



**INLAND
WATERWAYS**
ASSOCIATION

GUIDANCE NOTE

*Site Set-up &
Organisation*

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INTRODUCTION

Setting up a construction site and its ongoing organisation are important items to consider for any construction project. It is essential to get the site set-up right at the start to avoid spending time later reorganising the site.

The programmed duration of the project, timing of the work parties and the expected numbers of volunteers will influence the site set-up.

The linear nature of some canal restoration projects may require the establishment of more than one compound area. The logistics of moving plant, materials and equipment will require planning to reduce the amount of double handling. If the work at several locations on a linear site is relatively small scale (not warranting a full compound at each) such as minor repairs at three locks separated by lengths of towpath, a main compound could be established at one location. The work at the separate locations would need to be carefully planned to ensure plant, tools, equipment and materials are available at each work area. Provisions for the welfare of volunteers will need to be considered, such as using the main compound for rest breaks. Security at each of the work areas during rest breaks may require the use of lockable storage units or staggered breaks so that the site is always attended.

Signage on and around the site is important to ensure that new volunteers are aware of their surroundings and the possible activities taking place, making the site a safer and less confusing place. Signage placed at the site entrance can advise the requirements for personal protective equipment (PPE) and warn members of the public. Traffic management will need to be signed to segregate pedestrians and plant and indicate the route of any one-way system.

Signage for materials storage and waste facilities will result in less contamination and waste materials and will ensure products are not mixed. It will identify where hazardous materials are stored. The assembly point in the event of an emergency must be clearly signed.

When setting up a site, mobile phone connectivity is important. Although the use of mobile phones during working hours should be discouraged, they are useful in the event of emergencies or break-down of plant. They are useful on linear sites to maintain communication between sites. Some restoration projects are led by different people on consecutive days and mobile phones can be used to pass progress photos during the working day.



WELFARE

The Construction (Design and Management) Regulations (2015) (CDM) Schedule 2, details the minimum welfare facilities required on a construction site. Refer to the guidance note Volunteer Health and Welfare.



Sanitary conveniences - should be suitable and sufficient at accessible places, must be adequately lit and ventilated, kept clean and orderly. Separate facilities should be provided for men and women or should be a separate room which is lockable from the inside.



Washing facilities - should be suitable and sufficient, including showers if the work is particularly dirty, at accessible places in the immediate vicinity of every sanitary convenience and changing room. They must include clean hot and cold or warm water, soap and a means of drying. They must be sufficiently lit and ventilated and kept clean and orderly. Separate facilities should be provided for men and women or should be a separate room which is lockable from the inside.



Changing rooms & lockers - suitable and sufficient changing rooms must be provided if a worker has to wear special clothing or where the worker cannot be expected to change elsewhere. Separate facilities should be provided for men and women. Changing rooms must be provided with seating and facilities to enable a person to dry personal effects and clothing. Facilities must enable persons to lock away any special clothing which must not be taken home, their own clothing which is not worn during working hours and their personal effects.



Drinking water - an adequate supply of drinking water, marked by an appropriate sign. A sufficient number of suitable cups must be provided.



Facilities for rest - suitable and sufficient rest rooms or areas at accessible places. They must be equipped with adequate number of tables and seating with backs, include suitable arrangements to ensure meals can be prepared and eaten, a means for boiling water, be maintained at an appropriate temperature and where necessary have suitable facilities for any woman who is pregnant or who is a nursing mother, to rest lying down.

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On a restoration project that only holds infrequent week long work parties, a temporary shelter is erected for the duration of the work party. This is deemed to satisfy the requirements for shelter.



These minimum provisions may seem onerous on a restoration site with a limited budget, but volunteers will appreciate any investment in welfare provisions and their morale will improve encouraging their return to future work parties. There are limitations on a site but the use of temporary facilities, such as a gazebo for shelter and a means to heat water will make them more comfortable. You can suggest that volunteers bring dehydrated food that only needs the addition of hot water to make a hot meal.

MATERIALS & WASTE STORAGE

- 1 When planning a construction project the type of materials required for the permanent and temporary works needs to be considered. The order that materials will be required and delivery schedules will affect the quantity of materials that needs to be stored on site.
- 2 The choice of loose or bagged material will affect the storage, bulk materials may need a designated store to be constructed before delivery to avoid excessive waste. Materials may need to be stored in dry conditions.
- 3 When stacking materials make sure that the stacks are stable and not likely to topple over. It is worthwhile creating a firm level base before stacking material.
- 4 Fuel stores and other flammable material, such as compressed gas, need to be stored away from other site buildings and where accidental ignition would cause a fire risk.
- 5 Hazardous materials will have their own special storage requirements. Part of the risk assessment carried out under the Control of Substances Hazardous to Health Regulations (COSHH) includes how the materials should be stored and handled. More details are included in the guidance note on Control of Substances Hazardous to Health.
- 6 Plan deliveries so that there is time and space to unload and store the materials before the next delivery is scheduled. Make sure that there is adequate and appropriate equipment for off-loading and storing.
- 7 When planning the area for materials storage, consider how the materials will be transported to the work site and what order they will be required.
- 8 Make sure that there is an easily accessible space for waste skips to allow segregation of materials. Consider bulk materials that may need to be disposed off-site, such as surplus excavated material.
- 9 Plan mixing areas so that any wash water does not contaminate the ground or water course. Brick cleaning areas should be sited so that the arisings can be easily removed and the cleaned bricks can be placed in a safe storage area.
- 10 Keep storage areas clean and tidy, good house-keeping is likely to lead to a safe working environment.



TRAFFIC MANAGEMENT INCLUDING PARKING

One of the first considerations for traffic management is how vehicles will get from the public highway to the work area. Where possible use existing routes. If none are available consider the best option for providing access, include for reinstatement once the construction is complete. Permission may be needed to travel across third party land.

The entrance to the site should be well signed so that visitors and delivery drivers know where to enter the site. Make sure the entrance is wide enough for delivery vehicles or plan an alternate location for offloading deliveries off any public highway.

Make sure there is sufficient space for car parking for the number of volunteers and visitors that are likely to be on the site at any time. The parking area should allow for vehicle maneuvering.

The parking area should have a clean surface. Volunteers and visitors would want to be able to change footwear so that dirt is not transferred to their vehicles. Drivers will not want the risk of their vehicle being stuck in soft ground.

If possible the parking area should be separate from site plant routes so that dirt from the site is not deposited in the parking area and there is less risk of vehicle collisions.

Plant routes around site should be well marked and should be separate from pedestrian routes wherever possible. If routes are shared between plant and pedestrians implement a speed limit and procedure to allow safe plant movements and make this part of the site induction.



Arrange for a designated plant parking area. Fuel should be stored where it can be easily accessed by plant or for filling containers to refuel plant and equipment.

Ideally traffic should not have to reverse because visibility is compromised when reversing. Where possible a one-way system should be implemented. This is difficult to achieve on a linear site and the traffic route may need to include turning/passing places.



SECURITY

When setting up a construction site consideration needs to be given to security. Fences and lockable gates will prevent casual interference on site but will not deter determined criminals.

Plant left on site should be switched off and the keys stored in a secure place. Plant should also be immobilized. Equipment and tools should be locked away in a secure store. It may be better on small sites to remove equipment and tools from the site. Fuel should be stored in a lockable store or fuel tank.



On larger remote sites automatically operated floodlighting may be worth considering (perhaps even used in conjunction with cctv cameras).



PUBLIC

A requirement under the Health and Safety at Work Act etc is that any work activities should be carried out in such a way that the health and safety of members of the public is not put at risk.

If the work site is open to members of the public, such as an open towpath / footpath, or the public can gain access, work activities need to be carried out in such a way that the public is not put at risk.

Children are particularly at risk due to their inquisitive nature and may treat a construction site as a playground.

It may be possible to exclude the public by fencing off the work area, but consideration still needs to be given to the activities of trespassers.

Set up signs warning the public that work activities are taking place. Some operations, such as lifting over a towpath, may require a diversion route or the use of a banksman to control pedestrians.

Some things that need to be considered:

- ① Plant movements.
- ② Dust from the site.
- ③ Smoke from bonfires.
- ④ Unattended bonfires.
- ⑤ Noise.
- ⑥ Hazardous materials.
- ⑦ Uneven surfaces leading to slips, trips or falls.
- ⑧ Tools and materials left on public access routes.
- ⑨ Potential falls from height, including access onto ladders.
- ⑩ Exposed services.
- ⑪ Falling / flying debris.
- ⑫ Open excavations.
- ⑬ Dropped tools and materials.
- ⑭ Water.

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When lifting large coping stones onto a lock chamber using a crane, a banksman was placed on the towpath to stop the lift operation when members of the public were passing. Members of the public waited with the banksman to watch the lift and to find out what was going on.

ACCESS, EGRESS & ASSEMBLY POINT

The access route needs to have clear signage directing volunteers and visitors to the common meeting point.

Access routes around the site need to be clearly defined and communicated to volunteers and visitors as part of the site induction. Where possible there should be separate routes for vehicles / plant and pedestrians. The routes should be prepared to reduce the risk of slips, trips and falls.

Access into excavations or down slopes should be by means of a secured ladder, steps or a shallow gradient ramp. A secured ladder access should be provided for scaffolds.

Access routes running alongside vertical or steeply sloping drops must be provided with edge protection. Access routes should be kept clear of plant, equipment, tools and materials at all times.

The assembly point in case of emergencies should be clearly marked. The emergency procedure must form part of the site induction. Emergency services should be made aware of the site activities and the location of the assembly point in case of emergencies.



SERVICES & WATERCOURSES FIRST AID

During the project planning stage a service search should be initiated to ensure that there are no unknown underground or overhead services that may affect the work. The service providers should be contacted at an early stage to see if there are any requirements for working close to their equipment.

Overhead services will need signage and protection. Special considerations will be needed if work is to be carried out under them. Advice will be provided by the service provider.

Underground services may need to be protected if plant and equipment is travelling over them. If underground services cross an excavation, they will need to be supported. Prior to any excavation underground services will need to be located and identified. A Cable Avoidance Tool (CAT) can be used to locate live services and can be used with a genny to locate metal services. Excavation to locate services should be carried out using hand tools that are not likely to damage the service, such as spades and shovels, do not use picks or forks. More detailed information can be found in the guidance note on Underground and Overhead Services.

Health and Safety Executive (HSE) guidance note L74 sets out the requirements for first aid on site. To determine the requirements for your site, a first aid assessment is needed to ensure adequate and appropriate provisions are in place. You will need to provide sufficient first aid equipment (first aid kits), facilities and trained personnel.

After your first aid needs assessment; it might be beneficial to have personnel trained to identify and understand symptoms and able to support someone who is experiencing a mental health issue.

An essential part of first aid provision is an accident book, which is kept in the first aid kit to record accidents or incidents occurring on site. Major injuries, illnesses and occurrences need to be reported to the Health & Safety Executive (HSE) under Reporting of Incidents, Disease and Dangerous Occurrences regulations (RIDDOR).



Any work near a main river will need consent from the Environment Agency. Main rivers can be identified from their website. Obtaining consent can take some time so make sure you allow time in your project planning.



Full details of first aid and accident reporting is contained in the guidance note First Aid at Work and Reporting Accidents.

OFFICE ACCOMMODATION

Depending on the size of the project and the likely duration, some form of office accommodation may be required. The office would be the first point of call for any volunteers and visitors and should be sited close to the entry point of the site. It should be easily accessed from the parking area and the pedestrian route should be well signed.

The office would be used to house any documents required for the project including:

- ① Project plan (Construction phase health and safety plan).
- ② Any pre-construction information.
- ③ Drawings.
- ④ Risk assessments and method statements.
- ⑤ COSHH assessments.
- ⑥ Test certificates for plant and equipment.
- ⑦ Site records, including signing-in sheet and inductions.
- ⑧ Information to be passed on for the health and safety file.
- ⑨ The accident book.

The office would provide first aid facilities and may provide some welfare provision. A full list of notices and records to be kept on site is given at the end of the guidance note Preparing the Project Plan.

PLANT & EQUIPMENT

The scope of the project will determine the plant and equipment that will be used to complete the project. If you use any plant and equipment you will have duties under the Provision & Use of Work Equipment Regulations, PUWER.



FIRE PREVENTION & CONTROL

Fires can kill, injure and cause serious human suffering and financial loss and potential dangers may be severe on construction sites where hot works are combined with circumstances that could allow fire to spread. HSE have produced guidance note HSG 168, Fire safety in construction.

A fire risk assessment should be carried out by a responsible person and should follow the general lines for all risk assessments, namely:

- ① Identify the hazards.
- ② Identify the people at risk.
- ③ Evaluate, remove, reduce and protect from risk.
- ④ Record, plan, inform instruct and train.
- ⑤ Review.

The two ways of addressing fire in construction is prevention and prepare for and deal with the consequences.

Flammable materials should be kept away from potential ignition sources. Keeping flammable waste, such as paper rubbish, away from heat sources, such as sparks when cutting or grinding, will prevent fire occurring. Bonfires should be sited and controlled so that the flames will not spread to other flammable sources.

When carrying out hot works, a permit to work system should be adopted. The use of suitable fire extinguishers may be appropriate on a construction site, but should only be used by people who are trained to use them. The type of extinguisher needs to be selected to deal with the possible types of fire likely to be encountered.

On larger sites with a higher risk of fire occurring it is worth considering contacting the local fire brigade and inviting them to the site to give advice and make them aware of site conditions.

Further information can be found in the guidance note on Fire and Electrical Safety.



USEFUL RESOURCES:

Schedule 2, CDM

COSHH

Health and Safety at Work etc Act

Cable avoidance tool

Environment Agency Main River Map

HSE Guidance L74

HSE First aid assessment

HSE Accident book

RIDDOR

PUWER

WRG Driver authorisation scheme

HSE Fire safety in construction, HSG 168

Sign up to read the full Practical Restoration Handbook and supporting resources here:
waterways.org.uk/practicalrestorationhandbook



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