

THE SOUTHBANK BASIN  
AND THE FORTH AND CLYDE CANAL,  
KIRKINTILLOCH  
DATA STRUCTURE REPORT



PROJECT 2364

carried out  
on behalf of  
The Miller Partnership and Strathkelvin Development Company Ltd

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*Cover Plate:*

*Aerial photograph of the site 24 January 2007 (image 041) and of the completed development 2008 (Hawkeye Photography)*

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PROJECT 2364

by

Beverley Ballin Smith

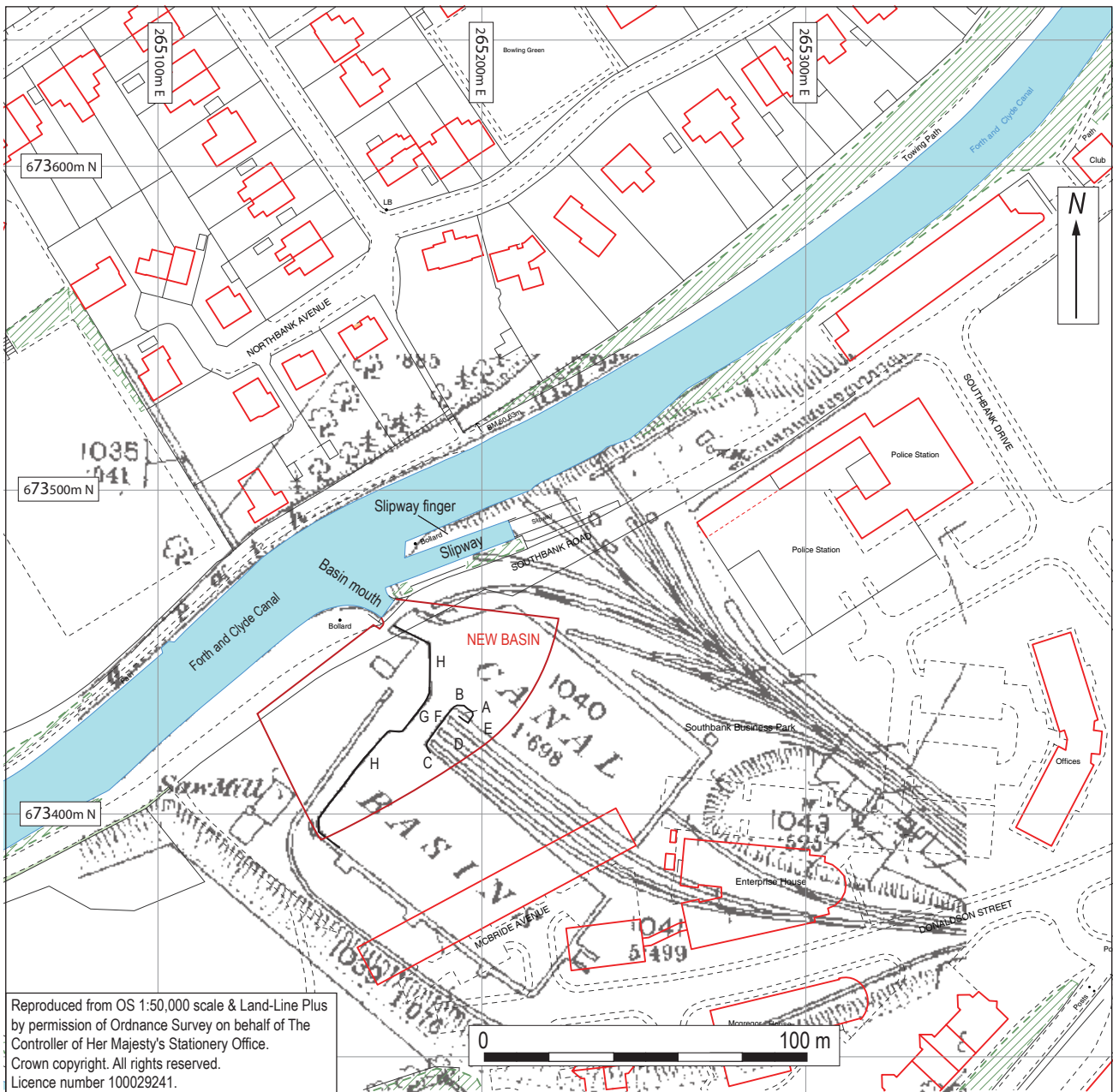
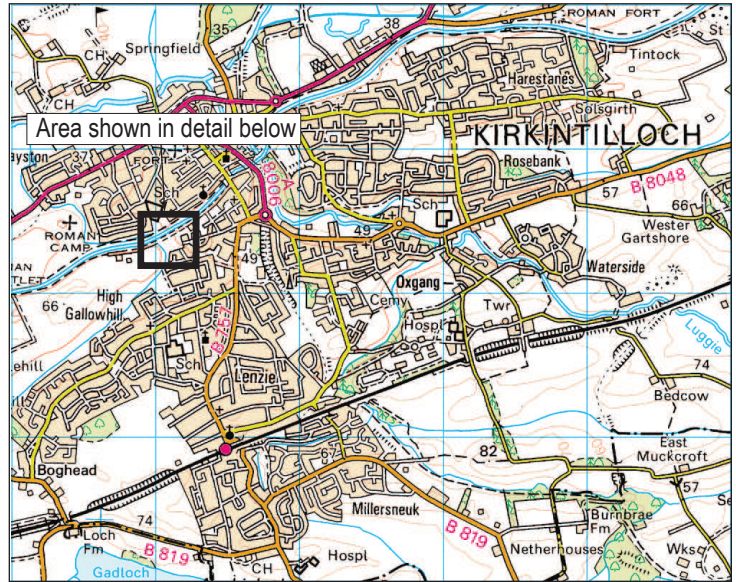
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Approved by: ..... Date: 17 October 2008  
Dr John Atkinson





Project 2364  
 North Canal Bank, Clydebank  
 Archaeological Monitoring



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Figure 1: Site Location.

## 1.0 Executive Summary

Redevelopment of the remaining part of the old railway basin at Southbank, Kirkintilloch allowed the archaeological investigation of the eighteenth-century double basin, the basin mouth where it joined the Forth and Clyde Canal and the nineteenth-century slipway and slipway finger. The work was undertaken by Glasgow University Archaeological Research Division (GUARD) at the request of The Miller Partnership and Strathkelvin Development Company Ltd. The canal is a Scheduled Ancient Monument, and additions, repairs and alterations to features beside it as part of the new development, were also monitored.

The background to the development and use of the basin was also investigated, as various industries had targeted the basin for its convenient access to the canal and outlets to the west and east. The dressed walls of the basin survived up to 2 m in height when revealed from beneath 1960s infill, although their upper courses were missing. Stop log channels in the walls for stop planks across the passage between the two halves of the basin were also preserved. The basin mouth survived to its full height of nearly 5 m, its walls resting on a foundation of concrete and pebbles lying directly on the subsoil. It also had stop log channels for taking stop planks to divide the waters of the basin from those of the canal.

Evidence survived that the slipway was a much later addition, as it was built for the construction of 'puffers'. The softwood timbers of the slipway ramp for the launching and repairing of boats survived and were noted to be covered in bitumen. The investigations of the slipway finger revealed that it originally had a sandstone bollard for mooring which was replaced in metal when the surface of the finger was renewed. The end of the finger was also extended and the whole resurfaced before its general demise in the 1960s.

## 2.0 Introduction

A proposal by Strathkelvin Development Company Ltd for the redevelopment of the old canal basin and adjacent lands at Southbank, Kirkintilloch beside the Forth and Clyde Canal was agreed by East Dunbartonshire Council. The new works included a replacement canal basin and boat shed with a new footbridge across the canal. Additional works, not monitored as part of this archaeological project, included office blocks, an arts centre, other facilities and access roads. An archaeological presence was required for part of the development that encroached upon the canal itself, which is a Scheduled Ancient Monument, and therefore protected by the Secretary of State for Scotland. The old canal basin, which was filled in during the 1960s and subsequently partly built upon, is not scheduled. However, archaeological monitoring of the new basin excavation was considered important in the expectation that it could provide information on the construction and development of the canal, the basin, its entrance and the slipway/boat sheds at Southbank. Monitoring of the works undertaken by Balfour Beatty on the basin, slipway and canal began in November 2006 and was completed in May 2008.

## 3.0 Site Location, Topography and Geology (Figure 1)

The Forth and Clyde Canal as its name indicates cuts through the central Scottish lowlands from Bowling in the west on the River Clyde to the junction of the River Carron with the Firth of Forth in the east. Kirkintilloch is situated *c* 26 km from Bowling, and therefore a little west of the mid-point of the course of the canal. Here the canal runs along the southern edge of the River Kelvin valley in what was relatively flat to gently rolling countryside about 47.5 m OD, but it is now surrounded by houses to the north and east, and mixed used urban development to the south and south-east. The old canal basin is located at NGR: NS 6550 7345.

The canal and basin at Southbank were dug through fluvio-glacial boulder clays and sands, which were observed at the bottom of the excavated slipway and other parts of the development. The underlying geology consists of a millstone grit series (Namurian) with intrusive basalt, dolerite, camptonite and related rocks, with a carboniferous limestone series to the north and Westphalian coal measures (part of the Central Belt coalfield) to the immediate south (Cameron & Stephenson 1985 and Geological Map of the UK 1979).

## 4.0 Archaeological and Historical Background (Figure 2)

The construction of the Forth and Clyde Canal began at the Firth of Forth by the River Carron in 1768 and it was completed in 1790 at the River Clyde at Bowling. It took 22 years to build and was dug by hand by a workforce of c 1000 local labourers (Bowman 2001, 44). The aim in constructing the canal was to link the west and east coasts by a navigable and safe waterway that was also relatively quick to sail along. Previously the main route for shipping was around the north of Scotland and down through the isles which at times was extremely dangerous. The designer and engineer for the canal was James Smeaton and it was his report that led to the 1768 Act of Parliament which allowed the construction to go ahead with an estimated cost of £150,000. The canal's total length is 62.5 km with 39 locks; it is up to 19.2 m wide and it was eventually cut to a depth of 2.7 m to enable sea-going vessels to pass along it (RCAHMS Broadsheet 9, 2002). Most of the canal is lined with puddle clay and its walls, locks, bridges and lock keepers cottages were originally constructed in dressed blocks of sandstone. The canal was used by industries, manufacturers and farmers throughout the Central Belt and also by travellers (Bowman 2001, 45).

At Southbank, to the immediate west of Kirkintilloch town centre, a large, single and rectangular railway basin had been constructed to join the canal. It is likely that this feature was built with the continuation of the canal to the west in 1775, as Kirkintilloch was the temporary terminus for the network prior to that date (Bowman 2001, 44, 54). The basin was originally built as a terminal for the transshipment of coal brought from the Lanarkshire coal mines by the Monkland and Kirkintilloch Railway. At the basin, coal would have been transferred to canal-going ships for its onward journey (Hutton 2001, 25) (Plate 1). Sometime after 1838 the basin was doubled in size by the addition of a similar sized arm to the south separated from the northern one by a rectangular peninsular (Plate 2). Iron foundries were constructed at Kirkintilloch (South Bank, Lion and Basin Foundries) (Plate 3). The basin was also used for stockpiling imported timber and the development of saw mills such as McGregor's Sawmill, and the construction of a nearby nickel smelter by the New Caledonia Mines Company took place close to its banks (Bowman 2001, 55-57). At the beginning of the twentieth century the basin was used by timber merchants and boat-builders Peter McGregor and Sons who built 'motor puffers'. The canal was also used from the 1860s by a firm of 'puffer' boat-builders, J & J Hay, situated on a slipway constructed immediately east of the basin mouth (Plate 4).

The canal was in use until 1963 when it was closed by Act of Parliament. During much of the preceding half century it had seen declining traffic and the closure of canal and basin industries, and was probably suffering increasing competition from road building, vehicular transport and freight, which were important factors in its closure (Bowman 2001, 58). By the beginning of the 1960s the canal was in need of extensive repair but there was a lack of impetus to invest in it. Some parts of the canal were filled in with industrial and other waste products; roads and motorways were built over it; its waters were polluted and it became a dangerous edifice to Scotland's industrial past. Similar events also occurred at the railway basin. It was filled in with industrial debris, part of it was built over for industrial units and the basin mouth was blocked by a plug of concrete (Plate 5).

During the late 1990s, Scottish Enterprise, with local authorities and British Waterways Scotland were funded by the Millennium Commission and the European Union to restore the canal (and the Union Canal via the unique Falkirk Wheel) and its infrastructure. The restoration and the re-established canal link between the Firth of Forth and the Clyde were completed by 2001 (RCAHMS Broadsheet 9, 2002).

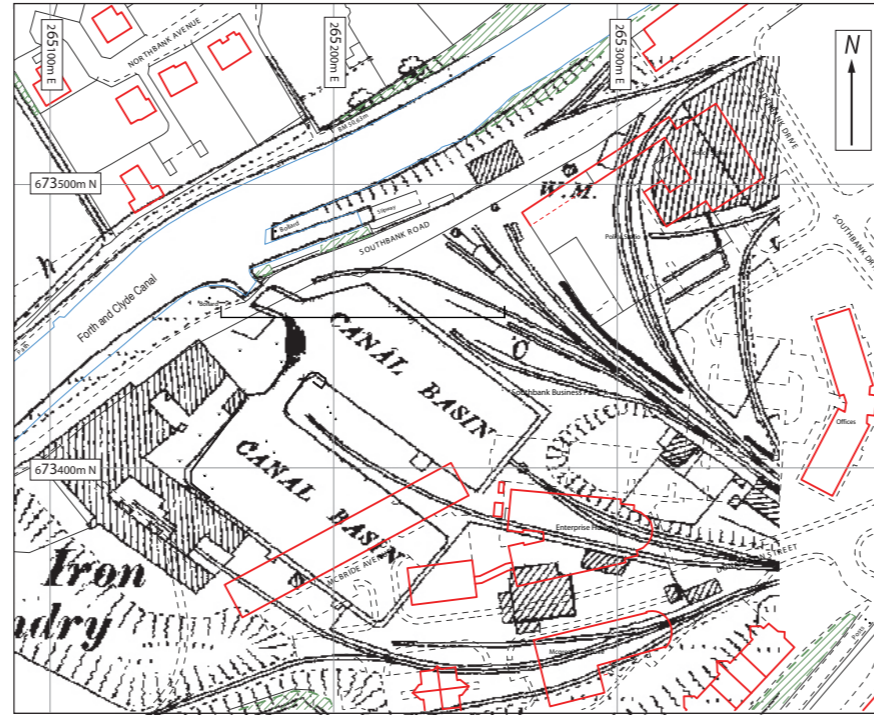
Although the majority of the canal had been restored, the railway basin at Kirkintilloch and its adjoining slipway were not part of that event. The construction of a new basin and boathouse on the slipway, a footbridge across the canal and refurbishment of the general area were part of a private initiative which has brought this part of the eighteenth-century monument into the twenty-first.

The canal is a Scheduled Ancient Monument. Although the development works were concerned primarily with the excavation and construction of a new basin, other works such as the reopening of the basin mouth and the construction of a new boat shed on the slipway, impinged on the canal. All works affecting the canal, basin and slipway were subsequently monitored by a professional archaeologist. Works concerning the canal and slipway were also monitored by Historic Scotland.

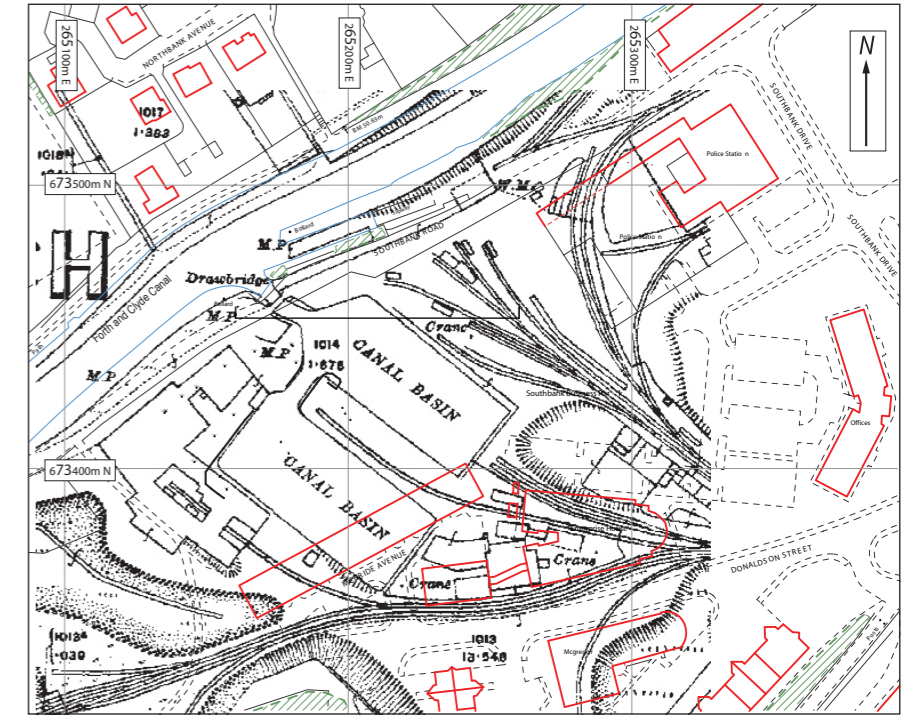




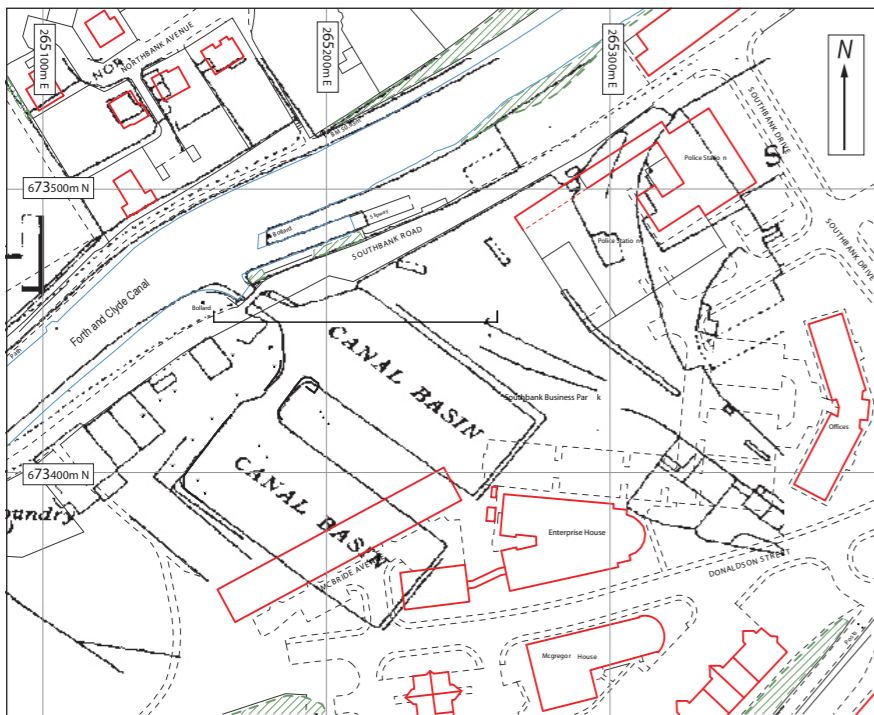
A. 1<sup>st</sup> Edition 1:2500 OS Map 1854 -1901.



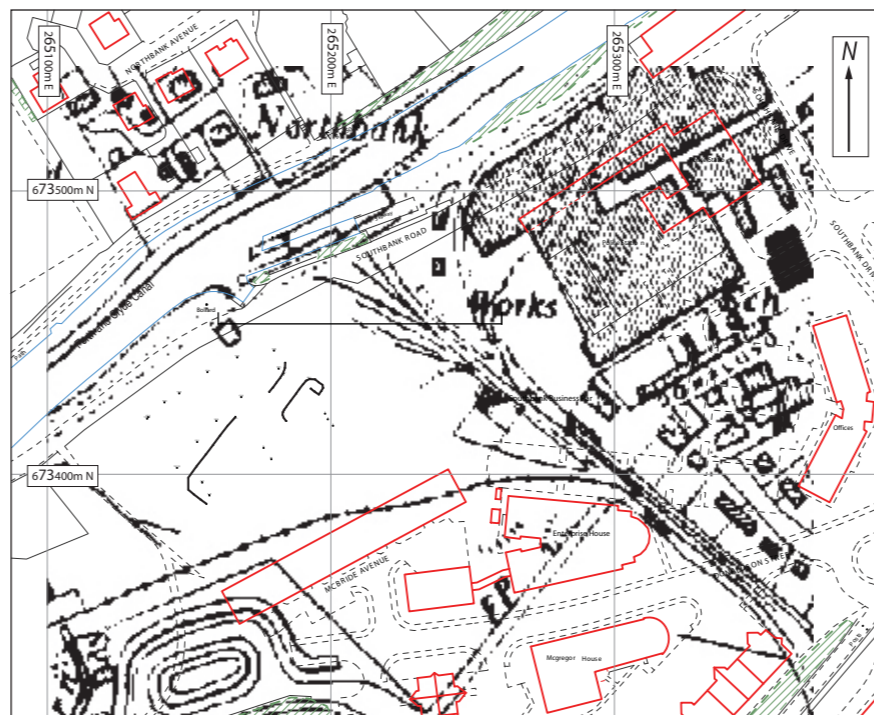
B. Revised 1<sup>st</sup> Edition 1:2500 OS Map 1854 -1949.



C. 2<sup>nd</sup> Revised Edition 1:2500 OS Map 1906 -1939.



D. 3<sup>rd</sup> Revised Edition 1:2500 OS Map 1924 -1949.



E. 1<sup>st</sup> Revised Edition 1:10560 OS Map 1948 -1977.



F. 1<sup>st</sup> Revised Edition 1:10560 OS Map 1949 -1981.

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Figure 2: Site Location and Historic Maps





## 5.0 Aims and Objectives

The general aims of the project were to work closely with the developer and Historic Scotland to investigate, monitor and fully record any exposed archaeological features or deposits in the development area that would be disturbed by the removal of modern deposits within the original railway basin and basin mouth, and to record the remedial works on the Scheduled Ancient Monument of the Forth and Clyde Canal and its slipway.

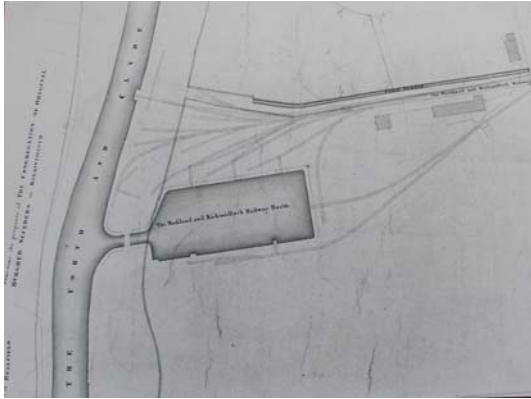


Plate 1:

Archive image, Strathkelvin District Libraries and Museums, Kirkintilloch. (P7044844)

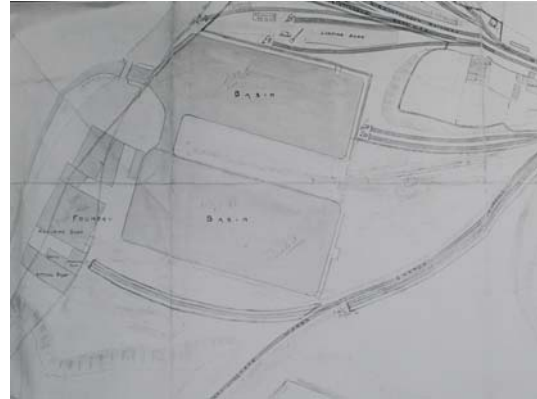


Plate 2:

Archive image, Strathkelvin District Libraries and Museums, Kirkintilloch. (P7044845)



Plate 3:

Archive image, Strathkelvin District Libraries and Museums, Kirkintilloch. (P7044833)



Plate 4:

Archive image, Strathkelvin District Libraries and Museums, Kirkintilloch. (P7044854)



Plate 5:

Aerial photograph of the site prior to works commencing 2 November 2006. (Hawkeye Photography image 017)

The specific objectives were:

- to record the stonework at the mouth of the basin/canal and its condition;
- to record the original stonework of the slipway where it is to be altered;
- to record the fill and any other associated features connected with the alteration of the slipway;
- to record any visible foundations to the basin/canal and slipway walls and the clay lining to the canal;
- to record any visible foundations to the walls of the canal during the footbridge construction;
- to record by digital photograph the development works as they affected the features of the canal, basin and slipway finger and
- to collate a digital record of events.

In addition, a search of the local library in Kirkintilloch was to be undertaken for archive photographs of the canal structures affected by the development.

## 6.0 Methodology (Figure 1)

### 6.1 *The Basin*

Conditions for the monitoring works during the course of the 18-month development varied with the seasons and the length of daylight. The winter of 2006-2007 was particularly wet and long delays were caused to the emptying of the railway basin infill by the accumulation of surface water. Digging conditions for the mechanical plant were often treacherous. During the summer and autumn months of 2007 and the spring of 2008 the development accelerated and circumstances for recording changes to features were generally good. Strong winds were often encountered as the surrounding landscape was fairly open.

The methodology employed at the railway basin included recording the progress of the removal of modern debris, and record by written description, digital photography and sketch plan of its exposed walls and features. During the winter of 2006-2007 a c 2-2.5 m depth of deposits were removed from within the basin that exposed the tops of the surviving walls. During the spring of 2008 the remaining 2-2.5 m of infill were removed to the basin floor/clay lining and the foundation of the walls.

Closer inspection of the basin walls was often prevented by dangerous slopes of partly removed infill material, by ponding of surface water and also by the movement of heavy plant.

### 6.2 *The Basin Mouth*

The basin mouth was treated similarly to the railway basin, but its stonework was the last to be revealed. All monitoring was undertaken during regular field inspections, by written description, digital photography and sketch plan.

### 6.3 *The Slipway Finger*

An Archaeological Method Statement (Appendix 12.4) was prepared in March 2007 and agreed with Historic Scotland.

Section 3.3 *Site Clearance and archaeological investigations* states:

Any site clearance that may be necessary during or after the temporary dam construction and the dewatering will be undertaken under archaeological supervision. This may include the 1980s concrete ramp at the top of the slipway, the down-taking of part of the north-east and south-east walls of the slipway, and any other masonry in poor or dangerous condition. Evidence for the construction of the slipway and its associated walls can be recorded at this time, and if artefacts contemporary with the canal construction or its use are located, these can be recorded on pro-forma record sheets and by drawings and photographs.

On 15 August 2007 in sunny weather, a mechanical excavator under close archaeological supervision removed the slipway finger surface, a metal mooring ring and a metal mooring bollard. The hole left by the removal of the bollard was carefully investigated by a narrow toothless bucket, and by hand, to a

maximum depth of  $\approx 1$  m. A mechanical and hand enlargement of the hole for the mooring ring was attempted but abandoned, due to the presence of concrete. The results of the investigation were recorded by written description, measured drawing and digital photography.

#### 6.4 *The Slipway*

All other monitoring of the slipway walls and floor was undertaken during regular field visits and by written description, digital photography and annotated sketch plans.

#### 6.5 *The New Bridge*

Monitoring of the foundation pits for the new bridge was undertaken during field visits and by digital photography.

## 7.0 Results

### 7.1 *The Basin*

The basin was excavated in two stages. The first included the removal of the 1960s fill to a depth of  $\approx 2$  to 2.5 m below the present ground surface (Cover Plate). This exercise was severely affected by the weather during the winter of 2006, as rain repeatedly filled the excavated parts of the basin and made conditions dangerous for working. During the first and middle part of 2007 the infill was gradually removed to the required depth to allow the development to proceed for the new canal basin. The remains of stone walls belonging to the original basin were exposed and recorded. The removal of the remaining  $\approx 2$  m of infill took place in spring 2008.

The fill of the basin was removed from east to west starting at the eastern side where an exploratory pit was excavated by machine to a depth of 1.5 m. The material infilling the basin was dark with much glass, brick, metal, concrete and wood, and was typical of industrial and building debris. Some of the infill was from the foundry situated to the north-east under the modern supermarket (Figure 2 - B & E).

The tops of the walls lining the original basin had been removed sometime in the past, but four to six courses of stone were revealed to indicate the survival of some of the wall that proceeded south and west from the basin mouth. The wall opposite, which separated the two halves of the basin, also survived in a similar condition.

Seven elements of the basin walls were exposed (Figure 1). The first described is feature (A), which was a squared area (roughly 2 by 2 m) of large sandstone blocks which stood three courses above the surrounding walls (Plate 6). It did not have a rubble core and the blocks of stone were held together by 40 mm (inch and a half) wide strips of iron (Plate 7). This was the tallest surviving masonry of the area between the two basins. Feature A is noted on archive photographs (Plate 8) and on the 1<sup>st</sup> edition Ordnance Survey map as a raised area, with a squared recess to its immediate west and another, possibly later, recess to the south. The photographic and map evidence suggests that this particular piece of masonry may have had different functions over time, such as for mooring ships, for taking the weight of a lifting device, or even as a buffer for a wagon line that ended at the basin. The purposes of the recesses to either side of it along the course of the basin walls are at present unknown.

Feature A was part of the walling of the long rectangular area separating the two halves of the basins along with features B to F. Features B (north-east) and C (south-west) were identified as the rounded ends to the single-faced wall built of large dressed blocks of sandstone that edged this neck of land. The wall was clearly identified on archive photographs (Plate 3) as straight with rounded ends, with one course of stonework and its capstones visible above the water line. When first exposed the full length of the wall was revealed to a depth of two courses, later four courses, (Plate 9a and 9b), but the capstones and possibly several courses of stone had already been removed. It is quite noticeable that the wall was not completely horizontally bedded as its south-west end was in fact lower than its north-east. This subsidence or settling may have been due to the prolonged use of a railway line and buffer that ended close to the wall in the south-west.

In the centre of each stone of the second course from the top of the wall (Feature B and C), as it survived, was a drilled hole (Plate 9b). The line of holes ran across the wall from end to end and may have been fixing points for a horizontal rail used to protect both the wall and shipping from damage when vessels manoeuvred, entered or left the basin. When it was revealed beneath the basin fill, some of the stones of



the wall had missing corners or pieces, or were slightly out of alignment, emphasising the need for protection in the past.



Plate 6:

*Feature A emerging from the fill of the railway basin.  
(PB293790)*



Plate 7:

*Detail of the metal ties to Feature A.  
(PC013834)*



Plate 8:

*Archive image, Strathkelvin District Libraries and Museums, Kirkintilloch.  
(P7044837)*



Plate 9a & b:

*Curved end of the peninsula dividing the two basins (Feature B PB293792 and Feature C.  
(PC013815)*

The packing or fill behind the wall (Feature B/C), referred to as Feature D, comprised earth, clay and rubble, and occasionally fragments of waste sandstone blocks. It was heavily contaminated by the basin fill and further evidence of its construction or composition was not pursued.

Continuing along the neck of land east and south from Features A and B was a wall face (Feature E), which was noted but not clearly defined due to the raised ground forming the edge of the new basin, immediately to the south of it. Archive images (Plate 10) indicate that this wall comprised blocks of stone which were heavily overgrown with vegetation. It is likely that each arm of the basin was lined with stone walling, but the quality and upkeep of the walls were not to the standard of that described above for features B and C.

Feature F in walls B/C was a vertical stop log channel for timber stop planks or a barrier across the basin passage (Plate 11). The channel was cut into the stonework and measured *c* 0.15 to 0.2 m deep by *c* 0.2 m wide. Notches in the front faces of the stones to either side of the channel made its access wider and therefore easier to use. It was opposed by a partner recess in Feature G to the north (see below). The stop planks at this point, when required, would have been *c* 7.5 m wide, comprising timbers *c* 0.2 m thick. Its function would have been to control the level of water in the south-western half of the basin.



*Plate 10:*

*Archive image,  
Strathkelvin District Libraries and Museums, Kirkintilloch.  
(P7044829)*



*Plate 11:*

*Feature F in end of peninsular separating the two basins .  
(PC013811)*



*Plate 12:*

*North wall (Feature H) of the basin.  
(PC013817)*



*Plate 13:*

*Heightened end to feature H, north wall of basin.  
(P1254019)*





*Plate 14:*

*Floor of the modern basin with a new layer of puddle clay.  
(P5156362)*



*Plate 15:*

*The blocking of the basin mouth with concrete.  
(P2234186)*

Opposite the peninsula (Features B and C) between the two halves of the basin was the continuation of the walling from the basin mouth. It formed the northern and western stone walls of the passage (Feature H) and continued to line the south-west basin. Like Feature B/C, the wall was of dressed sandstone, but in this instance it revetted the land between the basin and the canal (Plate 12).

Feature H was similar to its companion wall (Feature B/C) in that its upper courses had been removed and stones were dislodged prior to it being buried under the fill of the basin. When fully exposed it survived to over 2 m in height (approximately nine courses). The wall gently curved south from inside the basin mouth, ran straight south-west through the passage opposite the neck of land between the two halves of the basin, and then curved west and then south-west to run straight to the end of the south-west basin where it sharply curved to run to the south-east. The wall was not traced further than this corner because of the limit of the excavation for the new basin. There was evidence that Feature H had been altered where it formed the north-west wall of the south-west basin. A change in masonry along its length indicated that the wall had been heightened by up to three courses with the addition of concrete on its top (Plate 13). The increase in height may have been due to a function of the timber merchant's business established along this side of the basin (Plate 8).

The wall had a vertical stop groove or channel for timber stop planks (Feature G) and also holes for a protective rail. Feature G was slightly different from its companion slot in Feature B/C in that it was reinforced by two vertical iron rods positioned in the recesses to either side of the channel (Plate 12). These rods probably ran the full height of the channel from the bottom of the basin to the top of the wall.

During the digging out of the old basin fill to create the new, all these walls were removed but the best sandstone blocks were retained. Once the piling for the walls of the new basin had been completed the remainder of the old basin fill was removed another 2-2.5 m to its base. The basin floor was then raised by 0.6 m by the addition of a layer of puddle clay (Plate 14).

## *7.2 The Basin Mouth*

It is likely that during the infill of the basin in the 1960s the basin mouth was blocked by a plug of reinforced concrete (Plate 15) and a road, with various utilities contained within it, was constructed across it. The exact sequence of events concerning the blocking of the basin mouth and the filling in of the basins was not determined. Water would have had to escape from the basin while water from the canal would have had to be prevented from re-entering; a staged approach to the filling and plugging may have been attempted.

The fill of the basin mouth behind the concrete plug consisted of railway sleepers, slag, fragments of concrete, bricks, oil drums, metal and general building debris. Once this had been removed the base of the walls was found 14 courses deep (Plate 16). At this point the walls survived 4.86 m in height, and rested on a foundation of concrete and natural pebbles. Natural grey puddle clay had been laid down between the walls after their construction to line the mouth and entrance.

Prior to the construction of the plug, horizontal steel rails were inserted into the walls of the basin mouth in order to stabilise the concrete, and timber shuttering was erected. On the removal of the plug it was noted that the insertion of steel rails had caused some dislodgement of the wall stones, so much so that they needed repositioning, while others had fragmented and required indenting or replacing. Prior to its consolidation the basin mouth was temporarily filled with sand and gravel during the completion of the basin perimeter piling on either side of it. The ends of the original walls of the basin mouth were cut back and replaced in concrete to tie into the piled and concrete perimeter of the new basin (Plate 16 and Plate 17). Their upper portions were finally faced and capped with blond sandstone and tooled to the same design as the rest of the stonework (Plate 18).

The sand and gravel infill was removed before the walls lining the basin mouth were consolidated and new dressed stone was added to their tops. The original walls had been raised three courses higher than the masonry of the basin in order to take a bridge across it. In the new design the three courses of stone were removed to reinstate the original wall height and to enable it to fit in with the level of the new basin design.

### 7.3 The Slipway

The slipway was constructed in the c 1860s (95 years or so after the canal) as an addition to the slipway and basin (Figure 2) and as the base for a puffer boat-building enterprise by J & J Hay who started their business there.



*Plate 16:*

*Rear view of the plug within the basin mouth and the depth/ height of the basin walls.  
(P2196005)*



*Plate 17:*

*The joining of old and new walls at the north east side of the basin mouth.  
(P3276208)*



*Plate 18:*

*New and old stonework at the basin mouth.  
(P5156367)*





Plate 19a & b::

*Junction of the new slipway reveting wall with the north wall of the basin mout.  
(P4226248, P4226250)*



Plate: 20

*The construction and the dressing of the slipway masonry was  
different from that to the basin.  
(P3304273)*



Plate 21:

*The stop log channel in the slipway wall.  
(P3284255)*



Plate: 22:

*Wooden rails running down the length of the slipway.  
(P3284260)*



Plate 23:

*Wooden rails running down the length of the slipway.  
(P5094535)*



It became clear during the excavation of the basin mouth and the removal of the concrete plug that the join of its walls with the newer slipway revetting was not well done (Plate 19a & b). The east wall of the basin mouth had been partly truncated (see above) and the revetting wall of the slipway partly abutted the back of it. The upper half of the wall abutment comprised poor quality stone and debris. Where surviving the end of the slipway was a straight joint with the basin entrance wall, but the curved end of the latter was truncated by having been drilled away and cut back. There was also a clear change in the method of dressing the sandstone blocks. The stonework of the canal basin and wall had long horizontal dressed lines while those of the slipway were oblique and made by shorter strokes (Plate 20).

During the development, the slipway was dewatered by the construction of a dam of red blaes to cut off the canal from the basin mouth, and the water was pumped out. However, the accumulation of black silt and rubbish at the bottom of the slipway prevented complete drainage. By dewatering the slipway, examination of its walls and foundations was possible.

The walls of this feature were exposed on both sides. The wall of the slipway finger on the north side comprised a minimum of five courses of good dressed sandstone from its base. Above this were two courses of largely undressed stone with a capping of rough stone, dressed stone or concrete (Plate 20). In places, but mainly towards the north-east end of the wall, the upper courses were interspersed with red brick. The upper two or three courses of the opposite wall, revetting the bank between the slipway and the canal basin, were in a similar condition above the water line. Here, the lowest course comprised large dressed sandstone blocks, but above was an intermittent layer of much smaller rough stone with small sandstone blocks (possibly reused and cut dressed blocks) set on edge and capped with a thick layer of cement. These upper courses appeared to be quite badly eroded. In the walls on either side of the slipway there was a stop groove or channel for stop planks to cut off the water supply (Plate 21).

Once the slipway had been dewatered and the debris had been removed, its construction was revealed. The slipway was built into the natural subsoil of pale brown sand with cobbles. Bitumen coated wooden sleepers *c* 0.3 m wide, 100 mm thick and over 5 m long were placed between the slipway walls onto the subsoil and were laid 1.03 m (40") apart. On top of these, three equidistant pine timbers or rails were placed at right angles to run down the length of the slipway (Plate 22 & Plate 23). They were revealed 2.5 m west of the slipway's concrete ramp and sloped from it towards the base of the canal. Each side rail was 0.28 m (11") wide and 0.10 m thick and lay just in front of the slipway walls, but the middle rail was constructed of two timbers laid side by side and was therefore double in width (0.56 m). The rails, which were coated with bitumen, were pinned to the sleepers by a combination of long and short iron spikes.

More wood was noted beneath the concrete ramp at the top of the slipway, but its general appearance and function were not fully revealed.

In March 2007, five trial holes were excavated by machine and by hand at the bottom of the slipway walls in order to find their bases. The holes alternated across the slipway: TH1 was at the top of slipway beside the north wall; TH2 was positioned down slope and beside the south wall; TH3 lay in the middle of the north wall; TH4 was positioned further south-west beside the south wall and TH5 was located beside the end of the slipway finger in front of the north wall.



Plate: 24:

*Trial hole 4 with remains of a wooden rail.  
(P3284265)*



Plate 25:

*The surface and features of the slipway finger.  
(P8155299)*

Trial hole 1: This was abandoned because of the timber rail running down the slipway which could not be removed.

Trial hole 2: The stone walls of the slipway revetment rested on an 0.2 m thick concrete and pebble layer which in turn rested on natural sand. The wall at this point was 1.9 m high.

Trial hole 3: This was also abandoned because of the difficulty in removing the timber rails and sleepers at this point (Plate 22).

Trial hole 4: It was similar to TH2 but the wall survived 3 m high and rested on natural sand and cobbles with a concrete and pebble foundation. The bottom of the slipway from midway to the canal mouth was lined with a layer of pink clay (Plate 24).

Trial hole 5: The wall was 4 m high at the trial hole by the stop channel and c 9 to 10 courses of stone were visible. The underlying foundation concrete was c 0.3 m thick with a high percentage of small pebbles. The foundation was also very fragmentary, possibly as a result of the action of the mechanical excavator in digging the trial hole, and of water infiltration. The sleepers and rails of the slipway were noted lying on top of and adjacent to the trial hole. The amount of wood and splinters in the vicinity may indicate the remains of stop planks across the slipway.

After these exploratory holes were completed the stones comprising the walls of the slipway were cut vertically on either side approximately 1.5 m north-west of the stop log channel. From the cut to the top of slipway the masonry was taken down to be reused later and the slipway filled with sand and gravel before piling took place for a new boat shed. Piling was achieved through the natural sands and cobbles.

#### 7.4 *The Slipway Finger*

On Wednesday 15 August 2007 investigations by machine and hand were made into the construction of the slipway finger or wharf as it was known.

##### *Cement Surface*

The cement surface of the slipway was probably laid down as late as 2003 and on average was c 0.06 mm thick. It did not abut the sandstone wall of the slipway to the south or the gabions lining the canal to the north and, although it partly covered the concrete terminus, it did not conceal it. The cement surface was laid on a thin levelling layer of stone which in turn lay directly on older surfaces (see below). It incorporated a metal mooring ring close to the north-west end of the slipway finger and abutted a cement-filled metal bollard which had been inserted into the slipway at an earlier time (Plate 25).

##### *Metal Bollard*

The bollard was removed with some difficulty as it was set into an irregular concrete base measuring roughly 1.2 m by 1.2 m that projected c 0.75 m into the slipway fill. The foundation of the bollard had in addition to the concrete base, three metal spikes which projected another 1.8 m into the fill of the slipway.

##### *Slipway Constructional Details and Alterations*

The material underlying the concrete cap was revealed after hand cleaning, and reflected various earlier surfaces and constructional details of the slipway.

The south wall of the slipway and its west terminus were constructed in sandstone. The south wall comprised large sandstone blocks resting on a 0.3 m bed of coarse pebbly concrete lying directly on a subsoil of sand and gravels. The wall had been subsequently repaired and replaced at the terminus in rough concrete (see below). The west wall was glimpsed (and felt) through voids in the abutting wooden vertical sleepers at the terminus of the slipway, but it appeared to have been constructed of small blocks of level-bedded sandstone. Presumably, it was also faced in wood. The north wall of the slipway was replaced in recent times by gabions, but it originally had poor quality masonry behind.

The slipway finger was built up between the walls at its west end with a mixture of large rubble (waste building stone), earth, sand, clay and gravel. Elsewhere it was infilled with cleaner sand and gravel derived from the subsoil. A large vertical sandstone block 0.75 m high was noted in the side of the pit produced when the metal bollard and its foundations were removed. The block was not secured by concrete or cement, but was loosely packed around with stones and earth. Its tip was broken off but it is not inconceivable that this was an earlier or original mooring bollard that was placed in the middle of the slipway finger. Its width and thickness both measured c 0.3 m (Plate 26).



Plate: 26:

*Sandstone mooring bollard within the fill of the slipway finger.  
(P8155327)*



Plate 27:

*Earlier mortar surface of the slipway finger.  
(P8155313)*

The remains of the earliest surface found on top of the slipway infill was a cream-coloured cement mortar with stones, which survived in the centre of the finger and measured  $c$  3 by 1.5 m by  $c$  0.10-0.13 m thick. It was in poor condition and its edges were soft and friable (Plate 27). The relationship of the surface to the sandstone block was not clear. However, if it had functioned as a mooring bollard, its top could have broken off before this surface was laid. A cement patch on top of the cement mortar surface was also noted.



Plate: 28:

*The end of the slipway finger.  
(P8105295)*



Plate 29:

*The tow path test pit.  
(Chris Henderson Image 100-0925 taken 03.04.07)*

Sometime before, and certainly no later than the Second World War (Plate 4), the slipway was refurbished. The metal bollard was inserted close to the midpoint of the finger, and the hole surrounding it and holes in the cement mortar surface were filled in with a mixture of rubble and industrial debris, including metal and glass. The major alteration to the slipway was the extension outwards of its west end or terminus by as much as 0.35 m with a double thickness of squared wooden timbers set against the original masonry of the finger and its wooden cladding. The timbers were held in place by a substantial iron rail (0.07 m wide and 0.13 m deep), with iron pinions (Plate 28). The final detail of this refurbishment concerned the



capping of the timbers and the remains of the cement mortar surface by a c 0.26 m thick coarse concrete cap (at the west end), which extended across the full width of the slipway and approximately 2.5 m towards the east. This feature also replaced some of the sandstone slabs of the slipway south wall. A small hole was intended to be dug through the concrete cap to allow a clearer view of the underlying stone and timber work. Due to its density and the possibilities of fracture, the hole was abandoned. However, the concrete cap was subsequently removed in May 2008.

The slipway finger was to be finished to a standard in keeping with the new basin and boat shed, and yet retain some of its original elements and features.

### 7.5 *The New Bridge*

A test pit, c 1 m long by 0.6 m wide and c 1.2 m deep was dug in the tow path on the north bank of the canal to the west of the basin entrance. Its sections revealed a c 0.6 m depth of undisturbed pink boulder clay, on top of which was deposited a c 0.4 m of metalling for the tow path, comprising hard packed small stones, clay, industrial debris, and blaes (Plate 29). This was capped by a thin layer of bitumen and stones, which in turn was covered by c 0.15-0.2 m of grey stone chips and dust forming the modern ground surface.



*Plate 30:*

*Steel beams within the hole dug through subsoil for receiving the new bridge superstructure.  
(P6274808)*



*Plate 31:*

*Archive image, Strathkelvin District Libraries and Museums, Kirkintilloch.  
(P7044840)*

Two new holes measuring c 2 m by 2 m by 2 m were dug on either side of the canal, close to its edge, for the reception of vertical steel beams to hold the superstructure of the new bridge designed to cross the canal west of the basin mouth (Plate 30). The sections in these holes revealed natural pink boulder clay with turf and soil capping. No archaeological features were noted.

## 8.0 Discussion

### 8.1 *Summary of the Fieldwork Results*

#### *The Basin*

The outline of the original basin was preserved beneath the industrial fill of the 1960s. The upper courses and capping of the walls had been removed prior to its abandonment but enough survived to provide information on a range of features. The wall at the end of the peninsula between the two halves of the basin had curved ends and had been fitted during its life with a protective rail. The continuation of the wall to the south and east did not appear to be of an equally high standard of stonework. It is possible that they had not been refurbished or maintained during the life of the basin. A raised square area of densely packed, pinned stone of presently unknown function survived close to the end of the peninsula.

The basin wall which led west and south from its mouth was equally well constructed as its counterpart at the end of the peninsula, and shared with it a stop log channel for a barrier of stop planks across the passage separating the halves of the basin. This wall also showed evidence for a protective rail at water level, and for the heightening of part of it by the addition of several courses of stone which lay beneath a building associated with a wood yard.

Where revealed the walls were well preserved and rested on a foundation of concrete and pebbles directly on the subsoil. Puddle clay lined the basin, and no artefacts or remains of boats were found during the removal of modern debris from it.

#### *The Basin Mouth*

The modern concrete plug was constructed around steel rails and wooden shuttering close to the end of the mouth where it opened into the canal. Its function was to block water from the canal entering the filled-in basin. On its removal, although some damage was recorded to the walls of the mouth, the stonework survived 13 courses high and was the best preserved on the site. The walls of the mouth had similar foundations to those beneath the basin walls. The tops of the walls had been raised during the use of the basin for the construction of a bridge across the basin mouth (Plate 31). The extra courses of stonework were removed and the original height of the walls was reinstated; the walls were also repaired, and reinforced where they joined the concreted and piled walls of the new basin. New capping stones were also added.

The north-east end of the basin mouth wall had been truncated as a result of the abutment of the slipway revetting wall which was added during the 1860s.

#### *The Slipway*

The slipway was built out of the narrow strip of land separating the basin from the canal to the north-east of the basin mouth sometime in the 1860s. Stone walls were built to a similar standard to those lining the basin and basin mouth, but differences in the southern wall alignment where it badly abutted the basin mouth wall, and in the dressing of the stone walls, indicated that the slipway was a much later addition to the canal. Wooden sleepers with wooden rails at right angles lined the slope of the slipway from the ground surface to a level equal to the base of the canal. The timbers were coated in bitumen and were held in place by metal spikes. A vertical stop log channel for wooden planks or logs at the end of the slipway was noted in the stonework to either side of the slip.

#### *The Slipway Finger*

A number of new features or events concerning the slipway finger were clarified by the removal of the cement surface capping the finger, including an early cement mortar surface. A possible early sandstone mooring bollard was noted which was replaced sometime in the first half of the twentieth century during a major refurbishment of the slipway finger. The finger had been extended slightly and its terminus strengthened by the addition of extra timber with a horizontal metal rail and a cap of dense concrete. The last recorded alterations to the slipway finger were in c 2003 when a new cement surface was laid across it.

#### *The New Bridge*

A test pit was dug through the tow path to the natural boulder clay. It revealed the gradual build-up of the tow path surface by metalling, industrial waste, clay, blaes and finally grey chips and dust. Two holes dug on either side of the canal close to its edge showed that there were no archaeological features, only natural boulder clay with a turf and topsoil capping.

## 8.2 *Interpretive Issues*

### *The Basin*

From the portion of walls revealed, the two halves of the basin were constructed of regularly sized and dressed sandstone blocks. No evidence was noted in the surviving masonry for the enlargement of the basin from a single to a double unit. Stop log channels or grooves were part of the enlarged design, but holes for a protective rail at the water level may have been added later. The investigations showed that alterations to the walls took place during the use of the basin and with the development of industry around its banks. The raising of part of the wall, and the construction of a solid square of masonry towards the end of the peninsula between the basin halves are probably adaptations to use, but the



reasons for their construction are not fully understood. The basin survived largely as it was originally conceived for the best part of two hundred years.

#### *The Basin Mouth*

The entry from the canal into the basin was built as one feature with the canal and the basin. The high standard of dressed stonework noted in the basin was consistent with that in the basin mouth with no break in build documented. Although the walls of the mouth were raised by about three courses, their size and dressing were the same, and it is thought they were built as part of the original design, or not long afterwards.

The most interesting alteration concerned the construction of the slipway (see below) which disrupted the end of the north-eastern end of the basin mouth. The end was removed and part of the wall was dismantled. During the building of the slipway retaining wall against the south side of the canal, it was noted that the walls were not going to join neatly (the new wall abutted the back of the basin mouth wall) and the end of the basin mouth was left protruding some 0.1 to 0.3 m in an unfinished state.

#### *The Slipway*

The slipway was constructed into the gap between the canal and the basin, but it was not built to the same standard as the basin and its mouth, although some emulation of the latter's construction was noted. The techniques of building the retaining walls and the stop log channels were the same, but the sandstone blocks were generally of smaller size, and their dressing was different. The use of the slipway may have resulted in many repairs to the walls evident in the use of cement, concrete, bricks and small sandstone blocks, which did not occur in the basin walls.

The misalignment of the slipway wall and the basin mouth was probably due to the width required for the slipway and to prevent any narrowing of the canal. By cutting back into the bank between the canal and the basin, the slipway could function more easily and take wider boats. However, it meant that the basin mouth had to be cut back to accommodate the slipway, and the junction and tidying of walls at this point was poor.

#### *The Slipway Finger*

The slipway finger was made by building into the canal, and narrowing the waterway slightly, during the building of the slipway. Its construction was noted as comprising industrial debris and stone. The end of the finger was poorly built and it was probably extended or strengthened during its use. It had various surfaces but the concrete capping masked much of its earlier coverings and features.

Without the development, understanding the construction of these few features would not have been possible.

## 9.0 Recommendations

The new development has been such that only the lower portions of the basin mouth and the walls at the western end of the slipway remain as original features. All other walls have been removed and there is little remaining that is worthy of future field investigation.

It is recommended however that more documentary research be undertaken into the industrial and other activities that took place around the railway basin and on the slipway. This would allow a more detailed understanding of the development, use and decline of the canal at Southbank.

## 10.0 Acknowledgements

This project would not have been possible without the kind support of the Miller Partnership and Strathkelvin Development Company Ltd. The agents for Balfour Beatty Civil Engineering Ltd, Alan Brisbane and Stephen Nutley were extremely helpful in allowing access to various parts of the development, often during difficult working conditions. The staff in the archive room at the Strathkelvin District Libraries and Museums, Kirkintilloch are to be thanked for their information and guidance, as well as the use of archive images in this report. Edward Z. Smith of Hawkeye Photography, Kirkintilloch and Chris Henderson of Balfour Beatty kindly supplied images taken during the project. Olivia Lelong, Jen Cochrane, John Arthur, Ingrid Shearer and Caitlin Evans at GUARD helped to produce this report.

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## 12.0 Appendices

### 12.1 *List of Finds*

<i>Area</i>	<i>Find No</i>	<i>Context</i>	<i>No of Pieces</i>	<i>Material</i>	<i>Description</i>
Slipway	1	Subsoil	1	Iron	Nail for holding the slipway rails in place

### 12.2 *List of Photographs*

Held by Kirkintilloch Library - the Archives Room

*Archive Images: Kirkintilloch Basin*

<i>Catalogue No</i>	<i>Image</i>	<i>Description</i>
P890	P7044827	Taken in summer, date uncertain. Wooden bridge over basin mouth with wooden security fencing on north side. Five bay, two storey building on south side of basin mouth. Identified as '..... BASIN FOUNDRY SHOWROOM'
P888	P7044828	Taken in summer during the 1930s(?), as P890.
P886	P7044829	Stonework of basin central peninsula is visible as is one surviving railway line and buffer. Stonework of slipway is also visible but in need of repair. The canal face of the slipway finger has horizontal planking set behind vertical timbers. Rear of basin looks to be quarried with low cliffs(?) visible.
P894	P7044830	Possibly slightly later image than P886 with rolling stock on surviving line on central basin divide. New field stone revetment wall noted above wall on south-side of slipway. Construction of new housing east of basin.
P891	P7044831	Similar to P886 with rolling stock on line immediately west and south of basin.
P889	P7044832	Similar to P886 but with possible structure belonging to foundry or saw mill on edge of south basin.
P895	P7044833	Similar to P886 under snow.
P893	P7044834	Similar to P894 with the .....Basin Foundry Showroom identified.
P887	P7044835	Similar to P886.
P892	P7044836	Similar to P886 with boat within slipway. Rolling stock to rear of basin.
P4987	P7044837	Aerial view dated 1930 showing railway lines, rolling stock and foundry. Stonework of basin mouth clearly visible.
P6140	P7044838	Sketch of entrance to basin by Winifred Campbell 20 June 1939. Shows bridge over mouth, stonework and fencing.
P6323	P7044839	Watercolour of entrance to basin by Winifred Campbell. Similar to P6140 but in colour.
P6161	P7044840	Watercolour of entrance to basin by Winifred Campbell. Similar to P6140.
P7157	P7044841	Photo of basin in snow with S.S. Gypsy Queen by William Fletcher
P7156	P7044842	Photo of basin in snow by William Fletcher.
P5574	P7044843	Kirkintilloch Basin, Ordnance Survey map (undated) showing possible foundry and railway lines.

<i>Catalogue No</i>	<i>Image</i>	<i>Description</i>
P8414	P7044844	Plan of Kirkintilloch Basin 1838 (BWB Collection). Shows a canal feeder and the lines of the Monkland and Kirkintilloch Railway, with a line coming to the canal edge. Only the northern eastern basin has been constructed as there is no central divide between it and the basin to the south-west. The slipway has also not been constructed.
P8404	P7044845	Plan of Kirkintilloch Basin 1838 (BWB Collection). Later than P8414, with both basins visible. Foundry has been constructed with a moulding shop, smithy, fitting and dressing shops.
P8403	P7044846	Plan of Kirkintilloch Basin 1838 (BWB Collection). Railway lines round north-eastern part of basin, with yardmans's bothy, dwelling houses and stables, offices, loading bank, weigh house and land sold to Cameron & Robertson Ltd iron works Whitsun 1946.
P896	P7044847	Kirkintilloch Basin with <i>S.S. Gypsy Queen</i> on repair slip, similar to P886.

*Archive Images - Repair Slip, Kirkintilloch*

<i>Catalogue No</i>	<i>Image</i>	<i>Subject</i>
P4369	P7044848	Shows the slipway and the stone walls of the slipway finger which had a square end. Possibly from the 1930s.
P463	P7044849	Shows foundry show room partly demolished and slipway disused, with probable concrete capping to slipway finger with leaning metal bollard. Possibly 1970s.
P4989	P7044850	Aerial view dated 1930 with slipway in active use. Railway lines and ironwork sheds are visible also road running past the slipway.
P2496	P7044851	Repair slip January 1978, similar to P463
P7034	P7044852	From a photograph loaned by Mr McLellan, possibly 1930s with two boats on the slip and a possible boat shed with iron foundry buildings behind.
P6365	P7044853	Watercolour painting of the slip, from within the boatshed.
P1944	P7044854	With <i>M. V. Anzac</i> and puffers <i>Inca</i> and <i>Chindit</i> , April 1960. Repairs noted to canal wall at basin mouth. Slipway finger end is iron-bound and clad in wood. The surface of the finger is formalised in concrete. Canal side of finger looks formalised in concrete? Nearest boat house is a corrugated shed with low roof.
P2988	P7044855	With puffer <i>Gael</i> . Possibly similar date to P1944 with iron foundry buildings to rear. Nearest boat shed is corrugated iron with a shallow sloping roof.
P1203	P7044856	With puffer <i>Slow</i> - the last repaired there November 1961. Different iron foundry buildings visible to rear of boat slip with shed. Canal side of finger and its end are iron-bound with wood cladding.
P5405	P7044857	With puffer <i>Spartan</i> under conversion to diesel 1961. Several boat sheds are noticed. The basin is filled in and the basin mouth blocked. Foundry Show Room is visible along with rail tracks and rolling stock. A road runs across the basin mouth past the slipway finger.
P13566	P7044858	With puffer <i>Texan</i> on the slipway. The canal face of the finger is iron bound and wooden clad. It is overgrown with vegetation.
P846	P7044859	With puffer <i>Texan</i> . End of finger is wooden clad and iron-bound.

<i>Catalogue No</i>	<i>Image</i>	<i>Subject</i>
P1943	P7044860	With puffers <i>Boer</i> and <i>Moor</i> . End of finger is wooden clad and iron-bound. Wooden fencing along side of road and with iron foundry buildings beyond.
P4692	P7044861	With puffers <i>Hero</i> and <i>Vic XI</i> . End of finger is wooden clad and iron-bound. Wooden fencing along side of road.
P1954	P7044862	With puffers <i>Moor</i> , <i>Chindit</i> and <i>Greek</i> - the latter being broken up. Ice on canal. End of the slipway finger is wooden clad and iron-bound. The stonework by the basin mouth is heavily worn.
P1942	P7044863	With three puffers and iron foundry showroom. Telegraph poles show that the road running across the basin mouth has been built.

*Watching Brief Images*

<i>Date</i>	<i>Image</i>	<i>Description</i>	<i>No of Images</i>
09/11/2006	PB093752-PB093759	Total of 8 images of the fill from the area across the north-east basin being mechanically removed to a depth of c 2.5 m below the present ground level. Stonework of the north-corner of the central division between the two basins and its south-west wall are visible.	8
10/11/2006	PB093760-PB09361	Two images of the stonework of the central division between the basins surrounded by water	2
17/11/2006	PB103763-PB103765	Further removal of basin fill, no further stonework revealed of the basin.	3
29/11/2006	PB293787-PB293795, PB293798, PB293801, PB293803	A further 12 images of the exposed central division between the two basins. Large blocks of sandstone were used in its construction and up to three courses are visible, but the upper stones are dislodged or missing, and the wall is not continuous on its south-west and north-east lengths. The corners of the feature are rounded. The stone-lined corridor between this and the two canal basins is also partly revealed, but there has been some removal of the upper courses of stone. Two opposed stop log channels cut through the stonework are noted across this mouth to take stop planks.	12
01/12/2006	PC013805-PC013843	39 images of more detail of the central division between the two basins, showing stop log channels, shallow horizontal holes in the stonework of the walls along both sides of the corridor between the two basins, and the horizontal tooled upper course of stone to that of diagonal tooling on lower courses. There was a raised squared masonry feature on the north-east edge of the central division but its function is unknown. The slipway and basin mouth is also shown. the stonework is in a poor condition and capped or blocked with concrete.	39



<i>Date</i>	<i>Image</i>	<i>Description</i>	<i>No of Images</i>
25/01/2007	P1254004-P1254010, P1254012, P1254014, P125015, P1254017, P1254019, P1254021	13 images examining the walls lining the mouth between the two basins and the north-west wall of the south-west basin. There appears to be two phases of stonework, perhaps were the wall was raised. A break in the wall shows that there is rubble backing behind the large facing blocks.	13
23/02/2007	P2234174-P2234188	The removal of the fill of the old basins has continued and the central division between them has also been removed with the facing stones saved for reuse. The north-west wall of the south-west basin has also been removed. Stonework and blocking of the basin mouth is also recorded.	15
09/03/2007	P3094193-P3094205	Continuation of removal of debris and infill from the basins with information boards on the canal and basin in MacGregor House.	13
21/03/2007	P3214206-P3214221	Formation of a dam across the basin mouth to the slipway finger, and continuation of removal of infill from the basin. Removal of basin stonework has taken place.	16
28/03/2007	P3284239-P3284266	The slipway is being emptied of water now the dam is in place. Repairs of the stonework of the slipway side and the slipway finger are noted as the upper courses of stonework are in poor condition. The repairs are noted as brick infilling and cement wall-head capping and render. The slipway stop log channel is visible but the upper portion has been repaired in concrete. The debris in front of the basin mouth is being revealed due to the pumping out of the water between it and the dam. Test pits were bored through the concrete/cement bottom of the slipway to show that wooden rails and sleepers remained in place below. These were held together with iron pegs. Beneath was the natural boulder clay & sand subsoil.	28
30/03/2007	P3304267-P3304278	Approximately 7 to 8 courses of stonework of the slipway walls have been revealed. Opposed test pits near the stop log channel show that the walls of the slipway rest on a layer of concrete resting on boulder clay.	12
09/05/2007	P5094527-P5094540	Views of the slipway cleared of debris and silts. Vertical cuts were made in the stone walls to either side of the slip ready for removal of the rear stonework. Over views of the development of the new basin within the shell of the old.	14
27/06/2007	P6274791-P6274817	Walls of slipway to north of stop log channel have been removed and the slipway filled in with fine material in order to support it. Piling and supports for the new bridge across the canal have started. Piling and the walls to the new basin are in progress.	27
10/08/2007	P8105291-P8105295	Details of the supports for the new bridge and of the slipway concrete capping.	5

<i>Date</i>	<i>Image</i>	<i>Description</i>	<i>No of Images</i>
15/08/2007	P8155299-P8155303, P8155305, P8155307	Details of the concrete capping on top of the slipway finger, the leaning bollard, the rubble and mortar surface below, with a test-pit through the finger's rubble fill with the in-situ remains of the lower portion of a sandstone bollard. Plus detail of the rail at the end of the slipway finger.	31
17/09/2007	P9175656-P9175679, P9175681-P9175682	Rear of walls at the basin mouth, with the depth of infill. 14 courses of walling to basal boulder and lining clay just inside the basin mouth. The stonework is in good condition.	26
18/01/2008	P1185981-P1185989	Construction of the new boat house over the slipway with walls butting the original stonework of the slipway. The new basin during construction.	9
19/02/2008	P2196004-P2196017	The exposed basin mouth walls and the concrete pug between them. The walls have been cut vertically to meet the new basin construction, and their rubble fill and concrete foundation can be seen. The back of the plug is clad in wood. Progress is also seen at the boathouse and slipway.	14
27/03/2008	P3276200-P3276210	Floor of the basin exposed after removal of the rest of the backfill and a new puddle clay lining put down. New concrete walls added to original masonry at mouth of basin. The back of the original walls is exposed.	11
22/04/2008	P4226244-P4226264	After removal of plug in basin mouth the poor junction of stonework in the mouth (truncated) with the slipway can be seen. The slipway has been added later. The stop log channel at the mouth can also be seen, but the concrete plug damaged some of the original masonry.	21
25/04/2008	100_2921, 100_2923, 100_2930-100_2934	Breaking up of the concrete cap to the slipway finger to reveal the back of the rail and the wooden cladding.	7
29/04/2008	P4296268-P4296281	Exploration of the junction of slipway and basin mouth stonework. Exposure of the back of the rail and wooden cladding on the slipway finger after removal of the concrete capping.	14
15/05/2008	P5156359-P5156403	Floor of the new basin, the new stonework added to the original at the basin mouth and along the slipway, with details of the slipway rail and wood cladding. Bridge over the canal being constructed.	45
		<i>Total</i>	385

*Images taken by Chris Henderson*

<i>Date</i>	<i>Image</i>	<i>Description</i>	<i>No of Images</i>
15/11/2006	100_2050-100_2052, 10_2059-100_2062, 100_0264-100_258	Views across the development site, stonework of the central division between the two basins, the entrance to the basins and stonework of the slipway.	12
27/11/2006	100_0317-100_3019	Surviving stonework of the basins emerging beneath the basin infill.	3
01/12/2006	100_0320-100_0322	Surviving stonework of the basins emerging beneath the basin infill.	3

<i>Date</i>	<i>Image</i>	<i>Description</i>	<i>No of Images</i>
15/12/2006	100_0422-100_0447	Canal banks for reception of bridge, the slipway, basin mouth with the modern road above it and its poor quality stonework.	26
18/12/2006	100_0448-100_0450, 100_0457-10_0461, 100_0467-100_0469	Removal of basin fill and exposure of walls and central division of basins.	11
08/02/2007	100_0623-100_0633	Removal of fill of old basin and its surviving walls for the creation of the new basin.	11
23/02/2007	100_0738-100_0751	Removal of fill of old basin and its surviving walls for the creation of the new basin, and test pitting near basement entrance.	14
05/03/2007	100_0775-100_0778, 100_0780-100_0782	General views across development area including the piling of the new basin, removal of the road and the basin fill.	7
07/03/2007	100_0783-100_0793, 100_0795-100_0799, 100_0801-100_0803	Removal of road and piling around the edge of the new basin, and section through the road make-up.	19
22/03/2007	100_0863-100_0875	Completed dam across slipway and basin mouth, continuation of removal of old basin fill, general views across basin and slipway	13
26/03/2007	100_0885-100_0894	Views of the slipway and general views across the basin and development site.	13
28/03/2007	100_0911-100_0912	Test pitting on slipway.	2
02/04/2007	100_0917-100_0918, 100_0921, 100_0925	Test pitting on tow path.	4
24/05/2007	100_1007-100_1011	Piling in advance of bridge across the canal.	5
		<i>Total</i>	<i>143</i>

#### 12.4 DES

<b>LOCAL AUTHORITY:</b>	East Dunbartonshire
<b>PROJECT TITLE/SITE NAME:</b>	The Southbank Basin and the Forth and Clyde Canal, Kirkintilloch
<b>PROJECT CODE:</b>	GUARD 2364
<b>PARISH:</b>	Kirkintilloch
<b>NAME OF CONTRIBUTOR:</b>	Beverley Ballin Smith
<b>NAME OF ORGANISATION:</b>	GUARD
<b>TYPE(S) OF PROJECT:</b>	Watching brief
<b>NMRS NO(S):</b>	NS 67 SE 70
<b>SITE/MONUMENT TYPE(S):</b>	Canal
<b>SIGNIFICANT FINDS:</b>	None
<b>NGR (2 letters, 8 or 10 figures)</b>	NS 6550 7345



<b>START DATE</b> (this season)	November 2006
<b>END DATE</b> (this season)	May 2008
<b>PREVIOUS WORK</b> (incl. <i>DES</i> ref.)	None
<b>MAIN (NARRATIVE) DESCRIPTION:</b> (May include information from other fields)	<p>Redevelopment of the remaining part of the old railway basin at Southbank, Kirkintilloch allowed the archaeological investigation of the eighteenth-century double basin, the basin mouth where it joined the Forth and Clyde Canal and the nineteenth-century slipway and slipway finger. The canal is a Scheduled Ancient Monument, and additions, repairs and alterations to features beside it as part of the new development, were also monitored.</p> <p>The background to the development and use of the basin was also investigated, as various industries had targeted the basin for its convenient access to the canal and outlets to the west and east. The dressed walls of the basin survived up to 2 m in height when revealed from beneath 1960s infill, although their upper courses were missing. Stop log channels in the walls for stop planks across the passage between the two halves of the basin were also preserved. The basin mouth survived to its full height of nearly 5 m, its walls resting on a foundation of concrete and pebbles lying directly on the subsoil. It also had stop log channels for taking stop planks to divide the waters of the basin from those of the canal.</p> <p>Evidence survived that the slipway was a much later addition, as it was built for the construction of 'puffers'. The softwood timbers of the slipway ramp for the launching and repairing of boats survived and were noted to be covered in bitumen. The investigations of the slipway finger revealed that it originally had a sandstone bollard for mooring which was replaced in metal when the surface of the finger was renewed. The end of the finger was also extended and the whole resurfaced before its general demise in the 1960s.</p>
<b>PROPOSED FUTURE WORK:</b>	None
<b>CAPTION(S) FOR ILLUSTRS:</b>	-
<b>SPONSOR OR FUNDING BODY:</b>	Strathkelvin Development Company Ltd
<b>ADDRESS OF MAIN CONTRIBUTOR:</b>	Gregory Building, University of Glasgow, Lilybank Gardens, Glasgow G12 8QQ
<b>EMAIL ADDRESS:</b>	b.ballin-smith@archaeology.gla.ac.uk
<b>ARCHIVE LOCATION</b> (intended/deposited)	NMRS, Strathkelvin District Libraries & Museums, Kirkintilloch

## 12.5 *Archaeological Method Statement*

### **GUARD 2364: Southbank Basin and Slipway, Kirkintilloch** **Archaeological Method Statement**

#### 1.0 *Introduction*

This document is a statement of GUARD's methodology in connection with alterations and development to the Scheduled Ancient Monument, the Forth-Clyde canal and slipway at Southbank, Kirkintilloch. The strategy will largely include an archive search, monitoring and recording of stonework and associated works connected with the canal and slipway revealed during the development, and with the footbridge construction.

On completion of the alterations to the listed structures an illustrated report will be submitted for agreement with the client and Historic Scotland.

#### 2.0 *Aims and Objectives*

The aims and objectives of the archaeological work are to work closely with the developer to record:

- the stonework at the mouth of the basin/canal and its condition;
- the original stonework of the slipway where it is to be altered;
- the fill and any other associated features connected with the alteration of the slipway;
- any visible foundations to the basin/canal and slipway walls and the clay lining to the canal;
- any visible foundations to the walls of the canal during the footbridge construction.

In addition, a search of the local library in Kirkintilloch will be made for archive photographs of the canal structures affected by the development.

#### 3.0 *Methodology*

The strategy to be employed during the development works will consist of the following:

##### 3.1 *Construction of the Temporary Dam*

A method statement for the installation and removal of the temporary dam, prior to any further works being undertaken at the slipway has already been submitted to Historic Scotland by Balfour Beatty. It is intended that archaeological monitoring will take place when the dam is built between the stonework of the canal and the material at the canal side of the slipway.

A written description and photographic record will be taken of the works.

##### 3.2 *Dewatering of the Slipway and Basin Entrance*

After the construction of the temporary dam, the water at the base of the slipway will be pumped out into the canal. An archaeological inspection of the canal and slipway floor and walls will take place with the addition of a written description and photographic record. The wall alignments and depth will be checked with a Reflectorless Total Station or equivalent survey instrument.

##### 3.3 *Site Clearance and Archaeological Investigations*

Any site clearance that may be necessary during or after the temporary dam construction and the dewatering will be undertaken under archaeological supervision. This may include the 1980s concrete ramp at the top of the slipway, the down-taking of part of the north-east and south-east walls of the slipway, and any other masonry in poor or dangerous condition. Evidence of the construction of the slipway and its associated walls can be recorded at this time, and if artefacts contemporary with the canal construction or its use are located, these can be recorded on pro-forma sheets and by drawings and photographs.

##### 3.4 *Trial Holing for Wall Foundations*

Trial hole digging will take place in order to locate the foundation depth of the existing masonry walls of the slipway. This will be undertaken from within the slipway area down the face of the existing wall, and

will be monitored and recorded by the project archaeologist.

### 3.5 *Piling for New Foundations*

The piling of steel tubing into the walls of the slipway for foundations for a new boat house will take place. Although it is not expected that much new evidence for the construction of the slipway walls will be revealed, the operation will be monitored and recorded by the project archaeologist.

### 3.6 *Background Information on Structures Built on or Adjacent to the Slipway*

During the course of the above works the project archaeologist will investigate the records held by the public library in Kirkintilloch to locate archive images containing information on the canal basin, slip and boat yard. Any information gathered here will be included in the archaeological report.

### 3.7 *Removal of the Concrete Block in the Canal Basin Entrance*

A separate event from the development of the canal slipway will be the removal of the concrete plug at the entrance to the canal basin. The blockage will be removed when the rebuilt canal basin is at a stage that it will be able to take water. If there is an opportunity to examine the walls of the canal entrance before the basin is flooded, they will be photographed and recorded, as above. This item is also covered by the temporary dam installation method statement produced by Balfour Beatty and already approved by Historic Scotland.

### 3.8 *Construction of a New Footbridge*

The foundation works for a new footbridge on either side of the canal will be monitored and recorded by the project archaeologist.

### 3.8 *Archaeological Recording*

The archaeological recording will be undertaken in accordance with the Institute of Field Archaeologists' *Standard and Guidance for an archaeological watching brief*. Archaeological features will be recorded by written description on *pro forma* recording sheets, by photograph and where possible by measured drawing.

## 4.0 *Products*

On completion of the monitoring phase of work, an illustrated report suitable for submission to the client, Historic Scotland and the National Monuments Record for Scotland (NMRS) will be produced. This report will recommend whether there will be a need for any analytical work or whether the results of the fieldwork should be published. If there is a need for further work, a project design with costs will accompany the report.

In addition to the report a brief summary of results of the fieldwork will be submitted to *Discovery and Excavation in Scotland*.

## 5.0 *Foundations*

Unless otherwise agreed, copyright for any report resulting from the archaeological work undertaken as part of the project will be deemed the intellectual property of University of Glasgow.

## 6.0 *Archive Arrangements*

Once all the archaeological fieldwork is completed, all materials from the programme of work will be prepared to the appropriate archive standard. GUARD will undertake to deposit the resultant archive with the NMRS on completion of the report for publication.

Any finds will be reported to the Treasure Trove Advisory Panel, and GUARD will undertake to ensure their safe deposition within the designated museum at the appropriate time.

## 7.0 *Foundations*

GUARD will aim to produce a report on the work within one month of the completion of all archaeological fieldwork at the site.



## 8.0 *Foundations*

B. Ballin Smith one of GUARD's Project Managers or another experienced archaeological member of staff will perform the on site monitoring and recording.

## 9.0 *Foundations*

All archaeological working practices are subject to a risk assessment prior to commencement of the work where likely health and safety issues associated with the site can be highlighted.

GUARD, operating through the University of Glasgow, adheres to all standard Health and Safety regulations governing fieldwork projects. GUARD also possess appropriate third party/public liability insurance cover, proof of which may be supplied upon request.