

Brechin Flood Prevention Scheme, Brechin, Angus: Archaeological Watching Brief Report

AOC Project 22802

20th April 2015

OASIS:1-210041



ARCHAEOLOGY

HERITAGE

CONSERVATION

Brechin Flood Prevention Scheme, Brechin, Angus: Watching Brief Report

On Behalf of:	Angus Council, County Buildings, Market Street, Forfar, Angus DD8 3WR
Oasis Number	1-210041
National Grid Reference (NGR):	NO 5997 5971 (Zone 1) NO 6028 5944 (Zone 2) NO 6058 5933 (Zone 3) NO 6089 5942 (Zone 4)
AOC Project No:	22802
Prepared by:	Nicholas Johnstone & Steven Watt
Planning Application:	No 12/00642/FULM
Illustration by:	Jamie Humble
Date of Fieldwork:	05th January - 17th February 2015
Date of Report:	20th April 2015

This document has been prepared in accordance with AOC standard operating procedures.

Author: Nicholas Johnstone	Date: 28 th April 2015
Approved by:	Date: 28 th April 2015
Draft/Final Report Stage: Draft	Date: 28 th April 2015

Enquiries to: AOC Archaeology Group
Edgefield Industrial Estate
Edgefield Road
Loanhead
EH20 9SY

Tel. 0131 440 3593
Fax. 0131 440 3422
e-mail. admin@aocarchaeology.com



Contents

	Page
List of Figures	1
List of Plates.....	1
List of Appendices	1
Summary.....	2
1 INTRODUCTION	3
1.1 Background	3
1.2 Site Location and Description.....	3
1.3 Historical Background (taken from Angus council report 2014).....	3
2 OBJECTIVES	5
3 METHODOLOGY	5
4 RESULTS.....	7
5 CONCLUSION.....	8
6 REFERENCES	8
APPENDIX 1: Photographic Register	10
APPENDIX 2: Context Register	12
APPENDIX 3: ‘Discovery and Excavation in Scotland’ (DES) Report.....	15

List of Figures

Figure 1: Site Location map

Figure 2: Location of main features

List of Plates

Plate 1: Zone 1 The Mooring Area from west

Plate 2: Trial pit exposing sandstone mill wall [003]

Plate 3: Machine Base [026]

Plate 4: Northern wall of Mill Lade

List of Appendices

Appendix 1: Photographic Register

Appendix 2: Context Register

Appendix 3: 'Discovery and Excavation in Scotland' (DES) Report

Summary

This report presents the results of an archaeological watching brief undertaken by AOC Archaeology Group along the River South Esk for the 'Brechin Flood Prevention Scheme' on behalf of Angus Council.

The watching brief was undertaken within four separate zones and revealed substantial archaeological features relating to the development of a 19th century Paper Mill complex and Bleach-works. The features included a Mill Lade, stone and brick walls, brick floors, a cobble path and several machine bases.

Though heavily truncated the excavation of several trial pits revealed that archaeological remains survived to a depth greater than one metre.

1 INTRODUCTION

1.1 Background

- 1.1.1 A programme of archaeological works was approved by Angus Council on the 'Brechin Flood Prevention Scheme' along the northern banks of the South Esk River in order to help prevent future flooding at Brechin, Angus. A Planning Application (Ref No 12/00642/FULM) was approved to construct a flood defence barrier, including buried pumping stations at various sites, with associated works on land between River Street and East Mill Street, Brechin. The site lies within the administrative area of Angus Council, which is advised on archaeological matters by the Aberdeenshire Council Archaeology Service (ACAS). The archaeological works will be conducted in accordance with the principles as set out in Scottish Planning Policy (2014) and Planning and Archaeology 2/2011 (2011).

1.2 Site Location and Description

- 1.2.1 The development area covers four separate areas designated Zones 1 to 4. Together these zones cover an area of approximately 5.38 hectares along the northern banks of the South Esk River. Zone 1 is the largest area measuring up to 2.83 ha and extends from Ladeside Road along the banks of the South Esk till it meets River Street (centred on NO 5997 5971). Zone 2 is the narrowest of the areas basically sandwiched between the South Esk and River Street and measures only 0.71 ha (centred on NO 6028 5944). Zone 3 comprises an area of only 0.83 ha and is present at the southwest end of East Mill Road (centred on NO 6058 5933). The final area, Zone 4, lies to the east of East Mill Road and comprises an area of warehouses and a small pasture field. Zone 4 measures 1.01 ha (centred on NO 6089 5942).

1.3.1 Historical Background (taken from Angus council report 2014)

- 1.3.1 The historic core of Brechin developed from the central area of the Cathedral during the medieval period, and until the 19th century, did not extend much beyond the city walls. The area of the proposed flood defence scheme was therefore largely peripheral to the residential, ecclesiastical and commercial focus of the city, playing a role as a location for communication (via the Bridge) and for the water-powered town mills.

1.3.2 Zone 1 – The Inch Flood Works

- 1.3.2.1 The area of the Inch is documented as the site of the medieval Meikle Mill, but it is likely that remains of this date were swept away by 19th-century development. It is possible that building material of this date was reused in later structures. Few upstanding remains of historic significance have been identified. The retaining wall at the north-western end of the Inch may be that referred to in 19th-century correspondence. The boat mooring area appears to retain some historic fabric.
- 1.3.2.2 The western end of the Inch would have been more open than the area to the south, being occupied by the public washing house but surrounded by the bleaching green. The large reservoir (20m x 20m), would have formed a major feature, and also removed any earlier deposits. The central part of the Inch was intensively developed through the 19th and early 20th century, and the below-ground remains of the buildings are visible as platforms and exposed masonry. The lades are no longer visible, and it is not clear to what extent they survive below ground; an arch survives in the river bank, issuing from the central lade, suggesting some below-ground structural remains may be extant. At the south-eastern end of the Inch, deposits are likely to have been heavily truncated by the ponds and lade.

1.3.2.3 Along the River Street frontage, vestiges of former tenement housing can be seen as scars and features on the elevations of the surviving houses, and are likely to survive as below-ground features where they have been cleared to provide access to the Inch. The proposed works on the Inch will involve ground works which are likely to encounter and remove part of the below-ground remains of industrial buildings associated with the 19th-century Paper Mill and Bleach works.

1.3.2.4 The replacement of Denburn Culvert, if large extents are exposed, might also provide information on 19th-century activity. Although the extent of the features to be impacted will be limited, when compared to the overall size of the industrial complex, these features would provide valuable information about the date, survival and character of the industrial archaeology in this part of Brechin.

1.3.3 Zone 2 - River Street and Brechin Bridge Flood Works

1.3.3.1 The proposed works along River Street occupy a small footprint, confined to the retaining wall and railings that were constructed as part of the late 19th-century improvement works. The extant railings appear late 19th-century in date. When the 19th-century 'hovels' were removed, there are accounts of house platforms being visible within the river bank, and it is possible that some below-ground remains of these houses survive in the riverside area.

1.3.3.2 Brechin Bridge has been in existence since at least the 13th century, and it is possible that structural remains relating to medieval structures may survive in the Bridgend area. The area was the site of a brewery from at least the 18th century, but if this occupied the same location as its 19th-century successor, this lay beyond the area of the proposed works. The northern arch of the bridge is 18th-century in date, and parts of the parapet over may be later in date. Some evidence for historic walling is evident in the vicinity of the Electricity Substation, but is only visible for a short stretch.

1.3.4 Zone 3 - East Mill caravan park Flood Works

1.3.4.1 The caravan park area has remained beyond the main area of industrial activity through the 19th century, and Ordnance Survey maps show this to have been open ground until the late 20th century, with the exception of the mill lade leading from the weir to the East Mill, and the large oval tank.

1.3.4.2 The finds of food vessel sherds at Bridgend, and the more westerly presence of ring ditches and cist burials, indicate the potential for prehistoric activity in this area, and if the caravan park has not been subject to extensive truncation, it is possible that remains of this date, and later periods, may survive.

1.3.5 Zone 4 – East Mill Industrial Estate and Paddock Flood Works

1.3.5.1 The East Mill Industrial Estate and paddock area, lie closer to the area of cist burials and ring ditches, and might therefore be considered to have greater potential for Bronze Age or later remains. However, the greater degree of industrial activity in this zone is likely to have removed vestiges of earlier remains.

1.3.5.2 The potential for industrial archaeology is great; the mill lade ran through the centre of the site (and may still be extant below-ground), and many of the historic buildings have been subsumed into later structures, in contrast to the Inch where they were removed. Various tanks are shown on historic Ordnance Survey editions which are also likely to have truncated below-ground remains, but might be considered of historic interest in them.

1.3.5.3 The buildings along the riverbank are of post-1960s date and are not of historic significance.

2 OBJECTIVES

2.1 The objectives of the archaeological watching brief outlined in the Written Scheme of Investigation (AOC 2014) were:

- determine the character, extent, condition, quality, date and significance of any archaeological remains within the proposed development area by means of a watching brief on all ground breaking works within Zones 1, 3 and 4;
- to create a photographic record of the retaining wall and boat mooring area in Zone 1 as well as the metal railings in Zone 2.
- to advise and implement an appropriate form of any required mitigation, such as excavation (Phase 2), post-excavation analyses and publication (Phase 3), should significant archaeological remains be encountered compliant with *Scottish Planning Policy* (2010) and *Planning and Archaeology 2/2011* (2011).

3 METHODOLOGY

3.1 The archaeological works were undertaken between the 5th of January and the 17th of February 2015 in variable conditions of heavy rain to bright sunshine and archaeological visibility remained good throughout.

3.2.1 Zone 1 and 4

The area was stripped using a 20 tonne 360° excavator equipped with a 2m wide smooth bladed ditching bucket. This mostly only required the stripping of a thin layer of topsoil up to 0.3m deep but occasionally involved deeper excavation. All excavation was supervised by an experienced AOC field archaeologist and all spoil checked for finds of archaeological significance. In addition a series of high resolution digital photographs were taken of the boat mooring area within this zone.

3.2.2 Zone 3

Following consultation with the council and the client further archaeological supervision was not required in this area due to a new system of work involving minimal ground disturbance.

3.2.3 Zone 2

The 19th century railings lining the river along River Street were fully recorded using high resolution digital photography.



Plate 1 Zone 1 The Mooring Area from west



Plate 2 Trial pit exposing sandstone mill wall [003]



Plate 3 Machine Base [026]



Plate 4: Northern wall of Mill Lade

4 RESULTS

4.1 Zone 1

- 4.1.1 The photographic recording of the old mooring area on the river side in Zone 1 was undertaken. Although little of the original structure remained visible below the more recent developments, the older exposed portions of stone work were recorded through digital photography.
- 4.1.2 The groundworks in Zone 1 involved the removal of up to 0.3m of topsoil across the footprint of the flood defence wall, and along designated haul roads required for construction. This was carried out with a 360° excavator removing shallow the material spits. The topsoil was dark brown sandy clay and silt with inclusions of stone and 19th-20th century refuse.
- 4.1.3 The initial strip began at the mid point of Zone 1, next to the entrance to the park and nearby the Leisure Center car park, and from here work progressed to the west before returning to the east.
- 4.1.4 Features related to the old paper mill were discovered. These continued across the area from the park entrance to the river and to the west for approximately 60m. Due to the limited depth of the excavations these remains were fairly fragmentary but combined to give a good overview of the mill buildings which previously occupied the site. Although the scope of the current work was limited to a shallow topsoil strip, two small test pits were excavated to investigate the surviving depth of the features. Both of these pits found features continuing below 1m in depth. In addition a culvert cover was removed during the topsoil strip which opened a deep manhole further showing a significant surviving depth of the features.
- 4.1.5 The range of structural features discovered included a network of interior and exterior stone walls and pale brown mortar [004], [006], [008], [014], [016], [029], [031], [037] and red brick [010]. Alongside these walls were various surfaces of rooms, yards, and walkways such as cobble path [007], stone and concrete slabs [043], brick floor [034], and brick path [048]. In addition were also three stone and mortar interior surfaces [022], [023], and [024] with channels running between them. These channels had a series of square cut-outs and were likely related to the water powered machinery of the mill.
- 4.1.6 The most significant feature discovered during the strip was a large mill lade near the middle of the site. This was around 1.2m to 1.9m wide and lined on either side by lines of worked stone kerbs [025], [026], [032], [031] with carved recesses and iron fixings for machinery or structure overlying it.

- 4.1.6 The industrial nature of the site was made clear by the discovery of numerous large stone machine bases [018], [019], [020], [021], and [027] with cut-outs and iron fixings for the mounting of heavy machinery.
- 4.1.7 Excavations at the east of the area involved the removal of a modern play park area prior to the topsoil strip. When this area was stripped no archaeological remains were discovered at the depth removed. This is likely a consequence of previous ground reduction during the play-park's construction. As such it remains likely that further components of the papermill and associated structures still survive within this area but at a greater depth.

5 CONCLUSION

- 5.1 The watching brief was successful in revealing the remnants of a paper mill dating to the late 1800's to 1940's. Due to the relatively light nature of the ground reduction involved in the flood prevention works little conclusively said about the sites form and function without further archaeological investigation. However, several machine bases and walls were found across the site indicating its function as a mill. This is supported by the identification of the lade.

6 REFERENCES

AOC 2014 Brechin Flood Prevention Written Scheme of Investigation

Angus Council 2014 Brechin Flood Prevention Scheme: Brief for an Archaeological Field Evaluation, Watching-brief & photographic record

Scottish Government 2010 *Scottish Planning Policy*.

Scottish Government 2011 *PAN 2/2011 Planning and Archaeology*.

**Brechin Flood Prevention Scheme,
Brechin Angus:
Watching Brief Report**

Section 2: Appendices

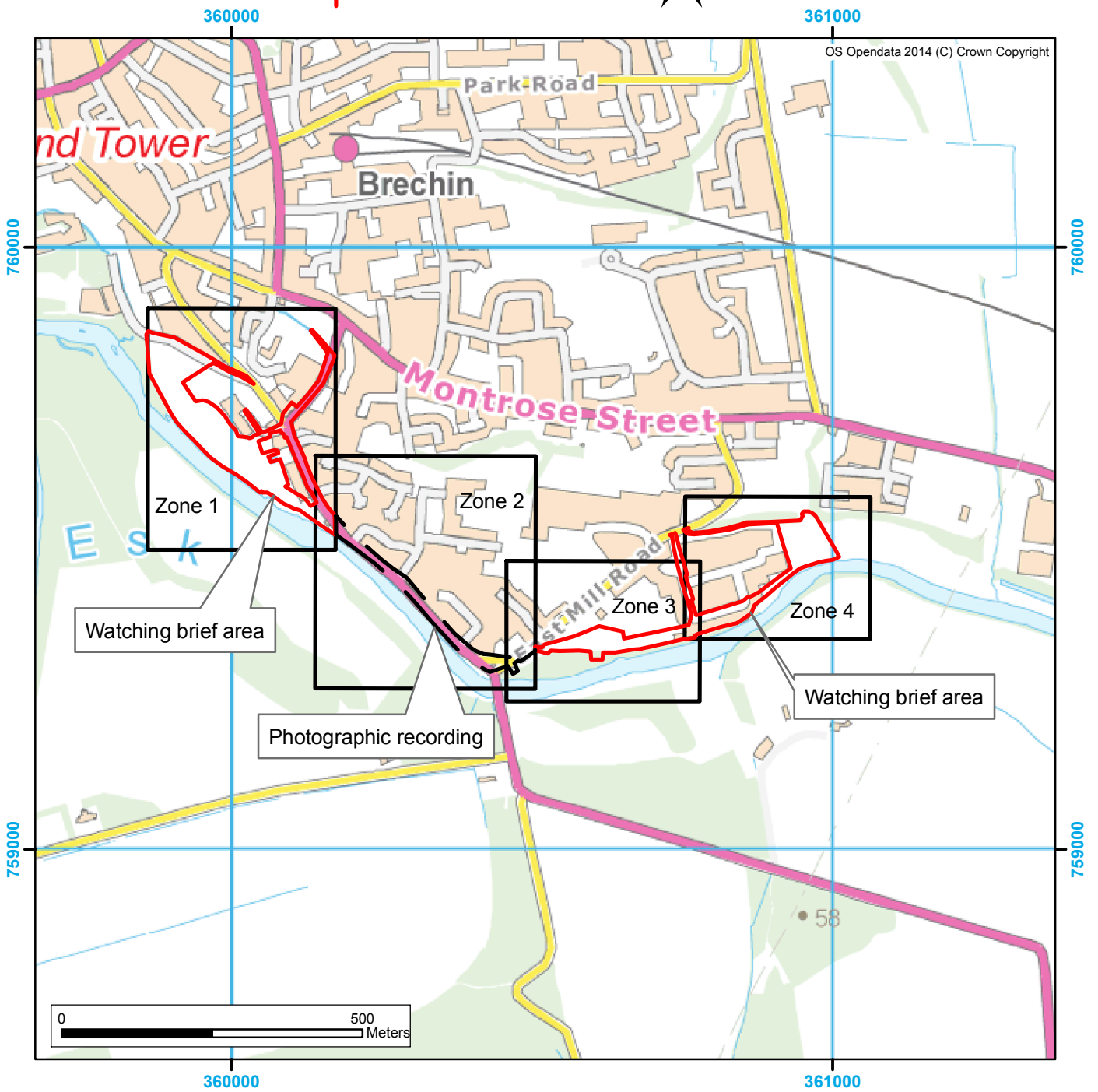
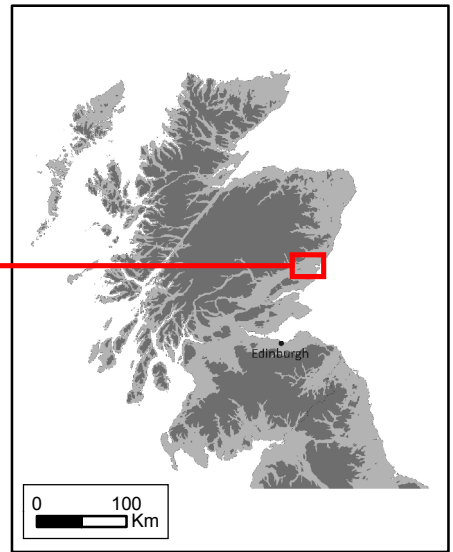
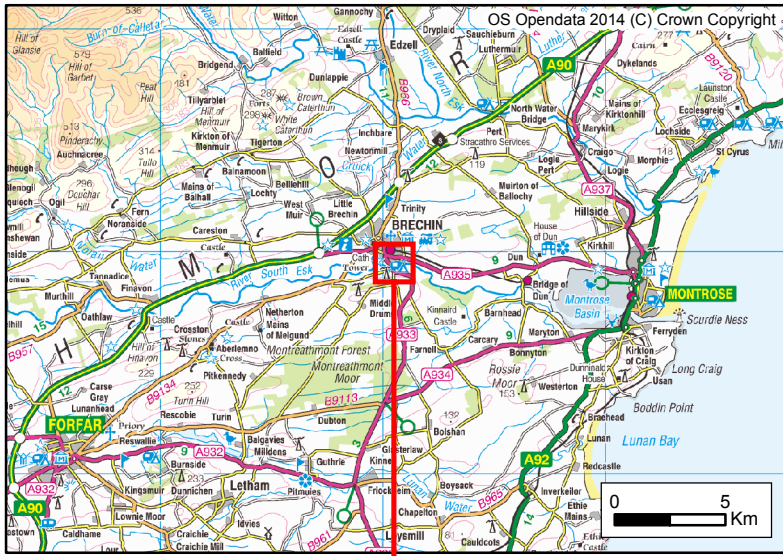


Figure 1: Site Location Plan



Figure 2: location of main features in watching brief zone 1, on background of Ordnance Survey 1924 map.

APPENDIX 1: Photographic Register

Digital Film 1

Frame	Zone	Description
1 - 24	1	Photo Record of mooring Area
25-28	1	Walls [003] and [004]
29-30	1	Wall [004]
31	1	Stone drain cover [003]
32-33	1	Walls [003] and [004]
34-36	1	Wall [006]
37-40	1	Wall [003]
47-56	1	Slots excavated next to wall [003]
57-59	1	Topsoil strip of play park area – no archaeology
60-63	1	Wall [003] fully exposed
64-69	1	Deep manhole exposed by machine excavations
70-78	1	General shots of central lade
79-80	1	[025] machine base
81-82	1	[026] machine base
83-84	1	[027] machine base
85	1	[029] lade wall collapse
86-90	1	[032] south lade wall
91-94	1	[033] north lade wall
95	1	[045] worked stone slab
96	1	[024]
97	1	[023]
98	1	[022]
99-101	1	General shot of [022], [023], and [024]
102-103	1	Detail of 'cut outs' in [022] and [023]
104-106	1	Stone box [035] at the end of [022]
107	1	General shot of [020]
108	1	Machine base [020]
109-110	1	Machine base [019]
111-112	1	Machine base [018]
113-115	1	Wall [011]
116	1	[015] and [014]
117-118	1	General shots of [009], [010] and [011]
119	1	[005]
120-123	1	Cobble surface [007]

124-126	1	Walls [006]
127-129	1	Wall [011]
130-131	1	Wall [037] and post pads [038] and [039]
132	1	Post pad [038]
133	1	Post pad [039]
134	1	Post pad [040]
135	1	Post pad [041]
136	1	Red brick pad [042]
137-140	1	Brick surface [034] and wall [037]
141-150	1	General shots of [043]
151-153	1	Wall [044]
154-156	1	Excavation under play park area – no archaeology
157-160	1	General site photos
161-163	1	Culvert (012)
164-166	1	Brick, Stone and Mortar foundations [046]
167-173	1	[047], [048] and [049] Brick cobbled path and walls
174-211	1	General shots of Victorian Railings in Zone 2
212-214	1	Shots of [046]
215-225	1	Working shots of Strip around outdoor sports court
226-236	1	Shots of North of Area 1 Post-excavation showing modern field drains and pit
237-245	1	Working shots of topsoil stripping in Zone 4

APPENDIX 2: Context Register

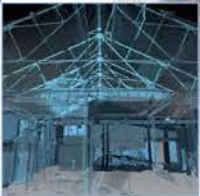
Context	Zone	Description
000	1	Natural
001	1	Dark Brown silt-sand-clay, with frequent rock inclusions, 0.2m depth Topsoil
002	1	Construction demolition with 19 th /20 th Century ceramic inclusions Demolition/Made Ground
003	1	Sandstone and pale brown mortar wall, flat faces un-worked stones (0.5m wide) Rectangular room area
004	1	Sandstone and pale brown mortar wall, flat faces – some large worked stones used in construction Wall
005	1	Stone drain cover – worked, 0.5x0.5m with central square hole, 0.2mx0.2m Drain cover
006	1	Sandstone and pale brown mortar wall – un-worked stones – 0.5m wide Wall
007	1	Cobbled path, (cobbles 0.2-0.3x0.15) path approximately 1.5x14m Cobbled path
008	1	Sandstone wall – 2x Worked stone slabs 0.3x1.7m each Wall
009	1	Worked sandstone slab, 0.6x0.8m with 0.25x0.25x0.03 recesses Stone slab
010	1	Red brick and pale brown mortar wall – shaped 0.9x2.3x0.2m – abuts (011) Wall
011	1	Sandstone and pale brown mortar wall, flat faces and red brick and worked stone 0.5m wide Wall
012	1	Underground culvert, runs towards river Culvert
013	1	Machine base abutting south side of (011), Large sandstone slab (0.6x1.13m) with 2x iron fixings Stone slab
014	1	Sandstone and pale brown mortar wall, 0.3-0.5m wide, some large slabs (3.4x4.3m) used Creates small room
015	1	Large broken sandstone slab abutting north of (014), 1.2x1.4m Stone slab
016	1	Pink sandstone and pale brown mortar wall, 0.45m wide North side of large rectangular room
017	1	Sandstone and pale brown mortar foundations, flat faced 0.6x0.8m Foundations
018	1	Worked stone machine base, 0.74x1.14 with 0.4x0.2m cut out and two 0.09m diameter bolt holes, one bolt in situ Machine base
019	1	Worked stone machine base, 0.74x1.14 with 0.4x0.2m cut out and two 0.09m diameter bolt holes, one bolt in situ Machine base
020	1	Machine base made of worked stone and mortar, 2.3x4.1m, 4x bolts in situ in south west in large sandstone slab Machine base
021	1	Sandstone and worked stone and pale brown mortar foundations – 1x1.3m Foundation
022	1	Large stone and mortar concrete slab 2m wide. 0.4x0.55m cut out on NW side every 1.5m aligning with those in (023) Slab

023	1	Large stone and mortar concrete slab 2m wide. 0.4x0.55m cut out on SE side every 1.5m aligning with those in (022) Slab
024	1	Large stone and mortar concrete slab, 1.35m wide with 0.35x0.55m cut outs on SE side every 1.5m Slab
025	1	Machine base worked stone and iron bolts, pairs with [026] to create possible channel – L-shaped 2.5x1.4m Machine base, possibly to create channel with [026]
026	1	Worked stone and iron bolts machine base 2.3x1.5m pairs with [025] to create channel. Some red brick used also Machine base, possibly to create channel with [025]
027	1	Worked stone machine base – 2.5x1.2m with 2x rectangular recesses 1 – 0.25x0.9m with 3x bolt holes, 2 – 0.3x0.8m with 1 bolt hole, large 0.8x0.5m cut out of NW side Machine base
028	1	Worked stone machine base remains, 0.9x0.4 with bolt in situ Machine base
029	1	2x large worked stone wall remains 1.25x0.25m each with some surrounding demolition stone remains Stone wall
030	1	Worked stone foundation remains, 0.9x0.6m Foundations
031	1	Sandstone and pale brown mortar wall, 2.2x0.5m, abutting SE of 022 Wall
032	1	Worked stone slabs with recesses and iron bolts creating the outer S wall of central lade, 0.36m wide Wall of lade
033	1	Worked stone slabs with recesses and iron bolts creating outer N wall of central lade, 0.36m wide Outer wall of lade
034	1	Brick floor surface – red bricks with pale brown mortar. Between walls [016] and [016]. 4x2.8m visible during excavation, some stone slabs used within it next to wall [016] Floor surface
035	1	Rectangular stone structure at the end of surface [022]. Constructed from large slabs of stone placed vertically on four sides, 1.8x1.2m Stone structure
036	1	Brick square at the end of wall [016] – red brick and pale brown mortar, 0.9x0.7m. Large iron pipe extends from within it. Brick square
037	1	Large sandstone and pale brown mortar wall. Connected to Wall [016] – creating rectangular room. 2.0x0.45 Stone wall
038	1	Large stone post pads, 0.5x0.6m – roughly square with small square hole in centre (0.15x0.15m) Post pad
039	1	Large stone post pads, 0.6x0.6m – roughly square with small square hole in centre (0.15x0.15m) Post pad
040	1	Large stone post pads, 0.6x0.65m – roughly square with small square hole in centre (0.15x0.15m) Post pad
041	1	Large stone post pads, 0.6x0.6m – roughly square with small square hole in centre (0.15x0.15m) Post pad
042	1	Large red brick and grey mortar structure, build over wall [037] – fairly modern, 1.5x2.3 Unknown structure
043	1	Large area with frequent large flat slabs of concrete and stone. All likely related.

		Some with iron pins for machinery others with carved recesses from machinery or pillars. Function unknown
044	1	Sandstone and pale brown mortar wall. Some worked stone connects to wall of docking area/river wall. 3x0.5m Wall
045	1	Stone machine base. 1.5x0.5m. Central recess with two bolt holes Machine base
046	1	Brick, stone and mortar foundations Foundations
047	1	Brick, mortar and cement wall, southern wall abutting brick cobbled surface – 0.35x23.8m Wall
048	1	Brick cobbled surface, possible path, 24x3.75m Cobbled surface
049	1	Northern brick, mortar and cement wall abutting brick cobbled surface, 24x0.4m Wall

APPENDIX 3: 'Discovery and Excavation in Scotland' (DES) Report

LOCAL AUTHORITY:	Angus Council
PROJECT TITLE/SITE NAME	Brechin Flood Prevention Scheme
PROJECT CODE:	22802
PARISH:	Brechin
NAME OF CONTRIBUTOR:	Nicholas Johnstone
NAME OF ORGANISATION:	AOC Archaeology Group
TYPE(S) OF PROJECT:	Watching Brief
NMRS NO(S)	None
SITE/MONUMENT TYPE(S):	None
SIGNIFICANT FINDS:	None
NGR (2 letters, 6 figures)	NO 5997 5971 (Zone 1), NO 6028 5944 (Zone 2), NO 6058 5933 (Zone 3), NO 6089 5942 (Zone 4)
START DATE (this season)	05/01/2015
END DATE (this season)	17/02/2015
PREVIOUS WORK (incl. DES ref.)	None
MAIN (NARRATIVE) DESCRIPTION: (May include information from other fields)	<p>This report presents the results of an archaeological watching brief undertaken by AOC Archaeology Group along the River South Esk for the 'Brechin Flood Prevention Scheme' on behalf of Angus Council.</p> <p>The watching brief was undertaken within four separate zones and revealed substantial archaeological features relating to the development of a 19th century Paper Mill complex and Bleach-works. The features included a Mill Lade, stone and brick walls, brick floors, a cobble path and several machine bases.</p> <p>Though heavily truncated the excavation of several trial pits revealed that archaeological remains survived to a depth greater than one metre.</p>
PROPOSED FUTURE WORK:	None
CAPTION(S) FOR ILLUSTRS:	None
SPONSOR OR FUNDING BODY:	Angus Council
ADDRESS OF MAIN CONTRIBUTOR:	AOC Archaeology Group
EMAIL ADDRESS:	admin@aocarchaeology.com
ARCHIVE LOCATION (intended/deposited)	NMRS



AOC Archaeology Group, Edgefield Industrial Estate, Edgefield Road, Loanhead EH20 9SY
tel: 0131 440 3593 | fax: 0131 440 3422 | e-mail: admin@aocarchaeology.com

www.aocarchaeology.com