INLAND WATERWAYS ASSOCIATION

GUIDANCE NOTE

Preparing the Project Plan

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INTRODUCTION

Volunteers are the lifeblood of the waterway restoration sector. Undertaking highly ambitious projects, big and small, requires the right planning to ensure health, safety and welfare considerations are taken into account to schedule the works and provide the necessary materials, plant and equipment at each stage of the restoration. Your volunteers are giving their time and effort and deserve the effort involved in providing a suitable Project Plan.

Pre-construction and project planning are important because they set-out the vision of the restoration group and provide a clear focus and objective for the restoration. They allow restoration groups to realistically attribute budgets and timescales, along with overseeing the overall quality of each phase. Plans allow the restoration group to demonstrate expertise in the field to external stakeholders and take on a leadership role within the restoration movement. Finally, and most importantly, they help manage the risk to those involved, working on site or overseeing the project.

The Construction (Design and Management) Regulations (CDM) cover the management of health, safety and welfare when carrying out construction projects. Restoration projects are classed as construction work and are included under these regulations. CDM requires the preparation of a construction phase plan to set out the health and safety arrangements for the site. At IWA we call this the Project Plan.

A Project Plan typically includes a variety of processes that provide an overarching plan for the coordination, design and execution of a construction project. No two Project Plans are the same. The Project Plan is a live document and can be reviewed and revised as the project progresses to take account of any changes, such as, methodology, timing or design.

The idea of writing a Project Plan can be daunting, especially in today's busy life, where everyone is being asked to do more but with less. In this guidance note we look at the pre-construction planning and how to put a Project Plan together including some tips to help you write your plan.

Project planning must start during the pre-construction phase of the project. Information gathered by the client and designer is used to compile the Project Plan.

For large projects the Health and Safety Executive (HSE) needs to be notified using the F10 notification. The criteria for notifying the HSE is; where construction work on a site is likely to last more than 30 days and have more than 20 workers working at the same time or exceed 500 person days of construction work.

More detailed information about CDM can be found in the guidance note Construction (Design and Management) Regulations.

PRE-CONSTRUCTION

The pre-construction phase of a project is when the planning, design and budgeting work is carried out. The restoration group may find themselves acting as client, designer and contractor under CDM. However it is still important to carry out thorough planning. Allow plenty of time for proper planning to avoid delays later on.

The scope of work will be decided early on and the first requirement will be to consider what permissions are required to allow the work to proceed. Permission is likely to be needed from the land owner, local authority, sitting tenants and neighbours. The Environment Agency may need to be consulted and give consent for the work if it is on or near a main river.

The location of the site will need to be taken into account. The site may be remote and need a dedicated access from the nearest highway in order to allow plant and deliveries to be made to the site. On a long linear site, such as a canal channel restoration, you will need to consider how materials, plant and equipment will be moved to the site and how pedestrians can move about safely in the presence of mechanical plant.

If the site includes public Rights of Way you may need to consider if the Right of Way needs to be closed and a diversion set up. You will also need to consider how to deal with members of the public who use the site.

When planning any work you should consult any plans or drawings for the site. There may be some historic documentation that shows past hazards, such as a canal channel being infilled as a council tip and toxic waste being present.

The condition of any existing structures must be considered and you will need to consider the effect of your work on the stability of them. Excavating next to an existing structure could cause it to collapse.

Ground conditions may need to be investigated and a search for underground or overhead services, such as gas mains, water or sewage pipes or cables, may be required. The service search may show that a service diversion is required. You will need to decide the route of any service diversion as it may involve access and wayleaves on neighbouring property.

The history of the site may indicate that contaminated ground is present. You will need to plan how you will deal with any existing hazardous material on your site.

An environmental appraisal will be required to identify the presence of protected species such as Great Crested Newts and water voles, or invasive species. Protected species may need to be relocated prior to your work. Invasive species such as Japanese Knotweed may need to be eradicated in advance of your work. Both of these activities can take time and planning to implement. You will need to consider the biodiversity net gain for your project. Further information is included in the guidance note Environmental Considerations.

The work may require some design or materials specification. You will need to clearly define your objectives in a design brief and provide information to your designer. If you are using specific materials you will need to consider whether your volunteers will need specialist training during the construction. For example an EPDM liner was specified for a canal channel and required specialist jointing. The manufacturer sent staff to show how to place and join the liner.

Hazardous materials should be avoided, but in some cases cannot be eliminated. Safety data sheets will be required to prepare an assessment for use on site.

The design will need to consider how the structure will be built safely. In the commercial world the designer may consult with the contractor as the design is being developed. In the restoration sector volunteers may need to be consulted as the design develops. The designer will need to consider if significant temporary works are required to carry out construction.

The design must also take into account the use of the structure and how it can be maintained safely. The designer will have to take into account the hazards associated with their design and decide if these could be eliminated or reduced, for instance could off site fabrication reduce the need for a more risky in situ construction?

If the restored structure is going to be owned or adopted by another organisation, such as a highway or local authority, the design may have to comply with specific design standards. The other organisation may need to approve the design and time will need to be allowed for the approval procedure.

The design will need to be communicated to your volunteers. You will need to decide how that will be done. Drawings may be required and you may need to explain the content of the drawing to volunteers who cannot understand them.

At the end of the design, the designer will need to identify any residual risks that the design couldn't eliminate. The Project Plan will need to address these residual risks and identify control measures that need to be put in place.

A lot of information will be gathered during the pre-construction phase. This information will need to be used during the preparation of the Project Plan.

THE PROJECT PLAN

A Project Plan is the written record of what you have talked about regarding what you want to do, who you want to do it and how you want to do it safely. It defines the project deliverables and the milestones in achieving these. It identifies hazards on the site and how these will be controlled.

The Project Plan consists of three parts:

Site specific Project Plan

Method statements

Risk assessments

The Project Plan includes an emergency plan and details of local hospitals.

Project Plans allow restoration groups to realistically attribute budgets and timescales and to oversee the overall quality of each phase. Most importantly they help manage the risk to those involved in working on the site or overseeing the project and allow the inevitable changes on site to be managed.

WRITING A PROJECT PLAN

Preparing a Project Plan can be daunting, but it need not be a large document. The size of the document should reflect to size and complexity of the project. A large project may need a number of contributors so it is important to define and delegate the roles and responsibilities. It is important to nominate one person to oversee the Project Plan and ensure consistency across the whole.

1. Start by describing the scope of the works, the tasks that are to be undertaken and the outcome of the project. Describe the site, location, site set-up and where the welfare facilities are located. Show how the site will be accessed from the public highway and any traffic management onto and around the site. Use plans, photos and drawings to provide a visual image of the site.

2. Write down the roles and contact details for the project members (client, principal designer, principal contractor). Add any relevant authorities, such as Local Authority, Canal and River Trust and utility suppliers. Provide details of the F10 if the project is notifiable.

3. Establish an emergency plan and provide details of the nearest hospitals and other medical facilities. Detail how accidents and incidents are reported and acted upon.

4. Write down how the project will be phased and any work schedules, for instance there may be some temporary works to divert water flow or services to allow access to the site. This information could be presented as a gantt chart programme.

5. Next consider the site and any hazards that you can identify. Include in this utilities apparatus (electric, gas, water for example), ground conditions, environmental factors. The risk assessment that will be prepared will detail how the hazards will be controlled.

6. Consider the plant, materials and tools that will be required for the work and consider how these will be sourced, stored and used throughout the project. Include with this any assessments for hazardous materials under Control of Substances Hazardous to Health (COSHH). Use this information to put together the method statement. More detailed information is given in the guidance note on Control of Substances Hazardous to Health.

7. Site rules need to be established. These will include what personal protective equipment (PPE) is required, any parking restrictions, driver authorisations and competency of volunteers. Further information on PPE can be found in the guidance note on Personal Protective Equipment.

8. Finally carry out a peer review of the document and arrange for the document to be signed off. The client must be satisfied that the Project Plan is in place and has been sufficiently developed for the construction to start. Arrange for the named client, identified above, to sign off the Project Plan to demonstrate that they have seen it.

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During a lock reconstruction the water flow in the channel had to be diverted around the site and the canal channel dammed at both ends of the lock.

Remember the Project Plan is a live document and needs to be communicated to your volunteers. It should be kept on site and any changes on site should be considered and the relevant part of the document updated. Part of CDM is the need to consult volunteers on matters of health, safety and welfare. These discussions can form part of the Project Plan review and be included in later versions of the document. The Project Plan should be given a unique reference and revision number and date. Document control will be needed to ensure volunteers don't use out of date plans.

RISK ASSESSMENT & METHOD STATEMENT (TASK PLAN)

A risk assessment is about identifying sensible measures to eliminate or control the risks in your work place. It is required by the Management of Health and Safety at Work Regulations. Details on preparing a risk assessment are given the guidance note on Preparing a Risk assessment.

There are five stages to a risk assessment:

1. Identify the hazards. Think about the activities, processes or substances that could injure your volunteers, harm their health or cause damage.

2. Decide who might be harmed and how that harm might arise. Consider volunteers, visitors and members of the public.

3. Evaluate the risks and decide on controls to reduce the risk. How likely is the hazard to cause harm and what would the severity be. What can be done to reduce the risk, you do not need to eliminate the hazard.

4. Record your significant findings. Make a record of the hazards, how people may be harmed and what you have in place to control the risks. Any record should be simple and focused and communicated to everyone involved in the task.

5. Review your assessment and update as necessary if there have been any significant changes, improvements need to be made or you find that your control measures are not working. Consult your volunteers. Learn from any accidents or near misses.

The risk assessment will identify what personal protective equipment (PPE) is required to carry out the work.

Definitions

Hazard:
Anything that may cause harm, such as chemicals, electricity, working at height or near water, uneven ground, plant and tools.

Risk:
The chance, high or low, that somebody could be harmed by these and other hazards, together with an indication of how serious the harm could be.

A method statement (sometimes called Task Plan) is an in depth look at the tasks involved, breaking them down into individual elements. It is a detailed step-by-step methodology and details the plant, tools, equipment and materials, such as the constituents for a mortar mix, to be used for the job. It includes the specification for the materials and how they should be used.

The method statement should be produced and read in conjunction with the risk assessment and will make reference to any COSHH assessments. If specialist plant, tools or equipment is required the method statement may include other specialist documentation, such as a lift plan when using a crane.

If the task is high risk, such as working at height on a scaffold, it should include a permit to work system to be followed.

Common problems and difficulties about Project Plans – Q & A:

1. **It's just a small project, surely it doesn't need a big plan?**
The Project Plan should be commensurate with the size of the project. However even a small project needs a Project Plan to demonstrate that planning has been undertaken.

2. **There are still too many unknowns with my project, surely there's no point in starting to write the Project Plan yet?**
The Project Plan should be started and all the current information included. The Project Plan is a live document and can be developed as the project grows and more information becomes available.

3. **It's all going to change anyway, so what's the point?**
The Project Plan is the starting point and will develop with the project. Change is inevitable but having an initial plan in place allows any changes to be thought through and recorded.

4. **What if someone challenges my Project Plan and I have got something wrong?**
Construction projects are complex and there can be more than one way to carry something out. Discuss any queries and explain your thinking, it may be that someone else has seen something that you have missed or seen a different way to carry it out. It can be a good thing and shows that somebody has read what you have written.

5. **Is it really worth doing when no-one will ever read it?**
The Project Plan needs to be communicated to those carrying out the work because it is in their interest to carry out the work safely.

6. **I don't have time to do a Project Plan, I just want to get on and do the job.**
You have a duty of care to your volunteers. A written plan will demonstrate that you have considered the hazards with the work and identified measures to control these to allow the work to be carried out safely.

7. **I have a lot of volunteers who just want to work. They are not interested in a Project Plan, how can I convince them to use it?**
Not everyone will want to read the whole Project Plan, but incorporate the appropriate method statements into your daily briefing and toolbox talks. This way the Project Plan can be delivered in easily digestible chunks. It is everyone's responsibility to ensure the Project Plan is completed. We all have a vested interest in running a successful restoration project.

8. **What's out there to help me write a Project Plan?**
The IWA Restoration Hub has a number of templates and examples of Project Plans, risk assessments, method statements and COSHH assessments.

NOTICES & RECORDS

The selection of the notices and records to be kept will be dependent on the activities that are being carried out. The list of requirements below seems onerous but unless your project is especially complex it is unlikely you will require all of them. Notices will provide information and some will be a legal requirement.

Record keeping is a way of ensuring that inspections and examinations are carried out. Records of toolbox talks demonstrate that on-site training is being carried out. Some records are a legal requirement, such as scaffolding inspections.

The list of key requirements for activities likely to be carried out on a restoration site is shown below, taken from CITB.

Category	Brief description	Legislation
Accident book BL510	Report of accident, must comply with General Data Protection Regulation	Social Security (Claims and payments) Regulations, Social Security Administration Act and Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR)
F2508	Report of injury or dangerous occurrence (on-line form)	RIDDOR
F2508A	Report of a case of disease	RIDDOR
F2508G1	Report of flammable gas incident	
F2508G2	Report of a dangerous gas fitting	
F10	Notification of a project	Construction (Design and Management) Regulations (CDM)
Air receivers	Safe working pressure and record of test	The Pressure Receivers Regulations
Asbestos	License, notice and records. Where appropriate, maintaining a written asbestos management plan	The Control of Asbestos Regulations
Builders skips	On road permit, lighting and signs	Highways Act Section 139
COSHH assessments	Maintenance of assessment forms and records	The Control of Substances Hazardous to Health Regulations (COSHH)
Danger areas	Identify with signs	Work at Height Regulations
Dangerous substances and explosives	Display notices	The Dangerous Substances and Explosive Atmospheres Regulations
Electrical equipment	Records, certification of new installations	The Electricity at Work Regulations
Electric shock placard	Display in work places	The Electricity at Work Regulations

Emergency evacuation	Emergency evacuation route signage as necessary and assembly point sign(s)	CDM
Excavations, cofferdams and caissons	Records of inspections of places of work	CDM
Falsework	Records of design, including calculations	CDM and British Standard 5975 Code of Practice for Falsework
Fire	Fire risk assessment and safety plan. Notices for extinguishers, fire points and other fire-fighting equipment	The Regulatory Reform (Fire Safety) Order
First aid	Notice regarding facilities and identity of first aiders	The Health and Safety (First Aid) Regulations
Fragile surfaces	Notice to be displayed (warning signs)	The Work at Height Regulations
Hazardous substances	Labels on containers. Manufacturers safety information, COSHH assessments	COSHH and EU Directive for Classification, Packaging and Labelling of Dangerous Goods
Health and safety policy	Display or distribute to all volunteers	Health and Safety at Work Act
Holes in floors and similar openings	Cover to be clearly marked (warning signs)	The Work at Height Regulations
Information for volunteers	Display approved Health and Safety Executive law poster or distribute approved leaflet to all volunteers	The Health and Safety (Information for Employees) Regulations
Insurance (employers liability)	Display of certificate	The Employers Liability (Compulsory Insurance) Act
Lead	Records of inspection and thorough examination of control measures	The Control of Lead at Work Regulations
Lifting operations	Records of inspection, examination and safe working load indication	The Lifting Operations and Lifting Equipment Regulations (LOLER)
Management of health and safety	Risk assessments, appointments, procedures	The Management of Health and Safety at Work Regulations
Manual handling	Assessment, marking of loads. training	The Manual Handling Operations Regulations
Noise	Marking of hearing protection zones	The Control of Noise at Work Regulations
Plant and equipment	Inspections and records	The Provision and Use of Work Equipment Regulations (PUWER)
Pressure vessels	Display of working pressure and other details	The Simple Pressure Vessels (Safety) Regulations

Protective clothing and equipment	Assessments, maintenance, training	The Personal Protective Equipment at Work Regulations
Safety signs	Signs and notices as appropriate	The Health and Safety (Safety Signs and Signals) Regulations
Scaffolding	Records of inspections, display of 'incomplete' notice	The Work at Height Regulations
Training	Records	Health and Safety at Work Act
Visual display units or display screens	Records of assessments, training, eyesight tests	The Health and Safety (Display Screen Equipment) Regulations
Waste management	Completion of duty of care documentation, forms, permits and certificates	
Work equipment	Suitability, maintenance, warnings	PUWER
Working time	Permitted hours of work	The Working Time Regulations
Working at height	Records of inspection of equipment	The Work at Height Regulations

The CITB has a set of checklists and forms, see link on p.14.

In the table the daily user checks, weekly inspections and the more onerous statutory inspections and examinations are shown.

Weekly inspections should be carried out by a competent person who has the knowledge and experience to carry out the inspection. Statutory inspections and examinations can only be carried out by people who are certified to do so.

RECOMMENDATIONS FOR INSPECTIONS AND EXAMINATIONS (TAKEN FROM CITB)

	Statutory or recommended						
Work activity plant item	Pre-use daily	Weekly record	Monthly record	Three monthly record	Six monthly record	12 monthly record	Form for statutory examination or report to comply with
Excavations, cofferdams and caissons	inspect	inspect					CDM
Plant and equipment (not electrical or for lifting)	inspect	inspect			examine	examine	PUWER

Work activity plant item	Pre-use daily	Weekly record	Monthly record	Three monthly record	Six monthly record	12 monthly record	Form for statutory examination or report to comply with
Plant and equipment (electrical) including fixed RCDs and portable 110 volt equipment	inspect	inspect		examine			Maintaining portable electrical equipment (HSG107)
Cranes and plant for lifting people, MEWPs harness, lifting accessories and safety nets	inspect	inspect			examine	examine	LOLER and PUWER
Cranes and plant used for lifting	inspect	inspect				examine	LOLER
Work at height, all scaffolds, working platforms, mobile towers, ladders and steps, and similar items	inspect	inspect			examine		Work at Height Regulations, PUWER and CDM
Fire-fighting appliances			inspect			examine	CDM and Regulatory Reform (Fire Safety) Order
Site offices electrical equipment and installation		inspect				examine	CDM and Workplace Health Safety and Welfare Regulations

USEFUL RESOURCES:

IWA Project Planning

CITB checklists and forms

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

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