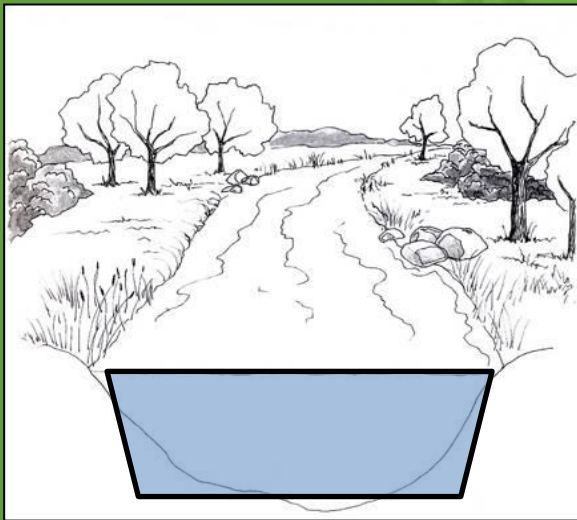
The riparian zone – access

Provides access for:

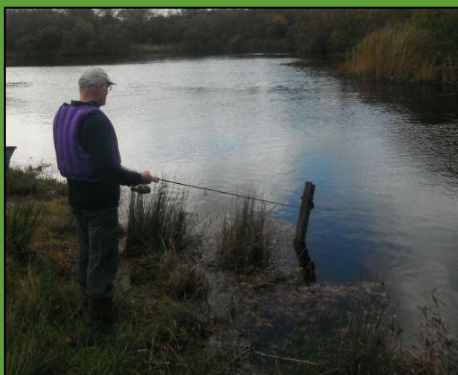
- recreation use
- utilities
- conservation and habitat improvements
- channel maintenance for flood risk management

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 – Canoeists / Kayakers

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:

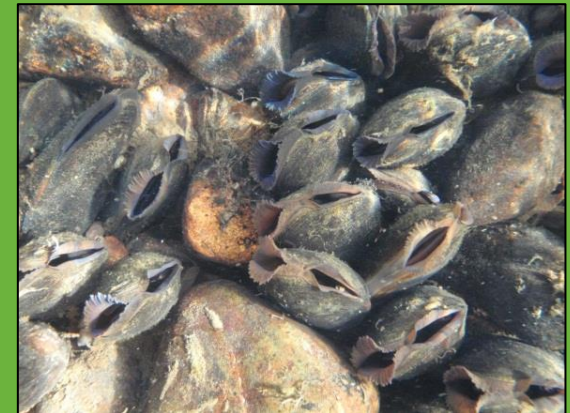
River bank erosion



Disturbance of fish migration and spawning gravels



Impact and disturbance to wildlife and habitats



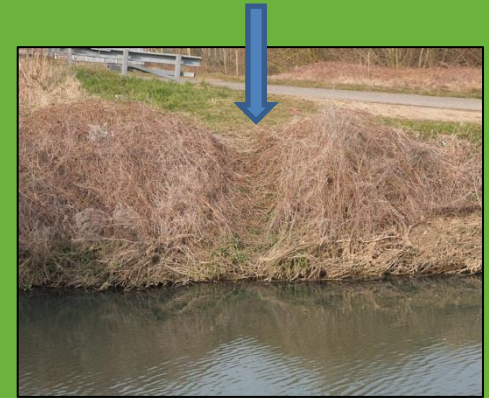
Potential threats and impacts – bank erosion

Impacts:

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

Caused by:

- Concentrated footfall at popular ingress and egress points
- Seal launches
- Dragging canoes/kayaks
- Damage to walls or fencing which allow farming stock to access the river bank



Potential threats and impacts – bank erosion

Solutions:

- Use designated ingress and egress points where possible
- Identify and report areas in need of management to reduce erosion to the local Waterways adviser
- Avoid climbing over walls or fences
- Carry boats
- Launch in the water



Potential threats and impacts – disturbance to migration

Most river species, particularly fish move some distance up and down river channels between feeding and breeding areas, whilst salmon, sea trout, lampreys and eels move between rivers and the sea.

Fish and eel passes are constructed to allow fish to get past natural and man-made barriers such as waterfalls, fish counters, gauging weirs and tidal gates.



Potential threats and impacts – disturbance to migration

Use designated routes which are in place.

Consider your movement around these structures to reduce any possible damage to these structures and to yourselves and to minimise disturbance of species using these route ways.



Potential threats and impacts – disturb spawning grounds

Fish spawn throughout the year and throughout the course of a river if the conditions are right – all species are different.

Key conditions for spawning to take place:

- Require small gravels to build their nest – Redd
- Faster flowing, well oxygenated riffles (on the edge of a pool)
- Generally water depths below 1m (except when in spate)



Potential threats and impacts – disturb spawning grounds

All species are important.

The most vulnerable species are those which migrate from the sea up river to spawn – some of the most active are native salmon and trout.

Salmonids:

- Between October to March -peak activity between November to January
- Hatching of the young fish (fry) during April

Coarse Fish:

- Throughout the year
- Can spawn more than once

Potential threats and impacts – disturb spawning grounds

Disturbance can lead to eggs being exposed to unsuitable conditions and can be caused by:

- Stepping/standing.
- Scraping.
- Silt covering.



Where possible, avoid or minimise disturbance to gravels and consider the depth of water before starting your journey to avoid any unnecessary disturbance.



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, Nature Improvement Areas.

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

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.

CHECK

CLEAN

DRY

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 paddle:

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



Potential threats and impacts – Invasive non-native species

What else can be done?

Set up a volunteer work party



ON THE PULL

INTERESTED?
Come and join like-minded people going on the pull to remove the invasive non-native Himalayan balsam from river banks and lake shores.

Why are we doing this?
Himalayan balsam is a fast growing annual plant from the west and central Himalayas which has damaging impacts to the environment by:

- Outcompeting native plants for light, water and nutrients.
- Exacerbating flooding by impeding water flow during high rainfall.
- When it dies back in autumn, it leaves bare ground exposed to erosion throughout the winter.

JOIN OUR NEXT 'ON THE PULL' WORK PARTY ON:

Date: _____ **Time:** _____

Location: _____

Contact: Jen Aldous
M: 07825 141716
E: jen@scrt.co.uk
W: www.scrt.co.uk

 South Cumbria Rivers Trust

For more information go to: www.scrt.co.uk/cfins

Design by www.pamelaogdenesign.co.uk

1. During May – August before the seed pods start to explode



2. Pull whole root ball out of the ground



3. Break stem between root ball and first node

4. Balsam will re-root from nodes if not broken in correct place

Node Root ball

5. Leave on-site in piles to decompose



Canoe England & Sustainable river use

You, your canoe & the environment

England has a wonderful network of inland and coastal waters that are amongst the best in Europe. This leaflet provides guidance on good practice for using these waters in a responsible and appropriate manner. Canoeists should be able to enjoy their sport and recreation in harmony with the natural environment and share the resource with other water-users.

To get the best canoeing experience, try to be considerate and respectful; treat others as you would wish to be treated, respect the freshwater and marine environment, follow safety recommendations and be seen as a welcomed visitor.

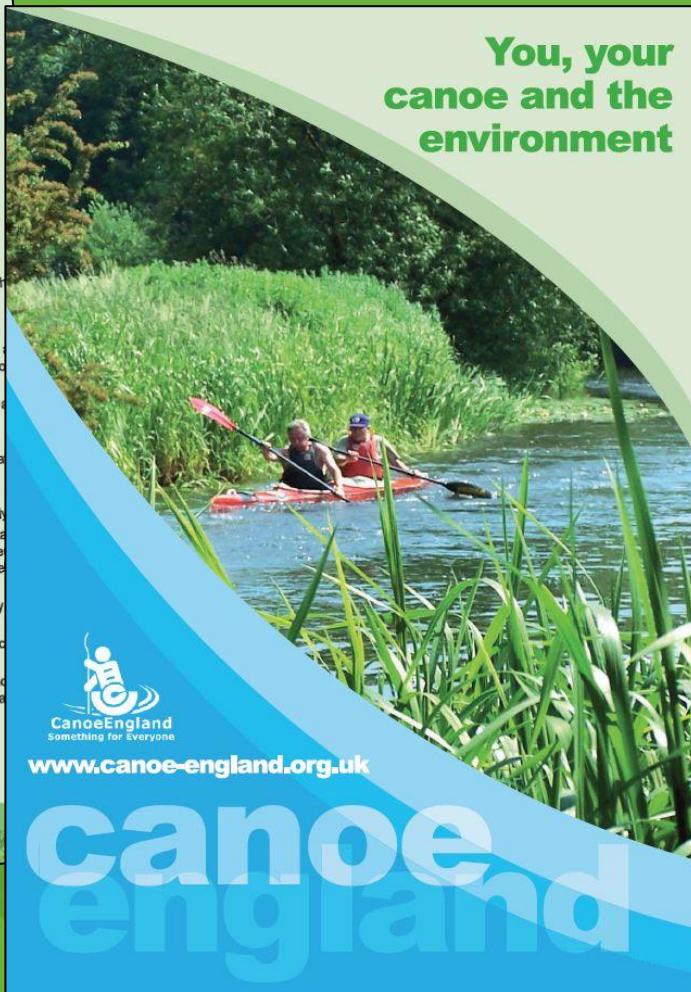
Take responsibility for your actions

The outdoors is a fantastic place for sport and recreation, but it is also a natural environment which needs to be treated with respect.

- Be aware of information/ hazards for your chosen journey and ensure you are confident in the ability of your party to cope with the conditions expected.
- Take account of water, flows, levels & weather conditions.
- Leave details of your trip with a responsible person and advise a safe arrival.
- Ensure your equipment is in good condition. Use and wear it correctly.
- It is recommended to take advantage of BCU advice and courses offered to improve canoe skills and safety for all levels of ability.
- Be aware of health, water quality & other safety information.¹
- Permission may be required to canoe on private land.
- It is your assessment of conditions & factors whether to go on the water.

Observe the Countryside Code.
For information visit:
www.countrysideaccess.gov.uk

For information on where to canoe, including information on access arrangements that may be in place, contact the Canoe England Local River Advisor, Local Coastal Advisor, Regional River Advisor, navigation or port authority. Contact details can be found on the Canoe England website:
www.canoe-england.org.uk



You, your canoe and the environment

Caring for the environment

Your canoe is a traditional craft used throughout the world for exploring wilderness areas and quietly observing wildlife and flora. It causes no erosion, noise or pollution and leaves no trace of its passing. Canoeing at appropriate water levels is an environmentally benign activity² and causes no damage to fish stocks³.

By following the simple steps below you can ensure your presence is not detrimental to the freshwater and marine environment, it can help to minimise and avoid accidentally disturbing wildlife and their habitats.

Find out about the area before you go, noting its sensitive places, protected areas⁴, species and breeding seasons. Take your litter home with you, leave no trace of your visit.

When clearing litter left by others, handle it with care.

Leave the environment as you find it. Keep noise to a minimum.

Do not 'seal' launch or drag boats to avoid disturbing natural banks. Float your boat for launching, lift out when landing and carry it to and from the water.

Do not damage bank side vegetation when launching or landing.

Where possible keep to any designated launching points.

Do not paddle over gravel banks or water conditions - they may contain debris.

- On coastal waters take care on shorelines, e.g. Terns. Avoid dragging canoes across rocky inter-tidal areas, through sand and their grasses. For more advice on Canoeing on the sea - A Guide to Good Environmental Practice⁵.

- Canoe a safe distance away from wildlife, to avoid causing disturbance and stress to otters, seal colonies - especially with pups present, rafts of wildfowl and seabirds as well as their nesting, shelter and feeding areas e.g. mudflats, marshes and cliffs. Remember, basking sharks, dolphins and whales can also be a danger to you.
- Constantly assess wildlife. If you see signs of disturbance move away quickly.
- Note the bio-security measures to minimise the spread of invasive alien aquatic species and diseases in UK waters. Check, clean and dry canoes & equipment after use⁶.

Report pollution, invasive species, damage and incidents to the relevant authorities.

Environment Agency
Telephone 0800 80 70 60 (24 hours)

British Waterways
Telephone 01923 201120
Out of hours Telephone 0800 47 999 47

RSPCA for wildlife and animals in distress
Telephone 0990 55 59 99 (24 hours)


For Coastguard and other emergency services call 999



www.canoe-england.org.uk


canoe england

Canoe England & Sustainable river use


Canoe England
Something for Everyone

WATCH OUT FOR AQUATIC INVADERS


Invasive Non-Native Species Can Damage Our Native Species And Habitats



Floating Pennwort




Zebra Mussel




DON'T LET THEM HITCH A RIDE ON YOUR CANOE / KAYAK

Clean all of your equipment before you plan to paddle on a different waterway or the sea.


Dry all of your equipment and clothing (some species can survive for many days)




Signal Croufish



Salmon Fluke




American Mitten Crab




Chinese Mitten Crab

Remove visible fouling and put in the bin, not back in the water

Check your equipment and clothing for living organisms & plant matter



www.canoe-england.org.uk




In association with:


Canoe England
Something for Everyone

HOW DEGRADING!

See how long some common bits of litter take to breakdown in the water





Reduce, Re-use or Recycle where Possible



Dispose of all waste responsibly on shore



www.canoe-england.org.uk



In association with:

Summary

How you can become river 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.

Any questions and to feedback comments please contact either:

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Invasive Non-Native Species Officer
jen@scrt.co.uk

Richard Atkinson
Waterways and Environment Manager
access@canoe-england.org.uk

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

Credits

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