The Grantham Canal Heritage Initiative Grantham Canal Makers Training Plan

Delivering the knowledge and skills for our canal



"The value of training is directly proportional to the effort which management puts into it. Whether you have only a few volunteers, or are entirely dependent upon them, if you don't train them then the organisation will suffer in the long run"

Lisa Conway 1994 "Working with Volunteers"



Executive Summary

The Grantham Canal Heritage Initiative has the following Vision and aims

Through active conservation volunteering, learning, education and skills training maintain, enhance and continue the restoration of the built and natural environment of the Grantham Canal.

Project aims

- Grow the use of volunteers, developing training and competency to build capacity in managing and developing the canal.
- Increase Heritage Awareness: raising awareness of and increasing participation in the Grantham Canal
- Work with contractors and partners in the design and restoration of Locks 14 and 15
- Carry out conservation and heritage training to pilot a Knowledge Based NOCN Entry Level in Waterway Heritage and NVQ2 Heritage Construction Course where volunteers obtain accreditation

Training objectives are -

- To work in partnership with CRT to develop training through skills sharing, peer support (CRT staff
 to Grantham Canal Makers and Waterway Recovery Group) relieving CRT in the future of
 especially minor tasks and growing responsibility and local 'ownership'
- Develop skills and capacity improving the quality of life for participants as well as a better understanding of waterway heritage and environment.
- To develop learning and knowledge to gain a better appreciation of waterway heritage and therefore participate in informed decisions about it.
- To extend the training to include other relevant opportunities such as use of archives and interpretation; Design and education Explorers.
- Develop training and participation that can enable the participant to gain transferable recognised work skills.

This training plan identifies the works -

For this document the Skills audits and training needs analysis groupings are divided into four parts –

- Canal Society Management and Governance
- Waterway Maintenance Works
- Waterway Restoration (major) works
- Waterway Recreation Development

Where actions are identified these plus any projected costs are detailed in the Activity Plan Actions .

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Overview

The Grantham Canal Heritage Initiative has been developed for a second round application to the Heritage Lottery Fund. It will enable **volunteer driven works** meeting the vision and objectives of the project.

Vision

Through active conservation volunteering, learning, education and skills training maintain, enhance and continue the restoration of the built and natural environment of the Grantham Canal.

Project aims

- Grow the use of volunteers, developing training and competency to build capacity in managing and developing the canal.
- Increase Heritage Awareness: raising awareness of and increasing participation in the Grantham Canal
- Work with contractors and partners in the design and restoration of Locks 14 and 15
- Carry out conservation and heritage training to pilot an NVQ2 Heritage Construction Course where volunteers obtain accreditation

To achieve this, an Activity Plan has been produced to support the second round application business plan and application. The Activity Plan includes this Training Plan which is produced for the Grantham Canal Society who will be the lead partner in the supply, recruitment and management of the volunteers for the project.

This Training plan covers all aspects of the GCS volunteering activities present and potential and shows how much could be the responsibility of GCS to deliver, manage and oversee as well as the skills in place and required. Additionally a draft budget is identified if appropriate.

The process of producing the plan began with doing a learning and needs analysis reviewing the Grantham Canal Society as an organisation in delivering the vision and aims of the project.

Methodology

The plan has been produced following the a process as follows -

Needs and SWOT analysis -researching with CRT, GCS and others the task needs and breaking these down into work areas and themes

Skills audit - Matching with the needs analysis and reacting to the SWOT analysis- Summarising the identified Grantham volunteer skills presently available and researching skill gaps and training requirements.

Training requirements - Defining the types of training needed and available. Researching budget costs

SWOT ANALYSIS

Strengths	Analysis	Actions
Strong management skills base	Understanding of business, legal issues and politics	Share the skills and experience through recruitment of others onto the executive.
History of creditable restoration projects	Experience in waterways type works and environment	Recognise this advantage in the recruitment of volunteers
Strong partnership links with associated organisations	There is evidence that some networking links have lapsed	Actively rebuild partnership links gaining additional resources
Membership base of some 500	Good baseline of potential recruits or advocates of recruitment processes	The membership would be the first opportunity for recruitment
Self Supervision in place	The responsibilities will need to be increased to meet task needs	Ensure adequate and agreed processes are used
Education Team	Strong active team in place but with limited members	Training and support required

Weaknesses	Analysis	Actions
Many volunteers are experienced in various skills but have no qualification	The skill base of experience for some works is not adequate	Training projects to build on the experience and gain qualifications or 'ticket'.
Management of Training and resources	The team at present is stretched in respect of volunteer time to manage	Need to employ a salaried Volunteer Manager .
Trustee Training	Research shows there is a need for Trustees (Executive Committee) to receive updates and development training	Set up Trustee development training
Reaching out to more diverse groupings	Traditionally there has not been a positive move to engage with ;'hard to reach groupings' This however has changed with offers of help coming from groups representing 'adults with learning difficulties' and some 'family organisations	To develop opportunities and a more welcoming culture to more diverse groups.

Opportunities	Analysis	Actions
Recruit new skilled recruits for range of roles	The use of volunteer recruitment agencies is not being used	Ensure training is considered
Create canalside training & education centre at Woolsthorpe	The project includes the transfer of the old Carpenters shop at Woolsthorpe.	Add budget and asset to GCS Business Plan.
Increased work through more and greater trained volunteers		
Good Practice Awards	There are a range of awards available to enter for	Enter for potential awards after year one
Work with Lincoln Heritage Skills Centre	A new HLF funded project	Link and structure formal and informal training opportunities

Threats	Analysis	Actions
Training Costs	Formal Training can be expensive	Phase training plan
Unable to recruit required volunteer skills	This is unlikely if there is active recruitment	

Delivering the Heritage Lottery Fund (HLF) objectives

The HLF has three main aims that relate to learning, conservation and participation.

- Help people to learn about their own and other people's heritage.
- Conserve the UK's diverse heritage for present and future generations to experience and enjoy.
- Help more people, and a wide range of people, take an active part in and make decisions about heritage.

The training objectives and actions have been linked to these objectives and are detailed in the Action Plan.

Waterway Volunteer Training in Context.

The recognition of the important contribution of volunteer input and labour behind canal restoration, campaigns, management and interpretation has long been understood. Little though has been undertaken to train the required skill sets that deal with the complexity of tasks that are required. Despite this a huge amount of work has been done and is being done around our waterways by volunteers who bring knowledge, professional expertise, skill, and sometimes just muscle power to make things happen.

Things have now moved on however, and there is a better understanding of the benefits and importance of training that –

- Increases personal skills and awareness
- Motivates and supports
- Improves personal and group awareness
- Clarifies tasks and task descriptions gaining best use of people and their involvement
- Operates a safer and managed operation
- Reduces the risk of site errors and mistakes.

An excellent draft document 'The Inland Waterways Heritage Skills Initiative was published in 2009 and has since been the supporting evidence for waterway Heritage Lottery Fund applications including the Grantham Canals Heritage Initiative.

The Inland Waterway Heritage Skills Initiative stands the test of time in respect of identifying the needs to set up appropriate training for volunteer workers that is accredited, transferable and recognised by navigation authorities. With the momentum for greater involvement with volunteers and the growing achievements of this engagement there is now a greater need to deliver the training of appropriate skills. There are 'pockets' of training activities and training planning taking place around the country but this is very much site specific.

Training generally has been undertaken 'on the job' for many of the skills required for volunteer waterway duties are appropriate for this type of instruction. Skill sets beyond that which can be trained in this way rely on individuals bringing to the work their experience, knowledge and qualifications.

The Waterway Recovery Group which is a subsidiary of the Inland Waterways Association has a long established internal training programme to support its work camps. Their training focuses on introductory skills for all workers and advance skills for camp leaders and worksite supervisor. They have an authorization scheme for vehicles, mechanical plant and equipment.

Delivering the Grantham Canal Heritage Initiative Training

Working in partnership

In delivering the initiative there is a mature developed partnership between The Grantham Canal Society (GCS), The Grantham Canal Partnership and The Canal and River Trust. The canal is the responsibility of the Canal and River Trust (CRT) who have work policies and procedures which

GCS is required to adhere too. Through a proven assessment process GCS or other assessed organisations can achieve a 'Self Supervision Status' that would allow them to undertake defined works. GCS has already achieved a status that already allows them to carry out a range of minor tasks. Additional tasks have been applied for and these are under review

The Grantham Canal Heritage Initiative proposals assumes that greater responsibilities will be undertaken by GCS not only in 'driving' as volunteers the restoration of the two locks but increasing the delivery of canal related works. The Canal and River Trust is keen on embracing this objective and therefore will, within the constraints of the resources at its disposal, assist in the training, teaching and instructing required. It is acknowledged that much of the routine waterways work will be assigned to and adopted by GCS over time and already they undertake some work over a long length of the Waterway.

The Plan does not remove the need for the CRT procedures in respect of, for instance, 'Self Supervision' for these assist the GCS in some of the required formal documenting of their activities.

Grantham Canal Training Objectives

The training plan has to be developed to critically consider the delivery of the project objectives and the onward outcomes from it.

It is proposed that recruited in the future and managed by the GCS could be trainees, probationers, offenders on community work so rather than use the term volunteers, which can be misunderstood, the title Grantham Canal Makers (GCM) will be used. (Stealing the idea from the term Games Makers used for London Olympic volunteers)

The training objectives are

- To work in partnership with CRT to develop training through skills sharing, peer support (CRT staff to Grantham Canal Makers) relieving CRT in the future of especially minor tasks and growing responsibility and local 'ownership'
- Develop skills and capacity improving the quality of life for participants as well as a better understanding of waterway heritage and environment.
- To develop learning and knowledge to gain a better appreciation of waterway heritage and therefore participate in informed decisions about it.
- To extend the training to include other relevant opportunities such as archiving, oral history etc.
- Develop training and participation that can enable the participant to gain transferable recognised work skills.

Good practice and skills shortages

Experience has shown that active participation in heritage benefits the people involved in decisions about it. The learning and training for even minor tasks can be enriching and informing. Through the Training Plan there will be the opportunity for training in good practice (governance, canal heritage appreciation lime mortars etc.) Each will add to the project and its delivery.

Identified benefits from training of good practice will be –

- Improved waterway maintenance through increased activity
- Reduced maintenance costs
- Increased skills and quality of life of participants
- Increased understanding of the waterway heritage
- Increased understanding of local issues and there solutions
- Increased volunteering opportunities

Skill shortages beyond those skills that are required for minor tasks can be identified as 'traditional building skills'. This is backed up by research carried out by the National Heritage Training Group (NHTG) whose report 'Traditional Building Crafts Skills – assessing the need. Meeting the Challenge (2005) identified the range of skills gaps and shortages. An additional report Traditional Craft Skills - re-assessing the need, addressing the issues(2008) went on to confirm the need to be proactive in training.

The NHTG has found that in the East Midlands 29% of Contractors have outstanding vacancies and 60% felt that recruitment was very difficult. The reasons – lack of applicants 54% lack of skills 78%.

Training Plan Development

The Training Plan has included the lead project partners – Canal and River Trust Managers and staff involved in operations, planning, restoration and conservation – Executive Committee of the Grantham Canal Society and members. Heritage Training providers have also been consulted to understand the process of obtaining accreditation and delivery of the formal training opportunities.

Additionally consultation was undertaken with the delivery team of a similar training initiative in South Wales and with the Project Manager of the HLF project 'Building the Past in Lincoln'.

Available too is the Waterways Recovery Group resources which include

- WRG Training Manual
- Practical Restoration Handbook
- Tool box talks
- Example risk assessments and method statements

From the skills audits and training needs analysis the training groupings are divided into four work themes-

- Canal Society Management and Governance
- Waterway Maintenance Works
- Waterway Restoration (major) works
- Waterway Recreation Development

For the objective of the pilot project for the NVQ Level 2 Heritage Skills this is covered separately.

Activity Plan actions are identified and transferred to the Action Plan with any identified budgets.

The Training Programme

The layout of the tables are as follows (Note - this is a Training plan not a Resource plan for this see Volunteering Development plan)—

- Task description a summary title that divides the task under the appropriate work theme
- Person Responsible Where known the person responsible for overseeing task and any training needs. (in the absence of any responsible person being identified this will be the responsibility of the Executive Committee until a person is recruited)
- Skills required a summary assessment of skills required.
- Skills in place This refers only to GCS skills availability.
- Training options
- Budget and time plan

Management and Governance

The governance of the Grantham Canal Heritage initiative provided by the Steering Group who have representatives from CRT; Directors and staff and the Waterway Partnership including Regional Operations Director Sustrans, GCS Executive Committee, GCP and the elected member for South Kesteven District Council.

Project Management will be undertaken by CRT with the employed Project Site Supervisor fulfilling the role of organising the works on site dealing with day to day management of construction tasks and management of Health & Safety and Logistics. (See appendices; Project Organogram; Job Descriptions Volunteer Coordinator and Site Supervisor).

Training plans

Each of the identified skill requirements has been listed to identify the training needs. These documented skills and training details will be recorded on individual training plans. (For more details see Volunteer Development Plan and example CRT Training Plan in appendices .)

Reviewing Progress and assessments

For more details see Activity Plan Monitoring and Evaluation section.

Canal Society Management and Governance

The project works and plans are 'owned' by the Grantham Canal Society. Critical to success will be effective political and strategic leadership by the Executive. To achieve this will be a strong and skilled Executive backed by the volunteer teams delivering the identified activities such as construction work to restore the locks. The day to day coordination of the construction work would require a suitably qualified and experienced Site Supervisor. This will be a new post, advertised, recruited and budgeted.

Task description	Person/s Responsible	Skills required	Skills in place	Training options and other actions if any	Notes	Activity Plan	Budget
Governance	Chairman; Mike Stone and Executive Committee-Vice Chair-John Brydon	Charity Governance skills - Charity, Company Law and business planning Succession planning is required	Experienced professional team- A business plan for the Society is being developed with associated policies an succession planning actions	Free On line Trustee governance updates - (i.e. NCVO) Register with volunteer recruitment agencies (i.e. REACH)		Review and complete Business plan Successio n planning	
Finance / Accounts	Treasurer-Stan Harbidge	As above including budgeting	As above and accountants employed	none			
Membership administration	Membership Secretary- Mary Noble and Membership Communications- Angie Howard	Administration skills					
Site Supervisor	Executive Committee	The delivery of the project will require strong full time leadership of the volunteer activity. See sample job description in appendix	There is no full time person in place.	Personal development training will be required		Recruit and employ Grantham Canal volunteer manager	£29k
Community Engagement	Rosemary Gibson	The political face of the GCS must be the Executive Committee	Experienced team	Business plan will define roles and responsibilities			

Task description	Person/s Responsible	Skills required	Skills in place	Training options and other actions if any	Notes	Activity Plan	Budget
Stakeholder management	Executive Committee	As above	As above	None			
Website content management	Mark Hubbard	Web design / computer literate	Experienced user	Content management training to recruited volunteer support team			
Fundraising- Commercial and Sponsorship	David Lyneham–Brown	Fundraising team	Limited skills	Programme of process walkthroughs with trainer/advisor	See Fundraising Strategy	Recruit a fundraisin g team/ develop and deliver Funding strategy	
Heritage & Environment management planning	Executive Committee-Tony Pitman GCS Representative to GCP	Ownership of policies within GCS Plan	Understanding of policies			Publish policies on Website	

Health and Safety

This heading cuts across all activities.

Task description	Person Responsible	Skills required	Skills in place	Training options if any	Notes	Activity Plan	Budget
Risk assessments and Monitoring and maintaining Health and Safety	Co Secretary- Gordon Wallis/Work party organizer-lan Wakefield	There is a legal responsibility that health and safety arrangements are adequately resourced; that there is competent health and safety advice; risk assessments are carried out; employees or their representatives are involved in decisions that affect their health and safety.	Limited	Health and Safety Awareness will be part of the volunteer induction –	Health and safety are important, and the standard of care imposed by legislation is pretty much the same regardless of the size of the organisation. All organisations must carry out a risk assessment identifying the risks to employees, other workers, clients, members of the public and anyone who comes onto the organisation's premises or uses its services. They must then draw up a health and safety scheme setting out a programme to reduce the risks, or to minimise the negative impact if they do happen. The risk assessment and scheme must be in	The management of H & S can be delegated to the Volunteering Manager but lead volunteer will be recruited to assist	

Task description	Person Responsible	Skills required	Skills in place	Training options if any	Notes	Activity Plan	Budget
					writing if the employer has more than four employees. For these purposes, it is probably best to count any volunteer doing more than a few hours a week as an employee		
Working with children and vulnerable people	Rosemary Gibson	CRB Checks as appropriate to match GCS Policies	Policy to be reviewed	Detailed within Learning and interpretation plan	See also Learning and interpretation Plan	Review policies and publish on website and within Volunteer handbook	
Record and instruct inspections of plant and equipment	Operations Manager / Site Supervisor/Dave Booth-Team Leader	Understanding of inspections procedure and recording	Adequate but requires support from Volunteering Manager when recruited	H & S Training for volunteer team leaders		Training programmes in H & S management	ADD COSTS
Work safely in the aquatic environment / manual handling/	Operations			As above		As above	

Health and Safety-CRT Minimum Safety Learning Standards

For all volunteers working on Canal & River Trust property the training for minimum safety standards is already provided by the Trust's Safety professionals. This training is given for all those volunteers working more than 3 days per year. In circumstances whereby volunteers do one-off activity bespoke task based training is given.

Task Description	Person Responsible	Skills Required	Skills in place	Training Requirement	Duration	Notes	Budget
Safety Induction- Basic, Fire, Water and Save a Life- Learning Event	All Volunteers over 3 days	PASS COURSE/BASIC UNDERSTANDING	NONE	COURSE	1 Days		56.66 per head
Accident Reporting/Incident Investigation	All Volunteers over 3 days	PASS COURSE/BASIC UNDERSTANDING	NONE	Presentation			
Health & Safety Foundation Course	All Volunteers over 3 days	PASS COURSE/BASIC UNDERSTANDING	NONE	COURSE	2 days		50 per head
Safe Handling Needles & Syringes Video	All Volunteers over 3 days	BASIC UNDERSTANDING	NONE	Presentation	1 hour		

HAVS & WBVS	All Volunteers over 3 days	COMPLETE		Presentation	1 hour	
PPE Guide and Maintenance	All Volunteers over 3 days	BASIC UNDERSTANDING	NONE	Presentation	1 Hour	
Environmental Virtual Tour	All Volunteers over 3 days	COMPLETE/BASIC UNDERSTANDING	NONE	Presentation	2 hours	
Water safety, Lifejackets and throwlines video	All Volunteers over 3 days	COMPLETE	NONE	Presentation	1 hour	
Lone Working DVD	All Volunteers over 3 days	COMPLETE	NONE	Presentation	1 hour	
Abestos Awareness Presentation	All Volunteers over 3 days	COMPLETE	NONE	Presentation	1 Hour	
Towing Trailers with Vans & HGVS	All Volunteers over 3 days	PASS	NONE	Presentation	1/2 day	
HGV Drivers walk around checks	All Volunteers over 3 days	PASS	NONE	Presentation	1/2 day	
Safe Loading of Vans & LGVs	All Volunteers over 3 days	PASS	NONE	Presentation	1/2 day	
Risk Assessment	All Volunteers over 3 days	COMPLETE	NONE	Presentation	1 day	
Confined Spaces 1	All Volunteers over 3 days	PASS COURSE	NONE	Presentation	2 hours	

POWRA in House	All Volunteers over 3 days	COMPLETE	NONE	Presentation	1 day	
Manual Handling Mind Your Back Video	All Volunteers over 3 days	COMPLETE	NONE	Presentation	1 hour	
Slips, Trips & Falls	All Volunteers over 3 days	COMPLETE	NONE	Presentation	1 hour	
Lone Working	All Volunteers over 3 days	COMPLETE	NONE	Presentation	1 hour	
Working on or Near Water	All Volunteers over 3 days	COMPLETE	NONE	Presentation	1 hour	
Safe Handling of Hazardous Substances	All Volunteers over 3 days	COMPLETE	NONE	Presentation	1 Hour	

Waterway Recreation Development

The Grantham Canal is an important recreational resource important regionally and locally. Attracting significant informal recreation visits by local residents and visitors, as well as angling and canoeing. Research in 2001 revealed some £1.7m of gross visitor expenditure per annum with around some 70 jobs. Marketing, Interpretation and Education led by the Grantham Canal Society would enable a coordinated and canal specific approach to recreation development. For budget see APPENDIX Marketing, Interpretation and Learning Plans

Marketing

Task description	Person Responsible	Skills required	Skills in place	Training and other actions options if any	Notes	Activity Plan	Budget
Media Relations	Steve Swann	Media release writing, PR skills	limited	Recruit trained volunteer via volunteering recruitment agency.(ie REACH) or from within membership		Recruit PR Representitive Produce Job description	
Publicity and Marketing	Steve Swann	Developing and implementing a GCS Marketing plan	Understanding of Marketing	As above		As above	
Exhibitions stand	Rosemary Gibson	Managing stand and other appropriate exhibition equipment for events	Limited resources	Recruit a bigger team		Recruit Marketing team split between management	£6530
Presentations	Rosemary Gibson	Knowledge of history and key issues to promote	as above	As above		and delivery As above	

Events	Rosemary	As above	As above	As above	As above	
	Gibson					

Education -

The following is covered more fully in the Learning and Interpretation Plan . Action Plan items are therefore taken from there to avoid duplication.

Task description	Person Responsible	Skills required	Skills in place	Training options if any	Notes	Activity Plan	Budget
Schools liaison	Rosemary Gibson	Knowledge about schools in area /how to contact schools/key selling points/good admin/ use word powerpoint and internet	Small team				
Schools in school and canal visits	Rosemary Gibson	Ex Teachers ideal- good presentation skills but the ability to create interactive opportunities rather than 'telling'H & S understanding see above .Training in a series of targeted activities aimed at KS2	Small team	CRT Training programme and resources can be developed for Grantham canal		Develop education programme for Canal	£1400 Explorers Course £2700 Education Resources
Work with young people during environmental activities	To be recruited	Development of a youth activity plan based around suitable activities and mentors (fun as well as practical conservation)Retired CRB checked Youth Leader or experienced person		Work with other agencies to develop activity with recruited Grantham Canal volunteer leader		Develop Youth Activity programme	See above
Water safety training	To be recruited	Knowledge of water safety issues and practical responses (guided by risk assessments KS 2 Water safety		CRT Education manager to advice on specialists contractor		Develop local but generic water	CRT already provide

Task description	Person Responsible	Skills required	Skills in place	Training options if any	Notes	Activity Plan	Budget
Family Discovery days	Rosemary and Tony Jackson, Paul Dadford	education – assembly or classroom As above		As above		Develop Discovery Days programme	this.

Interpretation

As with Education above Action Plan items will be taken from Learning and Interpretation Plan.

Task description	Person Responsible	Skills required	Skills in place	Training options if any	Notes	Activity Plan	Budget
Heritage Interpretation	To be recruited	Planning – Awareness of planning regulations, conservation areas, consideration of place, themes, stories. Media – Options for different media Design – Working with designers, briefing, design elements, identity, sense of place. Implementation – how to implement, consultation, suitable specialist contractors. Evaluation – Ways of evaluating.	Limited	CRT interpretation / education manager can suggest suitable contractor to put together a heritage interpretation workshop and mentoring. New CRT heritage interpretation guidelines are currently being developed		Build Interpretation Delivery Plan	£15000- Interpretive Designer £15700 for Interpretive Map and Downloadable Guide £10,000 onsite interpretation

Towpath and Lock Rangers

Task description	Person Responsible	Skills required	Skills in place	Training options if any	Notes	Activity plan	Budget
Inspections	Rosemary Gibson and Sustrans Partners	Understanding of waterway inspection needs and reporting procedure	Waterway is partially covered but training required	Towpath Ranger handbook is required to clarify task. Full on site Induction (including how to use the locks, emergency procedure [where first aid kits, hospital, who to call], Ethics/Gifts) Basic Fire Water and Save a life – 1 day, up to 10 people Drive and Survive (if using a car) Health and Safety Foundation Course – 1 day, 9 or 12 people. Lock Keeping CAATs The following videos: Manual Handling mind your back Slips Trips and Falls Lone working Water Safety Safe Handling of Hazardous Substances Safe Handling of Needles and Syringes Asbestos Awareness Working with Children		Produce handbook Produce Inspections and Induction and training package	CRT Minimum Safety Learning Standards already provide this. CRT Minimum Safety Learning Standards

					already provide this.
CRT Inspections	Understanding of Waterway At present a CRT operative undertakes inspection with handheld recording device	Extending of present Ranger inspections	In house training by CRT	Develop and pilot	

Monitoring and Surveys

The following are proposed as an opportunity to evaluate the project but also to advise on future projects It is proposed that it is an item added to the Action Plan but for the present no Training actions proposed.

Task description	Person Responsible	Skills required	Skills in place	Training requirement	Notes	Activity plan	Budget
Conduct and report on field survey							
Conduct and report on people survey							
Conduct and report on animal survey							
Conduct and report on habitat survey							
Conduct and report on plant survey							
Conduct and report on access survey							

Waterway Maintenance

The proposed structure of delivery of general maintenance would be an extension of the waterways organisation to include the GCS team as part of the waterway service delivery team directed by the Maintenance Manager as are the CRT teams. The following is an extract that illustrates the responsibilities of the waterway team for planned preventative maintenance (PPM) additional works would be added to these by the Works Planner.

Waterway Manager (WM)

- Own Waterway infrastructure, operational building and M&E assets
- Ensure adequate overall resourcing and achievement of the Waterway PPM programme utilising competent staff or external resources and incorporate into business plans
- Own and ensure effective prioritisation of the Core Waterway Programme with respect to PPM
- Ensure PPM plans and task lists are implemented and comply with PPM standard schedule,
- Check the process of making Generic PPM maintenance plan task lists asset specific.
- Undertake periodic (no less than 6 monthly) checks on waterway delivery, quality of PPM and compliance within their area of responsibility.
- Ensure checks are being undertaken and relevant corrective action is taken.
- Ensure findings from PPM visits and notifications are acted upon to meet statutory, operational and service obligations.
- Ensure records are kept in the prescribed manner
- Ensure that those undertaking PPM are competent to do so

Principal Waterway Engineer (PWE)

- Have a detailed knowledge of Waterway infrastructure assets,
- Review PPM requirements of each asset on an on-going basis
- Monitor and review the delivery of PPM for content, quality and consistency,
- Prepare change forms to convert Generic to Specific maintenance plans, and for proposed alterations to the task list or PPM frequency
- Responsible for Waterway monitoring and compliance
- Provide information regarding tasks and frequencies to Works Planners where these are being tailored to individual assets, to allow plans to be created or changed
- Raise additional notifications as necessary if work is required in excess of PPM,
- Take technical advice and recommendations as necessary from Head of Asset Management, Head of Engineering or other engineering specialists,
- Responsible for reviewing and submitting change forms to Engineering Manager

Works Planner (WP)

- Responsible for local application of process in SAP
- Create task list and maintenance plans when agreed including simulating and understanding the effects of changes.
- Create maintenance plans, task lists and schedule these in accordance with this standard and administer any changes and re-scheduling required
- Ensure that maintenance manager/delivery teams have sight of the program to ensure its delivery

- Highlight to PWE/MM areas of variance in plan to actual that may need investigation
- Review outstanding defect notifications prior to the PPM visit for each asset. Where practicable these will be scheduled for completion at the same visit, dependent upon notification priority and resource availability.
- Build business plan to reflect PPM requirements

Maintenance Manager (MM)

- Responsible for delivery of PPM to PPM2012 standard (note: not all PPM is delivered by the Maintenance Manager's team. PPM delivered by Contract will be the responsibility of the Contract Delivery Manager)
- Ensure local team competency and capacity to undertake PPM
- Check the delivery of PPM work
- Investigate with their teams any issues of poor or inadequate delivery
- Review traffic light report and address any areas highlighted

Our Sustainability Plan identifies the Planned Preventative Maintenance required for Locks 14 & 15.

The following tables identify minor waterway tasks. A general assumption is that for the training options, training would be by briefings, or training by CRT staff. There is an assumption that during the construction phase the Grantham canal makers will be managed by the proposed Project Site Supervisor and the existing Volunteer Coordinator would manage and monitor training for the Society in undertaking some of these tasks. The CRT volunteer coordinator would be supported by other staff such as the Customer Operations Manager/Maintenance Manager.

Waterway management

Task description	Person Responsible	Skills required	Skills in place	Training options	Notes	Activity Plan	Budget
Deliver delegated PPM activities	Customer Operations Manager and GCS Representative	Low level skills – Greasing, Painting etc.	Low level skill requirements	On the job training		Assign GCS Representative Training as with Towpath and Lock Rangers	None Required
Maintain and improve water channel capacity by manually removing debris and obstructions	As above	Low level Skills –		Manual Handling and Water Safety training		Manual Handling and Water Safety Course	None Required
Control water channel by manual operations	As above	Low Level skills but experience required		On the job training through CRT staff to build up knowledge			None Required
Monitor and report on water levels	As above	Experience and ability to read gauge board		As above			None Required
Maintain water levels	As above	Knowledge of water control manual		As above			None Required

Task description	Person Responsible	Skills required	Skills in place	Training options	Notes	Activity Plan	Budget
Planning and managing dredging operations	National Dredging Team and GCS Representative	Plan operation and Waterway Dredging procedures	GCS Plant operator	Work with National Dredging manager		Work with National Dredging	None Required for Training but £10k allocated for Site Investigations.
Operating water based dredging plant	As above	As above	As above	As above			

Vegetation management

Task description	Person Responsible	Skills required	Skills in place	Training options	Notes	Actions	Budget
Cross cut and stack small diameter timber using chainsaw	lan Goodson & David Cross	Chainsaw training	In place	To extend operations and gain greater involvement and remove liabilities from CRT.		Training course	Allocated in GCS Sustainability Plan- no budget required for GCHI
Use of small hand tools	As above	Low level skills and H & S Training	WRG Handbook- training weekends, HCA Heritage Training-Lime mortar				Included in NVQ 2 training for Heritage Skills in Construction
Tifor Winch	In-house experience	Medium Level skills	Industry Standard	WRG Training weekend on site. Prior to works			None Required
Safe use and application of pesticides	As above	Trained persons	None	As necessary arrange training course but low level priority			None Required
Prepare sites to create habitats	As above	Environmental Skills	In place	Training linked to planned project		Training in association with Wildlife Trust/CRT	None Required

				Staff	
Establish and protect woodland vegetation	As above	As above	As above		CRT Ecologist
Establish and protect wetland vegetation	As above	As above	As above		
Establish and protect hedgerows	As above	As above	As above		
Establish and protect grassland vegetation	As above	As above	As above		

Construction

Task	Person Responsible	Skills required	Skills in place	Training requirement	Notes	Activity Plan	No. Trainees	Cost Course	Total Budget
Maintain and repair permanent structures for the water environment	lan Wakefield/Volunteer Site Supervisor	Heritage skills, brickwork, stonework and concreting	Yes but limited. Some volunteers have attended courses	NVQ 2 Heritage skills – Knowledge of Heritage materials	Newark & Grantham Colleges are running courses (NVQ) on site with students and GCS volunteers together.	Training Course	14	£500 pp	£7,000
	Volunteer Construction (specialists)		Limited	Brickwork Level 1		Training Course	7	£440 pp	£3,080
				Carpentry & Joinery Level 1		Training Course	2	£1580 pp	£3,160
Temporary Works	Volunteer Site Supervisor/lan Wakefield	The need for a Temporary Works Policy Temporary Works and the Law	None	CO512 Temporary Works Coordination	CRT use Thomas Telford Training for Supervisors	Training Course	1	£285pp	

		Role of TWC/Supervisor & TW Procedures							
		Groundworks							
		Falsework & Formwork							
		Scaffolding							
		Temporary Works Awareness							
Stone Masonry/Heritage Brickwork Repairs	Volunteer (Specialists)	Stone Work Repairs		NVQ2 Repairing and Maintaining pre 1919 heritage waterways structures and buildings Module 3			3	£2500pp all m	odules
Site Management	Volunteer Supervisors	Management responsibilities for Construction Sites	None	Site Management- CDM	Grantham College have students working on this, GCS may also wish to train people.	Training Course	2	£1645 pp	£3,290
		Health & Safety	None	NEBOSH	Grantham College have students working on this, GCS may	Training Course	1	£850pp	£850

		also wish to train people.		

Plant and Boats

Task	Person Responsible		Skills in place	Training Requirement	Duration		No. Trainees	Course Cost	Budget
Dredging/Bank Raising/Earth Moving	Volunteer Team Leader/Specialist volunteer	Use of 360 excavator		Safe Use-Lantra Accreditation	16		2	£945 pp/per day £37.13pp	£8,505 £222.78
		Forward Tipping Dumpers	None	Safe Use Accreditation	2		4	£420pg	£840 £151.40
Dredging/Movements of earth	Specialist volunteer	Use of Dredger	None	Safe Use	твс	CAATS		£1200 KNWpp	
Welfare/Plant power;Generators				Safe Use- Lantra	1				
Concrete Breaking				Use of Compressors Accreditation	1		4	£450 pg £37.13pp	£450 pg 222.78

Working near to	Volunteer							
Utilities	Supervisors	H&S Services	None	Cables & Services	1	6	£450pg	£450
				Accreditation			£37.13pp	£222.78

Construction and Restoration

In respect of Construction and Restoration works there was the need to consider the following options appraisal.

Option 1 – 34 week programme

The original proposal to HLF involved a 34 week construction programme, with 7 weeks of volunteering activities concurrent with Contractor tasks. Hyder's design requires the installation of anchors both through the lock walls and inclined into the surrounding embankment. A complete rebuild of one lock wall with contiguous concrete piles and a concrete and brick facing is also necessary.

The construction is high risk and necessitates the use of an experienced Contractor for many elements. In Option 1, Volunteers would have been working at lock 15 only (the least complex) to complete brickwork repairs and rebuilding.

Option 2 – 1 year programme

One of four lock walls (the one that has collapsed at Lock 14) was to be built by contractors. For the other three walls, we considered rebuilding the top sections and the internal lock face wall repairs with volunteers only once the anchor beam is installed by contractors).

We considered reducing the Contractor programme and increasing that of the Volunteers, by adjusting the programme so that the Contractor carries out key structural activities (vertical and inclined anchors and the offside wall at lock 14) to stabilise the locks. Maintaining the same design, anchoring work is necessary in order to stabilise the locks to a point of being potentially operable in the future. Once this is complete the Contractor would de-mobilise from site and Volunteers would work for an extended period of time on the remaining tasks; these would be all brickwork repairs to the lock faces and rebuilding the top sections of wall.

The revised Contractor programme (excluding brick repairs to the lock wall faces, lock gates, and bank raising and lock landings) is approximately 26 weeks. It is estimated that Volunteers may take 6 months (based on a reasonable level of productivity) to complete the remaining brickwork to rebuild the locks. This duration did not include gate installation or lock landings (for which fundraising could be done over subsequent years). Scaffolding, water management (a flume system) and welfare will have to be maintained on site for 6 months of Volunteer work; Canal and River Trust can assume responsibility for these through the Site Supervisor.

It should be noted at this stage, whilst Contractor costs would have been reduced, there would be increases in ongoing costs for welfare, accesses, scaffolding, water management, supervision and Volunteer co-ordination. This potential alternative with lower Contract costs, and much improved Volunteer output, has been explored in terms of feasibility, budget and programme as Option 2.

Option 3 – 2.5 year programme

Feedback was received from GCS that a 6 month period of work for Volunteers may be slightly constrained based on their resource, the work that they would need to complete and level of productivity. Therefore, Option 3 was put forward for consideration with a 2.5 year programme in total; 6 months would be Contractor work and the Volunteer site duration would be 2 years. All other items are as per Option 2, with a reduced scope not including lock gate installation.

Option 4 – 2.5 year programme

This Option is as per Option 3 except with inclusion of a full scope of work, to include the installation of lock gates and lock landings.

However, it was found that the opportunity for volunteer involvement was not maximised and was an expensive solution.

Option 5-5 year programme

This Option allowed for a total re-design of the conservation works, removing the requirement for soil anchors and cast concrete beam. This involves volunteers undertaking all the works permanent and temporary. The principle of re-design is focused on excavating to the back of the lock walls, to a depth of 2m, installing ties rods, new anchor piles-steel piles into reinforced concrete. see Repair Strategy, Methodology & Design, July 2014, Les Clarke FICE, CEng, Canal & River Trust Principle Engineer. Some localised propping up of lock walls maybe required.

This option relies on supervision of volunteers with a Site Supervisor, and the development of a volunteer construction gang within the Grantham Canal Society-(see organogram, job descriptions). CRT would be acting as the Principle Contractor with increased support from organisations such as the Waterways Recovery Group who have installed piling and brick ties in previous projects. In order to deliver this volunteer led approach we need more time to complete the works-see provisional programme.

The Waterway Recovery Groups are looking to provide 8 weeks of support annually and also bring a number of national training weekends to the site. This will enable the project to widen the promotion of the project to a national market as well as increasing the opportunities for the Grantham Canal Society volunteers to gain competencies in the training identified in the training plan.

The project costs remove the rates provided by Kier and replace them with other supplier rates for materials and plant/machinery. Due to the need to increase the duration of the programme the welfare items will be purchased reducing the cost based on long term hire fees.

The partnership overall prefer this option as it allows for volunteers to take greater ownership of the lock restoration by being given the opportunity to take on a greater variety of tasks. If this Option is successful it provides a blueprint volunteer lock restoration on locks 12 & 13.

We have held lengthy discussions with the Waterway Recover Group, sharing our Repair Strategy, Methodology and Design with the Group and the Grantham Canal Society-committee and members. We know that we have commitment from both organisations to work on the project. We also have

support from the Grantham College who are keen to integrate brickwork and joinery courses into the project. This will enable their students to gain practical experience but also open their eyes to Heritage Construction.

Subject to the selected planned option a training plan can be developed with WRG. The following table illustrates the key segments of restoration and major construction work.

Role	CLIENT	PROJECT MANAGER	CDM CO-ORDINATOR	DESIGNER / LEAD DESIGNER	PRINCIPAL CONTRACTOR	STAGE OUTCOME
Function	Initiates project Determines budget Makes key appointments	Acts on behalf of client Monitors project and compliance with CRT requirements	Advises Project Manager. Co- ordinates health & safety aspects of design work. Facilitates good communication between all duty holders	Develops and specifies design Eliminates hazards and reduces risks of remaining hazards. Ensures Client aware of their duties under CDM.	Controls construction Manages sub- contractors	
1. Project initiation	Consults with sponsors and stakeholders Defines project scope	Assembles information on site hazards	Ensures preparation of pre-construction information			Outline Preconstruction information Letter of appointment

	Appoints a representative and CDM Co-ordinator					
2. Project development	Appoints Designer/Lead Designer		Ensures liaison between designers, client and Principal Contractor Agrees format of health & safety file with Project Manager	Conducts feasibility studie Evaluates options and Determines risks		Letters of appointment Significant residual risks of Design (if not applicable a statement to that effect)
3. Pre-contract			Notifies HSE	Includes health & safety information in design output		Form 10 (04/08)
Contract Placement	Appoints Principal Contractor		Makes any additional notification to HSE			Letter of appointment
	Accepts Construction Health	Agrees arrangements for routine liaison and	Ensures continuing liaison with all duty		Prepares Health & Safety Plan for construction work	Construction Health & Safety

Pre-construction	& Safety Plan Ensures adequate welfare facilities	monitoring. Project Manager to accept Construction Phase Plan. Releases site to PC	holders		and site rules and provides welfare facilities.	Plan Site Rules Site Release Certificate
4. Construction		Monitors work in progress	Reviews changes in design and liaises with designers and OC	Accepts design changes	Controls site access Manages work on site Enforces H&S Plan Liaises with coordinator on design changes, Provides site induction and any other training or information appropriate to site activity	Method statements Update of H & S plan Statutory inspection records
Hand-back	Accepts completed works and Health & Safety File	Accepts site back from PC	Ensures preparation of health and safety file			Hand-back Certificate Health & Safety File

Piloting NVQ Level 2 Heritage Construction Skills

Overview

A recognised formal training framework for inland waterways volunteers (and other engaged participants) will provide a transferable and recognised competency. At present there is no inland waterway industry standard accredited training appropriate to volunteer skill development. A key omission is the need to fill the requirement for heritage construction skills. A pilot scheme therefore that delivers a vocational training programme appropriate initially for volunteers and locally based would test the demand and potentially lead the way for growing a portfolio of courses and accredited qualifications within the sector.

In other craft, trade and professional areas there are recognised National Occupational Standards (NOS). These are drawn up by the relevant Sector Skills Council in conjunction with professional institutions. NOS describe what the individual needs to do, know and understand to carry out a particular job role or function. They are used therefore to –

- Describe good practice
- Set out a statement of competence
- Provide managers with a tool for workforce management
- · Offer a framework for training and development
- Form the basis of a range of National Vocational Qualifications (NVQ)

The required programme will pilot a new approach to formally train volunteers and young people working on our waterways. The bespoke nature of the training will reflect the specialist work undertaken by the waterway volunteers and staff and further on, reach out to sub-contractors and other volunteer groups across the country. The training will embrace the knowledge and skills required of people working within the special heritage on our waterways. The programme focusses on level 2 and will utilise both bespoke and existing qualifications to develop a beneficial programme of education and training, which will be made available to a number of bursary students throughout the life of the project.

The Training Programme

This will be a tailored programme of training and education, along with assessment of accredited learning outcomes. The blended learning process should embrace; Knowledge qualifications along with Vocational learning.

Target qualifications;

Level 2 NVQ diploma in heritage skills (developed from SVQ qualifications) Level 2 award in heritage construction (developed from Ascentis award)

(both the above qualifications have been re-developed in order to meet the specific requirements of the waterways operations.)

This will be bespoke training specifically designed and embracing

- working with lime mortars,
- Green oak manufacturing
- Stonework and brickwork and other special works.

Development:

Activities required to develop the programme are -

- 1. Working with awarding bodies to develop specialist qualifications based on existing models.
- 2. Accreditation of bespoke awards.
- 3. Development of bespoke interventions to underpin specialisms.
- 4. Preparation of delivery plan and teaching materials
- 5. Setting entry level and recruitment.

Development Costs:

PROGRAMME	DURATION	LEVEL	VENUE	COST PER
				STUDENT
Level 2 award in	90GLH	2	Classroom +	£500.00
heritage			visits	
construction				
(waterways)				
CPD	20 GLH	Notional 2	Site	£220.00
programme				
(lime)				
Level 2 NVQ	400 GLH	2	Site 60%	£2500.00
diploma heritage			Classroom 40%	
skills				
(waterways)				
Specialist	20 GLH	Notional 2	Classroom	£220.00
technology				
				£3540