

Lowland Canals
Steering Group

Freight Project
Group

Methodology

Lowland Canals
Freight Action Plan
Phase 1



Submitted to
**Lowland Canals
Freight Project Group**

by

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1 INTRODUCTION

This report sets out the methodology for the conduct of Phase 1 of the Lowland Canals Freight Action Plan.

The main objective of the study was to conduct surveys and investigations as part of the Lowland Canals Freight Action Plan, Phase 1 Survey of Potential”.

Phase 1 comprised a number of investigations, including:

- Identification of the potential and constraints which will influence the viability of canal freight on the Lowland Canals
- Surveys of business / retail parks and industrial estates in close proximity to the Lowland Canals that might provide freight opportunities.
- Identification of businesses (including waste, recycling and construction materials) both close to the canals and further afield which may benefit from the opportunities presented by the canals.
- Identification of potential canal-side development sites..

The final report of Phase 1 presents the findings of the investigations above, including a section which can be used as a stand-alone document introducing the Lowland Canals as a potential carrier of freight traffic, and the possible constraints which may be involved. This document could used to engage those who may be interested in commencing freight services on the canals.

The preparation of detailed proposals for implementation of sustainable canal freight projects, will be the subject of Phase 2 of the Freight Action Plan which will follow on from the work addressed by this study.

2 REVIEW OF POTENTIAL

2.1 Identification of General Factors and Constraints Influencing the Viability of Canal Freight on the Lowland Canals

The first part of the study involves a review of potential and constraints facing the use of the Lowland Canals for the movement of freight. To date, a number of studies into the carriage of particular freights on the Lowland Canals have been carried out. These are listed below.

Report	Author
Carriage of Waste on the Lowland Canals	Milton Resources Ltd 2003
Potential Wharves on the Lowland Canals	Milton Resources Ltd 2005
Swift Boat Passenger Transport on Urban Canals – Passenger and Funding Potential	Milton Resources Ltd 2005
Preparation of Brief and tender documents – Lowland Canal Freight Action Plan	Milton Resources Ltd 2005.
Consideration of Options for Retail Freight on the Birmingham Canal Navigations	Milton Resources Ltd 2005.
Lowland Canals Freight Demonstration Project – WEEE trials on Scotland’s Lowland Canals. (East Dunbartonshire Council and British Waterways 2005)	Milton Resources Ltd 2005.

The final report of Phase 1 of the Lowland Canals Freight Action Plan includes a review of the potential and constraints facing the use of the Lowland Canals for the movement of freight. This draws together information already provided in the above studies and, based on route investigations carried out in Phase 1, adds further details on the Union Canal which has been less thoroughly investigated.

The studies undertaken to date into the potential of canal freight, include the Carriage of Waste on the Lowland Canals, Wharves on Scotland’s Lowland Canals, reporting on the WEEE trials undertaken by British Waterways Scotland and East Dunbartonshire Council. However, there is no single summary document available that addresses the potential for general carriage of freight on the Lowland Canals, and the possible constraints which may be involved.

This element of the work is a component of the final report for the study, taking the form of a stand-alone document which addresses the potential and constraints of using canals for freight in general, and the Lowland Canal specifically. This document will be an essential tool for any organisation approaching businesses in Phase 2 of the Freight Action Plan, as most people do not have an understanding of the potential use of canals for freight.

3 SURVEY METHODOLOGY

This section details the methodology for identifying businesses, retail parks and industrial estates that might make use of the canals for freight, and includes those businesses further from the Lowland Canals that might use canals for bulk loads, and potential canal side commercial development sites. The location, details and current state of potential canal side loading and unloading points is also addressed. Each of the following sub-sections details the items recorded against each location type. Blank recording sheets are presented in the appendix to this report.

3.1 Identification of Businesses that might make use of the canals for freight

Existing businesses that have the potential to make use of canal-transport for the movement of raw materials and goods will be identified. The geographical extent of the survey will cover businesses adjoining the canals, and those in close proximity to them. A theoretical limit of distance from the canal of 1km will be applied, but this will not be a rigid limit. There may be businesses a little over 1km which may be able to use the canal for freight transport, or businesses whose front entrance is a long way from the canal, but the whose premises extend much closer to the canal.

The surveys and investigations will also consider ongoing developments to the canal network which may build future potential. These include the £100 million Glasgow Canal Regeneration Project's redevelopment of Port Dundas in Glasgow, and British Waterway's aspirations to improve navigation on the River Carron (which would extend the catchment area for freight to Grangemouth docks). In order to identify these locations, discussions will be held with Local Authorities, British Waterways etc to consider ongoing projects which may have an impact on our investigations.

Where businesses are focussed around a town such as Linlithgow or Banknock, the whole town will be surveyed, as these may be locations where public wharves may benefit a number of businesses. While single businesses may not generate sufficient traffic, the combined businesses in business parks or retail parks may generate sufficient traffics to make canal transport viable. Conversely, it may not be necessary to investigate such a wide area near "heavily locked" stretches of canal eg Maryhill or Falkirk, where the additional time spent working through locks may make the use of canal less viable for some freight types. As part of liaison processes the opinions of key stakeholders, particularly Local Authorities, British Waterways, Gateway Trusts and LECS will also be obtained.

Only businesses with higher freight movements will be considered, so businesses such as small retail concerns were not included. Some businesses such as building material manufacturers, scrap metals and steel fabricators are obvious potential businesses. As Phase 1 of the Freight Action Plan did not involve interviews with businesses, methods of identifying businesses with large freight turnovers have been identified that do not require access to the businesses or interviews with staff. The methods identified, together with nominal thresholds are identified in Table 3.1 below. The surveys did, however, bear in mind that some businesses with lower freight

movements may provide the potential for generating regular return-loads for other traffic.

Method of identifying businesses with large freight turnover	Guideline threshold
Company run goods vehicles	At least 1 LGV
Goods vehicles parked at business	At least 1 LGV
Forklift trucks / cranes	At least 1 forklift
Loading dock / bay	Presence of
Goods inwards / outwards compounds	Presence of
Storage area for bulk goods	Presence of
Warehouse	Presence of

Table 3.1. Methods and thresholds for identifying businesses with large freight turnovers.

Details that will be recorded for each business that has the potential to use canals for freight movements include those identified in Table 3.2

Recording Sheet for Businesses

Data item	Content
Reference number	Reference number of the business. This will be used to identify the location on the paper maps supplied with the report.
Business name	Business name
Contact details	Address, telephone etc.
Business type	Nature of business / what produced or handled.
Business size	Whether business is part of a larger organisation.
Single site or multiple site business	Whether the business has one or more sites in the vicinity of the Lowland Canals
OSGR	Co-ordinates will help confirm the locations of businesses. They also enable later integration of data into GIS in potential future applications.
Local authority	The local authority district in which the location lies
Photograph	
Type of Freight	Type of freight (both incoming and outgoing).
One or two directional traffic	Whether traffic would be materials coming into the business, leaving or two-way
Configuration of loads	How loads are transported: by container, pallets, skips or other common or specialist means
Nearest canal	Nearest suitable canal for freight
Potential wharf	Whether a wharf is currently available, and an estimate of the extent of work required to establish a wharf.
Means of freight transfer	Potential means of transfer between wharf & business such as road vehicle, site vehicle, forklift, conveyor etc
Estimated timings from businesses to wharves	How long the freight transfer would take.
Canal distances and timings	Timings, distances and locks to key locations along the canal network.
Remarks	

Table 3.2. Data fields to be collected for businesses

3.2 Identification of Retail Parks and Industrial Estates that might make use of the canals for freight

Initial surveys identified an additional type of freight generator: Industrial Estates. While some industrial estates have no businesses which would generate traffic on their own, it was noted that almost every unit had a recycling skip or container, and collectively these could generate enough to fill a vessel. Therefore the category of “industrial estate / retail park” was added.

The geographical extent of the survey covered estates adjoining the canals, and those in close proximity to them. A theoretical limit of distance from the canal of 1km was applied, but this was not a rigid limit. Industrial estates with good road links were identified that were over 1km from the canal but which were potentially large generators of traffic that might be able to use the canal for freight transport. This was particularly the case for key new towns.

Records for retail parks and industrial estates are identified in Table 3.3.

Recording Sheet for Industrial Estates

Data item	Content
Reference number	Reference number of the industrial estate. This will be used to identify the location on the paper maps supplied with the report.
Estate name	Estate name
Estate Manager contact details	Address, telephone etc.
Business size	Whether business is part of a larger organisation.
Single site or multiple site business	Whether the business has one or more sites in the vicinity of the Lowland Canals
OSGR	Co-ordinates will help confirm the locations of businesses. They also enable later integration of data into GIS in potential future applications.
Local authority	The local authority district in which the location lies
Photograph	
Type of Business	Predominant types of business at the estate.
Potential freight types	Potential canal-related freight types
Potential freight inwards	Potential canal freight destined for the estate
Potential freight outwards	Potential canal freight generated by the estate.
Nearest canal	Nearest suitable canal for freight
Current wharf availability	Whether a wharf is currently available, or whether there is a potential wharf site.
Means of freight transfer	Potential means of transfer between wharf & business such as road vehicle, site vehicle, forklift, conveyor etc
Estimated timings from businesses to wharves	How long the freight transfer would take.
Canal distances and timings	Timings, distances and locks to key locations along the canal network.
Remarks	

Table 3.3. Data fields to be collected for retail parks and industrial estates

3.3 Potential Loading and Unloading sites

Canal-side freight facility sites could include existing on-line wharves, basins or slipways at which freight can be loaded, unloaded and transhipped to other modes of transport. The facilities provided could range from a basic linear wharf with road access but no storage potential, thorough to secure basins equipped with cranes and warehouse facilities.

The utility of different wharf types for freight traffic would be dependent on the nature of traffic to be carried and the method of handling. This section of the study identified all the sites on the canals where there is some potential to load and unload freight.

In January 2005, Milton Resources Ltd prepared a document on wharves on the Lowland Canals. This presented information on existing and potential wharves identified in earlier studies. This element of Phase 1 of the Freight Action Plan revisited the locations, and identified additional locations that could be used. For each wharf location, a table was completed. Fields with their uses are shown in Table 3.4 below.

Data item	Content
Reference number	Reference number assigned to the potential wharf. This is used to identify the location on the paper maps supplied with the report.
Canal	Canal name
Wharf title	Title of wharf
Local authority	The local authority district in which the location lies
OSGR	Ordnance survey grid reference (eg NS 45207360)
Photograph	
Distances	Mileages and locks to key locations along the canal network. <i>For example:</i> <i>To Falkirk: 31.5 miles, 24 locks</i> <i>To Glasgow: 13 miles, 20 locks</i>
Site details	Description of the site.
Wharf type	Basin, Linear or Slipway Private or public wharf / Single or multi-purpose.
Ownership	Who currently owns the site.
Winding point	Nearest location for turning vessels which are not double ended (eg un-powered barges) or longer than the width of the canal
Road access	Details of road access, any restrictions (weight, height etc), nature of surfacing etc
Hard standing	Whether hard standing is available for transhipment between vehicles and vessels.
Storage facilities	What facilities there are for storage of loads either in the open or in warehouses
Security	What security is available at the site (eg fencing, 24-hour presence on site etc)
Amenity impact	Whether there is likely to be any impact on amenity as a result of using the wharf for freight.
Residential impact	Whether there is likely to be any impact on residential areas nearby as a result of use of the wharf for freight.
Remarks	Any other remarks on the wharf, such as whether works would be required to use it for freight, e.g dredging, restoration / re-building of wharf wall

Table 3.4. Data fields to be collected for potential wharf locations

It should be noted that where wharves exist, but there is no current freight use at the site, the wharf can be used for moorings to protect locations. Where the moorings are permanent (ie for tying leisure boats when their owners are not present), they can be used to generate revenue through mooring fees. This has been done at wharf locations such as Bowling Basin.

3.4 Potential canal side commercial development sites

In recent years, the UK canals have provided a focus for development and regeneration. On Scotland's Lowland Canal network, such developments include the Falkirk Wheel, Kirkintilloch (by Townhead Bridge), Spiers Wharf and Port Dundas in Glasgow. The work to reopen the Lowland Canals for the Millennium has stimulated a number of such projects, some of which are already in progress or complete.

Potential canal-side commercial development sites could include:

- Canal-side industry, including Materials Recovery Facilities (MRFs) which could use the canal for goods inwards and outwards.
- Offices, which may generate some small traffic such as paper recycling, and also may provide opportunities for waterbus services (possibly run by organisations such as the Nolly Barge, The Waterways Trust Scotland etc).
- Retail developments, both as an attraction for shoppers and as a freight traffic generator. This could also provide a focus for trip boat / waterbus operations.
- Leisure facilities, which could include bars, hotels and marinas. Facilities such as bars could have recycling waste such as bottles removed by boat, particularly if this option is incorporated in the development design.

Such developments provide two key opportunities for the use of Canal Freight. In the short term, canals can be used to bring in much of the aggregates and building materials which would be required during development. With a number aggregate, building material and construction companies located near to the route of the Lowland Canals, this could relieve much pressure on local roads during the development process. In the longer term, once the developments are operational, there are further opportunities for freight such as those outlined for industry, offices, retail and leisure above.

Milton Resources Ltd worked with British Waterways and Local Authorities to identify the opportunities presented by opportunities identified in Local Plans and other documents such as Link Monitoring Reports, notes of meetings etc. In addition, where further opportunities were identified in the course of surveys, they were discussed with the Freight Sub-Group members.

4 DRAFT APPROACH FOR PHASE 2

Phase 2 of the Lowland Canals Freight Action Plan will involve assessment of the opportunities arising from Phase 1. Activities in Phase 2 will be likely to include:

- Prioritising approaches to businesses to follow up the investigations of Phase 1.
- Working with individual businesses or traffic types to investigate their potential of using the canals for freight carrying; where possible developing this into cost / benefit studies, business plans or firm plans to initiate carrying by canal.
- Establishing the economic viability, potential environmental benefits and social benefits of its reintroduction.

Phase 2 of the study will not be a part of the study covered by this study, however our study will prepare a draft approach for Phase 2. The draft approach will include the format the studies will take, and a methodology for using fieldwork data obtained in Phase 1 to identify likely businesses for study in Phase 2.

In developing the plan to take forward the three activities identified above, we would identify:

- A methodology for prioritising likely businesses and traffic types for further investigation.
- A clear strategy for liaising with businesses and developers identified in Phase 1.
- Suggested organisations and structures for taking Phase 2 forward.
- Potential funding which might be available to assist with this process.

Prior to conducting this phase of the study, we will hold discussions with Freight Sub Group members to discuss the precise nature and direction Phase 2 should take.

5 LIAISON ACTIVITIES

At the commencement of the project, Milton Resources Ltd will meet with Freight Sub-Group members to finalise the plan for the conduct of the project. This will also provide an early opportunity to meet with local authority representatives, and smooth the way for liaison later in the project when consulting with the major stakeholders (Scottish Executive, British Waterways, Local Authorities etc).

Throughout the course of the study, we will liaise with the Contract Manager, providing monthly progress reports detailing progress of the work, actions since the last report, and the identification of any risks to, or deviation from the agreed programme of work. The report will also identify any variation to the agreed spend profiles. We will notify the Contract Manager at the earliest opportunity of any delays or difficulties encountered in conducting the project.

Liaison meetings with the Freight Sub Group will be held as follows:

- Inception meeting: presentation of the proposed methodology, finalising project plan, and agreement of content of deliverables.
- Progress meeting: presentation of the results of fieldwork and discussion of draft approach for Phase 2.
- Final Project Meeting: Presentation of findings of study, final report and recommendations for the way forward.

Liaison processes are summarised below:

Week Commencing	Liaison activities*
17 th October	Contract issued Draft methodology (this document) Inception meeting (latter half of week)
14 th November	Month 1 - Progress report Draft document on potential for freight on Lowland Canals
12 th December	Month 2 – Progress report Initial results of fieldwork & investigations Draft approach for Phase 2 Progress meeting
16 th January	Month 3 – Progress report Final report Final Project Meeting

** liaison activities with individual organisations with regard to work detailed in the sections above will continue throughout the duration of the project.*

6 PROGRAMME TIMESCALES

Figure 5.1 below shows the timescales for the project including the survey periods.

