

Practical Restoration Handbook

**Health & Safety - Section 3
Construction Design and
Management Regulations (1994)**

by

Dave Carnell and Mike Palmer

Please note that, for convenience, the Practical Restoration Handbook "Health & Safety" chapter is split into 4 sections:

1. Site Aspects
2. Personal Safety and Insurance
3. Construction Design and Management Regulations
4. Control of Substances Hazardous to Health

Although these sections are primarily separate there are subjects which overlap and so all four sections must be considered as one chapter. It is essential that all four sections are read together to get an adequate understanding of the Health and Safety requirements for waterway restoration.

INTRODUCTION

1. Introduction
2. Scope of CDM
3. Competence
4. CDM officers and their duties
 - 4.1 Client/Agent
 - 4.2 Planning Supervisor
 - 4.3 Designer
 - 4.4 Principal Contractor
 - 4.5 Contractor
5. Duties of the worker
6. Health and Safety Plan
7. Health and Safety File
8. Assessment techniques
 - 8.1 Method Statement
 - 8.2 Risk Assessment
 - 8.3 Safe System of Working
9. How do these roles apply to voluntary canal restoration?
10. Inspections, Registers and Records
11. Conclusion
12. Further Reading and Addresses

Appendix 1 – List of Texts and Publications Reference in PRH "Health & Safety Sections 1-4"

Appendix 2 – Examples of Health and Safety plans:

- Northsyke Footbridge
- London Canal Museum
- Leasowes Park Weir

Appendix 3 - Common Health and Safety abbreviations and CDM definitions

1. INTRODUCTION

- 1.1 The CONSTRUCTION (DESIGN AND MANAGEMENT) REGULATIONS 1994 (CDMR) were introduced in 1994 to implement the design and management aspects of the European Community Directive on Temporary or Mobile Construction Worksites (92/57/EEC). Unlike other health and safety legislation, CDMR imposes duties, not on employers per se, but on clients (those for whom construction work is being done) designers (including architects, quantity surveyors, etc.) and contractors. CDMR places responsibilities on other new duty holders – the principal contractor and planning supervisor (who oversee the health and safety arrangements during the design and planning phase of a project).
- 1.2 The objective of CDMR is to reduce the high accident rate in the construction industry by making those involved with construction projects consider health and safety issues as a fundamental part of designing a new project. This should be not only during construction, but throughout the whole life of a building or structure so that it is easy and safety to maintain and modify, and at the end of it's lifetime, demolish. CDMR requires the creation of a health and safety plan (for construction) and, so that future builders and architects know what they are dealing with, a health and safety file (for future construction works).
- 1.3 This section of PRH "Health and Safety" is intended to give volunteers (whether project planners or ordinary volunteers) an insight into the CDM legislation and the new responsibilities placed upon both them and others to plan, co-ordinate and manage health and safety throughout ALL the stages of a construction project.
- 1.4 As to whether your project falls under CDM regulations; only three people can decide this: the owner of the site, the officer of the local Health and Safety Executive or yourself. The authors would like to suggest that it will be least painless if you decide to comply before anyone else does.
- 1.5 The legislation does NOT make specific reference to volunteers, however unlike previous Health and Safety legislation it does not refer to paid workers (thus excluding volunteers) but simply considers everyone (workers [paid or unpaid] and public) that the responsible party has a liability for. It is, therefore, generally taken that volunteers do fall under at least some of the legislation if not all.
- 1.6 Responsibility for enforcing CDM is taken by the Health and Safety Executive (HSE) who have wide ranging powers to enter any site and inspect the site and associated documentation. Although not common, prosecutions can be severe, ranging from fines to imprisonment. HSE have always taken a keen interest in volunteer working - you have been warned!
- 1.7 At first glance CDM seems to be a long series of confusing, long winded definitions (often accompanied by confusing diagrams) and it must be admitted that unscrupulous "consultants" have profited by this confusion and incompetent managers have also used it as an excuse to put off or delay work.
- 1.8 However it will hopefully be seen that very little in the CDM legislation is new and what is new seems to help us. For a good organiser safety planning has always been an integral part of the planning of the project. He would have thought about such things as "will the dredger clear the electricity cables?" "Is the local casualty department open on a Sunday?" "Who do I ring if the dredger does bring down the power line?" The only difference is that instead of it being written down in his notebook and kept in his pocket, the notebook is now called the Health and Safety Plan and is kept in the site hut. This has obvious advantages if the powerline lands on the organiser. Similarly the dredger driver no longer has to think

“Who (if anyone) has checked if my dredger will clear the power line?” He now knows who is responsible, where the actual measurements are written down and what to do if anything changes.

- 1.9 As will be seen in section 7 it is possible to attempt to evade CDM requirements, however it is the authors opinion (and the policy of the Waterway Recovery Group [WRG]), that in the interests of the restoration movement as a whole it is considered “best practice” to adopt the recommendations of CDM.
- 1.10 The WRG Board firmly believes that following the spirit of the Health and Safety at Work Act for so many years has directly contributed to the excellent Health and Safety record that WRG holds. It is believed that CDM can further improve this situation.
- 1.11 This chapter is written for volunteers working on any waterway in the UK but it is worth noting that WRG and British Waterways (BW) have a joint booklet entitled “Volunteers Working Safely” that outlines what BW expect from volunteers wishing to work on their canals and what the volunteers can expect from BW. It is an excellent starting point for discussions with BW and is available from BW Regional Offices and IWA Head Office.

2. DEFINITIONS

- 2.0 The scope of CDM is based on the old definitions of whether a project was "notifiable" to HSE (this was basically defined as any project greater than 30 days in duration or more than 500 person days in duration).
- 2.1 Any previously notifiable project falls under CDM. In addition CDM applies to any work that includes demolition, regardless of the length of time or the number of workers. Finally, even if a project is not notifiable and involves no demolition then the design aspects of the work are still subject to CDM.
- 2.2 It is true, therefore, that by breaking down a restoration project into smaller and smaller jobs it could be possible to "wiggle" out of CDM for some parts of your project. This approach is to be avoided as the "overview" gained by considering the project as a whole is lost and risks that fall between specific jobs are not identified.
- 2.3 In addition the Health and Safety Executive (HSE) have made it clear that they will take a very poor view of anyone who tries to evade CDM by this technique. The widely held view is that it is only a matter of time before someone is prosecuted for just this.
- 2.4 British Waterways have also stated that it is their practice to consider all works as subject to CDM and they expect volunteer groups working on their waterways to do so too.
- 2.5 It is the case, however, that some aspects of the volunteers work are not covered by CDM. Straightforward hedge trimming, bank mowing or other such agricultural maintenance work is exempt. However, seeing as a full CDM assessment would not cover more than a page of A4, nor take much more than 10 minutes and is an excellent training exercise for people interested in safety legislation why not do one anyway? And when you hear someone say "Oh, I never knew a power cable ran through that hedge, I'll look out for that" you'll feel suitably smug, won't you?

3. COMPETENCE

- 3.1 This is undoubtedly the most common sticking point in the Health and Safety arena. The application of the word competent seems to most people to be entirely subjective. And to some extent this is true, however, it is a workable system. Although some areas do have situations where competence is clearly demonstrable – such as only a qualified civil engineer could design a highway bridge - there are many areas where there are no tests, exams or certificates – who is safe to set up a barrow run for concrete pour?
- 3.2 Where a straight definition or measure of competence is not given then an assessment must be made on whether the officer concerned is experienced enough (and has the resources) to complete the job. An alternative way of looking at this is that it is down to the Principal Contractor to prove his competence. This proof of competence does not necessarily take the form of a certificate, but may be just sufficient experience in the area concerned.
- 3.3 This is, of course, a generalisation and there are many areas where competence is carefully and objectively measured, however for some areas of Health and Safety competence IS a subjective matter.
- 3.4 One essential element of competence is that the person concerned has sufficient resources (such as skills, finance and especially time) to carry out their duties.

4. CDM OFFICERS AND THEIR DUTIES

- 4.0 The duties of CDM officers given here are taken from the HSE leaflet "CDM Regulations – how the regulations affect you" (ref. C400).
- 4.1 **The Client:** This is the owner of the waterway i.e. the navigation authority, landowner or Local Authority. their duties are:
- to appoint a competent Planning Supervisor and provide him with any information relevant to the Health and Safety of the project
 - to appoint a competent Principal Contractor
 - be satisfied that the Designers and Contractors appointed by the Planning Supervisors are competent
 - to ensure construction work does not start until the Principal Contractor has prepared a satisfactory Health and Safety Plan
 - to ensure the Health and Safety File is made available for inspection and use after the project is completed.

Where the client does not have the resources to fulfill these roles he may appoint an Agent.

- 4.2 **The Planning Supervisor:** Who has overall responsibility for co-ordinating the Health and Safety aspects of the design phase and for the early stages of the Health and Safety Planning and their duties are to ensure that:
- designers comply with their duties (in particular the avoidance and reduction of risk)
 - designers co-operate with each other

- a pre-tender Health and Safety Plan is prepared
- the HSE is notified of the project (this is normally done using Form F10rev)
- the Health and Safety File is completed and handed over to the Client

4.3 **The Designer:** Should ensure that the structures are designed to avoid risk or where this is not possible minimise risks to Health and Safety. This applies both whilst works are undertaken and after completion, including maintenance. Where risks cannot be avoided adequate information must be provided. Design includes the drawings, bills of quantities and written specifications for a project. They have a duty to:

- alert clients to their duties
- consider during the design phase the risks that may arise to those constructing and maintaining the structure
- design those risks out or
- minimise these risks if unavoidable
- ensure that the design communicates this Health and Safety information
- pass on this Health and Safety information to the Planning Supervisor
- co-operate with the Planning Supervisor and any other designers working on associated projects

4.4 **The Principle Contractor:** This is the main body working on the project, they should take account of Health and Safety issues when preparing and presenting tenders or similar documents. The Principal Contractor has a duty to:

- take over, develop and implement the Health and Safety Plan
- arrange for competent and adequately resourced contractors to carry out the work where it is sub-contracted
- co-ordinate the activities of ALL Contractors to ensure they comply with Health and Safety Law (such as Health & Safety at Work Act, Control of Substances Hazardous to Health etc.) and any site rules set out by the Health and Safety Plan
- ensure that contractors have information about risks on site
- obtain from contractors the main findings of their risk assessments and details of how they intend to carry out high risk operations
- check on the provision of information and training for workers and for consulting with them on Health and Safety
- monitor Health and Safety performance
- make sure only authorised people are allowed on site
- display the notification of the project to the HSE
- pass information to the Planning Supervisor for the Health and Safety File

4.5 **Contractors:** have duties to play their part in the successful management of Health and Safety during construction work. They should co-operate with the Principal Contractor and ensure that they:

- provide information for the Health and Safety Plan about risks to health and safety arising from their work and the steps they will take to control and manage the risks

- manage their work so that they comply with rules in the Health and Safety Plan and directions from the Principal Contractor
- provide information for the Health and Safety File, and about injuries, dangerous occurrences and ill health
- provide information to their workers

5. DUTIES OF THE WORKER

5.0 Under CDM all workers, whether paid or voluntary, benefit by being better informed and more able to play an active part in health and safety.

Workers are:

- required to work in accordance with the Health and Safety Plan
- entitled to free access to the Health and Safety Plan during the construction phase
- entitled to any free training required by the Health and Safety Plan
- able to express their views about health and safety to the Principal Contractor
- required to communicate any Health and Safety information back to the Principal Contractor as outlined in the Health and Safety Plan

6. HEALTH AND SAFETY PLAN

6.0 As mentioned previously CDM attempts to ensure that effective (two way!) communication takes place to minimise risks to both workers and the public. The Health and Safety Plan is the main vehicle for this communication.

6.1 In simple terms a preliminary draft comprising all the relevant Health and Safety information is drawn up by the Planning Supervisor. (In the commercial world this is known as the “Pre-tender Health and Safety Plan”). This will then be developed by the Principle Contractor based on the works intended to be carried out and the methods used. This continues until the Planning Supervisor is satisfied that it represents a satisfactory plan – this is the initial “Health and Safety Plan for the construction phase”. From this it will be possible to start the project.

6.2 Thus the Pre-tender Health and Safety Plan should include:

- A general description of the work
- Details of timing within the project
- Details of known risks to workers (e.g. buried cables)
- What information is required to demonstrate a Principle Contractors competence, and adequacy of resources
- Any other information that the Designer or Planning Supervisor considers necessary for the preparation of a Health and Safety Plan for the construction phase

- Expected welfare provision for workers

6.3 The Health and Safety Plan for the construction phase should include:

- A developed version of the Pre-tender Plan taking into account all issues raised. Risks identified either by the Pre-tender Plan or the further planning of the project by the Principle Contractor must be considered fully and minimised
- Arrangements for ensuring the Health and Safety of ALL who may be affected by the works
- Arrangements for the management of Health and Safety and the monitoring of compliance with Health and Safety Law
- Arrangements for the effective communication of any Health and Safety developments.
- Information about welfare arrangements.

6.4 Thus it can be seen that at the point of starting a project all the information is available for workers and clearly laid out guidelines exist for what to do once a problem is encountered. Any developments that pertain to Health and Safety must be added to the Plan in the manner described in the Plan. It is essential that deviations from the Health and Safety Plan are fully communicated to all parties responsible for developing the Plan (Designer, Planning Supervisor, Principle Contractor).

6.5 The Planning Supervisor is responsible for seeing that the initial Health and Safety Plan is developed sufficiently for works to start. The Principal Contractor then has the responsibility to develop the Health and Safety Plan and keep it up to date once works are underway.

6.6 Generally it is acceptable for a Health and Safety Plan to make reference to standard texts or guidelines providing that these guidelines are approved by the Planning Supervisor and available alongside the Health and Safety Plan. This is a common technique and can be seen in the Health and Safety Plan examples given in Appendix 2.

6.7 It is also worth noting that an initial Health and Safety Plan does not necessarily have to have all the answers but it is essential that all the right questions have been asked (and the source of the answer has been identified). This does not mean that “make it up as we go along” is an acceptable entry in the initial Health and Safety Plan but “exact method of concrete placement to be determined once dewatering has taken place (to be assessed by competent person following WRG “Concreting Guidelines”) may well be.

7. HEALTH AND SAFETY FILE

7.0 This is the ultimate evolution of the Health and Safety Plan. It is the record of information for the Client/end user, which tells those responsible for the structure in the future of the risks that have to be managed during maintenance, repair or renovation. Any hazards real or potential must be noted. It is the Planning Supervisor who has to ensure that it is prepared as the project progresses and is given to the Client when the project is completed. The Client has to make it available to those who will work on any future design, building, maintenance or demolition of the structure.

8. ASSESSMENT TECHNIQUES

- 8.0 In addition there are three other terms that frequently arise during development of the Health and Safety Plan; these are Method Statement, Risk Assessment and Safe System of Working.
- 8.1 **Method Statement:** this is the usual starting point for developing the Health and Safety Plan. It is an account of the intended jobs and the techniques that will be used. It is most often requested of the Principal Contractor by the Planning Supervisor but it can be used by anyone. It will probably not contain too much detail but will give the Planning Supervisor a good idea as to whether he is happy with the techniques that the Principal Contractor is suggesting. "Demolition of wing wall will be from the top down from scaffolding using electric hammers with waste material disposed of off site. Public access prohibited. Normal PPE." might be a typical entry. It sets out the tasks necessary, how they will be completed and any guidelines that will be followed. Once the Planning Supervisor is happy with this it will progress onto the Risk Assessment.
- 8.2 **Risk Assessment:** this is exactly what it says it is. It is a step by step examination of the project with the specific intention of highlighting risks that may occur during the project. It should highlight both long term risks (wall will require bracing for duration of project) and short term risks (care to be taken when excavator tracks past trench). Both WRG and BW support the judgemental approach to Health and Safety planning, to take full advantage of their workers knowledge and experience, rather than numerical or other fancy approaches that appear (spuriously) to be more scientific. Please note that the idea is not simply to highlight risks and then take precautions, ideally the risks are "designed out" altogether and appropriate precautions only taken if the risks are unavoidable. From the Risk Assessment the Safe System of Work is developed.
- 8.3 **Safe System of Work:** this is the logical result of a Risk Assessment and sets down the way that tasks are to be performed so risks are minimised. It will include, for example, comments on lifting and handling, control of access, evacuation and emergency procedures, material storage, protective clothing and equipment, etc.

9. HOW DO THESE ROLES APPLY TO VOLUNTEERS?

- 9.0 This is not as fixed as you would expect. Hopefully it can be seen that the definitions given in Section 4 fit reasonably well with the existing roles of canal owner/working party organiser/canal society/visiting group/canal camp/etc. The notes that follow are a generalisation of the roles, it must be stressed that these are not set in stone and with the mutual agreement of all parties they could be changed.
- 9.1 One question often asked is whether the role of a CDM officer is taken on by an individual or by a group. There is no fixed answer to this as to some extent it is dependent on the group involved i.e. does it exist legally. One thing is certain, if a group is accepted rather than any individual then a named representative will be required. An example of this would be if a Canal Group was the Principal Contractor then a blackboard on the site hut door with "today's leader is....." would be required.
- 9.2 When assessing the appointment of CDM Officers then the keyword is competence, and whether it is demonstrable in such areas as Health and Safety law, risk assessment, designing Safe Systems of Work. It is also necessary to ensure that an officer has the sufficient resources (such as skills, finance and especially time) to carry out their duties.

- 9.3 Assuming such competence is demonstrable there is no reason why a volunteer or a volunteer group could not occupy any of the roles of CDM officer (somewhere there must be a Canal society that occupies all five roles!). The local society or resident group would most likely take on the role of Principal Contractor and would have the job of developing the Health and Safety Plan by filling in all the details. Most importantly of all they must continue to do so as the work continues, for example filling in the gaps where the plan says "exact method of safe reconstruction to be determined after demolition". Remember that any modifications or additions to the Health and Safety plan should be communicated to and agreed by all parties.
- 9.4 Any visiting group such as a WRG weekend group or Canal camp would normally have the position of Contractor.
- 9.5 An example of a deviation from this standard arrangement would be a Canal Camp where a bridge owned by a local authority was to be replaced with a standard design, the local canal society had not worked on the bridge and it was separate from their usual sites. Given that the project can be viewed as a standalone job it may well be a sensible arrangement for the LA to take on the duties of Client and Designer and the Camp Leader (if competent and willing) to take on the tasks of Planning Supervisor and Principal Contractor. However, if the bridge was over a lock that was under restoration then it would be sensible for the project to come inside the existing Health and Safety management structure.
- 9.6 The exact breakdown of responsibilities is to be agreed by all parties and each officer and their contact details should be named in the Health and Safety Plan.

10. INSPECTIONS, REGISTERS AND RECORDS

- 10.1 It is often recommended as part of a Health and Safety Plan that items are inspected on a regular basis. Indeed it is often the case that there is a legal requirement to do so for such items as scaffolding, etc. There are two issues that often cause confusion; who is acceptable to inspect and how do they register their inspection?
- 10.2 Not surprisingly the issue of competence raises itself and again whilst there are many areas where competence is clearly defined (such as a scaffolders certificate) it may also be acceptable for someone with suitable experience to be considered competent within defined limits. People competent to inspect are listed in a Register and any inspections they carry out are listed in a Record. Although the case is different for each area (abrasive wheels, lifting equipment, welfare, etc.) the situation may best be illustrated by an example of how a volunteer site may comply with the spirit of the law.
- 10.3 Consider a reasonably complex scaffolding to gain access to replace a line of coping stones. The scaffolding should be designed by someone competent (this will be proven by a certificate), and installed by a competent installer (again certificated), who will sign it off as installed "as per design" in the Record of Inspections. Before leaving site he will also instruct volunteers with suitable experience of scaffolding on any important points about this scaffold and what frequency it should be inspected. These volunteers would be named in the Register of Inspectors. They would carry out inspections up to their level of competence (e.g. daily inspections or after a change of weather). These inspections would be kept in a Record of Inspections. But should the scaffold be struck by a falling coping stone they would not be competent to assess the safety of the scaffolding and the designer or installer would need to be called in to re-inspect.

- 10.4 Commonly used records are listed in Appendix 1. It is not absolutely necessary to use proper HMSO records (the HSE would rather see a ruled piece of A4 than nothing at all) but seeing as they cost only a few pence from HMSO it makes sense to use the correct forms. There is also further helpful guidance on the inside of each document. It is a requirement to keep these documents for at least 2 years after finishing the project.
- 10.5 It is strongly recommended that local societies compile a register of the competencies of their individual volunteers, even though this may be augmented for individual inspection regimes.

11. CONCLUSION

- 11.0. CDM promises great benefits but it will only work if all parties co-operate and communicate. Not only should it create a safer environment for workers and public alike but by taking an overview other benefits will accrue. CDM should result in a smoother running project with more questions answered before site work starts, better financial planning, lower hire costs, more efficient use of materials, less wastage, better time management, etc.
- 11.1 Volunteers have no reward but the satisfaction of sleeping well in their beds at night, they deserve adequate resources allocated to Health and Safety matters to ensure it is their bed they sleep soundly in and not the local hospital.

12. FURTHER READING AND ADDRESSES

"Volunteers Working Safely"
British Waterways
Willow Grange
Church Road
Watford
WD1 3QA

"CDM Regulations – How the Regulations affect you!"
"Construction Site Health and Safety Checklist (Construction Sheet 17)" - highly recommended
Health and Safety Executive
HSE Books
PO Box 1999
Sudbury
Suffolk
CO10 6FS

APPENDIX 1 – LIST OF TEXTS AND PUBLICATIONS REFERENCE IN THIS CHAPTER

Note that texts are listed under the section of the Chapter in which they are primarily referenced but may also be referred to in other sections. It is recommended that these texts are obtained as they will assist greatly with Health and Safety planning.

Section 1 – Site Aspects

Code	Title	Available from
	HSE Construction Summary Sheets	
SS2(rev)	Safe Use of Ladders	HSE
SS3 (rev)	General Access Scaffolds	HSE
SS6	Portable Electric Tools and Equipment	HSE
SS8 (rev)	Safety in Excavations	HSE
SS11(rev)	Safe Use of Propane and other LPG cylinders	HSE
SS12	Flame Cutting and Welding with Compressed Gases	HSE
SS16	The Control of Substances Hazardous to Health	HSE
SS17	Construction Site Health and Safety Checklist	HSE
SS26	Cement	HSE
SS28-35	Your Body at Risk: Are you Properly Protected?	HSE
SS50	Personal Protective Equipment: Safety Helmets	HSE
na	Noise in Construction	HSE
na	Construction (Working Places) Regulations 1966	HMSO
na	Carriage of Dangerous Substances in Packages Regulation	HMSO
na	Health and Safety at Work Act	HMSO

Section 2 - Personal Safety and Insurance

Code	Title	Available from
green book	Volunteers' Health and Safety Guide	WRG
B1510	Accident Record Book	HSE
IND(G) 84L	Leptospirosis - are you at risk?	HSE
SS18	Provision of Welfare at Fixed Construction Sites	HSE
SS46	Provision of Welfare at Transient Construction Sites	HSE
SS51	Construction Fire Safety	HSE
na	Insurance Guidelines	IWA

Section 3 - Construction Design and Management Regulations

Code	Title	Available from
na	Construction, Design and Management Regulations 1994	HMSO
F10	Notification of project to HSE	HSE
C400	CDM Regulations - How the Regulations affect you!	HSE
SS17	Construction Site Health and Safety Checklist	HSE
SS40	The Role of the Planning Supervisor	HSE
SS44	The Health and Safety File	HSE
	Guide to the Provision and Use of Work Equipment Regulations 1998	HSE
	Guide to the Lifting Operations and Lifting Equipment Regulations 1998	HSE
F91/CE	Lifting Appliances Record	HMSO
F91/A	Scaffolding Record	HMSO
F91/J	Lifting Gear Record	HMSO
F2202	Welfare Arrangements Record	HMSO
na	Volunteers Working Safely	BW

Section 4 - Control of Substances Hazardous to Health

Code	Title	Available from
na	Control of Substances Hazardous to Health 1988 & 1994	HMSO
na	Health and Safety at Work Act, 1974, 1992	HMSO
na	Factories Act 1961 Revised	HMSO
na	Health and Safety Information, Employees Regulations 1989	HMSO
na	Highly Flammable Liquids and Liquefied Petroleum Gases Regulations 1972	HMSO
na	Approved Code of Practice Control of Substances Hazardous to Health 1994 (ACOPS)	HMSO
	Health and Safety Executive Guidance Notes	
	Environmental Hygiene Series:	
EH17	Petroleum based adhesives in Building Operations	HSE
EH8	Arsenic: toxic hazards and precautions	HSE
EH9	Spraying of highly flammable liquids	HSE
EH16	Isocyanates: toxic hazards and precautions	HSE
EH22	Ventilation of Buildings	HSE
EH26	Occupational Skin Diseases: Health and Safety Precautions	HSE
EH40	Occupational Exposure Limits (Revised Annually)	HSE
EH42	Monitoring Strategies for Toxic Substances	HSE
EH43	Carbon Monoxide	HSE
EH44	Dust in the Workplace: general principles of protection	HSE
EH46	Exposure to Mineral Wools	HSE
	General Series:	
GS5	Entry into Confined Spaces	HSE
GS29/4/	Health and Safety in Demolition Work. Part 4	HSE

GS46	In Situ Timber Treatment using Timber Preservatives; health and environmental precautions	
	Medical Series:	
MS8	Isocyanates; medical surveillance	HSE
MS15	Welding	HSE
	Hazard Information Sheets	
No. 1	Cements 1985	HSE
No. 5	Solvents 1988	HSE
No. 7	Skin Hazards 1988	HSE
No. 8	Pesticides 1989	HSE
	Construction Summary Sheets	
SS15	Confined Spaces 1988	HSE
SS24	Chemical Cleaners	HSE
SS26	Cement	HSE
SS27	Solvents	HSE
SS36	Silica	HSE
	Respiratory Protective Equipment	
BS4275	Recommendations for the selection, use and maintenance of Respiratory Protective Equipment 1974	HSE
	Respiratory Protective Equipment (RPE): Legislative Requirements and lists of HSE approved standards and type approved equipment 1989	HSE
	Health Safety Leaflets	
	Introducing COSHH. A brief guide for all employers to the new requirements for controlling hazardous substances in the workplace	
	Introducing Assessment: a simplified guide for employers	
	Managing Health and Safety in Construction	
	Part 1: Principals and Applications to main contractor/visiting group projects. HMSO 1988	
	Part 2: Management Contracting HMSO 1988	
	Hazard and Risks Explained	
	Control of Hardwood Dusts 1987	
	Health Hazards to Painters 1989	
	Miscellaneous Documents	
	A Guide to Safe Use of Chemicals in Construction	CIRIA
	Construction Safety Manual : Section 25	BEC/BAS
	Development of Contaminated Land; Dept. Of Environment Circular 21/87	DoETR
	COSHH In Construction : A BEC Guide	BEC
L101	Safe Work in Confined Spaces	HSE

Addresses for these texts

Health and Safety Executive

HSE Books
PO Box 1999
Sudbury
Suffolk
CO10 6FS

HMSO

Any Local HMSO bookshop

Ciria

6 Storeys Gate
Westminster
London,
SW1P 3AU
0171 222 8891
www.ciria.org.uk

BEC Publications

Federation House
2309 Coventry Road
Sheldon
Birmingham
B26 3PL
0121 742 0824

Inland Waterways Association

Waterway Recovery Group Ltd
PO Box 114
Rickmansworth
WD3 1LT
01923 711114

APPENDIX 2 – EXAMPLES OF HEALTH AND SAFETY PLANS

Due to the many and diverse tasks encountered by restoration volunteers it can be expected that they will come across a great number of diverse presentations and layouts of Health and Safety Plans.

Three examples of WRG plans are enclosed: one having an alphabetical index, the other two numerical.

Both follow a logical step by step approach for the completion of the task with:

- General Safety Considerations
- Listing of relevant legislation (COSHH, Health and Safety at Work Act, etc.)
- Specific Site Considerations
- Telephone numbers of the other key parties involved
- Tasks to be carried out and their individual safety requirements

None of these examples are held up as the ideal Health and Safety Plan. However they satisfied the Planning Supervisor concerned and are regarded as a good way of presenting the relevant information for each particular job. Those responsible for developing Health and Safety Plans should beware of just copying previous Health and Safety plans, it is bad practice (there are bound to be differences between projects) and if you are to reap benefits from CDM it is necessary to examine each project separately. It is for this reason that WRG has not produced a standard pro forma Health and Safety Plan.

It can be seen that several of the Health and Safety Plans refer to standard guidelines and references to avoid the need to repeat details and make the presentation of the Plan easier to follow. The text referred to in these examples is the old WRG Large Health and Safety Guide. This has now been replaced by the Practical Restoration Handbook Sections 1-4 i.e. this guide!

CONSTRUCTION HEALTH AND SAFETY PLAN

Job: Northsyke Footbridge
(Savick Brook, Preston)

LCC ref: 9348

WRG ref: CC1196, CC1396

Site leader: Mike Palmer (12th-20th July)
Martin Johnson (21st-28th July)

Assistant: Matthew Taylor

Northsykes Footbridge Construction

General Safety Considerations

The following Safety Assessment has been prepared in conjunction with the WRG Health and Safety Guide and should be read alongside it.

All work is to follow the guidance of the WRG Health and Safety Guide.

Volunteers will only be allowed to work on site once they have received a Safety Talk from the Site Leader.

They must read the WRG "volunteers guide to safety" and sign to say they have done so.

The Health and Safety File is to remain on site at all stages of the work and is then to be passed to LCC.

Local emergency services information is to be included in the Health and Safety File.

Site to be designated a "hard hat area" for the duration of works.

WRG Driver Authorisation scheme will operate at all times for all classes of plant on the site.

First aid provision on site will include:

- one HSE First Aid Kit for up to 50 employees
- additional eyewash facilities (2 x 500ml bottles minimum)
- welfare kit

Each vehicle will carry a First Aid kit.

Each volunteer will be issued with

- a safety helmet to BS 5240

In addition, where the job dictates, the volunteer will be issued with:

- eye protection to BS2092
- hearing protection to BS5108
- disposable nuisance dustmasks to EN149
- suitable gloves

Site Specific Safety Considerations

It is assumed that LCC will have completed the installation of the pier bases.

Stated weight of a single main beam is 0.75T and completed bridge is 2.4T.

LCC to supply any required safety signs.

LCC to supply the design for the temporary scaffolding for access to the old bridge.

CDM

- LCC to notify HSE using Form F10.
- LCC to supply all details of known or suspected hazards for the Health and Safety File.
- LCC are, for the purposes of CDM, considered to be Client, Designer and Planning supervisor.
- WRG are, for the purposes of CDM, considered to be the Principal contractor.
- The WRG contact before the work is Mike Palmer (0121 472 2882).
- The WRG site leader is Mike Palmer (13th-20th July) then Martin Johnson (21st-28th July).

Emergency Procedures

- Location of the nearest 24 hour Accident and Emergency Hospital is to be stored in the Site Health and Safety File and in all WRG vehicles.
- Location of nearest public phone is to be stored in the Site Health and Safety File and in all WRG vehicles.
- Site mobile phone is to be available on site at all times (0850 422157).
- A sign is to be placed where the footpath meets the road for emergency vehicles to locate the site entrance, if access is not permitted through the sports ground.
- One emergency WRG vehicle is to remain on site at all times.
- On site there will always be one nominated individual (usually the Site Leader) to take charge in the event of an emergency.

Pedestrians

- The right of way across the Savick Brook at this point must be maintained at all times (except in an emergency).
- Temporary fencing (orange mesh and lamp-irons) is to be used to prevent access to any incomplete works or unsafe areas. Due consideration must be given to trespassers including vandals, children and golfers looking for lost balls. LCC to supply this fencing. (Orange mesh and lamp-irons).
- Consideration will need to be given to loss of installed fencing overnight by vandals.

COSHH

- All relevant COSHH Data sheets will be available in the Site Health and Safety file.

Liaison

- LCC contact is Paul Medlam (01772 264479)
- A contact is requested from LCC for the NRA for use in emergency
- A contact is requested from LCC for the Golf Club
- A contact is requested from LCC for the Sports Ground

TASK	Refer to section In Guide:	SAFETY
I. Install safety screens, fencing and signs. Liaise with Golf Club	C	Consider all pedestrian access routes (inc. trespassers). Ensure no unauthorised access to incomplete works. This to be checked/modified on an "as required" basis.
II. Agree positions of supply stores (including fuel) Liaise with sports group if appropriate with regard to access and storage.	C/D/E	Ensure no materials are stacked where safe access for loading/unloading is compromised. Public access to stores is not permitted. Fuel stores to be safe, lockable and marked.
III. Check safe access routes for skid steer loader.	K	Mark off any unsafe areas. Ensure all operators are aware of them.
IV. Construct bridge piers:		
A. Assemble steelwork and install.	P/V	Care to be taken when preparing steelwork – no sharp edges. Eye protection to be worn.
B. Build stone piers backfilling with concrete on a section by section basis.	E/G/K	Ensure lifting is non strenuous and safe. Ensure safe wheel barrow route and tipping area. Ensure adequate eye and skin protection.
C. Construct shuttering for pier tops	L	
D. Pour pier tops	E/G/K	Ensure safe tipping area. Ensure adequate eye and skin protection.
V. Assemble bridge:		
A. Clear space by golf course for assembly bridge.	C	Consider pedestrian movements.
B. Escort bridge onto site across golf course	K	Care to be taken with extreme wide/long loads. Ensure golfers are aware and flying golf balls are not a problem.
C. Assemble bridge.	G/L/P	
D. Escort crane across golf course. Liaise with Golf Club.	K	Seek crane operators advice. Ensure golfers are aware and flying golf balls are not a problem.
E. Lift bridge onto piers.	M	Seek crane operators advice on slinging and loading. Appoint banksman if required. Ensure only essential staff are working in load area.
F. Fix bridge down.	I/P	Care when working from/on incomplete structure.
G. Lay bases for steps	E/G/K	Ensure safe tipping area. Ensure adequate eye and skin protection.
H. Assemble handrails structure	I/L	Care when working from/on incomplete structure

I. Assemble steps	I/L	
J. Commission new bridge	n/a	To be approved by LCC?
VI. Demolish old bridge:		
A. Position acrow supports under old bridge	n/a	Acrows to be checked daily for creepage. Bases to be checked for river erosion.
B. Cut pedestrian barriers off old bridge for wheel barrow access	C/V	No sharp edges to be left.
C. Assemble scaffolding	I	Scaffolding to be to LCC design and be inspected daily. Care when working in and above water course.
D. Demolish old bridge	I/M/P	Only to occur once new bridge has been commissioned by LCC. Care when working from/on incomplete structure. Care when working in and above water course.
E. Dispose of old bridge	E	Care with dangerous waste. To be disposed of via skip specifically for this purpose.
F. Remove scaffolding	I	Care when working from/on incomplete structure. Care when working in and above water course.
VII. Clear site and make safe.	C	Ensure no dangerous materials left on site and all temporary works are removed.

**London Canal Museum
14th - 21st February 1998**

Health & Safety Plan

(Abridged for use as an example for Health and Safety Handbook)

- i) Setting up the accommodation (first floor)
- ii) Setting up the worksite (ground floor)
- iii) Safe system of work
- iv) Emergency procedures
- v) Daily checklist
- vi) Volunteers health & safety introductory talk
- vii) Visitors procedure

i) **Setting up the accommodation (first floor)**

1. Clearance of museum displays to the satisfaction of Canal Museum Trust.
2. Catering cooker to be located on first floor (via the horse ramp) beneath a set of opening windows, a fire extinguisher shall also be provided.
3. Kitchen to contain:
 - Electric hob
 - Gas stove
 - Deep fat fryer
 - Electric water boiler
 - Fire extinguisher & fire blanket
4. Utility room (education room) to contain:
 - Electric fridge
 - Catering kit & food
 - First aid kit (catering)

ii) **Setting up the worksite (ground floor)**

Refer to the accompanying sketch 'safe system of work'.

1. Clearance of museum displays to the satisfaction of Canal Museum Trust.
2. Open museum doors to encourage thru-ventilation.
3. Position skips during delivery away from entrance/exits to other buildings.
4. Locate skip ramps away from entrance/exits to other buildings and delivery areas. Ensure they are fixed to skip side and angled correctly. Install a timber end stop at top of ramp.
5. Establish hard hat area inside museum to include ground floor and ice pits.
6. Test atmosphere in ice pits.
7. Fix 110v festoon lighting throughout ice pits 1&2, and test halogen lighting. Ensure lighting is so placed to minimise shadows where possible.
8. Remove two barriers from sides of hatch, replace with stop boards at floor level and temporary hand rails at waist height fixed to remaining barriers.
9. Fix access/escape ladders at correct angle and projection above hatch opening. Ensure ladders are firmly footed at base and fixed at top.
10. Test submersible pump and pump sump dry.
11. Install acrow props/bracing to connecting passage between ice pits 1 & 2.
12. Sheet fully over sump hole and hole located in connecting passage.
13. Erect hoist frame, electric hoists and cables above hatch. Conduct test lowerings of empty barrows to establish 'hoist area' at pit level.
14. Re-erect two barriers at pit level around 'hoist area' and stabilise using ties.
15. Ground floor office to contain:
 - Washing facilities

- Electric water boiler/tea making facilities
- First aid kit (site)
- Emergency telephone

16. Establish health and safety notices and visitor book outside ground floor office.

iii) **Safe system of work**

Refer to the accompanying sketch 'safe system of work' (not included for brevity).

General Practices

- Never enter ice pits unless instructed to do so by an appointed leader
- Atmospheric testing to be carried out by a competent person every hour and when suspect materials are discovered
- You must wear a hard hat, safety boots, and gloves when working in the ice pits
- Never work alone
- Keep equipment clean, especially ladders and skip ramps
- Retire and report any broken/faulty tools and equipment
- Beware of moving vehicles when working in New Wharf Road
- Only one person at a time allowed on ladders and ramps (except escape ladder)
- Only use 'escape ladder' during emergencies
- Tea and meal breaks to be taken in ground floor office or first floor accommodation
- Temporary handrails to be fitted around hatch openings when work ceases

Digging Practices

- Do not work too closely to others
- Do not enter 'hoist area' unless instructed to do so by an appointed leader
- Do not fill skips and barrows above level of sides
- Observe 'one way system' for barrows from pit level to skips
- Only take barrows up skip ramps if you feel confident to do so
- Work in a methodical pattern to avoid unnecessary holes (suggest working from a ring trench towards centre of pit)
- Maintain an even surface at foot of ladders
- Maintain sump pit at least 0.5m below pit level and avoid any build up of water
- Maintain gentle grade between pits 1 & 2, working in Ice pit No. 2 when instructed
- Maintain sheeting over all unattended pits and trenches
- If any suspected voids or hazardous materials are discovered, all unnecessary personnel to leave the pit and material placed in bags
- When instructed to work in 'hoist area' only do so when hoist operations have been stopped and hoist operators made aware of your presence

Hoist Practices

- Hoists may only be operated by personnel appointed by the leader
- No leaning over hatch permitted at any time
- Only hoist operator and assistant allowed near hatch opening at all times
- Only banksmen allowed to enter 'hoist area' and only to handle barrow chains

- No hoist operation allowed without a signal between banksmen and hoist operator, and the hoist operator checking the ‘hoist area’ is clear first
- Hoists to be swung away from hatch and switched off when personnel digging in hoist area

iv) **Emergency Procedures**

Whilst thorough plans have been made to prevent accidents, it is essential that anyone on the site is familiar with the actions to be taken in an emergency if one were to happen.

1. Evacuation of the Ice Wells

Evacuation of the ice wells will be required in the event of a real or potential danger to people in them. The signal to evacuate will be one of:

- Sounding of the gas alarm
- Whistle sounding with shouts of “evacuate”
- Calling out “evacuate”

The need to evacuate could arise from:

- Suspected gas, chemical, or high volume water ingress
 - Dangerous conditions elsewhere in the Museum building (e.g. a fire)
 - Discovery of something in the refuse which might pose a threat - evacuation pending investigation
 - Some other situation where remaining in the wells would give rise to potential danger
- a. If the signal to evacuate is given, everyone in the Wells should leave all tools behind (though not in a position where people following might fall over them) and walk briskly (do not run) to the ladders. Both ladders will be used - the one leading direct to the Museum gallery is to be preferred if both are free.
 - b. The person nearest the hoist operator should inform the latter by shouting. The hoist operator will call the camp leader or his deputy.
 - c. Everyone leaving must note who is following them and observe that they follow all the way out of the wells. The last person to leave the front well (the one without the opening above) should, so far as possible, check visually that nobody is behind him or her. This is essential to ensure that everyone leaves the wells or attention is immediately drawn to anyone who does not do so. If emergency evacuation has to take place in darkness, people are to hold hands and evacuate in a “chain” as far as the area under the floor opening.
 - d. After leaving the wells everyone who was in them is to assemble in the area near the main museum entrance and a roll call will be taken. Everyone will be expected to confirm that those working near them before the evacuation are present.
 - e. Re-entry into the wells is not allowed until the situation has been assessed by the camp leader or his deputy and the emergency declared over.

In the event of it being necessary to evacuate whilst a person is injured or trapped in the wells, the injured person is to be helped to the surface if the injuries so allow (e.g. twisted ankle) but in the event of a person

being trapped, the rescue will be performed by the fire service. (The camp leader or deputy will judge the circumstances and make decisions as required at the time).

2. Gas Detection

- a. In the event of a gas alarm sounding, follow the emergency evacuation procedure.
- b. The Camp Leader or deputy will not declare the emergency over until the atmosphere has been retested and found to be safe.
- c. During the sounding of the gas alarm there must be no attempt to rescue anyone thought or known to be still in the well - if there is reason to suspect that someone is still in the well, the fire service must be called by dialling 999.

3. Electrical blackout

In the event of a failure of electricity supply so that there is no light in the wells, torches will be used to provide emergency lighting. Unless there is also an emergency requiring emergency evacuation, the emergency evacuation procedure will not be followed but instead everyone will leave the wells in a *slow and careful* manner using the torches. The person nearest the torches will use them to light the way for others to leave. Nobody will remain in the wells during a complete failure of the electric lighting.

4. Fire

The building does not have a fire alarm system. Emergency lighting to fire escape routes is provided. Whistles will be the alarm signal together with shouts of “Fire”. In the event of discovery of a fire:

- Use whistles to wake or alert others, and call “Fire”.
- Evacuate the building by the nearest exit. The rear fire exit leads to the side of the canal basin. The route from there to New Wharf Road is via Battlebridge Moorings and the exit in the corner of the basin to Wharfedale Road then back along the street. Close all doors and windows (where no delay will be caused) behind you. Do not stop to collect belongings. However, at night, pick up warm clothing, sleeping bag, etc. as immediately available without delaying your exit.
- Call the fire service by ringing 999 from the Museum’s telephone or any available telephone.
- Assemble in New Wharf Road on the opposite side to the Museum for a roll-call (as per well evacuation)
- Do not re-enter until it has been declared safe to do so by the fire service or the camp leader or his deputy.

Small Fire

Small fires, e.g. in a waste paper bin, may be tackled using extinguishers which are located strategically around the building. Water extinguishers (which are coloured red all over) should not be used on electrical equipment or on cooking fires involving hot fat - a fire blanket or powder or gas fire extinguisher should be used on these. Fire can spread very quickly - if in any doubt, evacuate.

5. Injury

In the event of a serious injury, help must be summoned by using the whistles followed by shouting “injury”. The nearest persons must:

- a. Call the Camp Leader or deputy, and the first aider.
- b. If the first aider feels it necessary Dial 999 using the phone in the ground floor office to call an ambulance (if the injured person is in the wells the fire service should also be called).

If the patient is in the wells, those who are not able to offer help should leave the wells. The first-aider will assess the injury and decide the appropriate measures to be taken. In general, if the patient is able to climb the ladder safely with assistance this will be done but where this is unsafe or not possible due to his or her condition, the fire service will be asked to lift the patient out of the well - the hoists will not be used except under direction of the fire service.

In some circumstances the first-aider may decide to take the patient to hospital by car or van rather than wait for an ambulance. The nearest hospital is:

University College Hospital
Accident & Emergency Department
Cecil Flemming House, Grafton Way

The map shows the location and route.

v) Daily Checklist

A competent person as appointed by the Planning Supervisor must ensure the following daily checks are made of the worksite before any personnel begin work:

- Check museum doors are opened
- Check atmospheric condition of ice pits is safe
- Note water level & use submersible pump to empty sump
- Check both lighting systems are operational
- Check condition of all ladders and ramps
- Check ice pits for new structural failure and note condition of existing
- Remove any temporary guardrails to hatch openings

vi) Volunteers Health & Safety Introductory Talk

Not included for brevity.

vii) Visitors Procedures

As a visitor you are required to read the following parts of the Health & Safety Plan, and sign the Health & Safety Declaration, before gaining entry to the designated worksite.

CONSTRUCTION HEALTH AND SAFETY PLAN

Job: Leasowes Park Weir
(Lapal Canal Halesowen)

WRG ref: CC397

Site leader: Mike Palmer (29th March - 5th April)

Leasowes Park Weir Refurbishment

General Safety Considerations

The following Safety Assessment has been prepared in conjunction with the WRG Health and Safety Guide and should be read alongside it.

All work is to follow the guidance of the WRG Health and Safety Guide.

Volunteers will only be allowed to work on site once they have received a Safety Talk from the Site Leader.

They must read the WRG "volunteers guide to safety" and sign to say they have done so.

The Health and Safety File is to remain on site at all stages of the work and is then to be passed to Barhale Construction.

Local emergency services information is to be included in the Health and Safety File.

Site to be designated a "hard hat area" for the duration of works.

WRG Driver Authorisation scheme will operate at all times for all classes of plant on the site.

First aid provision on site will include:

- one HSE First Aid Kit for up to 50 employees
- additional eyewash facilities (2 x 500ml bottles minimum)
- welfare kit

Each wrg vehicle will carry a First Aid kit.

Each volunteer will be issued with

- a safety helmet to BS 5240

In addition, where the job dictates, the volunteer will be issued with:

- eye protection to BS2092
- hearing protection to BS5108
- disposable nuisance dustmasks to EN149
- suitable gloves

Site Specific Safety Considerations

It is assumed that Barhale Construction will have exposed the weir and no excavation (other than manual) will be required.

It is assumed that access to the site compound and associated fuel/COSHH stores will be available (security to be discussed with MKP and Barhale).

Where building materials will exceed 25Kg appropriate lifting techniques will be employed.

Barhale Construction is to inform WRG if any safety signs are required (in addition to the ones described below).

Although the exact nature of the job required cannot be assessed until the old brick fascia has been removed it is not envisaged that the two options (repoint/patch old wall or rebuild new fascia) will be significantly different in terms of hazard assessment and safety policy. This plan should be acceptable for both, if the job assessment changes significantly then the Health and Safety plan should be rewritten.

Where grass is to be removed the turf should be removed so that it can be replaced after the works are completed.

CDM

- Barhale Construction are responsible for all notifications to HSE (form F10, etc.)
- Barhale Construction are to supply all details of known or suspected hazards for the Health and Safety File
- Barhale Construction are, for the purposes of CDM, considered to be the Principal Contractor and Planning Supervisor
- WRG are, for the purposes of CDM, considered to be a sub contractor, volunteer numbers will not exceed 15 and hours should not exceed 8 per day
- The WRG contact before the work is Mike Palmer (0121 472 2882)
- The WRG site leader is Mike Palmer (29th March - 5th April)

Emergency Procedures

- Location of the nearest 24 hour Accident and Emergency Hospital is to be stored in the Site Health and Safety File and in all WRG vehicles
- Location of nearest public phone is to be stored in the Site Health and Safety File and in all WRG vehicles
- Site mobile phone is to be available on site at all times (0850 422156)
- One emergency WRG vehicle is to remain on site at all times
- On site there will always be one nominated individual (usually the Site Leader) to take charge in the event of an emergency

Pedestrians

- The works do not block any rights of way but pedestrians can be expected to approach the works. Lamp irons and orange hazard fencing will be required to fence off the area of the works. A sign at each end of the weir should warn people not to breach the fence.
- Temporary fencing (orange mesh and lamp-irons) is to be used to prevent access to any other unsafe areas.
- Ground surfaces need to be kept clean between the weir works and the site compound.
- Consideration will need to be given to loss of installed fencing overnight by vandals.

COSHH

- All relevant COSHH data sheets will be available in the Site Health and Safety File.

Liaison

- A contact name and number is requested for Barhale Construction.
- A contact name and number is requested for the Leasowes Park staff for use in emergency.

TASK	Refer to section In Guide:	SAFETY
I. Install safety screens, fencing and signs.	C	Consider all pedestrian access routes (inc. trespassers). Ensure no unauthorised access to incomplete works. This to be checked/modified on an "as required" basis.
II. Agree positions of supply stores (including fuel)	C/D/E	Ensure no materials are stacked where safe access for loading/unloading is compromised. Public access to stores is not permitted. Fuel and COSHH stores to be safe, lockable and marked.
III. Remove old face using:		
A. Manual (hammer and chisel)	CH	Eye and hand protection to be provided.
B. Mechanical (Electric demolition hammers)	PH	Eye, ear and hand protection to be provided. Hammers to be 110v and kept clear of the water. Noise levels to the public to be checked.
iv. Clean old bricks for reuses:	CH	Eye protection and dust masks to be used. Dust nuisance to public to be minimised.
v. Refurbish weir wall:		
A. Grind out old mortar joints using angle grinders.	C H P	Eye protection and dust masks to be used. Dust nuisance to public to be minimised.
B. Demolish poor brickwork.	J	Ensure stability of main wall is not compromised.
C. Reinstate brickwork and re point mortar joints.	E H	All mortar mixing to follow normal guidelines, eye protection to be worn, gloves to be available.
D. Excavate trial section behind weir wall and backfill with waterproofed concrete if required.	J E	
vi. Refurbish weir lip		
A. Manually expose weir face:	L	
B. Remove weir lip, clean bullnose bricks and reset lip.	H E	Eye protection and dust masks to be used. Dust nuisance to public to be minimised.
C. Pack soil back upto weir lip.		
vii. Clear site and make safe.	C	Ensure no dangerous materials left on site and all temporary works are removed.

APPENDIX 3 – COMMON HEALTH AND SAFETY ABBREVIATIONS AND CDM DEFINITIONS

These may help you in your dealings with Health and Safety.

ALARP	–	As low as reasonably practicable
BA	–	Breathing Apparatus
COSHH	–	Control of Substances Hazardous to Health Regulations 1988 and 1994
HSE	–	Health and Safety Executive
NaW	–	Noise at Work Regulations
PPE	–	Personal Protective Equipment
PPEaW	–	Personal Protective Equipment at Work Regulations
RIDDOR	–	Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 1985
RPE	–	Respiratory Protection Equipment

As mentioned previously CDM attempts to cover the whole construction industry and as a result the legislation has many, many clauses and definitions. Two that are particularly of interest to WRG and Restoration Groups are; Construction works and Structure.

Construction works:

- The carrying out of any building, civil engineering or engineering construction work and includes the alteration, conversion, fitting out, commissioning, renovation, repair, upkeep, redecoration or maintenance (including cleaning by high pressure water jets, shotblasting, or corrosive/toxic chemicals. The demolition, dismantling or de-commissioning of a "structure",
- or
- the preparation of a site for an intended "structure" includes site clearance, exploration, investigation, excavation of the site and laying or installing the foundations,
- or
- the assembly or disassembly of sectional and prefabricated "structures",
- or
- the removal of a "structure" or any waste resulting from the demolition or dismantling of the same,
- or
- the installation of, commissioning, maintenance, repair or removal of mechanical, gas, compressed air, hydraulic, telecommunications, computer or similar services fixed in or to a "structure".

Structure:

- Any building, steel or reinforced concrete structure, rail or tram lines, dock, harbour, inland navigation tunnel, shaft, bridge, viaduct, waterworks, reservoir, pipeline, cable, aqueduct, sewer, sewage works, gas holder, road, airfield, sea defence works, river works, drainage works, earth works, lagoon, dam, wall, caisson, mast, tower, pylon, under ground tank, earth retaining structure, structure designed to preserve or alter any natural features,
- or
- similar structures i.e., formworks, false works, scaffold, or other temporary structure designed or used to provide support or means of access during construction work,
- or
- fixed plant from which there is a risk that a person can fall more than two metres during installation, commissioning, de-commissioning or dismantling work.

