Canal & River Trust
Making life better by water

Code of Practice for Works Affecting the Canal & River Trust

Part 1
General Information

April 2023

Contents

Foreword to the 2023 Edition of the Code of Practice for Works Affecting the Canal & River Trust

Thank you for agreeing to work with the Canal & River Trust on your project. The Trust is the guardian of 2,000 miles of historic waterways across England and Wales. We are among the largest charities in the UK, maintaining the nation's third largest collection of listed structures, as well as museums, archives, navigations and hundreds of important wildlife sites. Our vision is to create living waterways that transform places and enrich lives. Our canals and rivers are a national treasure and a local haven for people and wildlife. It is our job to care for this wonderful legacy – holding it in Trust for the nation in perpetuity and helping to improve the health and wellbeing of those who come into contact with the waterways.

Within Infrastructure Services, we have a professional team of works engineers, inspectors, technical administrators and specialists in a variety of disciplines ready to help you to deliver your project goals, while at the same time protecting the very special nature of our historic inland waterway network. The Trust's position as a Statutory Consultee with regard to planning applications means we are usually formally consulted on projects affecting our waterways, but please remember that our consent for you to undertake works affecting our estate is in addition to any consents granted by Local Planning Authorities, DEFRA etc. Our team members will be happy to explain this in more detail if necessary.

Our waterways are a vibrant, living network; they bring life to communities across England & Wales. Income earned by our teams is reinvested directly into the waterways so we can secure the best future possible.

These are challenging times for our ageing waterways. Faced with soaring costs and the highest levels of inflation in over 40 years, we must address the budget shortfall to safeguard our waterways. As has been the case with many organisations, we need to generate additional income to help offset our cost pressures to help protect the future of the Trust and the 250 year old historic network that we care for. We have worked hard to avoid introducing any in year increases in to our 2022/23 charges contained in this Code of Practice, but have had no option but to apply an inflation increase to our rates of c17% from 1st April 2023 to reflect the impact in financial years 2021 and 2022, as well as adjusting some other rates to reflect the benefit they provide to our customers. Any future rate adjustments will reflect inflationary pressures, and this will ensure that we continue to offer the best service for our customers.

You may not be aware that the Trust may be able to help you achieve your Corporate Social Responsibility and Biodiversity Net Gain objectives by offering a range of options to align with your requirements. If this is of interest to you, please contact your allocated Works Engineer.

Peter Walker

Head of Technical Support

1. INTRODUCTION

The Code of Practice for Works Affecting the Canal & River Trust (The Code) gives guidance and details procedures for all those (The Third Party) whose work may or will affect the property of the Canal & River Trust (the Trust)

The purpose of the Code is to facilitate the undertaking of works by the Third Party while at the same time safeguard the interests of the Trust, and it forms the basis of the relationship between the Trust and the Third Party.

All works that 'affect' the Trust must comply with the Code. This includes but is not limited to construction works on the property of the Trust, works undertaken on neighbouring property, works requiring access across the property of the Trust and works that over sail the property of the Trust.

This document comprises three parts:

Part 1 – General information – this contains general information on the processes to be followed for all projects

Part 2 - Detailed information – this provides specific information on many of the typical types of projects that are undertaken on our waterways. However, due to the varied needs and desires of our customers, not all works and situations can be envisaged. Any works that fall outside the identified types of activities in the Code of Practice will be subject to review by the Works Engineer who will use their best experience, knowledge and judgement to assess the works and any mitigation or remedial measures required to ensure the safety of the works and our customers & infrastructure.

Part 3 – Forms – this contains all the forms that need to be completed, depending on the nature of your project

Approval to carry out works is gained through an application process which is illustrated on the next page. The process is managed by on behalf of the Trust by Works Engineers.

The Third Party determines the speed of progression of the process by ensuring that the required forms and payments are received by the Trust. The Works Engineer will aim to agree methods of working in a timely manner. The Third Party must allow sufficient time for the process to be completed. Without completion of the process, the works cannot proceed.

The Third Party should provide a single point of contact for the Works Engineer to avoid confusion. The Third Party should disseminate the information from this process to their staff - project managers, site managers, accounts managers, designers, CDM duty holders, contractors, H&S officers and others as appropriate.

ACCESS FOR ALL

The Trust has a corporate priority to encourage the use of its network of canals and rivers by people with disabilities. The Trust also recognises its responsibilities under the Equality Act 2010 to take reasonable steps to improve access to its waterways and associated services (including works undertaken by third parties). Where works affect the Trust, the Third Party is required where possible to provide suitable access for all people. The Third Party is required to demonstrate to the Trust that the access needs of all people will be met during and after construction, where the project allows.

COMMUNITY CONSULTATION

Consultation with various community groups is an important planning issue for any new scheme. With works affecting the Trust's network and infrastructure the Third Party may be required to consult with various groups to gain approval for the proposed scheme and to assure user groups that the development will not adversely affect the waterway environment and associated uses. Community consultation will also be integral to delivering a project that considers the needs of all people, e.g., consult with people with disabilities to ensure that local needs are taken into account.

VANDALISM

A significant social issue is potential damage to works, equipment and the environment due to vandalism. In particular, damage to plant and equipment or fuel storage tanks can be costly in both financial and environmental terms. The Third Party is responsible for all fuel, oil and chemicals that are present on the site and for their appropriate containment. The Third Party should be aware of its legal obligations in regard to a pollution incident. Measures should be implemented to reduce the risk of vandalism on-site including risks to the Trust's property and the waterway environment. Where such an incident occurs, the Trust may seek to reclaim any costs incurred in responding.

ENVIRONMENT

The Trust has a statutory duty to not only protect, but also to further the conservation of the natural environment. As such, all work within its boundaries is subject to agreement with the Works Engineer who may consult internal environmental experts. Third parties must also apply to the Trust for abstraction and/or discharge of water, effluent etc. in every instance as we are not a land drainage authority. This Code of Practice has been written to provide advice for applicants when designing their projects. This can be found in section 7 of this document.

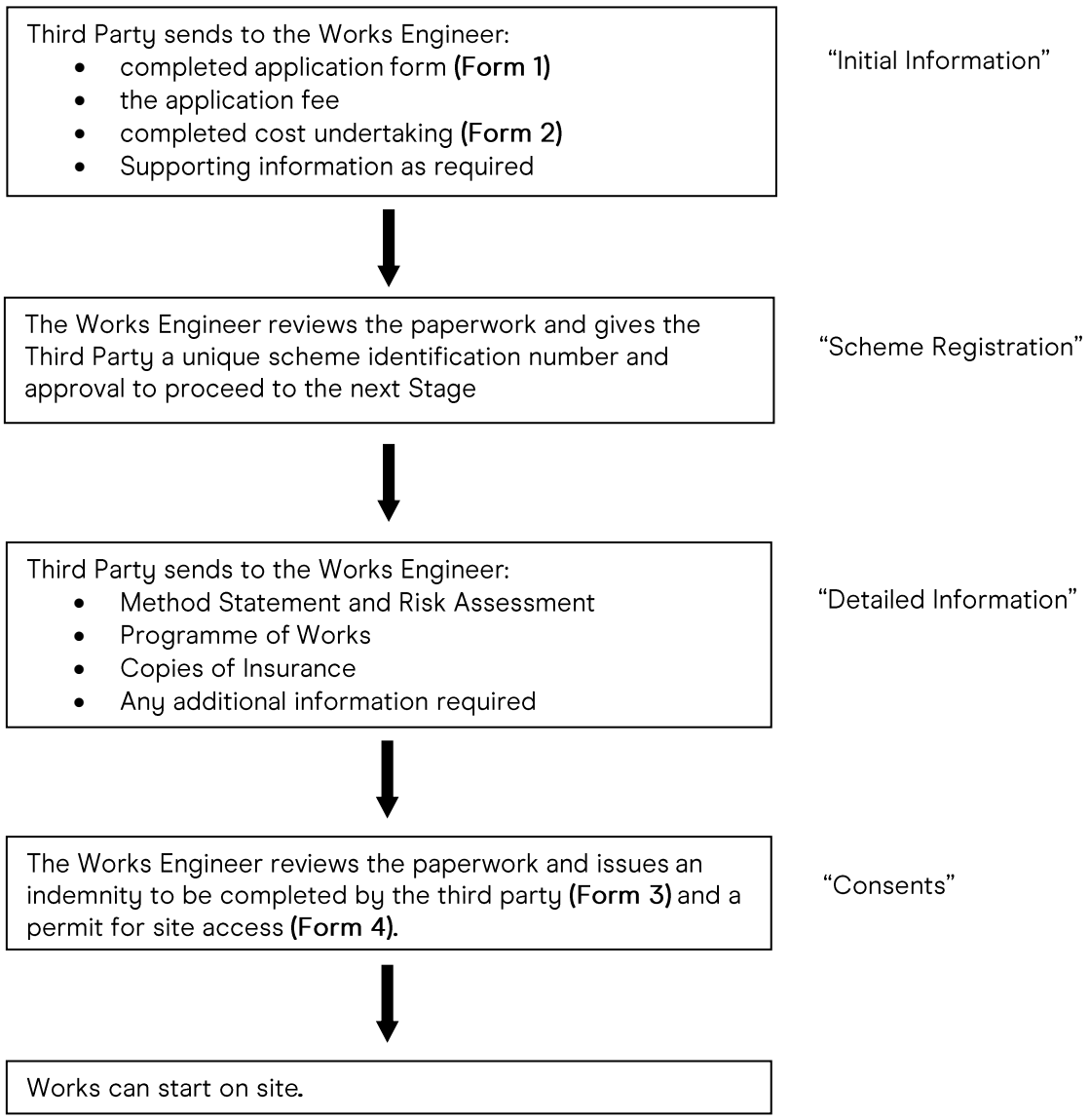
HERITAGE STRUCTURES

Many elements of the waterway fabric are over 200 years old. The heritage of the waterway is unique and even where no statutory protection is in force the Trust seeks to protect and enhance all structures, surfaces and features with heritage/historic value. Section 8 of this document provides detailed information.

DEFRA APPROVAL

It should be borne in mind that schemes affecting the Trust's infrastructure property may require DEFRA (Department for Environment Food & Rural Affairs) approval, in addition to any approval by the Trust. The Trust cannot apply to DEFRA until final drawings, estates documents and any Charities Act requirements have been met. You are advised to allow in your programme at least 16 weeks for DEFRA approval to be obtained.

2. APPLICATION PROCESS IN BRIEF



3. THE APPLICATION PROCESS

INITIAL INFORMATION

Having familiarised themselves with the requirements of the parts of this document relevant to the work, the Third Party should complete and submit to the Trust a completed Application Form, the Application Fee and a Cost Undertaking. (the 'Initial information')

As a guideline, notification of the proposed works should be made **3 months** in advance of commencement of the works, or by **1st March** if a closure of the navigation is required within the upcoming winter maintenance period.

As the Trust is subject to the Freedom of Information Act 2000 and the Environmental Information Regulations 2004, we must provide any information requested of us that we hold, unless one of the exemptions applies. This includes information regarding proposed works by a Third Party. There may be some information (such as names and addresses of individuals) that will be automatically exempt under the General Data Protection Regulation (GDPR) and which we will not disclose. There may be other reasons, such as confidentiality or commercial sensitivity, why a Third Party may not wish for the Trust to disclose this information to the public. Whilst we may still have to disclose this information under the Act or the Regulations, we will take your reasons into account in assessing our duties to disclose or withhold the requested information.

SCHEME REGISTRATION

On receipt of the Initial Information, the Works Engineer will undertake initial project administration and will provide a receipt for the payment together with a unique scheme reference number, which should be used on all future correspondence. The Works Engineer will then undertake a preliminary appraisal to assess the impact of the works on the waterway.

DETAILED INFORMATION

If approval is given by the Works Engineer to proceed to the next stage, the Works Engineer will provide specific site information that affects the works to assist the Third Party in preparing Health and Safety Information. General safety information can be found in section 10 of this document.

The Works Engineer will require from the Third Party a method statement and risk assessment for the works. In addition, depending on the nature of the works, the Works Engineer may require:

- Party Wall notifications
- Condition surveys
- COSHH assessment
- Drawings / Plans / Maps
- Details of proposed diversion route for towpath users
- Copies of consents and approvals already obtained from Regulatory Bodies (e.g., Planning Consent / EA consent)
- Details on the assets of utility companies affected by the works.
- Works Programme
- Copies of Insurance
- EIA or other environmental assessment

The Works Engineer will then review and comment on the proposals. This may require taking advice from other departments within the Trust.

If the works include a request by the Third Party to use the land of the Trust for the works, either in a temporary or permanent fashion, the Works Engineer will arrange for the required licences to be drawn up.

The Third Party should then update documentation taking into account the comments by the Works Engineer; then resubmitting any as required.

Once the Works Engineer is in receipt of the correct documentation, they will return to the Third Party a signed Indemnity Form and a Permit for Site Access Form.

Receipt, countersigning and returning the signed Indemnity Form constitutes approval to gain access to or across the property of the Trust or adjacent land to undertake the works in accordance with the agreed methods of working. A copy of the Permit must be maintained on site to demonstrate to other agents of the Trust that permission is in place. If a valid Permit cannot be produced on demand the works may be stopped. A Trust representative may without notice present themselves at the works and should be granted access to inspect the works.

4. LICENCES

In addition to a permit / indemnity form, a licence to occupy property owned by the Trust may be required and if so, should be in place before works can begin. A licence is entered into between the Trust and the Third Party and this forms a commercial arrangement.

Examples of when licences are needed include:

- The installing, maintaining and removing of structures on the Trust's property
- Undertaking regular works on the Trust's property for maintenance, vegetation clearance, cleaning and other similar
- Temporary use of the Trust's property, including scaffolding, hoarding, towpath closure, crane oversail, storage area and site compounds
- Use of floating plant to extend a site
- Towpath closures
- Installation of utilities

All licence fees are payable ahead of receipt of the Licence. The Licence fee comprises two parts: the fee to raise the licence and the weekly occupation fee. A further fee is levied for extending the licence and is payable before the date of expiry of the original licence.

BOAT LICENCES

All craft operating on our waterways require a licence. For works typically managed through the Code of Practice these craft are normally classified as either Workboats or Safety Boats.

Workboat Licence

These are for workboats with no overnight accommodation that are used exclusively for 'qualifying waterway maintenance work'. This is defined as "Work on waterway infrastructure, structures or development sites adjacent to the waterway under contract to the Canal & River Trust, another statutory undertaker or a private contractor, providing that the work is undertaken from or involves direct access from the craft operating on the waterway."

The boat will require a home mooring unless it is removed from the waterway when not in use. We understand that some works will take longer than 14 days (the maximum single-location mooring period), but there is no provision for leaving these craft on the waterway between jobs.

This licence does cover the removal of 'Section 8' boats from the waterway, but not private towing contracts or cargo carrying; these activities require a Roving Trading Licence. The Policy for Workboats and Cargo Carrying gives further details.

There are specific requirements for a boat to be licenced to operate on our waterways. These include Insurance, Boat Safety Scheme Certificate (or exemption for unpowered craft), Boatmaster's Licence for the Skipper, and compliance with our Fees and Terms and Conditions for boat licences.

Please see https://canalrivertrust.org.uk/business-and-trade/boating-business/starting-or-expanding-a-boating-business/maintenance-workboat for full details and information on how to apply for an appropriate licence.

Safety Boat Licences

These licences are exclusively for boats owned and operated by the statutory emergency services or voluntary organisations nominated by them to carry out emergency rescue procedures.

Safety boats associated with waterway maintenance or construction works should apply for a Maintenance Workboat Licence.

5. NAVIGATIONS AND TOWPATHS

NAVIGATION CLOSURES

A major element of the work of the Trust concerns Navigations and Towpaths. The Trust aims to keep all navigations and towpaths open wherever possible. With this in mind, the Third Party is strongly advised to design their works to avoid such closure as permission will only be granted in exceptional circumstances.

STOPPAGES

The term "Stoppage" is used to define the period of time that a waterway is closed to allow works to be undertaken.

The Canal & River Trust (the Trust) customers are very tolerant and understanding with regard to stoppage works. Often these works create a huge disruption to their plans as practical diversion routes are not always available. For Boaters these diversion routes can often take weeks to navigate. It is therefore in all our interests to ensure that the duration of stoppages is reduced as much as possible.

It is vital that the waterway network is open and accessible to all users and there is not a negative impact on the boating tourism industry.

Low Season (Winter) Stoppages

The Winter period is generally when the Trust undertakes works that require the canals to be restricted or closed, and it is during this period that we will consider requests from outside organisations for closures and/or restrictions.

High Season (Summer) Stoppages

The Summer season is when the canals are at their busiest. Requests for stoppages during this period will only be granted in exceptional circumstances. Any works will therefore need to be carefully planned to avoid the summer season.

Summer stoppage applications will be considered on a case-by-case basis. Permission and fees may vary depending on location.

Please note that for both Winter and Summer stoppages there may be additional costs for the actual implementation of a stoppage or restriction on site depending on the technical details. Please also note that compensation for freight carriers and other businesses may also be required – the Works Engineer will be able to offer guidance on this.

Night Time Stoppages

Night time closures 23.00 to 06.00 (where the canal does not need to be drained) are a preferred option. These closures may be available throughout the year as they are less disruptive to waterway users.

Stoppage Overruns – Working together to prevent these

Should your works require a stoppage the Trust will require your co-operation in working together with its own Works Engineer to ensure that the works are completed without overrunning on the booked stoppage. Typically, this will include:

- Commenting on your proposed programme of works with respect to the closure of the canal
- Requiring you to confirm that the programmed stoppage period has been validated via some form of Early Contractor Involvement
- Requesting weekly progress reports including confirmation that the stoppage period will not be exceeded
- Weekly site visits by our Works Engineer and / or Works Inspector to check on progress of the works

RESTRICTIONS

Where the works reduce the width of the canal but still allow for the passage of boats and / or create a delay for boaters not exceeding 30 minutes (once in any 3-hour period) – this is classed as a restriction.

To avoid closures, the Third Party is advised to consider utilising restrictions, such as:

- A restriction on a towpath could involve closing the towpath for a few minutes at a time using a banks man.
- A restriction on a navigation could involve closing the navigation for up to 30 minutes at a time within any 3-hour period (for small scale works this may be negotiable). Requires 1 months' prior notification.
- Width restrictions to the canal are allowed as long as one boat can pass.
- A night time closure 2300 to 0600 hours (applied for outside of the normal notification period for winter works), requires 1 months' prior notification.
- Night time closures may be considered in the summer period, but like all closures this cannot be guaranteed. A premium rate will be charged for such closures if they are approved.
- All night time closures must enable the waterway to be open by 06.00 hours. Failure to do this will result in a minimum £10,000 per day charge.

Our Works Engineers can advise further.

If a restriction is not practical, full closures (or 'stoppages') may be requested by the Third Party but these requests are often rejected as they impact upon one of our primary roles i.e., to make the waterways available to all. Stoppages are subject to consultation by users and this consultation can take several months to complete.

Stoppages are more likely to be granted if less than 4 weeks. The closure periods as shown in the table below. Applications must be received by 1st March for a closure of the navigation within the upcoming winter maintenance period, however, in line with the Trust's objectives of keeping the network operational some canals are considered for closure pre-Christmas whilst others may not be until after Christmas.

All relevant stoppage documentation must be submitted at least 3 months prior to the commencement of the stoppage. A penalty fee may apply for late submission or there is a risk of the stoppage not being allowed to take place. The stoppage fee will not be refunded if the stoppage is cancelled due to late submission of documentation.

Stoppages may only be available if they coincide with the Trust's pre-planned proposed winter maintenance dates (see table below for these dates).

Freight and commercial waterways and river closures should be discussed with the Works Engineer at an early stage. These waterways may fall outside the general protocol and will have to be considered on an individual basis. Extra costs may be applied especially in tidal waterways.

A late booking fee will apply for stoppages requested without the required notification period.

Requests for stoppages outside the winter stoppage period are seldom granted. There is also a window over Christmas where the navigation must remain open.

If granted, a stoppage begins at 08:30 on the first day and ends at 17:00 on the last day unless otherwise specified.

The fees for stoppages are listed in section 11.

The Third Party may be required to install signs on site to advertise the stoppage.

All stoppages must be of minimised duration. Where feasible the waterway should be re-opened to navigation at weekends during the stoppage.

Transfer of boats around the works by road may be required at the Third Party's expense.

Some boating businesses have agreements with the Trust entitling them to compensation for loss of income due to disruption and these charges will be passed on to the third party.

PROPOSED WINTER MAINTENANCE DATES

	Pre-Christmas		**Post-Christmas**	
	From	**To**	**From**	**To**
2022/23	07/11/2022	16/12/2022	03/01/2023	17/03/2023
2023/24	06/11/2023	15/12/2023	02/01/2024	15/03/2024
2024/25	04/11/2024	13/12/2024	02/01/2025	14/03/2025
2025/26	03/11/2025	12/12/2025	02/01/2026	13/03/2026
2026/27	02/11/2026	11/12/2026	04/01/2027	19/03/2027
2027/28	08/11/2027	17/12/2027	04/01/2028	17/03/2028
2028/29	06/11/2028	22/12/2028	03/01/2029	16/03/2029
2029/30	05/11/2029	21/12/2029	03/01/2030	15/03/2030
2030/31	04/11/2030	20/12/2030	03/01/2031	14/03/2031
2031/32	03/11/2031	19/12/2031	05/01/2032	12/03/2032
2032/33	01/11/2032	17/12/2032	05/01/2033	18/03/2033
2033/34	07/11/2033	23/12/2033	04/01/2034	17/03/2034
2034/35	06/11/2034	22/12/2034	03/01/2035	16/03/2035
2035/36	05/11/2035	21/12/2035	03/01/2036	14/03/2036
2036/37	03/11/2036	19/12/2036	05/01/2037	13/03/2037
2037/38	02/11/2037	18/12/2037	05/01/2038	12/03/2038

TOWPATH CLOSURES

The Trust require 4 weeks notice for a towpath closure; in addition to any statutory obligations relating to public rights of way (which remain the responsibility of the Third Party). Notices of a suitable size and type in general accordance with the Traffic Signs Manual Chapter 8 are required to be displayed for towpath closures.

Two weeks before the closure, the Third Party should display a notice at both ends of the closure, to advise users with an "ADVANCE NOTICE OF TEMPORARY TOWPATH CLOSURE" notice.

On the first day of the closure, each of these should be replaced with a "TEMPORARY TOWPATH CLOSURE" notice displayed with a plan of the diversion route.

On completion of the works all notices and diversion route maps should be removed.

Where a towpath is a Public Right of Way (PRoW), the Third party is responsible for obtaining consent for closure from the Local Authority.

The towpath should be closed over its entire width in a manner that prevents people moving past or climbing over the barrier. The barrier should be self-supporting and as required lit at night to make it discernible to towpath users that there is a barrier across the towpath.

The Trust will not permit towpath closures to overrun beyond the agreed period. Should your project overrun beyond the agreed period the Trust will impose a number of sanctions in order to ensure the towpath is reopened as soon as possible. In signing the Code of Practice, you are agreeing to pay the reasonable financial penalty imposed together with reasonable compensation to affected Trust customers and waterway business.

The sanctions include (but are not limited to):

- Daily Penalty fees to for each day that the closure overruns (these fees will be advised by your Works Engineer before your works commence on site)
- Reasonable compensation payment to identified Trust customers and waterway businesses who have suffered loss as a result of the additional closure
- The Trust requires the site to be returned free from any plant, equipment, debris used in the course of the works to which the closure applies
- Recovery of costs (including legal fees and interest) incurred by the Trust in clearance of machinery and/or debris left on the land following completion of the works

Key Facts

- **Apply for the stoppage before 1 March for a closure in the following winter stoppage period.**
- **Cost Undertaking and Purchase Order for payment is required on application and will be invoiced in April.**
- **Some canals are programmed for a stoppage pre-Christmas, others post-Christmas.**
- **Stoppages form part of the Trusts annual public consultation and are normally confirmed by the end of August.**

LOADING ON TOWPATHS

Wherever possible the Third Party should design the works to avoid plant and equipment on towpaths. In the event that plant or equipment is required to be on the towpath, the edge of plant tracks must be located outside of the 45° load line projected from the bottom of the canal wall. The plan distance between the tracks and canal edge is an exclusion zone which much be physically marked on the towpath. In any case permission for it being on the towpath must be given by the Works Engineer. (See Part 2, section 11 for more details).

In all cases, the suitability of the towpath for load bearing must be agreed with the Works Engineer in advance. It is worth noting that nearly 50% of our towpaths are classed as unsuitable for vehicles.

WORKS ADJACENT TO THE WATERWAY

In the case of works adjacent to the Trust's property, the principles are that no support is offered and no loads are to be imposed on the property. The Party Wall …etc Act 1996 is usually applicable and you may wish to apply in accordance with that Act.

The Trust enjoys a right of support under Common Law. It is important that support is not removed by excavation, dewatering undermining etc. In areas of mining subsidence canals can be of great depth due to bank raising - 10m is not unknown. Factors of safety are often not great and ill-considered actions can be disastrous.

A less obvious consequence of excavating near to canals is that of increasing hydraulic gradients. Not all canals are lined and so seepage rates can be increased. Permanent leakage or piping failure can result.

The Trust offers no support to new works. Loads should not be placed near to cuttings, over tunnels etc. without being independently supported. Should a Trust structure withdraw support from later development, the Trust would accept no liability. When building over tunnels, for example, not only should the new structure span independently but the effect of a collapse of the tunnel should be considered.

RIVER NAVIGATIONS

River navigations are affected by currents, floods and in some cases tides. There will be a deep navigation channel, not necessarily in the centre of the river. Elsewhere there may be insufficient depth to navigate. It is less easy to control vessels travelling in the same direction as the flow than those travelling against it. The former can move at considerable speed and need sufficient visibility and space to manoeuvre. Temporary and permanent works in the river can produce turbulence affecting navigation. The effects will vary in different river conditions.

STABILITY OF STRUCTURES

Many existing structures were built before slope stability, foundation design etc were understood. Materials and methods now taken for granted were not available. Compaction of embankment fill was not possible. It was not practice to prepare engineering drawings until the 1820's. Calculations were not undertaken until later in the 19th Century.

Old structures often have factors of safety close to unity. Factors of safety for embankments and cuttings reduce with time. Old structures are therefore particularly vulnerable to nearby works. Ill-considered excavations at the toe of an embankment, for instance, can have disastrous consequences.

No discernible vibration will be acceptable to Trust property unless the level of vibration has been prescribed in advance by the Works Engineer. Vibration is a particularly significant issue close to embankments of a granular composition.

All work near old structures must be carried out with great care and forethought. It is the Third Party's responsibility to demonstrate that there will be no detrimental impact on existing structures.

6. CANAL AND RIVER STRUCTURES

INTRODUCTION

All work near structures must be carried out with great care and forethought. It is the Promoter's responsibility to demonstrate that there will be no detrimental impact on existing structures.

Many existing structures were built before slope stability, foundation design etc were understood. Materials and methods now taken for granted were not available. Compaction of embankment fill was not possible. It was not practice to prepare engineering drawings until the 1820's. Calculations were not undertaken until later in the 19th Century.

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SERVICES AND HIDDEN HAZARDS

Buried within the towpath and also present overhead are large number of services all of which have the potential to cause injury or disruption to the local community if damaged. Risks from striking underground high voltage electricity cables and gas services are significant. Some of these services maybe unfamiliar to vendors as they include strategic oil pipelines, fibre optic cable networks, and occasionally private services such as oxygen mains linking parts of adjacent factories together.

Increasingly the Trust has its own apparatus within the towpath providing power to locks and other structures and waterway monitoring / communication infrastructure.

Many of our structures are old and were never designed to accommodate the activities of the 21st century. Some modern plant and equipment can gain access to the canal in a way that was never envisaged when the system was constructed. It is worth remembering that the original canal system was operated by men and women with horses!

Some of the canalside buildings have fallen into disuse and entering them can present particular hazards ranging from weak floors through to abandoned materials which may be unstable or harmful.

Preserving the heritage of the canal system sometimes means that trip hazards and some unguarded falls may not be safeguarded in the way you may expect.

Some of our structures particularly those below ground, such as culverts, can harbour poor air conditions sometimes with fatally low oxygen levels.

HIDDEN HAZARDS

Part 1, section 10 highlights some types of hazard that might be encountered in the canal and waterway environment.

Whilst the examples outlined are believed to be comprehensive, they cannot be seen as exhaustive as with 3000km of canals and waterways there can be specific hazards and conditions which maybe unique at a location. You are advised to seek more detailed information.

The Trust canals in general are not hazardous environments but there are some elements that need to be considered when working, or seeking access along, our property.

The canal system does not have an easy reference system for locating yourself when compared to most works where an address is often enough for suppliers and emergency services to locate your works. Site staff and suppliers need to be given accurate information to allow them to locate you from the adjacent road system. This may be a problem in both rural and urban areas.

Large areas of the canal network have poor reception for mobile phones and you should test coverage prior to the start of the works. Be aware that different networks have different coverage so there may not be universal coverage. Towpath conditions can vary throughout the year with some surfaces becoming wet

and slippery particularly during the winter months. Some lengths of canal can be very exposed and changing weather conditions can present new hazards.

RIGHT OF SUPPORT

The Trust enjoys a right of support under Common Law. It is important that support is not removed by excavation, dewatering undermining etc. In areas of mining subsidence canals can be of great depth due to bank raising - 10m is not unknown. Factors of safety are often not great and ill-considered actions can be disastrous.

A less obvious consequence of excavating near to canals is that of increasing hydraulic gradients. Not all canals are lined. Seepage rates are increased. Permanent leakage or piping failure can result.

SUPPORT TO NEW WORKS

The Trust offers no support to new works. Loads should not be placed near to cuttings, over tunnels etc. without being independently supported. Should a Trust structure withdraw support from later development, the Trust would accept no liability. When building over tunnels, for example, not only should the new structure span independently the old but the effect of a collapse of the tunnel should be considered.

NEW AQUEDUCTS, LOCKS, ETC

If it is necessary to build a structure which is of major significance to the Trust such as a new lock, a canal re-alignment, a mooring basin or the construction of a new aqueduct carrying the canal over a road, watercourse etc, the Trust reserves the right to carry out the design and supervise the construction on behalf of the Promoter.

HERITAGE ISSUES, LISTED BUILDINGS AND SCHEDULES ANCIENT MONUMENTS

See section 8.

COFFERDAMS

When dewatering a section of canal, the usual options are to use stop planks, piling, clay stanks and fabric dams. Stop planks are rarely located at convenient points, resulting in extensive dewatering leading to safety and environmental concern. Piling is generally not allowed because of the damage to the lining caused by withdrawal. Clay dams can displace fluid silts over considerable distances, leading to access difficulty for removal by conventional plant and can cause water quality problems with dispersed silt on removal. Fabric dams are readily portable, can be supplied with flumes for water transfer, but are subject to undercutting, vandalism and boat impact. Inflatable dams may not be used. If large quantities of water could escape from the canal, it is usual to use secondary containment.

Fabric dams and stop planks must be protected from boat impact. All Cofferdams should be checked on a regular basis by a competent person.

The third party is responsible for obtaining Environment Agency consent for the installation of any Coffer Dam.

CANAL LININGS

Although not all existing canals have an artificial watertight lining, works must be designed so that the canal is watertight. Works should be designed such that they do not penetrate the canal lining. Puddle clay is the most common lining material used in existing canals. It was rarely used with a thickness less than 500 mm however replacement may require a greater thickness.

Modern compaction plant needs clay of a somewhat lower moisture content, which is therefore less impermeable, and a minimum thickness of 1000 mm is now normal. There is evidence that canals in sandy areas were lined in the 18th Century with manure to accelerate the rate at which the surface is sealed.

Modern lining materials include reinforced concrete, butyl and geotextile/bentonite membranes. Bentonite must not be used in areas with high sulphate levels, or with lime stabilised materials. Membranes must be protected from boat propellers, boat-shafts and dredgers.

The old and new linings must be tied in using a suitable agreed detail.

Puddle clay must be placed in accordance with the requirements of The Trust's Specification for Puddle Clay (available upon request from the Works Engineer). The Trust reserves the right to request copies of test certificates. Compaction of puddle clay into pile pans must receive special attention. Lime stabilised clays must not be used.

Interlocking sheet steel piles cannot be regarded as a lining unless backed in puddle clay, used in soils of low mass permeability, and / or clutch sealant such as 'Wadit' or 'Britseal' is used. Piling works should comply with the ICE Specification for Piling and Embedded Retaining Walls (SPERW).

WATER LEVEL CONTROL STRUCTURES AND CROSS SECTIONS

The water level is normally controlled by waste weirs, by-washes and sluices and fluctuations in level can occur for a number of reasons, particularly during storms at the site and upstream, and during dewatering downstream. Care should be taken to define normal water level and maximum water level at the survey stage in consultation with the Works Engineer. Detailed surveys of weirs and sluices together with cross-sections of the Waterway may be required and these shall be submitted before and after the Works at the Promoter's expense. The Contractor should particularly note when planning any work in relation to the Waterway that the Trust cannot guarantee any particular water level or depth and not prevent any fluctuations to such water level depth or speed of flow in any Waterway.

Requests to lower and maintain water levels slightly below those normal for that location are particularly difficult to achieve without alterations to structures, will usually cause navigation problems and even if possible will require constant monitoring and adjustment, all at the Promoter's expense.

All designs should consider flood defence and fish migration legislation. The third party is responsible for agreeing any design with the Environment Agency.

WATER CONTROL

At his or her own expense the Promoter will be required to maintain navigation feed flows and flows being transferred to abstractions past the site and to also deal with storm flows reaching the site at all times including outside normal working hours. If pumping/dewatering is required, refer to section 7.

BANK PROTECTION

The third party may encounter many forms of bank protection and any alteration or addition will have to be tied into the new works. The interface will need to be detailed to prevent an erosion pocket forming.

Although the nature of the Works often dictates a 'hard' bank protection system, the introduction of the Water Framework Directive means that any installation of hard bank must be to satisfy an engineering/safety need. The third party may have to agree their design with the Environment Agency and obtain consent, see section 7.

It is often necessary to use a structural system of bank protection, such as interlocking sheet steel piling, for instance to act as a cofferdam to allow bridge footings to be built below water level or to allow the Trust's plant to pass along the towing path under a new bridge. Piling is also used in open cut service crossings to act as a water cut-off. Non-structural systems require the canal bank to slope into the channel and navigation must be considered in the design.

Although galvanised trench sheets are often used on smaller canals without pile capping, it is usual to install a reinforced concrete capping beam to structural piles. This beam should generally be made to accord visually with vernacular building materials for instance by laying brick or stone masonry to the upper face and fendering the vertical face.

Concrete and masonry walls are sometimes used but are difficult to construct without dewatering.

Where possible, 'soft' systems which allow a natural vegetation to develop at the water's edge, should be employed. A range of techniques are available, including reed planted coir fibre rolls, brush wood rolls and hazel wattles. Sometimes timber washboards, gabions and stone filled mattresses, pitching and dry-stone

walls are appropriate. Guidance is contained in the Environment Agency R&D Publication No. 11 Waterway Bank Protection: A Guide to Erosion Assessment and Management.

The interface between the water's edge and the canal bank is one of the most valuable of the waterway habitats. Where installation of bank protection will involve disturbance to this area, surveys for the presence of water voles or white clawed crayfish are required at the early stages of the project. If found, the method of bank protection must be agreed with the Works Engineer to ensure their habitat is conserved, as required by law. In addition, all soil and plants (including reeds and aquatic vegetation) which are removed should be reinstated adjacent to the works. Where original plants cannot be reinstated equivalent planting agreed with the Works Engineer must be carried out. See section 7 for further guidance.

Future maintenance of bank protection systems must be addressed at the design stage.

FENDERING

The permanent and temporary works must be fendered to protect the works from craft and vice versa. Modern narrow canal craft have overhanging bows and the steering skill of some boatmen leaves something to be desired. Fendering materials include cast iron (used sometimes for heritage reasons), steel bullhead rail, recycled timber or timber obtained from legal and sustainable sources, polyethylene (which has low friction properties) and polyethylene faced rubber (which absorbs energy). The durability and maintenance of fendering must be considered and addressed at the design stage.

Bolt heads must not project. There should generally be no external angles; radii should be employed.

Any drilling of the waterway wall or coping stones must be agreed with the Third Party Works Engineer.

RIVER NAVIGATIONS

River navigations are affected by currents, floods and in some cases tides. There will be a deep navigation channel, not necessarily in the centre of the river. Elsewhere there may be insufficient depth to navigate. It is less easy to control vessels travelling in the same direction as the flow than those travelling against it. The former can move at considerable speed and need sufficient visibility and space to manoeuvre. Temporary and permanent works in the river can produce turbulence affecting navigation. The effects will vary in different river conditions. Environment Agency consent as drainage authority will be needed as well as that of the Trust as navigation authority. The effects of all works on river navigations will need careful and specific consideration. Sailing vessels use some river navigations.

The Trust has powers and duties as Navigation Authority on those rivers listed in Statutory Instrument No 1195 "The Inland Waterways of the Trust Board Order 1965" as amended. The Trust is usually the freeholder for artificial sections but in general not so for natural river channels. Where the Trust is not the landowner, there will be no need for a contract with the Promoter however the principles of this Code will apply, particularly with regard to the contents of the Submission. The Trust has Bye Law powers to control works affecting river navigations. The Bye Laws are published on the Trust website. The procedure outlined above must be followed except where it refers to the contract.

7. ENVIRONMENT

INTRODUCTION

The third party is required to consider all potential environment impacts throughout the life of the project, and to demonstrate to the Trust that all potential environment risks that affect the Trust will be mitigated against. All activities have the potential to cause harm to the environment; applicants should complete form 1 in Part 3 alongside this section, as this will guide your application and act as a preliminary assessment. Information has been divided into relevant section headings and all sections should be reviewed.

ENVIRONMENTAL SURVEYS & RESEARCH

Research establishments wishing to conduct investigations on Trust property should contact the Works Engineer who can direct you to the local Environment Team. If the research is likely to be of benefit to the Trust we may ask for a copy of the final report and/or data set.

If access is required for ecological surveys by consultants in advance of a planning application, access will be subject to the provision of any survey data results. Prior to designing any survey, the works engineer will discuss your proposals with the Trusts ecologist for comments and considerations – upon receipt of these comments they must be incorporated within your proposal.

Where trapping/translocation is required as part of the proposal, the third party would need to demonstrate that they have all the relevant consents in place from the relevant regulatory bodies.

BIODIVERSITY & ECOLOGY

There is a great variety of wildlife along the inland waterway network. The Trust has a Biodiversity Strategy Statement, which identifies objectives and actions to promote the conservation and enhancement of a number of habitats and species. The third party will be expected, where it is reasonably practicable / necessary to:

- Reduce any habitat loss within the land owned by the Trust by keeping the working area to the minimum required
- Provide plans and a summary of any features of interest for all known areas of nature conservation interest which may be affected by the project
- Develop guidance on ecological best practice methods to be followed in order to mitigate potential ecological effects during the project
- Produce plans showing the location for all fences/ barriers to be erected for the purpose of controlling animal movements during and post construction, e.g., deer, badger and amphibian fencing
- Provide plans showing the location of any ecological features, mitigation or enhancement to be implemented (e.g., bat roosting features / boxes, otter holts)
- Provide individual habitat or species management plans to include the information above (where appropriate) for: terrestrial habitats; aquatic/ habitats; European Protected Species (e.g., great crested newt, dormouse, otter, and bats)

The Trust will require all persons to manage impacts from construction on ecological resources, including the following:

- Designated sites including Special Protection Areas (SPAs), Special Areas of Conservation (SACs), Sites of Special Scientific Interest (SSSIs), Nature Reserves and local wildlife sites (i.e., non-statutory sites designated for nature conservation)
- Protected and notable species
- Trees, hedgerows and other features of ecological importance (including linear/ecological corridors), and
- Invasive species

Designated Sites

Some of the waterways and adjacent land are designated under UK legislation as Sites of Special Scientific Interest (SSSI). Some SSSIs are further protected by European law. Any activity taking place in the vicinity of these sites that may be a potentially damaging cannot proceed until Natural England (or Countryside Council for Wales) has been consulted.

The Trust will require the third party to:

- Manage impacts upon all statutory designated sites of ecological interest (including SPAs, SACs and SSSIs) and non-statutory sites of ecological interest
- Obtain and comply with the requirements of any consents
- Develop relevant procedures, including any special measures, to be implemented in the event of a pollution incident, where this occurs on or adjacent to a designated nature conservation site or where protected and/or notable species are known to be present
- Notify Natural England and obtain consents as required for any works. The Trust has an obligation to inform Natural England of any works that may impact a protected site and will do so, whether consent has been obtained or not

Protected and Notable Species

Several plants and animals (including birds) which occur on the waterway network are legally protected. These include Floating Water-Plantain, Bats, Badgers, Otters, Water Voles, native Crayfish, nesting water birds and Great Crested Newts. There are statutory requirements relating to the conduct of works, which may affect protected species or their habitats. Formal consent is often required from Natural England (or Countryside Council for Wales) before any work, which may affect a protected species, or its habitat can be carried out.

Where a species protected by European legislation may be affected, consent is required from the Department of Environment, Food and Rural Affairs (in England), or the National Assembly for Wales. The Trust will require the third party to:

- Consult with Natural England, the Environment Agency, local wildlife trusts, and local planning authorities as appropriate
- Obtain and comply with the requirements of any wildlife licences, including all protected species licences necessary for construction of the project
- Provide procedures to be adopted in the event of unanticipated discovery or disturbance of protected species or important habitats
- Programme the work to have due regard to the potential impact on all protected and notable species, avoiding times when they are most vulnerable such as hibernation or breeding seasons

Trees and Hedgerows

Under Town and Country Planning legislation, trees may be protected by Tree Preservation Orders or by virtue of being in Conservation Areas designated by the Local Authority. Whilst under the Hedgerow Regulations 1997, most countryside hedgerows are legally protected from removal. Felling licences may also need to be obtained from the Forestry Commission. The Trust will require the third party to:

- Obtain written consent from the relevant Local Authority prior to any work on protected trees or hedgerows
- Protect all retained trees in line with the recommendations in BS 5837: Trees in relation to design, demolition and construction and the following measure implemented as appropriate:
    - Provision of appropriate protective fencing to reduce the risks associated with vehicles trafficking over root systems or beneath canopies
    - Measures to prevent compaction of soils

    - Maintenance of vegetation buffer strips, where reasonably practicable
    - Selective removal of lower branches to reduce the risk of damage by construction plant and vehicles
    - Standard guidance for working within root protection zones (RPZs) including procedures to follow in the event that significant roots are uncovered during work
    - Provision of contractor guidance for working in close proximity to retained aged and veteran trees and areas of retained ancient woodland, and watching briefs as appropriate
- All tree works should be guided by BS5837: Trees in relation to construction and BS3998: Recommendations for tree work, which includes ensuring root protection is in place
- Ensure protected species surveys have been undertaken in advance of the work, recommendations are followed and any necessary wildlife licences are sought

Invasive Species

Under the Wildlife and Countryside Act 1981, as amended, it is an offence to plant or cause to grow in the wild any plant listed in Schedule 9, parts I and II whilst the Weeds Act 1959 ensures the control of injurious weeds. (Note: invasive species can be found in water as well as on land.)

The Trust will require the third party to:

- Develop appropriate construction, handling, treatment and disposal procedures to prevent the spread of any invasive plants
- Ensure appropriate measures for the treatment/control of invasive, non-native species (both plants and animals) and injurious weeds will be implemented, taking into account ecological best practice guidance and where necessary extends beyond the boundary of the site
- Consider that the programme of works will need to reflect that it can take a number of years to eradicate invasive species
- Obtain and comply with the requirement of any consent including the use of herbicide near water
- Promote bio-security and minimise the risk that invasive non-native species and diseases are imported through the procurement of soils and plants, and
- Ensure all imported materials should be screened and material specifications must adequately address the potential for the introduction and spread of invasive plants requesting that they are from a source which is free from invasive plants, roots and seeds

LANDSCAPE AND SETTING

Landscape is the inclusive environment of waterway corridor, the immediate visual envelope, plus impacts on views in and out of the canal corridor. Landscape includes surfacing, boundary treatments, furniture and built development adjacent to the canal corridor.

Waterways should have a “sense of place” (a recognisable identity); often specific to a certain river, canal or area, these characteristics are important to the cultural heritage of our waterways and are what appeals to our customers; it is therefore important to recognise and protect this through the design process. The Trust will require the third party to:

- Prevent habitat fragmentation by maintaining a continuous green corridor to enable flora and fauna to move past the site, as such creating formal access to the water on the opposite bank to the towpath is discouraged
- Involve an ecological specialist as required, in relation to vegetation clearance, tree works, the creation of new wildlife habitats and reducing disturbance
- Involve a specialist to assess shading by structures and maximise solar gains by making best use of the sun and avoiding over shadowing

- Prevent damage to the landscape and historic features adjacent to the construction site by movement of construction vehicles and machinery
- Protect existing and new areas of planting through the provision of appropriate protective fencing to reduce the risks associated with vehicles trafficking over root systems or beneath tree canopies
- Use well maintained hoardings or fencing during construction
- Use screening and soft boundary treatments such as native trees, hedges and shrubs to create privacy whilst naturally guiding sight lines to and from the waterway as well as providing pedestrian access
- Consider the towpath as an integral part of a mixed use or residential scheme and ideally where possible upgraded to ensure that increased pedestrian and cyclist numbers can be accommodated as well as being DDA compliant. NB: Measures to control cycle speed should be incorporated
- Where possible locate car parks and roadways away from the waterway. Where it is not, ensure adequate planting and screening is used to reduce detriment to the canal corridor
- Use appropriate lighting schemes

POLLUTION PREVENTION

Protecting our assets from damage or harm is important; care needs to be taken during the planning and execution of any project. The Trust require the third party to:

- Develop and implement appropriate measures to control the risk of pollution from construction works, materials and weather events and proactively manage the site to prevent pollution
- Complete a site drainage plan for the site, including field drain layout and outfalls, irrigation pipes, fixed water supplies for livestock etc
- Locate hazardous materials, stockpiles and fuel away from the waters edge and surface water drains
- Prevent solid or liquid waste, sediment, soil or vegetation entering the waterway. Escape of material held in tanks, receptacles and buried pipes must be prevented, waste water from activities such as washing equipment must be contained and not allowed to enter surface water drains
- Complete a Pollution incident control plan, train staff on actions and using pollution control kit
- Contain, limit and mitigate any effects as far as reasonably practicable in the event of a pollution incident and notify the Works Engineer
- Undertake works in accordance with the Environment Agency pollution prevention guidelines
- Provide full details including size of area to be drained, the land use, water quality assessments, flow rate, discharge point and monitoring regime to the Trust if surface water run-off is proposed to drain into the waterway at any stage of the project, whether temporary or permanent, see Part 2, section 3. Install where necessary interceptors and other measures so that drains can be shut off in the event of a spillage or fire
- Obtain consent from the Trust for any surface water discharge connection to our watercourses, the granting of which is not to be assumed on obtaining Environment Agency consent
- Be aware that drainage from areas with commercial activities such as working boatyards can be subject to trade effluent agreements with the Environment Agency, and
- Manage storm flows and excavation dewatering to prevent sediment contaminated flows e.g.
    - cut-off ditches to control surface water and well point dewatering or cut-off walls for ground water can be used
    - Seed or cover stockpiles and supplement with geotextile perimeter fences
    - use settlement lagoons or silt busters on silt laden water prior to discharge
    - keep sites and roads clean from soil

WATER

Appropriate management of our water is naturally one of the Trusts primary concerns. The Water Framework Directive (WFD) is European Union legislation intended to protect and enhance the water

environment, rivers, canals, feeders and reservoirs. A requirement of WFD is that there is no deterioration in the quality of our designated water bodies and as such has the ability to affect many activities on the Trusts holdings such as bank protection, barriers to fish, dredging, abstraction & water supply and discharges.

The Trust is not a Drainage Authority, any works that affect the channel or bank of a Main or Ordinary Watercourse will need Flood Defence/Land Drainage Consent from the Environment Agency or Local Flood Authority respectively. Works including piling, dredging, bridge construction, installation of scaffolding/coffer dams and other structures in channel may require consent. Where works require Flood Defence Consent, it is the responsibility of the application to obtain it well in advance of the works as these consents take several months to obtain. The Environment Agency will look for consideration of the Water Framework Direction in any design and third parties should build its requirements into the project.

N.B. there is no correlation between navigability and designation of a watercourse as "Main River" or "Ordinary Watercourse".

The Environment Agency may also place restrictions on project design where a site is located on a flood plain to ensure there is no loss of flood storage capacity. Hoarding and fencing in areas at risk of flooding should be permeable to floodwater unless otherwise agreed with the EA/other Local Flood Authority to ensure that the flood plain retains function.

BANK PROTECTION

The interface between the water's edge and the canal bank is one of the most valuable of the waterway habitats. WFD requires no deterioration of the ecological value of the in channel or marginal aquatic habitat, banks and riparian zone. Changing a soft "unimproved" bank into a hard piled/stone edge is not permitted except where a genuine need can be demonstrated and mitigation agreed with the Environment Agency. This will typically be through a Flood Defence Consent condition and/or Planning Consent condition. It is recommended that the third party:

- Use soft engineering solutions as a preference. These allow natural vegetation to develop at the water's edge should be used in preference to creating hard bank edges with further consideration given to channel integrity, diversity and its function as a fishery
- Where this is not possible consider how the hard engineered edges may be 'greened'
- Consider the opportunity to remove or soften hard bank reinforcements and revetments
- Survey for the presence of water voles or white clawed crayfish at the early stages of the project. If found, the method of bank protection must be agreed with the Works Engineer to ensure their habitat is conserved, as required by law
- Reinstate adjacent to bank works all soil and plants (including reeds and aquatic vegetation) which are removed
- Provide compensation or mitigation where soft bank is to be lost permanently
- Consider future maintenance of bank protection systems at the design stage
- Incorporate access and egress points such as animal ramps into hard banks with a freeboard to stop entrapment and drawing risk to animals

WATER MANAGEMENT AND FISH (PUMPING, DEWATERING, STOPPAGES, ETC)

Reducing water levels results in the loss, albeit temporarily, of part of an aquatic habitat or alter the water quality to a point where it is unable to support life. This has the potential to affect a number of protected species including crayfish, water voles and great crested newts. Additionally, all species of fish are impacted by alteration to water levels. All fish are protected by law and several fish species have additional protection. Eels, lampreys, bullhead and spined loach are four such species that are relatively frequently encountered in Trust fisheries.

The Animal Welfare Act makes owners and keepers responsible for ensuring that the welfare needs of their animals, including fish, are met. This means that the provision of a suitable environment is necessary to allow fish to exhibit normal behavioural patterns and ensure their protection from pain, injury, suffering and disease. Reducing water levels can lead to increased turbidity from rainfall events and a build-up of

ammonia. Prolonged ice cover, especially where the water depth is shallow, leads to lack of gaseous diffusion thus leading to fish mortalities. Oxygen is less soluble at high water temperatures which reduces oxygen availability in a period of increased fish activity.

The Environment Agency ultimately regulates fisheries in England with Natural Resources Wales (NRW) carrying out this function in Wales. CRT are the largest owner of fishing rights and fish stocks in the UK. We have national blanket fisheries arrangements with the EA and NRW that cover our day-to-day fisheries work. This work is undertaken by our fisheries management term contractor. Third party works also undertaken by the Trusts appointed fisheries management term contractor would be covered by this national consenting arrangement.

In the event that third parties wish to lower water levels or empty sections of waterway they should:

- Ensure that they have both the permission of the Trust and Environment Agency/Local Flood Authority for any drawdown.
- Consider how temporary dams could be used to minimise the extent of the drawdown in certain situation.
- Consider the location of the abstraction and discharge points of any pumping. The abstraction pumps can be raised off the sediment to reduce the amount drawn through and screened to prevent fish from being drawn through the pump whilst the discharge should be at a rate that will not cause flooding and across a baffle or other deflector to avoid scour and causing suspended sediment pollution.
- Undertake aeration or other suitable mitigation where works may result in de-oxygenation of water as agreed with the Trusts Works Engineer and National Fisheries & Angling Manager.
- When a minimum depth of 750mm in the centre of the channel can't be maintained undertake a fish rescue, preferably using the approved CRT fisheries management term contractor. Provision for a fish rescue must be made for any section of waterway that is to be drained or the water level lowered to the extent that fish populations may be harmed as determined by the Trusts national fisheries and angling manager. Fish must not be flushed through lock paddles or other similar structures at low water level. Additionally, fish must not be flushed into river systems from canals.
- The promoter must have the written approval of the Trusts National Fisheries & Angling Manager for the fish rescue component of the proposed works before any works go ahead.
- Where the Trusts fisheries management term contractor is not used to undertake the fish rescue, the promoter must obtain SAFFA consent to use a relevant fishing instruments and consent for fish transfer from the Environment Agency or Natural Resources Wales. The promoter should then forward a copy of these consents together with the proposed method statement and associated risk assessment to the national fisheries and angling manager at least ten working days prior to the work commencing. These documents will then be assessed and any necessary amendments made as required by the national fisheries and angling manager. As well as fish rescue methodology, the fish relocation sites are to be agreed in advance with the national fisheries and angling manager. When the Trusts national fisheries and angling manager deems it necessary, the Trust may appoint their own fisheries term contactor to monitor and supervise the fish rescue operation and charge the promoter the cost of undertaking this supervision.
- Ensure that where any protected species need to be handled or moved, all necessary authorisations are obtained from the relevant wildlife and environmental regulators, and copies provided to the Trust. Valuable and protected species should be reintroduced to a suitable habitat.
- Following re-watering of the waterway, undertake restocking to reinstate the fishery where required and as agreed prior to the works consultation with the Trusts National Fisheries & Angling Manager.
- Capture and humanely destroy any non-native crayfish species and any non-native fish species including zander, sterlets and catfish which may, after agreement with the Trusts national fisheries & angling manager and the Environment Agency or Natural Resources Wales be transferred to other legally licensed locations.

- Install Fish Passes when >50% of a structure is being refurbished or a new structure is being built, such as hydropower schemes.

ABSTRACTION & DISCHARGE

Water within the Trusts waterways and reservoirs is a private asset and as such all abstractions and discharges require consent from ourselves. Consent from the EA does not automatically confer consent from the Trust. Additionally, consents are given to individuals or companies, it should not be assumed that an existing discharge/abstraction can be retained when a site is redeveloped for a new use, if permission is given to retain and re-use an existing discharge/abstraction, a new commercial contract will normally be required.

It is also possible that there are abstractions from, or discharges to the Trust or neighbouring waters which may be affected by the Works or which may affect the Works. The Promoter should make inquiries, to establish whether such abstractions or discharges exist. Where they do exist, the Promoter should discuss the works with the abstractor or discharger with a view to making suitable arrangements.

Abstraction

Although the abstraction of <20m3/day of water does not require EA consent, consent is required for any abstraction from Trust watercourses whether permanent or temporary, including agricultural irrigation. The granting of which is not to be assumed on obtaining Environment Agency consent as we will take into account additional parameters. The Trusts Works Engineer or Utilities Team member will consult the Environment Team and Water Engineer to assess whether we are prepared to allow the abstraction and determine conditions this may be subject to.

If the Trust does accept a temporary installation, it will be subject to separate engineering approval and commercial contract.

The Trust gives no assurance as to the quality of the water within its waterways and reservoirs and third parties should ensure that it is fit for purpose at an early stage, particularly if the abstraction is leisure related. The quality of any water abstracted is also subject to change and cannot be guaranteed.

Discharge

The Trust do not accept foul, polluted or contaminated water. Discharges of trade or sewage effluent are not normally accepted on water quality grounds because of the relatively static nature of our waters. It is therefore our preference and best practice outlined in the Environment Agency pollution prevention guidelines that any sewage/trade waste and grey water is connected into mains drainage.

There is a presumption against accepting small domestic discharges (<5m3/day) of treated sewage discharges due to our concerns regarding maintenance, potential pollution and nutrient enrichment. Other larger discharges may be considered on a site-by-site basis when subject to a full assessment including detailed information including the specifications of the plant (sewage treatment plant/industrial process), its capacity, discharge quality and quantity, the discharge point and any other overflows (grid references), whether there is a soakaway, the fall of the land and whether there is a shut off mechanism in the event of a pollution or the plant malfunction. We would also need assurance that maintenance has been considered to ensure the operational efficiency and effectiveness. The details including method and frequency of maintenance must be communicated in a written format to the Trust Works Engineer and the management company on site who accept responsibility for planning and implementing the maintenance regime.

We would need to be satisfied that any discharge would not result in a detriment. You would have to demonstrate this and offer monitoring proposal passed to utilities department.

We encourage Sustainable Urban Drainage Systems where appropriate and subject to a hydrological and pollution assessment.

Heating/Cooling

Using the waterway network as provider for heat exchange technology offers significant savings on energy costs; it is a sustainable solution which replaces the need to burn fossil fuels or the need to use large

amounts of electricity to power air cooling units. This system is particularly pertinent to new waterside buildings. Contact the Works Engineer to discuss applications, requirements and opportunities for this technology and consents that would be required.

There would be a presumption against accepting heated water at sensitive sites such as protected sites (SACs, SPAs and SSSIs) or areas of known water quality issues.

WASTE

The Trust encourages all third parties to consider the waste hierarchy when planning their projects and minimise and recycle construction waste. The Trust requires that materials reusable for waterway works particularly those which are no longer readily available such as copings and castings be carefully removed and transported to an agreed storage area for use in canal maintenance. The Trust retains ownership of such materials.

Because of their industrial heritage, land and sediment in the corridor of some waterways may be contaminated. Site excavated soils and sediments should be analysed in advance of the project commencing so an appropriate management route can be determined.

Please note that silts and other materials recovered from canal beds or elsewhere might contain chemical contaminants, or biohazards such as used hypodermic needles. In addition, the Trust require the third parties to:

- Manage all wastes in such a way as to prevent harm to human health, amenity and the environment (i.e., not within 10m of a watercourse, borehole, well or water drainage system)
- Store all wastes and materials safely and securely to prevent their escape and prevent contamination of our assets
- Ensure no waste is disposed of/reused on C&RT property except where has been agreed in writing with the Trusts Works Engineer
- Maintain responsibility for the management of all waste generated by the project, third parties will be considered the legal “producer” of any waste from the project under the Duty of Care Regulations and will be solely responsible for complying with all current legislation. This includes material excavated from C&RT property such as canal dredgings and tow path bank fill
- Register any relevant exemptions with the Environment Agency to cover temporary storage and reuse of waste
- Undertake pre-demolition/refurbishment asbestos surveys to identify ACM and ensure it is managed appropriately. A licenced contractor should be used, in accordance with relevant statutory requirements

CONTAMINATION

As discussed in section 10, the industrial heritage of the canal corridor can be reflected in contamination of the land. The Trust require that third parties:

- Undertake Desk Studies and Site Investigations as required to identify contaminated land issues in advance of the work. Site Investigations should be completed in line with Part 2, section 7 of this document
- Model risk to all receptors, not just human health and ensure that all potential pathways are investigated
- Where contamination is identified and will be disturbed/excavated, agree the necessary steps that will be taken to protect workers and the public from contact with the material or with gases or liquids arising from it with the Works Engineer both during construction and post construction
- Where contamination is identified as present, a thorough Environmental Risk Assessment outlining how contamination of Trust assets and particularly our surface water network will be protected. Construction activities can change existing pathways and create new ones e.g., through piling, this should be factored into any Risk Assessment. **N.B. It should not be assumed that there is an impermeable lining in the canals**

- Where contamination is identified and monitoring undertaken (e.g., boundary monitoring/surface water or groundwater quality monitoring) is undertaken, share monitoring data with the Trust at regular intervals

NUISANCE

Consideration should be given in design and throughout construction to the impact of the project on adjacent site residents and users of the surrounding amenity. It is expected that third party implement controls and measures to control and mitigate the effect of potential nuisance caused by construction work.

NOISE & VIBRATION

Best Practicable Means should be applied throughout the project to minimise noise and vibration impact on local receptors. It is expected that the third parties:

- Minimise the impact of noise on our users and neighbours particularly residential boaters both during and post construction. Consider building and landscape design, the use of screens, silencers and 'quiet plant', minimising traffic movements and controlling hours of operation
- Consider the noise impact on canal environment from new bridge. If noise levels are too great, mitigation measures must be introduced. Noise mounds or barriers are suggested measures, solid parapets are preferred
- Where appropriate fit and maintain appropriate mufflers on site plant, and enclose noisy equipment
- Limit site works to normal weekday time hours
- Install noise attenuation barriers, particularly when working in close proximity to residential areas (including schools and office buildings)
- Undertake appropriate measures to mitigate any disturbance through vibration of protected species such as badgers, water voles and birds
- Ensure no damage is caused to Trust assets through vibration. No discernible vibration will be acceptable to Trust property unless the level of vibration has been prescribed in advance by the Works Engineer
- Where significant levels of noise cannot be avoided the third party should apply for a section 61 consent

DUST & ODOURS

Every effort must be made to minimise the impact of dust and odours during and post construction on our waterway users and neighbours particularly residential boaters. To prevent and/or mitigate for a dust nuisance, third parties should:

- Plan the site layout to locate plant and any dust/odour causing activities away from sensitive receptors and the site boundary where reasonably practicable
- Proactively employ dust suppression where significant levels of dust have the potential to be or are created including damping down, cover material, road sweeping, wheel cleaning, surfacing of haul road, covered skips and demolition chutes for waste transfer and a ban on burning on site
- Use site hoarding and screens to minimise off site dust migration
- Undertake odorous work with respect to wind direction
- Ensure that plant are fitted with emission control equipment and are regularly serviced
- Consider formal odour suppression on the site boundary where significant ground gas has been identified as a potential risk (e.g., excavation of old waste sites)

LIGHT

Consideration with regards to lighting needs to be paid to both the design and construction phases. Lighting may be appropriate to illuminate the towpath, access points, bridge undercrofts and locks in urban areas and mixed-use developments as well as illumination of landmark features and artwork. The third party:

- Consider the potential for light pollution (potential for breaching Section 79(1) of the Environmental Protection Act 1990 'Artificial light emitted from premises so as to be prejudicial to health or a nuisance'). Minimise the amount of artificial light in the project design and include the specification of low energy components such as LED and lux levels
- Design lighting for site boundaries to allow safe public access or on-site lighting for site safety, however the introduction of waterside lighting should meet a clearly defined need
- Ensure lighting schemes are designed with protected species (particularly bats) in mind and should therefore not cast over the waterspace, baffles and directional lighting should be used to manage the light beam and white light avoided where possible
- Ensure lighting design positions lights so as not to unnecessarily intrude on adjacent buildings or waterway users. Where possible they should be activated by motion sensors to minimise their impact

ENVIRONMENT RESOURCES

This section is to be read in conjunction with the following external guidance:

- All designations available at the Magic website http://magic.defra.gov.uk
- Contact the Environment Agency to determine if a watercourse is Main River or Ordinary Watercourse 0300 506 506
- BS3998: Recommendations for tree work
- BS 4428 Code of practice for general landscape operations (excluding hard surfaces)
- BS5228: Code of Practice for noise and vibration control on construction and open sites
- BS 5837:2012 Trees in relation to design, demolition and construction – Recommendations
- CLR11 - Model Procedures for the Management of Land Contamination., Defra/Environment Agency
- Environment Agency R&D Publication No. 11 Waterway Bank Protection: A Guide to Erosion Assessment and Management.
- Guidance notes AqHerb01: Agreement to use herbicides in or near water, Environment Agency 2012
- Managing invasive non-native plants, Environment Agency 2010
- National Groundwater and Contaminated Land Centre Report (NC/99/73) Piling and Penetrative Ground Improvement Methods on Land Affected by Contamination: Guidance on Pollution Prevention
- NJUG: Volume 4 Guidelines For The Planning, Installation And Maintenance Of Utility Apparatus In Proximity To Trees (Issue 2)
- PPG1 General Guide to the Prevention of Pollution
- PPG5 Works and maintenance in or near water
- PPG6 Working at Construction and demolition sites
- PPG21 Pollution Incident Response Planning
- PPG22 Dealing with spills
- PPG2 Above ground oil storage tanks
- PPG3 Use and installation of oil interceptors in surface water drainage systems
- PPS9: Biodiversity and Geological Conservation, UK Government 2005
- PPS10: Planning for sustainable waste management
- WRAP website for advice on sustainable waste and construction.

8. HERITAGE

INTRODUCTION

Most of the Trusts waterways infrastructure is well over 200 years old and forms an important part of the national heritage. It is a key value of the Trust that all heritage assets, whether designated (i.e., legally protected) or non-designated, are given the same level of beneficial treatment and protection.

The following paragraphs deal with statutory controls on Listed Buildings and Scheduled Ancient Monuments. Even where no statutory protection is in force, it should be noted that the Trust seeks to protect and enhance all structures, surfaces and features with heritage/historic value.

LISTED BUILDINGS

Many waterway buildings and structures are listed buildings and are subject to historic building legislation. Works to listed buildings often require listed building consent from the local planning authority and this should be negotiated and applied for well in advance of any works. Works to adjoining non-listed structures may also be classed as 'development affecting the setting of a listed building'. Listed buildings also enjoy a measure of 'curtilage' protection.

SCHEDULED ANCIENT MONUMENTS

A number of waterway sites and structures are scheduled monuments and are protected under special legislation. Many works affecting them require scheduled monument consent which must be obtained from the appropriate Secretary of State, via the statutory agencies (Historic England, Cadw). Gaining scheduled monument consent can take time. Works to scheduled monuments almost always require archaeological recording conditions to be met.

WORLD HERITAGE SITES

Designation of a World Heritage Site by UNESCO brings no additional statutory controls, but protection is afforded through the planning system as well as through the other designations (listed buildings, scheduled monuments etc) that cover elements, if not the whole, of the site. All UK sites have management plans in place, which are regularly reviewed. Each site typically has a steering group, which comprises its owner/s and other key stakeholders and contributes to the management plan review process.

CONSERVATION AREAS

Conservation Area controls affect many waterway sites and early consultation with the local planning authority is advised before works take place in a conservation area. Demolition of any building or structure (whether listed or not) will require planning permission. Changes to the external appearance of a building in a conservation area may require planning permission that is not required elsewhere as some permitted development rights are curtailed. Alterations to fencing and walling may require planning permission if bordering a public right of way.

Felling, lopping or topping of trees calls for six weeks' notice to be given to the local planning authority and removal of hedging is also controlled. It is the promoter's responsibility to ensure adequate application time and all necessary permits are in place prior to construction.

Under the National Planning Policy Framework (NPPF) conservation areas are designated heritage assets and their conservation is to be given great weight in planning permission decisions.

SETTING AND CHARACTER

While it is difficult to define "character" objectively; any repair, refurbishment or new build should be carried out so as to be in keeping with the general setting and landscape of the waterway corridor.

Selection of materials should seek to match existing or surrounding styles and reinstatement of the site should take account of the need to restore the overall setting of the waterway (for instance replacement or enhancement of vegetation, historic surfaces or features).

The Trust can advise on local distinctiveness in relation to heritage features of the individual canal or river navigation.

GENERAL CONSIDERATIONS WHEN WORKING ON OR WITHIN THE CURTIALGE OF HERITAGE STRUCTURES

Much of the waterways historic structures or fabric requires the use of special materials or skills to ensure the unique character and function of a structure is protected. A particular type of stone, brick or mortar may be required when working on the waterways this will require the use of specially trained contractors and the sourcing of materials that may not be readily available. Many canal structures are old and do not conform to modern standards of design or construction.

Lime mortars are an important element in historic structures contributing to their character and enabling them to breathe and absorb structural or thermal movement. The appropriate use of lime for heritage repair work is vital to ensure that these structures are taken into the future in the best condition.

ARCHAEOLOGY

Archaeological remains associated with waterways represent an important and finite resource. They may comprise buried remains of past waterway structures such as old basins, now in-filled; or they may be remains of activities that took place alongside the waterways such as housing, stables, water mills, pumping stations, warehouses and 'ridge and furrow' fields. Archaeology also covers buried objects with heritage value, such as tools, iron furniture or former items of cargo.

Sites of archaeological interest may be Scheduled Monuments or may appear on the County Sites and Monuments Record, now usually known as the Historic Environment Record.

It is the Trust's policy to ensure that archaeological remains are not destroyed or unnecessarily removed. Offsite preservation and re-use of complete structures must be considered, where applicable. The archaeological recording of structures to be demolished must be undertaken, where applicable. Artefacts should be preserved. The Trust retains ownership of such materials.

MATERIALS

The Trust requires that materials that have a heritage value or are re-usable for waterway works, particularly those which are no longer readily available, such as copings and castings, be carefully removed and transported to a storage area for use in canal maintenance. The Trust retains ownership of such materials.

9. CONDITIONS

All operations affecting the Trust's property shall be carried out in such a manner so as not to endanger or damage the Trust's property and/or any persons entitled to be present thereon and to avoid (except to the extent agreed in writing) any interference to the free movement of any persons, pedestrians and/or road and waterborne traffic.

Generally, the Trust must be consulted for any works proposed within 15m of the Trusts land boundary, with the exception of more far-reaching works such as scaffolding, demolition, piling or vibration impacts, etc. which may present a hazard beyond a 15m separation distance. The Third Party shall not commence any Works, particularly excavation piling or dredging work, until adequate provisions to the satisfaction of the Works Engineer been taken to ensure the stability and security of any Waterway or associated supporting structures whether in the ownership of the Trust or not and to prevent the escape of water there from.

The Third Party shall if required by the Works Engineer provide temporary fencing to the satisfaction of the Works Engineer to provide safety and to prevent trespass or the straying of animal or poultry stock.

The Works Engineer and other agents of the Trust shall at all times have reasonable access to the Trusts property on the site.

Unless otherwise agreed uninterrupted passage for craft on the Waterway is to be maintained at all times. All lights provided by the Third Party shall be so placed or screened so as not to interfere with any signal lights, navigation lights and/or beacons of the Trust. Any Temporary Works which obscure signs signals or beacons shall not be erected without the written permission of the Works Engineer.

In addition to any special marking or lighting requirements of the Works Engineer, warning notices/signs/lights must be displayed throughout the duration of the Works as follows:

- For works taking place on Trust land for less than 1 month duration, boards with the words CAUTION - WORKS IN PROGRESS in red letters 150mm high on a white background shall be erected on both banks of the navigation at a distance of 100 and 200 metres upstream of the works. In addition, one A2 sized board (420 x 594 mm) shall be erected on both banks displaying the Canal & River Trust logo, examples of the template are below. Contact your Trust engineer for a copy of the template.

- For works taking place on Trust land for 1-3 month duration, requiring the use of fencing or hoarding a sign/board at least A1(594 x 841mm) sized shall be erected on said fencing/hoarding displaying the Trusts logo; contact your Trust engineer for a copy of the template. If there is no fencing or hoarding in use then an A2 sized sign shall be erected on both banks, contact your Trust engineer for a copy of the template.

- For works taking place on Trust land for 3 - 6 months duration requiring the use of fencing or hoarding a sign/board at least A0(841 x 1189mm) sized shall be erected on said fencing/hoarding displaying the Trusts logo; contact your Trust engineer for a copy of the template.
- For works taking place on Trust land for more than 6 months, please speak to the works engineer regarding the inclusion of joint branding on the works hoardings.
- By night, lights shall be displayed to define the navigation opening upstream and downstream of the Works. Two red lights side by side, 300 mm apart should be fixed at each position and in addition an amber light should be displayed upstream and downstream of the Works to mark the centre of the navigation opening.
- Where the completion of the Works involves projections of any kind into the navigable channel and/or anywhere vertically above the line of its edge the Contractor shall conform to the Board's Bye-Laws in respect of signing, marking, lighting and fendering.
- Where work is on a River or Freight Waterway the Third Party should discuss the lighting requirements with the Works Engineer as IALA lighting requirements must be followed.

No construction equipment for the Works shall be allowed on the Trust's property and, in particular, adjacent to the canal without the acceptance of the Works Engineer which may be subject to the prior submission of stability calculations.

The Contractor shall NOT without the specific written permission of the Works Engineer (and then ONLY under such conditions and restrictions as the Works Engineer may require) do any of the following:

- Use or place plant and/or heavy vehicles which may cause damage to the Waterway and which shall particularly include but not be limited to damage to Waterway walls.
- 'Crane' or otherwise similarly move plant materials and/or vehicles over any Waterway.
- Use floating plant barges and/or pontoons and the like in any Waterway.
- Excavate, tunnel or carry such other underground operations beneath any waterway.
- Display any advertisement or other material, except as specifically required by this condition, on or above the Trust's property.
- Discharge trade or sewage effluent, or arising's, surface water of any kind in any way into or onto the Trusts property including the waterways.
- Abstract extract and/or draw water from the Trusts property including the waterways.
- Damage or remove flora, fauna, waterway relics, architectural heritage, industrial heritage, landscaping, towing paths or waterway walls.
- Drill into any Trust Asset, including Coping Stones on the bank
- Store fuel or oil re-fuel service vehicles or plant on or in proximity to the waterway where there is a risk of pollutants entering the waterway.
- Access the Trust's property by any unauthorised route.

The Third Party shall take all necessary measures to prevent:

- Siltation of any Waterways.
- Damage to the Trust's property.
- Construction debris, materials or arising's of any sort which shall include but not be limited to bricks, timber, containers of any kind, reinforcing bars, polythene or plastic sheeting entering any waterway.
- Contamination of any waterway with any toxic, or other polluting matter or liquid of any sort which shall include but not be limited to grout, concrete or silane.
- The creation of any hazard to the visitors to the Trusts property which shall include but not be limited to oxy-acetylene burning, welding, grit blasting, water jetting or cleansing, spraying or pointing. Alternatively, all such works shall cease until the craft or persons are past and clear.
- The spread of any invasive species

In the event of any of the above occurring the Third Party shall immediately inform the Works Engineer and then follow their instructions to abate and remedy the situation.

On completion of the Works all surplus material attributable to the Works, including any temporary works, on the Trust's property (including the waterway) shall be removed from it and the property shall be made good to the satisfaction of the Works Engineer.

Where for the purpose of completing the Works, any Temporary Works are required above the waterway the Third Party shall provide and maintain a minimum height clearance above the water surface as specified by the Works Engineer.

The Third Party should particularly note when planning any work in relation to the waterway that the Trust cannot guarantee any particular water level or depth, nor prevent any fluctuations to such water level depth or speed of flow in any Waterway.

If completion of the Works necessitates the closure and/or the reduction in width of the Waterway or towpath the Third Party shall strictly comply and work within the arrangements and limits defined by the Works Engineer for the closure and/or reduction in width of the Waterway or towpath.

Any vessel or craft on the waterway for which the Third Party has obtained the permission of the Works Engineer for use in completing the works shall be licensed, used and moored in accordance with the Trusts Bye-Laws.

If any plant, vessel or craft falls or sinks or is cast adrift the Third Party shall immediately inform the Works Engineer and take immediate steps to make the hazard known to users of the Waterway. The Third Party shall immediately arrange the salvage/re-securing of the plant, vessel or craft from the Waterway and until such salvage/re-securing has been completed the Third Party shall provide buoys and/or markers and erect warning notices indicating the navigation hazard to Waterway users to the satisfaction of the Works Engineer. In the event of resulting oil or fuel spills affecting the water or land, the Trust may seek to recharge any costs incurred through containing and treating the spills.

The Third Party shall keep the Trusts property free from rubbish. The Third Party shall not leave rubbish or project waste on or in the property of the Trust.

All damage to the Trust's property shall be made good by the Third Party to the satisfaction of the Works Engineer.

The following actions shall be taken by the Contractor in the event of any damage in the Waterway its containment and/or supporting structure or banking:

- IMMEDIATELY inform the Works Engineer and (if required) the Emergency services.
- Secure the area from the approach of traffic and/or the general public.
- Render every assistance to the Emergency Services and/or the Trust as shall be requested for the purposes of mitigating water loss and/or damage arising from the incident and/or for the purpose of securing public safety and the stability of other property.

The Third Party will be liable for any damage arising from the activities of his or her Agents, such as Consulting Engineers, Contractors and Sub-Contractors. In the event of a claim, the first course of action by the Trust would be directed towards the Third Party, though others may be joined in. It is in the Third Party's interest to ensure that their agents have adequate insurance to protect him or her from action. However, it is the Third Party's responsibility to ensure the appropriate level of cover is taken. If a Third Party or his or her agents, causes damage to the Trust's property then it will seek reinstatement of such damage, plus any inconvenience costs, loss of profits etc., which the Trust might incur, in full and without monetary limit. Levels of insurance will be specific to the risks attached to the proposal. The design and construction of the Works should minimise risk to a reasonable level such that insurance for £5,000,000 should suffice. If the potential consequences require it, higher insurance levels may be necessary. The Trust reserves the right to inspect copies of insurance documents to ensure adequate levels of cover.

Press and publicity activities regarding the intended works must have the approval and prior knowledge of the Trust.

Site signs of agreed format should be erected indicating the organisation responsible for the Works including a description of the Works and telephone numbers for twenty four hour emergency contact and provide an apology for disruption caused to the Trust's customers.

All contract work and reinstatements shall have a maintenance and defects correction period, normally for one year.

If the Works Engineer considers the Waterway, Waterway users, or environmental or heritage features are at risk until his or her reasonable requirements or conditions have been met, the Works Engineer reserves the right to order operations to be suspended and issue a cessation of works notice (Form 5). It should be noted that the Trust cannot accept any liability for any costs or claims which may be incurred by the Third Party as a result.

The Works Engineer shall be given twenty-eight days' notice of the end of the maintenance Defects Correction Period of the Works Contract and/or seven days' notice of any meeting in connection therewith, to enable an inspection to be made to ensure all outstanding works have been completed.

No works of maintenance, alteration or demolition may be carried out unless further submissions have been agreed.

In order to demonstrate the public value of the canals and rivers, the Trust is required to capture the value of investments in its canals and rivers, therefore we require the third party to supply financial information in respect of the costs of works which constitute improvements to the waterway as set out in Part 2, section 13. Such works may include, improved towpaths, access points, waterway walls, signage and other physical improvements to improve public access to waterways. The final information required by the Trust is a copy of the final certificate from the contractor or the final invoice, both of which need to demonstrate the cumulative value of the works. If the works are completed "in house" then a screen shot/report from the internal financial system demonstrating the value of works carried out on the Trust's infrastructure. This information will be for internal use only and will not be published externally and treated with the strictest confidence.

10. HEALTH AND SAFETY CONSIDERATIONS

GENERAL

This section highlights some types of hazard that might be encountered in the canal and waterway environment. Whilst the examples outlined are believed to be comprehensive, they cannot be seen as exhaustive as with 3000km of canals and waterways there can be specific hazards and conditions which maybe unique at a location. You are advised to seek more detailed information. You should present this information to your designer in addition to any site-specific information provided by the Works Engineer.

The Trust's canals and rivers in general are not hazardous environments but there are some elements that need to be considered when working, or seeking access along, our property.

The canal and river system does not have an easy reference system for locating yourself when compared to most works where an address is often enough for suppliers and emergency services to locate your works. Site staff and suppliers need to be given accurate information to allow them to locate you from the adjacent road system. This may be a problem in both rural and urban areas. All bridges and locks are numbered to assist with this.

Some areas of the canal network have poor reception for mobile phones and you should test coverage at an early point in the project feasibility stage. Be aware that different networks have different coverage so there may not be universal coverage. Towpath conditions can vary throughout the year with some surfaces becoming wet and slippery particularly during the winter months. Some lengths of canal can be very exposed and changing weather conditions can present new hazards.

The Trust invites the general public onto its property to enjoy both boating as well as towpath access for walking, cycling and fishing, etc. It must be assumed that these people are unfamiliar with the risks associated with your activity and you may need to take additional precautions to protect them. The towpath, the path adjacent to the waterway, is not usually suitable for vehicular traffic. You may have been given specific permission to use the towpath if it is suitable, otherwise you must gain access by alternative routes.

Where permission has been given then the requirements of the approved method of access must be strictly adhered to. Driving too close to water's edge or with larger plant than specified, can lead to the failure of the towpath edge and vehicles capsizing into the canal. In such instances, there is the risk of occupants being trapped in their vehicle. Particular attention needs to be paid to ensuring that vehicles and plant can be safely turned around. Reversing vehicles down the towpath is not acceptable without a banks man and safe turning areas need to be identified as part of any method statement. In public access areas such as car parks, etc all reversing manoeuvres must be supervised and banks men used where necessary.

WATER AND ITS HAZARDS

Canal and river water represents a number of hazards. The obvious risk of drowning is in fact less than that of the shock of falling into the water, particularly in cold conditions which can cause a heart spasm. Despite the majority of canals being relatively shallow, dragging oneself out of the water when cold and wet can be energy sapping particularly if you are some distance away from welfare facilities. The Trust strongly advises that suitable life jackets are used when working near water.

Water levels on rivers in particular can change rapidly as a result of river flows upstream or the operational need to transfer water. Particular areas to avoid are weirs and sluices where water speeds can be higher than expected.

The water and canal sediments can be potential sources of infection, in particular leptospirosis, which is a life-threatening disease which most doctors are unfamiliar with. This can lead to delays in treating the disease and long periods of rehabilitation.

Other more obvious health problems are stomach bugs and the possibility of infections entering your body through cuts and abrasions.

In certain areas there is a hazard from discarded syringes and other antisocial activities. Accessing these areas unaccompanied, particularly at night, may not be advisable.

SERVICES AND OTHER HIDDEN HAZARDS

Buried within the towpath and also present overhead are large number of services all of which have the potential to cause injury to your staff or disruption to the local community if damaged. Risks from striking underground high voltage electricity cables and gas services are significant. Some of these services maybe unfamiliar to Third Parties as they include strategic oil pipelines, fibre optic cable networks and occasionally private services such as oxygen mains linking parts of adjacent factories together. Increasingly the Trust has its own apparatus within the towpath providing power to locks and other structures.

STRUCTURES

Many of our structures are old and were never designed to accommodate the activities of the 21st century. Some modern plant and equipment can gain access to the waterways in a way that was never envisaged when the system was constructed. It is worth remembering that the original canal system was operated by men with horses. Some of the canal side buildings have fallen into disuse and entering them can present particular hazards ranging from weak floors through to abandoned materials which maybe unstable or harmful.

Preserving the heritage of the canal system sometimes means that trip hazards and some unguarded falls may not be safeguarded in the way you may expect. Some of our structures particularly those below ground, such as culverts, can harbour poor air conditions sometimes with fatally low oxygen levels.

Increasingly some of our structures are mechanised and this can lead to entrapment hazards with structures such as lock and bridges moving unexpectedly, giving the potential for people to be crushed between the moving and static elements of the structure. It is essential that agreed lock-off procedures are implemented when it is necessary to work within the confines of such structures. Sometimes the hazard can change as a result of the day-to-day operation, for instance a full lock does not represent such a hazard to falling from a height as does an empty lock.

The Health and Safety File for the works should include reference to this Code or a statement that the Trust's agreement must be obtained before any works of maintenance, alteration or demolition are undertaken.

Please note the above information is general to the canal and river network. There may be site specific information that the works engineer can make available and you should request this information.

11. FEES

In general, the Trust will normally recover all reasonable costs associated with the works.

The Application Fee, to be paid upon notification of the works, is £380 + VAT. This covers the initial administration associated with each project. The application fee will be valid for up to 12 months, a new application will be required if no works are undertaken within this period.

The fee and any further costs can be paid by Credit / Debit Card by telephone or online, by BACS transfer (please contact the Works Engineer for details) or by invoice against a Purchase Order.

A receipt will be issued upon receipt of each payment.

The Trust will issue invoices throughout the life of the project at a frequency of not less than 1 month and not greater than 3 months.

In the event of late payment, the Trust may charge a rate of 8% above the Bank of England base rate on overdue amounts. The Trust also reserves the right to claim debt recovery costs.

At the discretion of the Works Engineer, for projects of a domestic nature a reduced application fee of £150 + VAT may be applied.

Reasonable costs include time (measured in hours) dedicated to the application of this process. This will include the time of the Works Engineer and other staff of the Trust or Consultants as may be required.

The current rates per hour for Trust staff are as follows (subject to annual increases):

Grade	Rate (£/hr)
Administration / Operational	80
Technical / Supervisory	115
Professional / Management	155
Senior Management/Principal	215
Internal Legal Team	261

The Works Engineer is classed at Professional / Management.

Consultants and Contractors procured by the Trust as part of the process will be re-charged to the third party.

The Third Party will be required to sign a cost undertaking to guarantee that the Trust will receive payment. The Works Engineer will not progress a project past the initial application unless the cost undertaking is in place.

The Works Engineer will advise upon the amount to be included in the Cost Undertaking. This is usually a minimum of £5,000. N.B. The cost undertaking is for a sum exclusive of VAT.

Disbursements - subsistence and other out-of-pocket expenses will be recharged at cost. Car mileage will be at 56p per mile.

Costs incurred for projects which are cancelled by the third party will still be invoiced.

The Works Engineer will be happy to provide an outline quotation in advance of the works. This will clearly be subject to change as the project progresses as the required inputs from the Trust's staff are established. As a guide, the following charges are typical in addition to the application fee, and are quoted ex of VAT:

NOTICES

For issuing / amending a notice - £700

STOPPAGES

For a navigation stoppage in "Winter" (1st November to 29th February) a fixed weekly charge in the amount of £7000 will be applied.

A late booking fee of £10,000 will be applied for stoppages requested after 1st March, as such applications will require a bespoke review and approval process.

Once the stoppage is applied for, the fees for that stoppage become due and payment will be invoiced in April. Please note no refunds will be made in the event of any subsequent cancellation by the Applicant or reduction in stoppage time. If a stoppage is not approved by the Trust, stoppage fees will be refunded to the applicant.

All relevant stoppage documentation must be submitted at least 3 months prior to the commencement of the stoppage. A penalty fee may apply for late submission or there is a risk of the stoppage not being allowed to take place. The stoppage fee will not be refunded if the stoppage is cancelled due to late submission of documentation.

Night Time Stoppages

A fee of £1000 per night or £7000 per week of night time in the low season (winter) and £2000 per night or £14,000 per week of night time closures in the high season (Summer).

A penalty will be imposed if the waterway is not open by 06.00 (see penalties below).

Unauthorised Stoppage Overruns (including night time) – Penalties

The Trust will not normally permit stoppages to overrun beyond the agreed period. Should your project overrun without authorisation beyond the agreed period the Trust will impose a number of sanctions in order to ensure the waterway is reopened as soon as possible. In signing the Code of Practice, you are agreeing to pay the reasonable financial penalty imposed together with reasonable compensation to affected Trust customers and waterway business.

The sanctions include (but are not limited to):

- Penalty fees of £10,000 minimum for each day of the unauthorised stoppage overrun (these fees will be advised by your Works Engineer before your works commence on site)
- Reasonable compensation payment to identified Trust customers and waterway businesses who have suffered loss as a result of the additional stoppage
- The Trust requires the site to be returned free from any plant, equipment, debris used in the course of the works to which the stoppage applies
- Recovery of costs (including legal fees and interest) incurred by the Trust in clearance of machinery and/or debris left on the land following completion of the works

USE OF WATERSPACE

Works that require the use of the waterspace may be subject to charges depending on the details. The Works Engineer will be able to advise.

TOWPATHS

For a towpath closure - £800 per week

MISCELLANEOUS

Issuing a cessation of works notice - £700

Wharfage – this includes mooring operational craft, their lifting in and their lifting out – costs to be determined upon receipt of the details by the works engineer.

SITE ACCESS PERMIT FEES

One month - £200

One to 6 months - £250

Greater than 6 months – by negotiation only

SPECIFIC TASKS

Some typical costs are included below for specific tasks, you should note that these can vary dependent upon the complexity of your scheme and the amount of staff time required to consent your scheme:

Bridge or Structure Inspection:

- From Towpath - £530
- From Towpath (some of inspection team in the water) - £1250
- By boat or rope or under bridge unit/working platform - £1600
- Plus pontoon charges at £12/sq. m/week
- By divers (with or without boat) - £2500

In addition to the above guide costs you will still be responsible for the initial sign on fee.

SCAFFOLDING / SAFETY FENCING / HERAS FENCING / BOARDING

A charge is made based on the duration, length and width of these items. The minimum charge is £6 / linear m / sq. m/ week. The maximum charge is £30 / linear m / sq. m/ week. Charges are not prorated for shorter durations. The actual charge for your scheme will be determined by the Works Engineer.

Large scaffolds requiring an extensive use of land will be managed through a licence (see section 4).

N.B. Any vessel or craft on the waterway for which the Third Party has obtained the permission of the Works Engineer for use in completing the works shall be licensed, used and moored in accordance with the Trusts Bye-Laws.

SUMMARY OF COSTS

A summary table of our costs is presented below for information.

Description	**Rate/Value**	
Application/Registration Fee Applicable to all projects / schemes	£380	
Staff Time (Works Engineer is Professional / Management)	**Grade**	**Rate (£/hr)**
	Administration / Operational	80
	Technical / Supervisory	115

	Professional / Management 155 Senior Management / Principal 215 Internal Legal Team 261
Site Access Permit	Up to 4 weeks: £200 Up to 6 months: £250 Over 6 months: By negotiation/license only
Notices: Issuing or amending a notice Cessation of Works Notice	 £700 £700
Winter Stoppages in line with process	£7000 per week
Unauthorised stoppage overrun fee	£10,000 minimum per day
Towpath Closure	£800 per week
Scaffolding (rates vary by location/impact)	By negotiation
Temporary fencing along our boundary e.g.: Heras, site hoarding etc.	£12 per linear metre per week
Pontoon charges	£12 per square metre per week
Surface Water Discharge Review	£3000
Land Occupation (e.g., for site compound)	By negotiation
Inspection activities	From Towpath: £530 From Towpath (some of inspection team in the water): £1250 By boat or rope or under bridge unit/working platform: £1600 By divers (with or without boat): £2500