

Designing for Canals

How to create policies, guidance,
design codes and masterplans that
make great waterway places



Contents

Introduction	5
How to use this guide	10
A Place for Nature	12
A Place for Movement	16
A Place for People	20
Designing for Canals - a Checklist	28
Find Out More	30

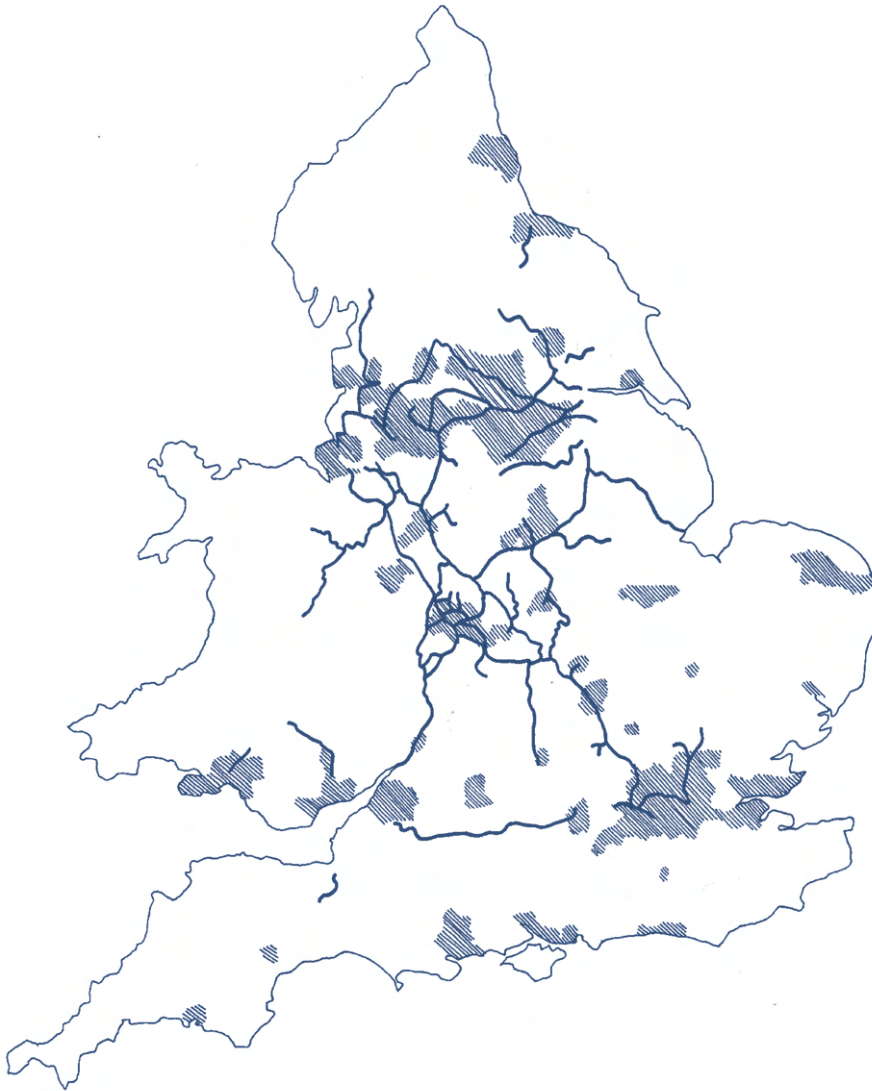
Introduction

The Canal & River Trust is the charity that cares for and brings to life 2,000 miles of canals and towpaths, river navigations, docks and reservoirs across England and Wales.

We believe our network of historic canals, with their towpaths and all their associated structures and habitats has the power to make a positive difference to millions of people's lives; supported by evidence that spending time by water can make us all healthier and happier. As a society we are facing a number of challenges – climate change, biodiversity decline, water shortages, inactivity and loneliness, to name just a few.

Through our research, and what we see every day, we know that canals, other waterways and water bodies in our towns and cities are vital blue spaces, having the potential to transform communities and help address these societal challenges. From providing local free spaces for people to exercise, connect with nature and improve their mental health, to green traffic-free corridors for active travel, nature recovery and wildlife migration, our canals are bringing substantial, widespread benefits to society. They support sustainable urban living, jobs and local economies, playing an important role in the nation's water and utilities infrastructure, and even delivering new sources of renewable energy.

Just as they were the catalyst for the Industrial Revolution, our historic canals and other waterspaces can help to shape a positive future for us all. We want to build their resilience and unlock their full potential to help urban and rural communities prosper and mitigate the effects of climate change and biodiversity decline.



Map of England & Wales showing built-up areas and waterways in the care of the Canal & River Trust. Source: ONS/DK-CM

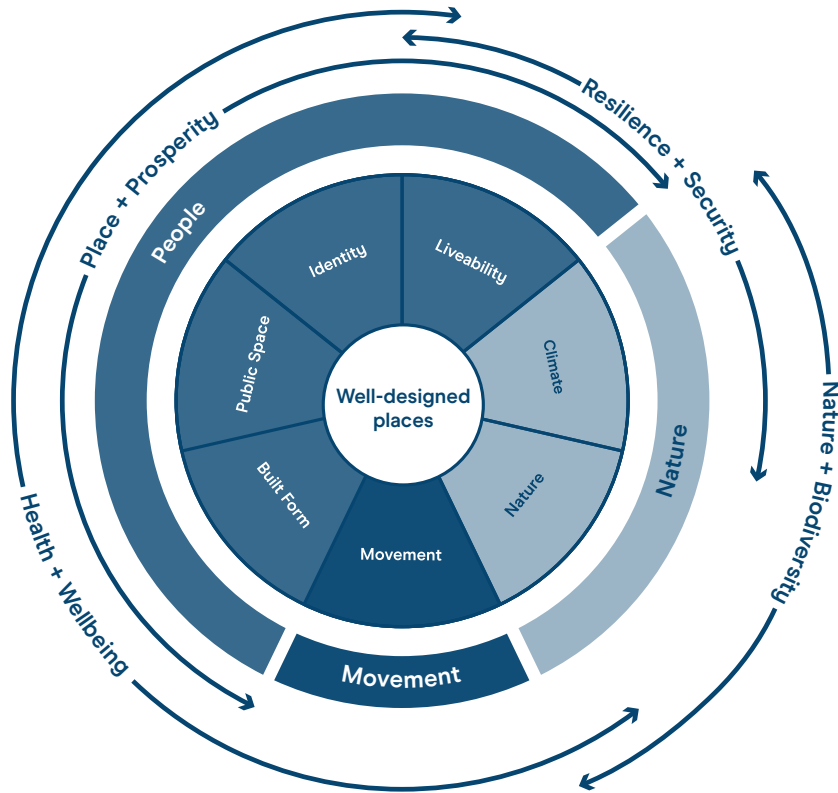
Canals are important features of local places and are highly valued by communities. Our network of canals and towpaths, other waterways and waterspaces play a vital role as demonstrated during and post Covid and have the potential to do even more. With 9+ million people living on the doorstep of our network, these blue spaces can significantly contribute to ensuring that everyone should live within a 15-minute walk of a green or blue space – providing free and inclusive access to heritage, the outdoors and nature.

Unlocking their potential and added value, depends upon good waterside and waterspace planning, design and conservation as well as securing long-term support and funding for them to thrive.

The Ministry of Housing, Communities and Local Government encourages the use of locally specific design policies and guidance, design codes and masterplanning to provide clear design expectations in order to improve the design quality for new development. In this context, the Trust has developed this design guide and accompanying checklist - as a complement to national design guidance and best practice - to help local planning authorities, developers, local communities and others with an interest in good planning and design to recognise the contribution that our historic network of canals and towpaths, river navigations, docks and reservoirs can and do make to the local character and distinctiveness of an area.

This guide can be referenced or used to inform production of design policies and guidance, design codes and masterplans to promote high quality waterfront design and the creation of great waterside places.





Above

Waterways relate to all 7 features of well-designed places - the centre of the wheel - as well as to the Trust's key drivers of impact - the edge of it. They do this through three key themes of nature, movement and people - these form the structure of this guide.

Canals can support the Government's commitment to everyone having access to green or blue space within a 10-15 minute walk from where they live.

The Trust's research and independent evidence proves why our network of canals and towpaths, other waterways and waterspaces are important. Some of this evidence is set out in the adjacent diagram, and further information on the impact of our canals, the challenges they face and the role they play in connecting nature and people - including subsequent impact reports as they are published - can be found on our website:

→ <https://canalrivertrust.org.uk/our-cause/impact-of-canals>

To learn more about...

Delivering health and wellbeing benefits from urban blue spaces on the doorsteps of communities.

Providing open, free and accessible spaces to the 9+ million people living within 10-15 minutes from a waterway.

Removing barriers to use by providing inviting, welcoming and safe spaces, often with greenflag status.

Creating opportunities to engage and experience being on & by the water.

Enabling community connections, involvement and ownership in local waterways

...explore here:

- Value of Blue Space & Wellbeing with Kings College (Impact Report 2024: p40)
- Urban Cooling (sustainable urban living) with University of Manchester (Impact Report 2024: p115)
- Vital Connector for Health report (2026)
- Demographics of the 9+ million people living on the doorstep (Impact Report 2024: pp11-15)

Waterways being important features in urban places:

- Rate this Scene with Warwick University (Impact Report 2024: p66)
- Barriers to Use & Routes to Enjoyment Research with Cardiff University (Impact Report 2024: p52)

- Canal & River Trust engagement programmes (Impact Report 2024: p44)
- Vital Connector for Nature and People report (2025)

- Nature Connectedness with University of Derby (Impact Report 2024: p78)

How to use this guide

The Trust has developed *Designing for Canals* to be used in conjunction with evolving national design guidance. When developing guidance or codes for areas that include a waterway, there is no one-size-fits-all approach. This guide does not set out guidance for the design of canalside buildings; rather it is about the role canals can play in creating well-designed places and how those places can positively impact the canal network. The character of a canal or river navigation can change significantly depending on context: in a dense urban environment a waterway might provide an unusual amount of access to nature, tranquillity or heritage, or might be closely integrated with wider movement patterns and urban areas. In a rural context it might be the only visible man-made structure and a vital connection to nearby settlements or amenities, or an important component of an ecosystem. **A waterway will have its own particular character (or varying characters) relative to its context which should be taken into consideration.**

Waterways are places for **nature**, for **movement**, and for **people**. Achieving the appropriate balance between these needs is key to successful design for waterways. As a first step it is important to establish the current and desired balance between them - what the waterway provides today and what it should provide in the future, taking into account not only the waterway itself but also the towpath and adjacent land and buildings. The checklist that ends this guide has been created to help with this.

The Trust's planning team are available to work with design teams and consultants. Information on the Trust's pre-application advice service is available on the Trust website:

→ <https://canalrivertrust.org.uk/planning-and-design>

Right

Key stage-by-stage design processes and considerations when working in the context of waterways

1. Analysis

Design Considerations

- Establish if a waterway is in or adjacent to your area.
- Analyse the character and opportunity of the waterway and consider it relative to other places in your area.
- Consider and reference national design guidance and best practice.

Engagement Considerations

- How can waterway users, communities and the Trust input into the initial consultation exercise?
- What should the design approach in your area cover from a waterways perspective?



2. Vision

Design Considerations

- Establish a clear approach to the waterway corridor: Does the waterway corridor have a single coherent character throughout? Does it change relative to the different area types it passes through?

Engagement Considerations

- What is the character of the waterway and how should it develop?
- How does the vision impact on the wider area and does this mean other waterway communities should be engaged with?



3. Design

Design Considerations

- Establish a design approach for the waterway corridor and adjacent spaces.
- Based on the prompts on the following pages, what is the balance needed between nature, movement and people along it?

Engagement Considerations

- How can waterway users and communities input into the detailed development of the design?

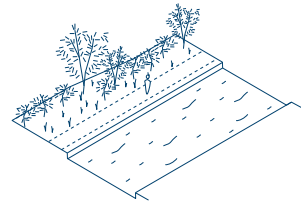
A Place for Nature



Canals provide habitats and corridors for wildlife and can play a significant role in climate adaptation and mitigation, flood resilience, biodiversity, nature recovery and the overall environmental quality of the places they pass through. They can also provide people with valuable experiences of nature, building knowledge and understanding, and this is perhaps especially important in urban areas.

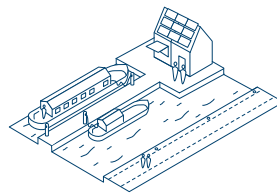
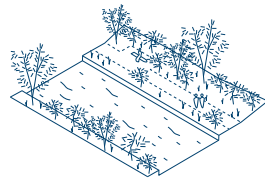
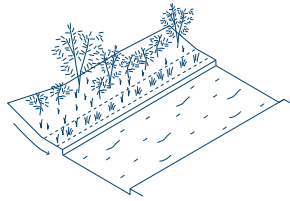
Ecology

- Has space been preserved and/or provided for wildlife, based upon local input (for example from local authority or Trust biodiversity officers) regarding habitats and species?
- Has the potential of the water and adjacent land spaces to provide habitats for wildlife been considered and designed for?
- Has a continuous green corridor been provided, such as at the waterway edge (on either side) or between the towpath and wider area? The length of the waterway corridor is crucial to its value as a space for ecology so green and wild spaces should be as continuous and connected as possible.
- Has the impact of development on habitats and wildlife populations been properly considered and balanced, particularly in relation to protected or designated sites such as Sites of Special Scientific Interest or Nature Reserves? Impacts can include shading, sunlight, noise and light pollution.
- Have the light and noise levels of the waterway corridor been carefully balanced relative to its context? Both wildlife and people benefit from the relative darkness and quietude of the waterway corridor, but this needs to be balanced against perceptions of access and safety.
- Will the development meet requirements to deliver a Biodiversity Net Gain (BNG) and favour on-site and/or local improvements, wherever possible? Have opportunities to deliver biodiversity enhancements for BNG on the canal corridor been explored? Have these been discussed with the Trust?
- Have opportunities on the canal corridor been identified to support the creation of the national Nature Recovery Network or Local Nature Recovery Strategy (LNRS) priorities?



Climate & flood resilience

- Has the potential of the waterway to form a key part of local and regional flood resilience been established and implemented? Consideration should be given to local surface water flooding - for example by including the waterway in sustainable urban drainage (SuDS) schemes, and to larger-scale and more regional strategies.
- Have future climate scenarios been taken into account, such that schemes are adapted to changing weather patterns and do not exacerbate or introduce new risks to the canal network?
- Have opportunities to use canals as part of heating and cooling strategies been considered? In England and Wales up to 350,000 homes could benefit from the use of canals to heat and cool buildings, saving 1+ million tonnes of CO2 per year. Water-source heat pump systems are more efficient than air-source equivalents.
- Has the potential of the waterway to help reduce the 'urban heat island' effect been considered in the design of adjacent buildings, spaces and towpath access? Waterways can reduce the effect in their immediate environment up to 1.6°C.
- Have opportunities to provide eco-moorings been explored, which provide electric charging points as an alternative to generators and other locally-polluting power sources?



The Trust is always looking for ways to harness the power of our waterways and many businesses can benefit from the range of utilities services our extensive network of waterways can provide.

→ For more information on water sales and utilities contact utilitiesenquiry@canalrivertrust.org.uk

Experiencing nature

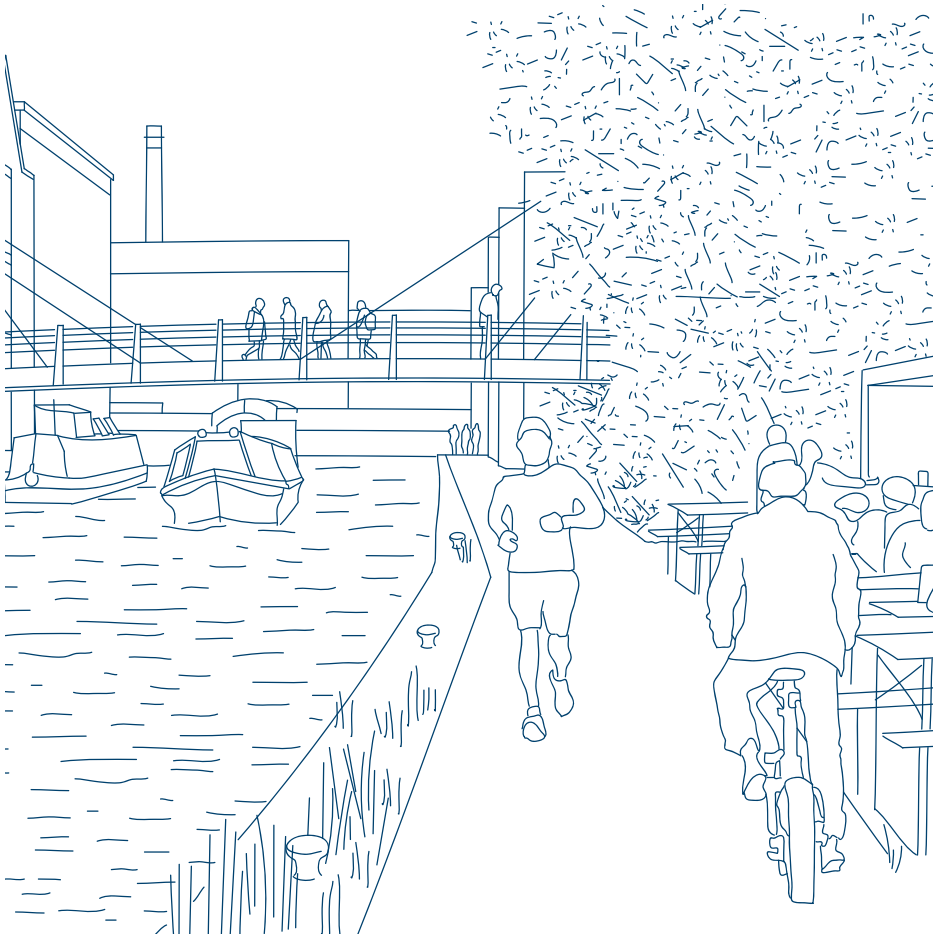
- Have opportunities been taken to provide or enhance human access to, and understanding of, habitats, for example through improved and inclusive access, and interpretation?
- Has the canal's potential to ensure that everyone lives within a 15-minute walk of a green or blue space been utilised?
- Has the right balance been achieved between space for nature and human access to it?
- Does the space provide places that support environmental education, the Trust's Explorers programme and forest school programmes? → <https://canalrivertrust.org.uk/explorers>
- Have opportunities been taken to provide space for foraging, for example through edible boundaries/hedgerows in place of static fencing, or through specific tree planting schemes?

Right

Orchard trees planted along the Birmingham Old Main Line at Wolverhampton



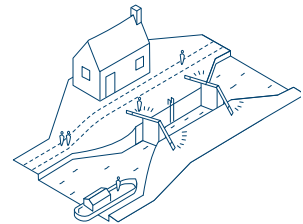
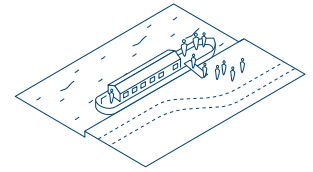
A Place for Movement



Waterways need to provide an appropriate and high quality movement corridor for leisure, residential and commercial boats and water-borne craft. The Trust is committed to towpaths being pedestrian priority shared spaces. More popular than ever, our towpaths aren't a standalone network, they play a key part in public life, and as part of wider active travel networks they also form the nation's greatest linear park. Towpaths should be accessible to as many people as possible.

On the water

- Is the waterway's capacity for water-borne travel maintained and supported?
- If appropriate, are there adequate means of accessing the waterway from the waterside for people and for goods and services?
- Have opportunities to provide facilities and amenities for boating been explored, including new moorings, having understood the nearest equivalent facilities and demand and liaised with the local Trust to better understand local need?
- Many of the waterway's most attractive heritage features, designed to facilitate movement, remain operational and critical for navigation. Ensure the heritage and operational value of these assets has been properly considered when enhancing the waterway for pedestrian movement.



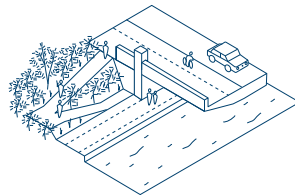
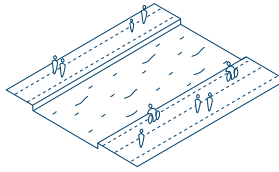
On the towpath

- Have the needs of users and potential users of the towpath as a space of movement been understood, and designed for? Consider pedestrian priority and the diverse community of towpath users including boaters, anglers, and cyclists, etc.
- Does the towpath provide appropriate room for the types of movement that take place here without negatively impacting other uses? Busy stretches of towpath, especially in urban areas, can experience tensions between all users.

→ **#StayKindSlowDown**

→ [Towpaths for Everyone \(2024\)](#)

- Is the towpath carefully integrated with wider local active travel networks? In some locations, it will be important to improve connectivity between the towpath and wider routes. In others, where footfall on the towpath is high, a more complex strategy for managing access may be required, for example along busy stretches it may be desirable to complement the towpath with other dedicated routes in order to create better space for movement.
- Is a coherent approach to wayfinding achieved, extending beyond the waterway corridor and into the wider context? Are access points clearly but appropriately identified? Connections to context should help to ensure that the waterway corridor is a natural and accessible part of neighbourhoods.
- Does the wayfinding approach give people a sense of facilities, settlements and places across the wider region? Many people use waterways to travel long distances, by boat, on foot or by bike or paddle.
- Does the form of new bridges make an appropriate, elegant and positive contribution to the canal corridor, considering local scale and vernacular? Bridges form key landmarks along canals, and are typically experienced at low speed, therefore it is important to ensure that the details of portals, wingwalls, abutments, bearings, and soffits are designed and detailed to be highly scrutinised.
- Where bridges are present or are being created, have they been made inclusive for all users wherever possible, and their potential to serve as positive elements in the landscape considered?



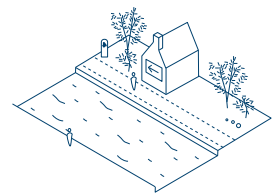
Above Right

Along busy stretches it may be desirable to complement the towpath with other dedicated routes in order to create better space for movement. (Kings Cross, London, credit John Sturrock / King's Cross Central Limited Partnership)

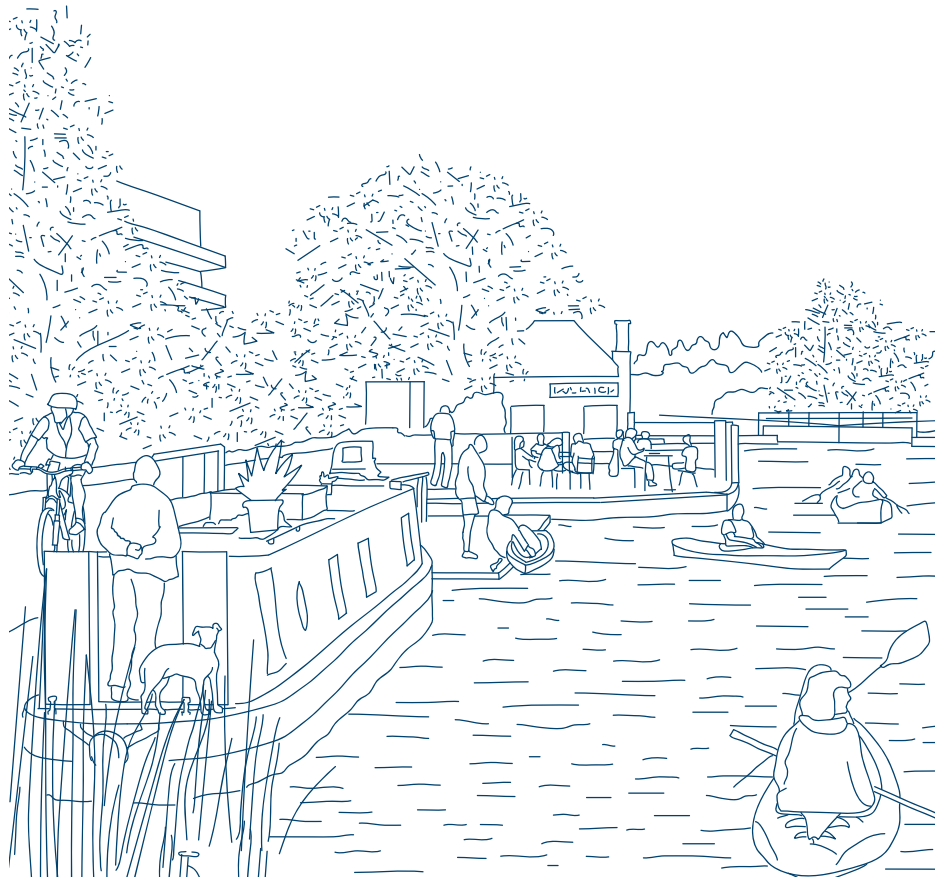


- If the towpath is likely to be used as part of peoples' exercise and training regimes, have opportunities been taken to provide for this? Examples might include distance markers and signage.
- Have good quality places of rest been provided? For many people, places to sit and rest are a vital function of movement.
- In relation to wider context and character, have location, materials and design been carefully selected in response to local towpath heritage, character and anticipated use?

→ [Towpaths for Everyone \(2024\)](#)



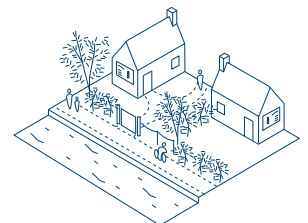
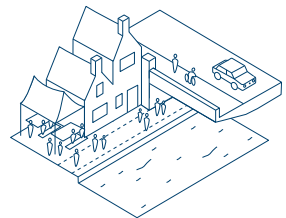
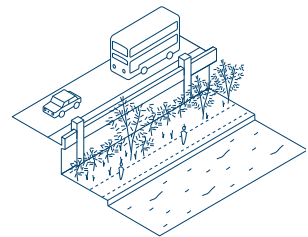
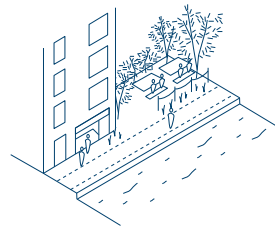
A Place for People



Waterways are places where people spend leisure time and boost their wellbeing, and they are also places where people are increasingly choosing to live - either in housing built alongside the waterway corridor or afloat, in boats or floating homes. In certain places along the waterway, such as where it intersects with a town centre and places of economic activity where businesses choose to locate, the waterway can serve as a hub of activity and sociability.

Public life

- Have land and water been integrated such that uses adjacent to the waterway corridor take proper advantage of the presence of the waterway, for example by providing access via the waterway, active frontages, sun terraces, passive surveillance or wayfinding? Waterway activity can be promoted and sustained by appropriate waterside development.
- Have opportunities been taken for new canalside public space to increased shared and equitable access to the canal?
- Has daylight and shading been properly considered such that the creation of shady waterway corridors and hostile micro climates is avoided wherever possible, ensuring that centres of activity receive good daylight and that appropriate amounts of sunlight and shading have been provided along the corridor? This should be considered in relation the potential of waterways to reduce the urban heat island effect.
- In busy locations, has the relationship between the waterway corridor and the wider place been carefully designed so that the waterway remains a distinct place, whilst sharing its benefits to the wider neighbourhood and communities? Whilst it is important to build good connections with the wider area, waterways are often valuable because they provide a different kind of 'shared use' place. A change in level, material or other quality can help to protect or enhance this feeling.
- Have active uses - e.g. dining terraces or play facilities - been located so that they are accessible and do not dominate the waterway corridor? In general, bridges and other points of intersection with wider neighbourhoods, sometimes including locks, are particularly suitable for active uses.





Left

A pub is an excellent example of a sociable use located at key junctions or intersections. (The Greyhound, Hawkesbury Junction on the Coventry Canal)

Below Right

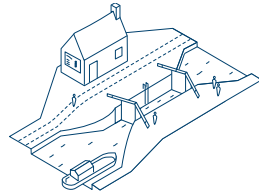
Concentrating activity at points of connection such as bridges (Stratford, Bow Backs)

- Has the boundary between the waterway corridor and adjacent buildings and uses been properly considered? Opportunities should be sought to provide good quality boundaries, opportunities for planting and new connections wherever possible.
- Have the potential structural impacts of new development adjacent to the waterway been considered, and due regard paid to mitigating any negative impacts?

→ <https://canalrivertrust.org.uk/planning-and-design>

Health & wellbeing

- Have opportunities to promote healthy lifestyles and wellbeing been considered, including spaces for pause and reflection, and new connections to improve accessibility?
- Have spaces valued for their tranquillity and calm been preserved and maintained?
- Have opportunities for providing facilities and access for on-water leisure, recreation and sport been explored?



Heritage & identity

- Has the heritage significance of the waterway corridor, and any listed buildings, scheduled monuments, conservation areas or other heritage assets along it, been properly considered?
- Has the relevance of the various scales of canal heritage been considered? Heritage can vary from the nationally iconic to the everyday and include patination.
- Have opportunities been taken to protect, enhance and increase access to the heritage assets of the waterway corridor and their settings, and to interpret them?
- How has the waterway's heritage and local distinctiveness inspired the design, including choice of materials, details, furniture and other design elements?
- Has the local distinctiveness of the waterway been properly assessed and understood when developing designs? Local character on a canal corridor may relate closely to the places and buildings adjacent, but might also relate to the particularities of that waterway's individual origin and history.
- Does the siting of new buildings preserve and frame key views along, out of and into the waterway corridor, or open up new ones where appropriate?
- Does the scale, setting, space and massing of new buildings respond positively to the character of the waterway corridor, and maintain its sense of openness or enclosure where appropriate?

Right

Moorings adding vitality to the waterway corridor (Regents Canal, Islington, London)





On the water

- Have opportunities for creating, enhancing or supporting moorings been considered? The waterways provide various types of moorings, from short-stay or visitor moorings to provision for permanent residential use and for businesses. As well as meeting local needs, the well-planned provision of moorings can help to support the character of the waterway, provide passive surveillance, reduce conflicts between waterway users and support decarbonisation. They often feature vital amenities and facilities for boaters, for example recycling & waste points, showers, and charging stations, and their design should be carefully considered.

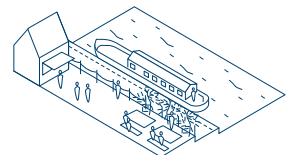
Above

Leisure and sports on the waterway

- Has the possibility of providing space and moorings for trade boats been considered? Active, living waterway communities create great waterway places, often featuring trade boats selling beverages or books, among many other things, and are increasingly a feature of busy stretches of waterway. We want everyone to have an enjoyable experience along our canals and rivers, and water-borne businesses can make a significant contribution to achieving this aim.
→ <https://canalrivertrust.org.uk/business-boating>
- Has the opportunity to provide space for other popular uses of the waterway corridor, for example angling and paddling, been considered?

Health & safety

- In places where multiple uses overlap or are likely to, does the design of the space work to minimise the risk of collisions and conflicts?
- Have personal safety, and perceptions of safety, been properly accounted for? It is important to avoid making places and connections that could feel dangerous or could encourage anti-social behaviour, unauthorised vehicular access or crime.
- Have active frontages and passive surveillance been considered in terms of how they can improve safety and perceptions of safety?
- Have issues of water safety, particularly for children, young people, and vulnerable adults, been properly considered, including allocation of waterside land uses; where necessary have appropriate mitigations and safety equipment been proposed.
- In areas of high activity or where the waterway intersects with the wider public realm network, consider appropriate provision of good quality rubbish and recycling points, sited carefully to be visible but unobtrusive?



Designing for Canals - a Checklist

Aligning this guide with the seven features of well-designed places (MHCLG)

A Place for Nature

Climate

- Contributing strategically to local and regional flood resilience?
- Surface water flooding considered/mitigated?
- Use of renewable energy sources and Water Source Heat Pumps considered?
- Potential to reduce Urban Heat Island Effect considered?
- Provision of eco-moorings explored?

Nature

- New habitats for wildlife created, based on local expert knowledge and on both water and land?
- A continuous green corridor created or maintained?
- Impact of development on habitats and wildlife properly considered?
- Light and noise levels carefully balanced?
- Biodiversity Net Gain opportunities identified?
- Nature Recovery Network supported?
- Human access to, and enjoyment of, habitats improved?
- A balance achieved between nature and human access to nature?
- Space provided for environmental education programmes?
- Spaces for foraging provided?

A Place for Movement

Movement

- Capacity for water-borne travel maintained and supported?
- Appropriate access to the waterway provided?
- Provision of boat facilities explored?
- Value of heritage features considered when improving movement?
- Towpath carefully integrated into wider active travel network?
- Movement of users and potential users understood and designed for without negatively impacting other uses?

- Inclusive design principles incorporated, including for bridges?
- Coherent approach to wayfinding, including at a regional scale?

Liveability

- Opportunities taken to support people exercising and training?
- Good quality places of rest provided?

A Place for People

Liveability & Public Space

- Do public uses adjacent to the waterway take advantage of it being there?
- Daylight and shading carefully considered?
- The waterway maintained or enhanced as a distinct place?
- Active uses located to be accessible and appropriate?
- Boundary between waterway and wider area carefully considered?
- Structural impacts of development been considered and mitigated?
- Healthy lifestyles and wellbeing promoted?
- Spaces for tranquillity and calm preserved and maintained?
- Design minimises risk of collisions and conflicts?
- Personal safety and perceptions of safety accounted for?
- Active frontages and passive surveillance considered?
- Good quality rubbish and recycling amenity provided?
- Opportunities for creating, enhancing or supporting moorings considered?
- Space for trade boats considered?
- Opportunities to provide space for other popular uses considered?

Identity & Built Form

- Heritage value of the waterway and its heritage assets properly considered?
- Heritage assets protected, enhanced, and access increased?
- Materials, details, furniture and design reflect waterway heritage?
- Local distinctiveness assessed, understood, and responded to?
- Key views preserved? New views created?
- Scale, setting and massing of new buildings respond to the waterway?
- Materials carefully selected to respond to character and use?

Find Out More

Canal & River Trust

Impact Report (2024 & 2026)

Vital Connector for Health (2026)

Vital Connector for Nature and People (2025)

Supporting Nature Recovery on Canals and Inland Waterways (2024)

Towpaths for Everyone (2024)

Nine ways canals can fight climate change (2021)

Ministry of Housing, Communities and Local Government

National Planning Policy Framework (2021)

National Design Guide (2021)

National Model Design Code (2021)

Living with beauty; promoting health, well-being and sustainable growth (2020)

Kenneth Dodd: Managing Visitor Safety in the Historic Built Environment : Principles & Practice (2015)

This document has been made possible thanks to the support of Postcode Lottery players.





canalrivertrust.org.uk
0303 040 4040

The Canal & River Trust is a charitable company limited by guarantee registered in England & Wales with company number 07807276 and charity number 1146792.

All information correct at the time of printing.

Produced by DK-CM
with the Canal & River Trust

July 2026

