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Client: HMC

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**M80 Stepps to Hags Improvement Scheme:
Report on Archaeological Monitoring of Works during
Construction Phase**

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PROJECT SUMMARY SHEET (MEWB08)

Client	HMC
Planning Reference	HS/C/3469
National Grid Reference	South-West NS657 693 to North-East NS793 798
OASIS No.	headland1-101979
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Summary	

This report presents the findings of archaeological monitoring of groundworks undertaken as part of a programme of mitigation required by Historic Scotland during construction of the M80 motorway improvement scheme. The route for the new section of the M80 motorway development runs from Stepps in North Lanarkshire to Hags in the Falkirk area and incorporates the route of the existing A80. The fieldwork was undertaken between February 2009 and March 2011.

Few archaeological features were revealed during the work. Monitoring of areas immediately adjacent to the A80 revealed that there had been significant landscaping during the road construction in the 1960s, which is likely to have removed much of the archaeology at these locations.

No features were recorded in the areas where peat had developed; indicative of poorly-draining soils where settlement would be impractical. At other locations more suitable for habitation, such as on higher and better-draining ground, some evidence for agricultural activity from the medieval period onwards was recorded.

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1. INTRODUCTION

Headland Archaeology Ltd was commissioned by PPCA Ltd on behalf of Grontmij, the design consultants to Highway Management Construction (M80) to undertake a programme of archaeological mitigation during construction of the M80 Steps to Haggs Motorway. This report presents the results the archaeological monitoring of groundworks carried out at a number of locations along the road corridor. The methodology was agreed in advance with Historic Scotland and fieldwork was undertaken between February 2009 and March 2011.

2. PROJECT BACKGROUND

Several phases of archaeological mitigation works were completed in advance of the motorway construction, commencing with a desk based assessment and walkover survey carried out by AOC Archaeology Group in 1994. This was followed in 2007 by a programme of works carried out by Headland Archaeology Ltd (Haston *et al* 2007), comprising:

- trial trench evaluation of the road corridor
- watching brief on geotechnical test holes
- building recording
- survey
- palaeo-environmental assessment of five sites.

An additional evaluation at the site of the former Castlecary Lime Works was also completed by Headland in 2008 (Scott 2008). The results of those advanced investigations were utilised to inform mitigation proposals for the construction phase of the project; which subsequently included the monitoring reported here.

In addition to the programme of archaeological monitoring, mitigation required that test pitting and an excavation be carried out on the edge of the scheduled area of Mollins Roman Fort (SAM 6136). The results of which are reported separately (Dalland 2009).

3. ARCHAEOLOGICAL BACKGROUND

The most significant of the ancient monuments located within the vicinity of the motorway corridor is the Antonine Wall, located 3km north and running for approximately 58km in an east-west direction. The monument has World Heritage Status and where it remains unaffected by modern development or is not totally destroyed, is scheduled as a monument of national importance under the Ancient Monuments and Archaeological Areas Act 1979. Built in 142-143 AD under Emperor Antoninus Pius, the Antonine Wall formed the most northerly frontier of the Roman Empire for some two decades. The linear barrier takes the form of a substantial rampart and ditch behind which runs a military road, connecting a series of forts and fortlets. Signalling platforms and camps utilised during its construction are to be found at regular intervals along its rear.

The scheduled site of Castlecary Roman Fort adjoins the Antonine Wall on an elevated location overlooking the Bonny Water and Red Burn, while within the CPO boundary itself is situated a small area of Mollins Roman Fort, identified from aerial photography. Limited excavations in 1977 and 1978 suggested this may represent a rare surviving example of an earlier line of Roman defences constructed in the first century AD.

The only evidence of prehistoric or Roman activity recorded in the 2007 archaeological programme, undertaken in advance of construction, consisted of the presence of a stone quern in a trench adjacent to Mollins Roman fort. The evaluation and palaeo-environmental assessment revealed there to be few archaeological features in parts of the landscape where peat deposits had accumulated within glacially scoured hollows, suggesting that in these low-lying areas the land was very wet and boggy and unsuitable for settlement. The extensive remains of post-medieval agricultural activity recorded in the evaluation attests to the cultivation of drier, less low-lying pockets of land from the medieval period onwards.

Relics of the modern industrial age survive at Castle Glen, where the extensive remains of the former Castlecary Lime Works are located and include limekilns, earthworks, revetment walls and quarries. It is not clear when lime quarrying was founded at this location; however there is no cartographic reference to the Works prior to the 1st Edition Ordnance Survey map of 1859.

4. AIMS & OBJECTIVES

A watching brief was undertaken of groundworks associated with construction of the motorway in order to adequately record any archaeological remains exposed during the work that would be damaged or destroyed.

5. METHODOLOGY

Headland Archaeology's previous involvement in the project allowed Headland Archaeology to propose and agree with Historic Scotland a monitoring strategy which took into account Headland Archaeology's prior knowledge of the site and to target monitoring on areas of potential archaeological interest that were not previously fully investigated (illus 1). Monitoring was undertaken at various locations along the development corridor that were considered to have archaeological potential (Illus 1). The site selection was informed by the information gathered from the previous programme of archaeological mitigation undertaken by Headland Archaeology in advance of construction. Construction groundworks subject to archaeological monitoring were carried out using a 360° mechanical excavator fitted with a flat bladed ditching bucket, operating under continuous archaeological supervision. A ratio of one archaeologist to one machine was adhered to throughout. Any potential features identified during the works were hand cleaned, investigated and recorded appropriately. In the vicinity of Mollins Roman Fort, metal detecting was also undertaken to recover finds.

Prior to monitoring at Castle Glen, sections were excavated through four drystone walls which had been identified during the 2007 mitigation programme (Haston *et al* 2007, Appx 5.2). The features were fully recorded as they would be damaged or destroyed by construction groundworks.

Archaeological features and deposits were hand excavated and recorded using standard archaeological methods and pro-forma record sheets. Archaeological contexts were recorded using a combination of AutoCAD and TheoLT survey, hand planning and measured sketch. Colour transparency and digital photographs were taken and recorded in a photographic register. Record shots of archaeological contexts included a metric scale.

At South Broomknowes peat basin the plant was equipped with a long boom, which meant an extended safe distance for the archaeologist from the machine. Monitoring therefore proved difficult as newly-stripped ground could not be closely inspected. It was agreed between Headland and Historic Scotland that direct archaeological monitoring would be discontinued and a guidance leaflet produced for plant operators. This briefly outlined the type of archaeological remains commonly found in peat and the action the operator should take if they uncovered such finds prior to contacting Headland Archaeology to decide what further work might be required.

6. RESULTS

The results have been divided primarily into chainage section, showing the distance in metres from the western-most start point of the development corridor. Each section then contains the named locations of the specific monitored areas (Illus 1).

Chainage 1400-1700 (Illus 2).

South Broomknowes peat basin

Removal of peat in this area revealed natural subsoils of clay and sand sealed by peat deposit [134] 0.6-1m in depth. No archaeological remains were revealed during stripping of the peat basin.

Drumstack Road

The area monitored at this location comprised a triangular parcel of land immediately south of South Broomknowes peat basin. Long grasses and scrub covered the ground and there was a significant downward slope from south to north. The subsoil across the site consisted of yellow/orange sandy clay. Furrows were identified in the southern part of the site, spaced 5-6 m apart. Peat deposit [135] was present in the northern part of the site to a depth of 0.7m, becoming shallower towards the south and up-slope. Overlying these deposits was mid brown sandy loam topsoil [139], 0.2-0.25m deep.

Chainage 4150-4550 (Illus 2).

Stoneyettes Cottages

In agreement with Historic Scotland, the area to be monitored was reduced from that originally proposed. This was due to the presence of a ridged outcrop of bedrock at the eastern part of the site as well as a substantial area of made ground up to 3m deep. The cut for a sewer was exposed but no features of archaeological significance were recorded during monitoring.

Chainage 6400-6550 (Illus 3).**Land adjacent to Mollins Roman Fort scheduled area**

Topsoil stripping at this location was monitored with additional metal detecting undertaken due to its proximity to the scheduled area of Mollins Roman Fort. The natural subsoil consisted of mottled yellow and grey clays interspersed with mid brown sandy clay. Overlying this was mid brown loam [123] containing abundant coal and clinker fragments 0.2m deep. A clay pipe stem of 17th/18th century was recovered from this deposit as well as various sherds of medieval to post medieval ceramics (see appendix 2). Metal detection revealed part of a small lead pistol ball of post medieval/ modern origin.

Deposit [123] was sealed by dark brown loam topsoil [122] 0.35m deep. Several miscellaneous metal objects were recovered from the topsoil including a coin likely to be a 19th century halfpenny. No archaeological features were identified.

Chainage 6900-7300 (Illus 3).**Land adjacent to Luggie Water at Badenheath Bridge, North of Mollinsburn**

The monitored area was divided by the Luggie Water, running north-west to south-east. In the north-east part, natural subsoil consisted of dark orange compact boulder clays with occasional patches of sandy clay. Two shallow sub-circular pits [117 & 119] were cut into the subsoil, both 0.6m in width and filled by dark brown clay loam [118] and [120], respectively. Pit [119] contained a sherd of modern pottery and the features were interpreted as remnants of modern agricultural activity. Overlying the subsoil and features was clay loam topsoil [140], which varied in depth from 0.5m to 0.2m; becoming shallower west to east.

In the south-west part, the construction works reduced the ground level by approximately 2m where Luggie Water passes under the A80 (Illus 7). Buried topsoil [136] consisting of light brown sandy silt was exposed at the base of the excavation. This was sealed by a mixed make-up deposit containing rubble and brick [137] which was itself sealed by redeposited clay loam topsoil [138].

Topsoil stripping in the remainder of the area revealed natural subsoil consisting of mottled grey and orange clays. Overlying this was dark brown clay loam topsoil [141], approximately 0.4m in depth (Illus 8).

Chainage 12250-12500 (Illus. 4)**Bog Stank**

Excavations were relatively deep at this location; to approximately 1.7m (Illus 9). The earliest subsoil layer recorded consisted of grey blue natural clay [132], identified

at a depth of 1.5m and extending below the limit of excavation. Overlying this were two bands of peat [130 & 131], totalling 1m in thickness, and containing twig and wood fragments (Illus 10). Yellowish brown clayey silt [129] overlay the peat and was 0.1m thick. Topsoil consisting of brown clay loam formed the upper deposit and was 0.4m deep [128]. No archaeological remains were recorded.

Chainage 15400-15550 (Illus 5).

Castlecary Road grouting compound

Archaeological monitoring was undertaken on a strip of land approximately 120m in length and 20m in width. Natural subsoil of orange brown silty sand and gravels was exposed to the west, while to the east the excavations only revealed mixed modern overburden deposits. A 5.5m wide sewer cut was revealed running east-west through the centre of the area. No archaeological features were present.

Chainage 15900-16500 (Illus 5).

Castle Glen

The site is located to the north-east of Cumbernauld, occupying the steep north-west slope of a wooded valley between the A80 road and the Red Burn; immediately upstream from Castlecary Viaduct. Extensive remains of the former Castlecary Lime Works are located in Castle Glen and include limekilns, earthworks, revetment walls and quarries.

Sections were excavated through four walls to establish their dimensions and details of construction (Illus 6). The walls [101-104] appeared to act as revetments to prevent land slippage and so maintain the various trackways and levelled areas that were utilised in the lime works. Excavation showed that level ground had been created for them by cutting into the valley slope. The walls were then erected using angular rubble of 0.1-0.6m length, with random coursing and no bonding material (Illus 11 & 12). They ranged from 0.4-0.7m in both height and width. The sections revealed a shale-rich fill [105-108] behind each wall, which may represent redeposited material from mining. Ceramics recovered from [108] date to the 19th/20th centuries and are therefore consistent with the period in which the lime works were known to be active (see appendix 2).

Monitoring of topsoil stripping (Illus 13) revealed natural geology comprising light brown mudstone and shale lenses. Overlying this were make-up deposits ranging from 0.5-2m depth, which comprised dark grey shale-rich deposits [111] as well as red brown sand and ash mixed with rubble [112]. These deposits are likely to be dumped waste material from both the mine shafts and kilns. They were sealed in places by mixed sandy loam deposit [113] which was up to 2m deep and contained slag, modern pottery, masonry and brick. Within this deposit were the redeposited remains of demolished brick structures, including a 1m section of mortared wall [110]. These remains may derive from structures in the vicinity depicted on the 1st Edition Ordnance Survey map, however may equally be introduced material dumped as overburden during construction of the A80.

Four test pits were also excavated adjacent to the haul road, to a depth of 3m. They further revealed modern make-up deposit [111] containing brick, rubble, ash and shale (Illus 14). A 2m length of unmortared brick coursing [116] was also identified within deposit [111]. Natural subsoil and geology was not reached.

Putlog Bridge (Illus 5).

A wall section [133] exposed during construction works near Putlog Bridge was recorded by photographic and measured survey. The former road bridge is an 18th century single-span, depressed arch bridge which is Category C(S) listed and lies adjacent to the Castlecary Viaduct (Illus. 15). The wall section represents part of the former approach-road to the bridge and was founded directly onto natural clays. It was exposed to a length of 40m and was up to 1.5m in depth (Illus 16). Wall [133] was composed of tooled and margined sandstone ashlar, with an average size of 0.3m x 0.5m bonded by lime mortar. The surrounding area had also been reduced down to the natural subsoil and mixed modern overburden lay directly over both this and the wall. The ground reduction and dump deposits are likely to result from construction of the A80.

Chainage 16700-16850 (Illus 5).

Castlecary sliproad & cycle track link

Monitoring was undertaken in two areas either side of the A80-B816 sliproad; immediately north of the line of the Antonine Wall. The eastern area comprised a strip of level ground which formed the edge of a grassed field. It was bordered to the south and west by a wooded embankment which rose steeply to the sliproad (Illus 17). The monitored area was approximately 220m in length and 10m wide. The natural subsoil predominantly consisted of green/grey clays and orange gravels. Midway along the strip, a 0.4m deep peat layer [121] had formed where the ground was considerably boggy. Frequent ceramic field drains were also recorded at this location. Overlying the subsoil deposits at intermittent points was modern overburden [142] comprising rubble, ceramics and blaes which is likely to derive from landscaping for the sliproad. This was sealed by redeposited sandy loam topsoil [143], approximately 0.2m deep. No archaeological features were recorded.

The area immediately west of the sliproad comprised a 4m wide strip at the base of the road embankment. Previously wooded, the area had been stripped of vegetation prior to monitoring. Excavations were approximately 1m in depth and did not expose natural subsoil. A mixed modern deposit [144] of dark brown loam, shale and red blaes was revealed, containing construction materials including kerb stones and concrete blocks which were assumed to derive from previous road building (Illus 18).

7. DISCUSSION

Monitoring of the construction works revealed a relative paucity of archaeological remains. The results are comparable with those of the 2007 evaluation (Haston *et al* 2007) and similar conclusions can be drawn from this phase of work.

No features were recorded in the areas where peat had developed; indicative of poorly draining soils where settlement would be impractical. In other areas more suitable for habitation, such as on higher ground and better draining soils, evidence for agricultural activity from the medieval period onwards was recorded in the form of furrows and field drains as well as from a number of ceramic finds. The furrows were consistent with the broad rig field system; the origins of which lie in the medieval period following the introduction of the heavy mould-board plough (Dixon 1994, 38). Broad rig cultivation fell out of use around 1800 during the Improvement period when narrow, straight rig was adopted. The earliest ceramic finds recovered during the course of the monitoring date from the 13th to 17th Century, while the remainder span a period from that date through to the present.

At locations adjacent to the existing A80, the ground had been considerably altered by the construction of the road in the 1960s and any archaeological remains are likely to have been truncated. In several areas the ground had been reduced to natural subsoil before being built up with modern deposits for stabilisation and landscaping. This was evident at Putlog Bridge, where both the remains of the former approach road and surrounding natural subsoil were sealed by modern deposits associated with construction of the A80.

At Castle Glen, no new in-situ features were identified relating to the former lime works. Shale and ash deposits associated with the mining and processing of lime were noted across the area, while it was evident that construction of the A80 would have removed any structural remains in the monitored area.

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Map Sources

Thompson 1823. *Dunbartonshire*

Ordnance Survey 1859 *Dunbartonshire Sheets XX & XXIX*

Ordnance Survey 1899 *Sheet XXIX SE & NE*

Ordnance Survey 1922 *Sheet XXIX*

APPENDIX 1: Registers

Context Register

Context	Description
101	Stone wall terminal in Castle Glen
102	Stone wall aligned N-S
103	Rubble revetment wall aligned NE-SW. Approx. 0.6m in height & 0.3m wide. Irregular coursing.
104	Rubble wall aligned N-S
105	Slate rich fill abutting wall 104
106	Slate rich fill abutting wall terminal 101
107	Slate rich fill abutting wall 102
108	Slate rich fill abutting wall 103
109	Rubble bank. 0.4m in height and 0.7m wide.
110	Brick wall remains aligned E-W adjacent to haul road. 1m length, 0.2m width, 0.6m height
111	Demolition backfill overlying slate rich deposits. Sandy silt with inclusions of sandstone rubble, brick, pottery, slag. On average 2m in depth
112	Burnt deposit of red ash & sand. 4m wide in section, 2m deep.
113	Dark grey slate- rich backfill overlying burnt deposit 112
114	Mixed deposit of slag, ash and rubble filling linear cut 115. 0.4m wide.
115	Shallow linear cut immediately below turf. Probable drainage channel. 0.4m wide & 0.15m deep.
116	Remains of unmortared brick wall. Exposed to 2m width and 5 courses high. Identified in test pit.
117	Cut for sub round pit. 0.6m length, 0.56m width, 0.13m depth.
118	Dark brown clayey loam. Fill of pit 117.
119	Cut for sub round pit. 0.66m length, 0.58m width, 0.13m depth.
120	Square cut with near vertical sides. 0.87m width, 0.16m depth. Modern agricultural feature.
121	Wood-rich peat deposit, up to 0.4m depth, at Castlecary cycle link.
122	Dark brown sandy silt topsoil with small & medium stone inclusions
123	Mid brown sandy silt sub soil, underlying topsoil 122. 0.18m depth.
124	Mid brown alluvial clayey sand. 1.2m depth
125	Mid orange brown clayey sand subsoil
126	Mid grey silty clay subsoil
127	Mottled orange and grey clay subsoil
128	Dark brown clay loam topsoil at Bog Stank. 0.4m deep.
129	Yellow brown silt deposit below topsoil. Hillwash. 0.1m deep.

130	Yellowish brown peat deposit 0.3m deep.
131	Peat layer with wood fragments 0.7m deep.
132	Grey blue clay and peat deposit. 0.32m deep.
133	Wall forming part of approach to Putlog Bridge. Regularly coursed, sandstone ashlar wall with lime mortar. Approx. 40m exposed in length. 1.5m high.
134	Dark brown peat deposit at Broomknowes. 0.6-1m in depth
135	Brown peat deposit at Drumstack. Maximum depth of 0.7m.
136	Light brown sandy silt. Buried topsoil beside Luggie Water.
137	Make-up deposit containing rubble, brick and ash. Up to 1.5m in depth. Area adjacent to Luggie Water.
138	Mid brown clay loam. Redeposited topsoil sealing 137. 0.4-0.5m depth.
139	Mid-brown sandy loam topsoil at Drumstack Road site. 0.2-0.25m deep.
140	Clay loam topsoil at Badenheath Bridge site. Depth from 0.2 to 0.5m.
141	Dark brown clay loam topsoil at Luggie Water, approximately 0.4m in depth.
142	Modern make-up deposits comprising rubble, ceramics and blaes at Castlecary cycle link. Up to 0.4m deep.
143	Redeposited sandy loam topsoil, approximately 0.2m deep. At Castlecary cycle link
144	Loam, shale and red blaes make-up deposit. Contained inclusions of kerb stones and concrete blocks. Castlecary sliproad site. At least 1m in depth.

Photographic Register

Photo Number	Direction Facing	Description
1	-	Film 1 ID shot
2	-	Void
3	-	Void
4	-	Void
5	E	W facing [104]
6	W	E facing [101]
7	W	E facing [101]
8	W	E facing [104]
9	N	S facing section [104]
10	W	E facing section [102]
11	W	E facing [102] close up
12	W	Slot in [101]
13	W	E facing elevation [103]
14	W	E facing elevation [103]
15	S	N facing [103]
16	W	E facing bank [109]
17	W	Section [109]
18	W	Stone bank at Castle Glen
19	W	Mid ex shot of box section

20	N	Box section cut through stone bank
21	E	West facing section through revetment wall
22	W	Red/orange ashy burnt deposit (112)
23	W	Shale deposit - natural?
24	W	Slate/shale deposit below topsoil
25	N	Working shot of haulage road excavations
26	S	Linear deposit of slag and ash (114) below topsoil
27	S	Linear deposit of slag and ash (114) showing depth
28	W	E facing section of haulage road at 1st pylon showing slate backfill
29	NW	Shot of haul road showing bedrock in E facing section where pylon crosses river
30	NE	SW section of test pit at start of retaining wall location showing >3m backfill
31	W	E facing section of test pit showing brick layer in backfill deposits
32	SW	Unmortared brick (terracing) in test pit section
33	NW	SE facing section of test pit assoc. with brick terracing
34	N	Working shot of cable trench and haul road
35	E	W facing section cable trench at 25m S of 1st pylon showing slate deposit over natural
36	NE	Stripped area for pylon location showing slate dump deposits below turfs
37	-	Film 2 ID Shot
38	W	Access track after removal of topsoil
39	E	Feature 117
40	W	Working shot
41	N	Feature 119
42	S	Feature 120
43	N	General shot from S end of SAM
44	N	General shot
45	N	General shot showing line of stakes
46	E	W facing section of test pit 3
47	S	N facing section of test pit 2
48	S	General location shot of test pits 2 & 3
49	N	S facing section of test pit 1
50	E	Location shot of test pit 1
51	W	E facing section of test pit 1
52	E	W facing section of test pit 2
53	E	W facing section of test pit 3
54	N	S facing section of test pit 3
55	N	S facing section of test pit 4
56	E	W facing section of test pit 4
57	S	N facing section of test pit 4
58	W	E facing section of test pit 4
59	N	S facing section of test pit 5
60	E	W facing section of test pit 5
61	N	S facing section of test pit 7
62	E	W facing section of test pit 7
63	S	N facing section of test pit 7
64	W	E facing section of test pit 7
65	N	S facing section of test pit 6
66	E	W facing section of test pit 6
67	S	N facing section of test pit 6

68	W	E facing section of test pit 6
69	N	S facing section of test pit 8
70	E	W facing section of test pit 8
71	S	N facing section of test pit 8
72	W	E facing section of test pit 8
73	S	General view of stripped area of SAM
74	S	General view of stripped area of SAM with scale
75	N	General view of stripped area of SAM with scale
76	NW	Castlecary cycle link- general view
77	E	Castlecary cycle link- gravel area
78	W	Castlecary cycle link-area under hillwash
79	NW	Castlecary cycle link-boggy area
80	W	Castlecary cycle link-west end
81	E	Pre-ex shots of site at Drumstack
82	E	Working shot
83	W	Pre ex of west end of site
84	E	Post ex of 1 st day's stripping
85	E	Post ex of 1 st day's stripping
86	E	Post ex of southern part of area
87	N	Post ex of eastern part of area
88	E	Post ex of northern part of area
89	SW	Castlecary slip road stripped ground
90	-	Reg. Shot Film 4 Castlecary
91	S	General pre ex shot
92	S	General pre ex shot
93	N	General pre ex shot
94	W	Working shot
95	W	Working shot
96	-	Reg. shot Badenheath Bridge, Deerdykes
97	W	Working shot
98	W	Working shot
99	S	Stepped section of excavation showing natural clays
100	W	Section of test pit A
101	NE	Section of test pit B
102	NE	Section of test pit C
103	NE	Section of test pit D
104	SW	Pre ex shot of area to be stripped
105	S	General shot of pylons and overhead services
106	SW	Working shot
107	NE	Area stripped on 12/8/09
108	SE	Water course at edge of excavation
109	SE	Commencement of excavations 13/8/09
110	NE	Area to be stripped
111	N	Working shot
112	SE	General shot
113	NW	Working shot
114	SE	End of section 3 stripped
115	W	General working shot
116	E	Area to be stripped
117	N	Section through deposits
118	N	General shot of stripped area
119	E	General shot of stripped area

120	NW	End of day shot 24/8/09
121	N	General shot stratigraphy
122	NE	Shot of post med furrow in plan
123	SW	Shot of NE facing section through furrow
124	N	Shot of rubble drain
125	E	General working shot of machine
126	E	General working shot of machine
127	W	Rubble drain aligned E-W
128	W	Stripped area
129	NE	Pre ex of area to be stripped
130	E	Stripped area- no archaeology
131	N	Section showing depth required
132	SE	Field drain continuation
133	NE	Modern disturbance- gas main
134	E	End of day shot 27/8/09
135	-	Modern disturbance
136	-	Modern disturbance
137	N	Depth of modern dumped material below topsoil
138	W	Working shot
139	NE	Working shot
140	E	Cleared area
141	-	Modern waste in dump deposit
142	N	Modern waste in dump deposit
143	NE	General shot of stripped subsoil
144	N	Shot of previously stripped/disturbed area
145	W	Shot of previously stripped/disturbed area
146	E	Edge of dumped deposit
147	W	Gas main
148	NE	Section 3 stripping completed
149	N	Pre ex shot of area to be stripped 4/9/09
150	W	Pre ex shot of area to be stripped 4/9/09
151	SW	Pre ex shot of area to be stripped 4/9/09
152	W	Modern dumped material on river bank
153	SW	Modern dumped material on river bank
154	NE	Modern dumped material on river bank
155	W	General shot of stripped area
156	NW	General shot of stripped area
157	S	General shot of stripped area
158	-	Void
159	NE	Pre ex of section 2 area to be stripped
160	NNE	Pre ex of section 2 area to be stripped
161	E	Pre ex of section 2 area to be stripped
162	E	Working shot
163	E	Shot showing topsoil and underlying ploughsoil
164	NE	End of day progress
165	NE	Working shot of previously stripped area
166	NE	Subsoil 125 appearing under topsoil
167	SE	Section edge 0.2m into 124
168	SW	Depth of 124
169	NE	Depth of 124
170	NE	Edge of 123 and 125
171	N	Ceramic tile field drain in 125

172	N	Mid grey subsoil- working shot
173	S	Mottled orange and grey subsoil
174	SW	End of topsoil strip
175	N	Working shot of stripping ploughsoil
176	NE	Tree remains at 2m depth
177	NE	Tree remains at 2m depth
178	N	Tree remains at 2m depth
179	N	Tree remains at 2m depth
180	NE	Hole containing preserved wood layer
181	N	Examples of wood removed
182	N	Sump containing wood
183	N	Wood from sump
184	SW	Area completed 15/9/09
185	-	Reg shot- Bog Stank
186	-	Reg shot
187	S	General site shot pre ex
188	E	Shot following removal of topsoil
189	E	General shot of west area of site
190	E	S facing section through peat in central area
191	N	General shot of yellowish brown peat
192	N	General site shot
193	E	S facing section through peat
194	N	S facing section
195	S	General site shot
196	NE	General site shot
197	E	General site shot
198	N	General site shot
199	N	Working shot
200	N	S facing section
201	N	S facing section
202	S	General site shot
203	E	Working shot
204	S	General site shot
205	W	General site shot
206	E	General site shot
207	E	General site shot
208	W	General site shot
209	SW	General site shot
210	SW	General site shot
211	N	Wall 133 exposed by Putlog Bridge
212	N	Wall 133 exposed by Putlog Bridge
213	W	Wall 133 exposed by Putlog Bridge
214	W	Wall 133 exposed by Putlog Bridge
215	NE	Wall 133 exposed by Putlog Bridge
216	NE	Wall 133 exposed by Putlog Bridge
217	NE	Wall 133 exposed by Putlog Bridge
218	NE	Wall 133 exposed by Putlog Bridge
219	NW	Wall 133 exposed by Putlog Bridge
220	NW	Wall 133 exposed by Putlog Bridge
221	NW	Wall 133 exposed by Putlog Bridge
222	N	Area stripped on 16/3/11
223	NW	Area stripped on 16/3/11

224	W	Area stripped on 16/3/11
225	NW	Area stripped on 16/3/11
226	NW	Area stripped on 16/3/11
227	NW	Area stripped on 16/3/11
228	NE	Area stripped on 16/3/11
229	E	General view of site
230	E	Putlog Bridge
231	N	Putlog Bridge
232	N	Putlog Bridge
233	W	Putlog Bridge
234	S	Putlog Bridge
235	S	Putlog Bridge
236	SW	Details of Putlog Bridge arch
237	SW	Putlog Bridge
238	N	Trial hole excavated by wall 133
239	NW	General view of site
240	N	Trench excavated to south of wall 133
241	N	General view of site
242	NW	General view of site
243	-	Reg shot- Putlog Bridge

APPENDIX 2- Finds List

Julie Franklin

Contexts

122 = metal-detecting finds

123 = ploughsoil finds

Finds List

Context	SF No	Sample No	Material	Quantity	Weight (g)	Object	Description	Spot Date	Period
108			Pottery	2		Modern	whitewares	19 th /20 th	Mod
108			CBM	1		Pan Tile	Large sherd		PM/Mod
122			Pb	1		Sheet			
122			Pb	1		Strip	Curled		
122			Pb	1		Object	Sub-circular disc shaped object		
122			Metal	1		Object	Bar with screw holes at both ends		Mod
122			Cu	1		Coin	Round coin, surface obscured by corrosion, diam 28mm, probably a halfpenny,	e.19 th	Mod
122			Cu	1		Vessel	Cauldron rim sherd, everted with thickened rim, lead bronze?		
122			Fe	1		Object	Flat round object		
123			Coal	1					
123			Pb	3		Sheet			

Context	SF No	Sample No	Material	Quantity	Weight (g)	Object	Description	Spot Date	Period
123			Clay Pipe	1		Stem		17 th /18 th	PM
123			Pb	1		Shot	Part of small pistol ball, broken and abraded, diam c.12mm		PM/Mod
123			Pb	1		Object	Large sub-rectangular lump with indentation on one side		
123			Pottery	4		Medi/PM	PMR/PMO/WG various sherds	13 th -17 th	Medi-PM

APPENDIX 3: DES entry

LOCAL AUTHORITY:	Falkirk, North Lanarkshire
PROJECT TITLE/SITE NAME:	M80 Extention, Stepps to Haggs. Watching Brief
PROJECT CODE:	MEWB08
PARISH:	Falkirk, Cadder
NAME OF CONTRIBUTOR(S):	A Robertson
NAME OF ORGANISATION:	Headland Archaeology Ltd
TYPE(S) OF PROJECT:	Archaeological monitoring
NMRS NO(S):	NS77SW 6
SITE/MONUMENT TYPE(S):	Medieval./ Post-medieval deposits and 19 th century industrial remains
SIGNIFICANT FINDS:	Medieval pottery.
NGR	NS657 693 to NS793 798
START DATE (this season)	February 2009
END DATE (this season)	March 2011
PREVIOUS WORK (incl. <i>DES</i> ref.)	DES 2007, 84
MAIN (NARRATIVE) DESCRIPTION: (May include information from other fields)	<p>Headland Archaeology Ltd. was commissioned to undertake archaeological monitoring during construction of the M80 motorway improvement scheme. Few archaeological features were revealed during the work, with the results comparable to those of the evaluation carried out by Headland in 2007. Monitoring of areas immediately adjacent to the A80 revealed that there had been significant landscaping during the road construction in the 1960s, which is likely to have removed much of the archaeology at these locations.</p> <p>No features were recorded in the areas where peat had developed; indicative of poorly-draining soils where settlement would be impractical. At other locations more suitable for habitation, such as on higher and better-draining ground, some evidence for agricultural activity from the medieval period onwards was recorded.</p>
PROPOSED FUTURE WORK:	None
ARCHIVE LOCATION (intended/deposited)	Archive to be deposited in NMRS and report lodged with WOSAS.
SPONSOR OR FUNDING BODY:	Historic Scotland on behalf of Transport Scotland
CAPTION(S) FOR ILLUSTRS:	n/a
ADDRESS OF MAIN CONTRIBUTOR:	Headland Archaeology Ltd, 13 Jane St, Edinburgh. EH6 5HE
EMAIL ADDRESS:	Alistair@headlandarchaeology.com

266900
671900

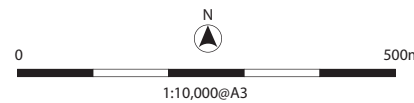
Stoneyettes Cottages

269400
671900

South Broomknowes Peat Basin

Drumstack road site

Key
■ area of watching brief
— planned route of M80

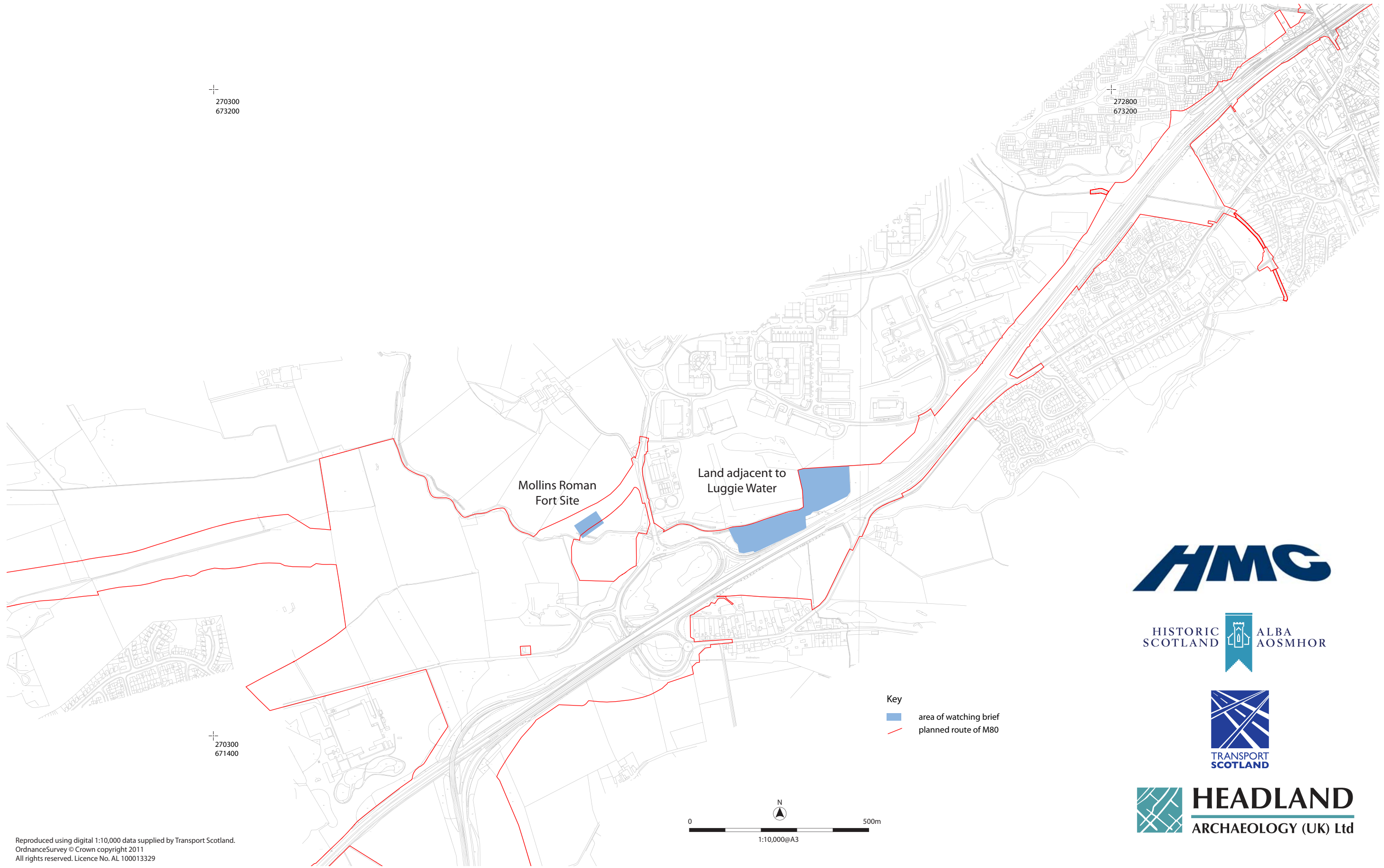


266900
669800

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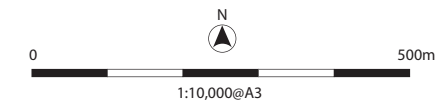
Illus 2
Detail of M80 watching briefs



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Key
 ■ area of watching brief
 — planned route of M80



Illus 3
 Detail of M80 watching briefs

274400
676600

277400
676600

Bog Stank

Key
■ area of watching brief
— planned route of M80

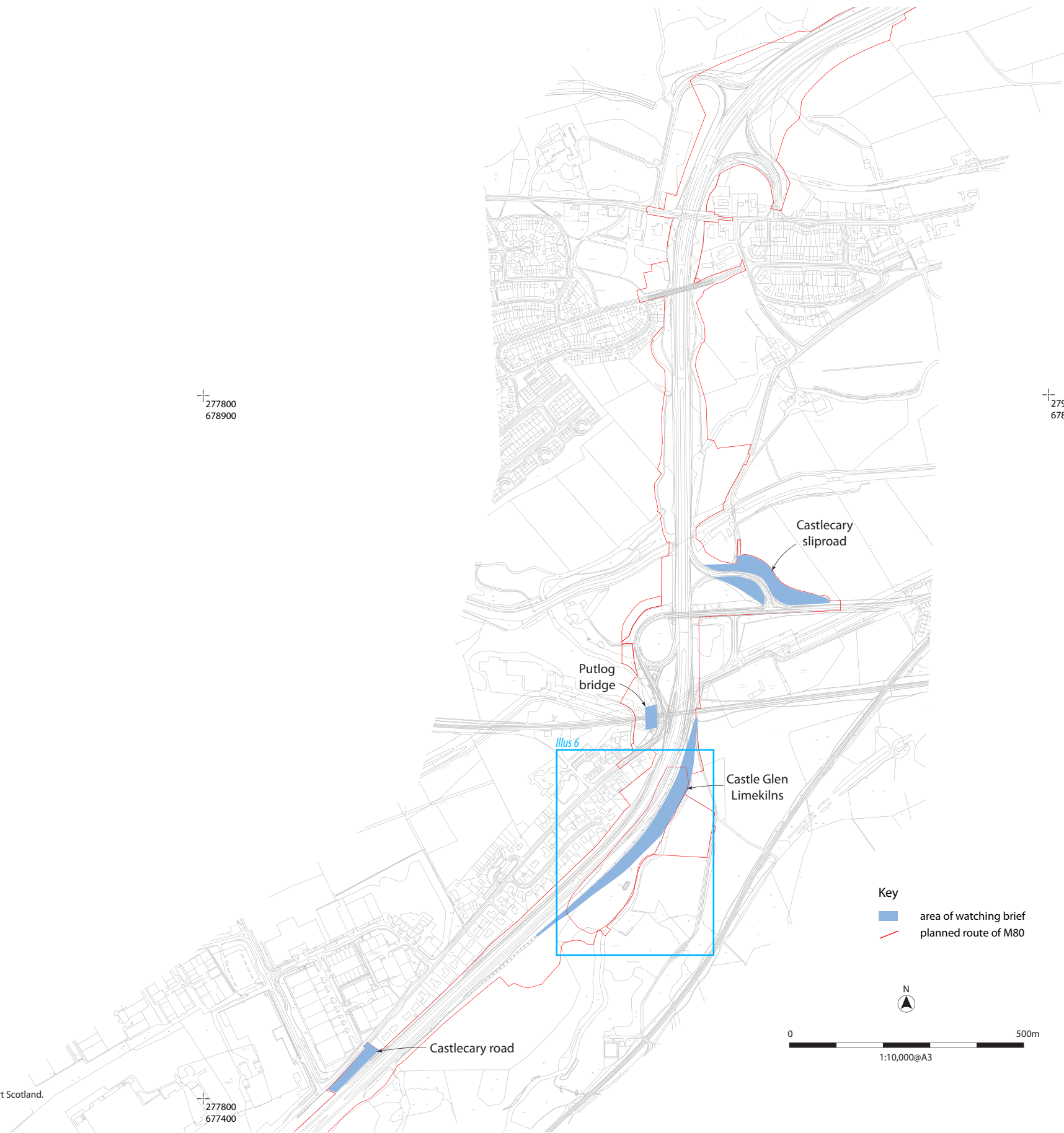


0 500m
1:10,000@A3

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Illus 4
Detail of M80 watching briefs



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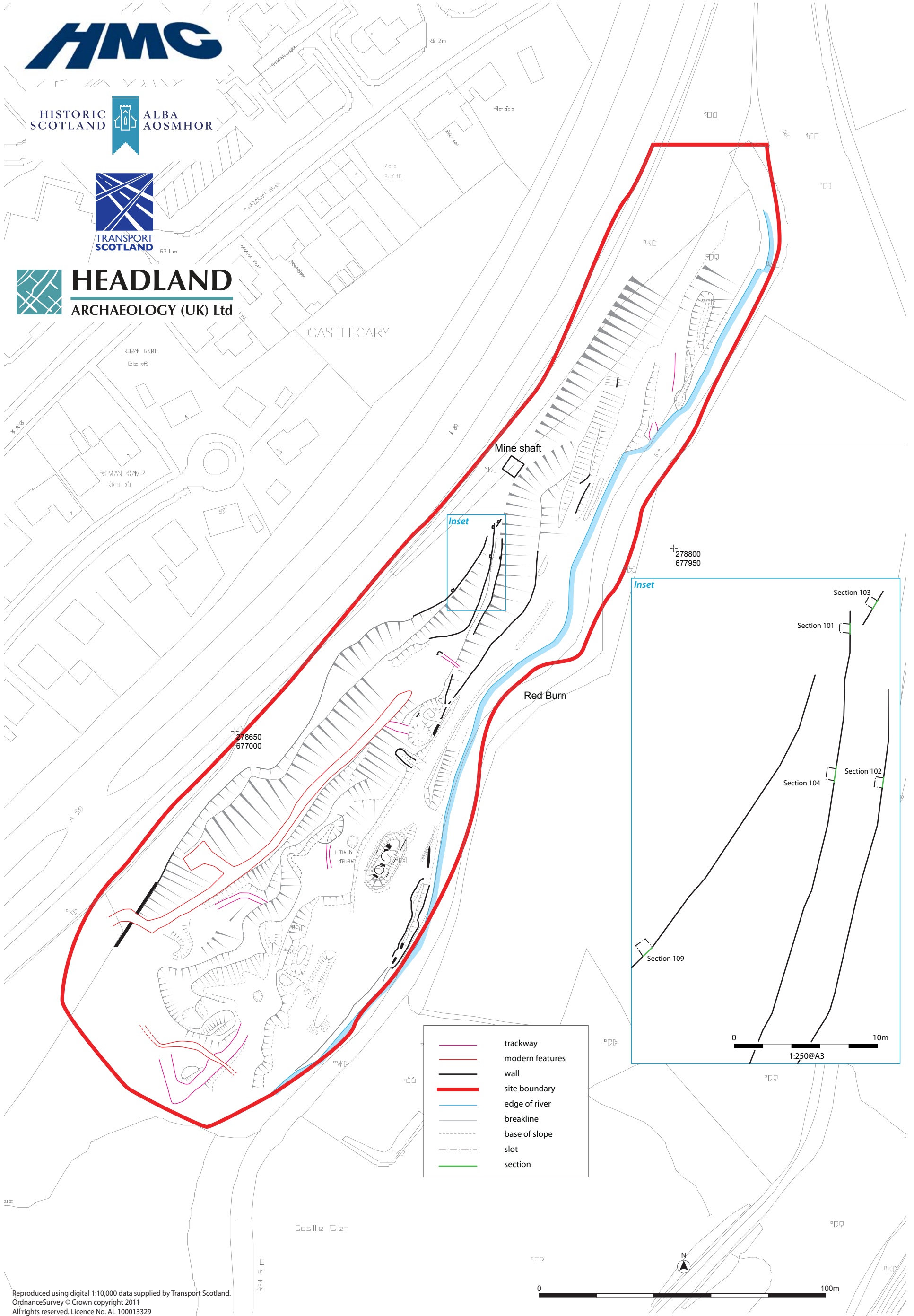
Illus 5
 Detail of M80 watching briefs



HISTORIC SCOTLAND ALBA AOSMHOR



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Illus 6 Detail of Castle Cary Limekilns



Illus 7

W facing shot of excavations at Luggie Water



Illus 8

SW facing shot of excavations W of Luggie Water



HISTORIC
SCOTLAND



ALBA
AOSMHOR



HEADLAND
ARCHAEOLOGY (UK) Ltd



Illus 9

General shot of Bog Stank excavations



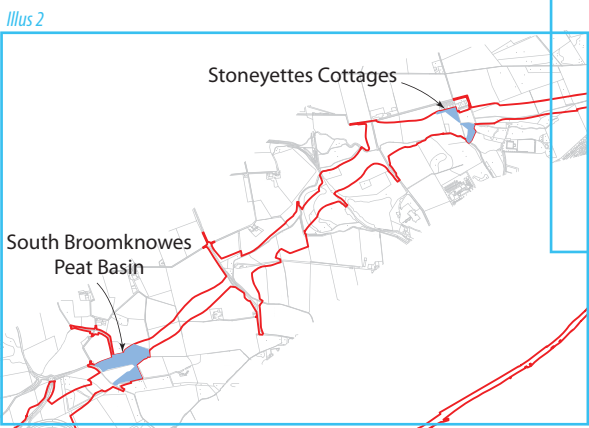
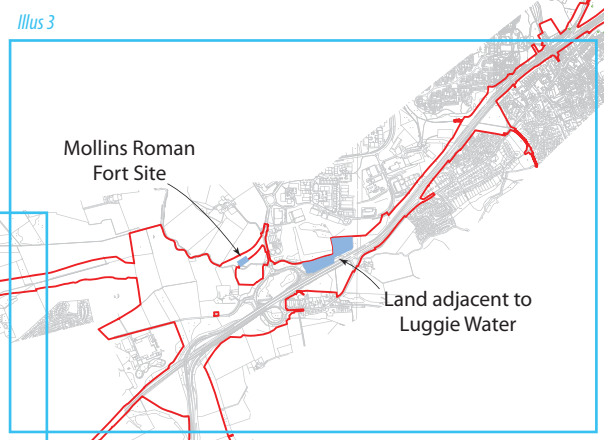
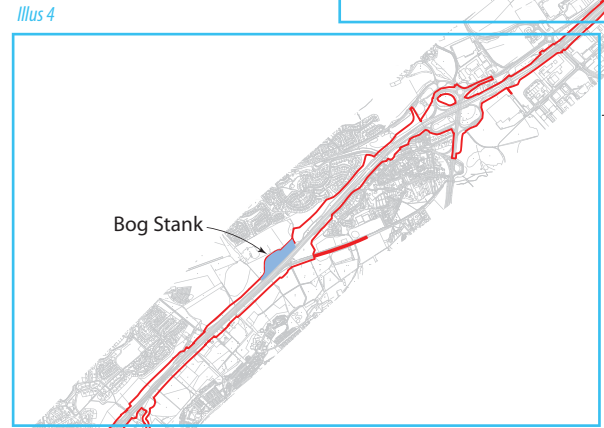
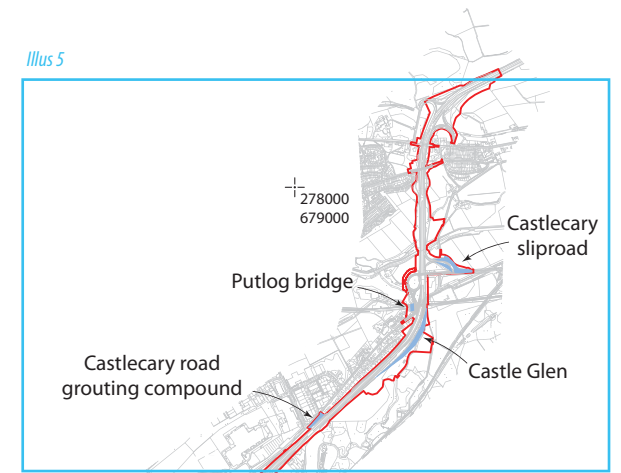
Illus 10



S facing section through peat deposits

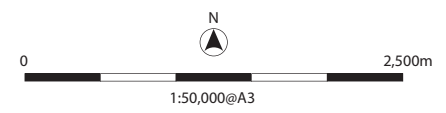




M80
Steps to Hags

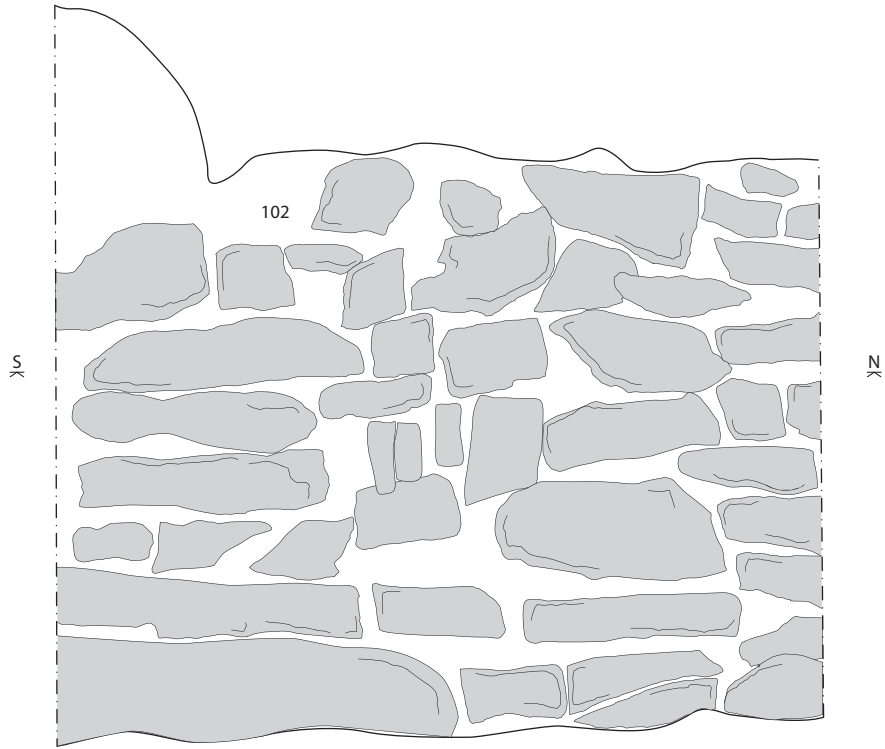


Key
 area of watching brief
 planned route of M80

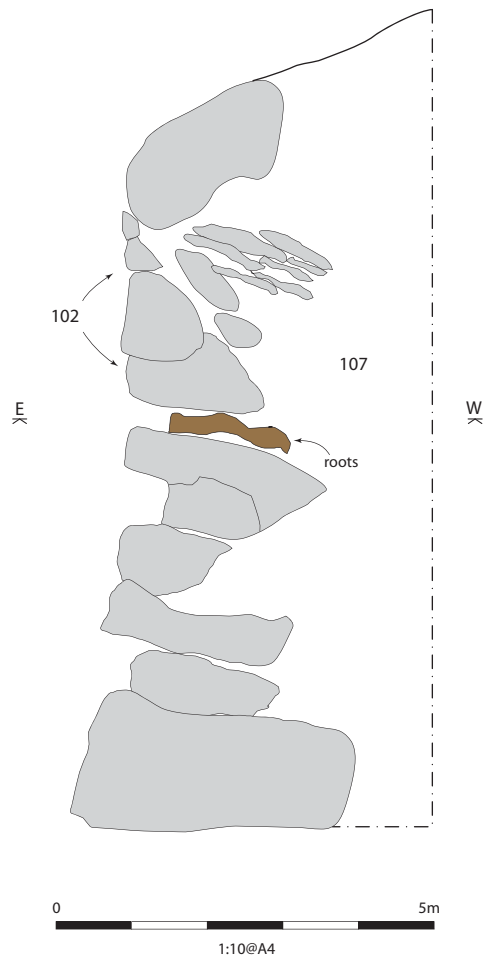


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Illus 1
 Proposed M80 route with areas of watching brief



Illus 11
E facing elevation of wall [102]



Illus 12
N facing section of wall [102]



Illus 13

E facing shot of haul road excavations at Castle Glen



Illus 14

S facing section of test pit showing make-up deposits





Illus 15

N facing shot showing Putlog Bridge, dominated by the Castlecary Viaduct



Illus 16

W facing elevation of wall forming approach to Putlog Bridge





Illus 17

N facing shot of Castlecary cycle link excavations



Illus 18

N facing shot of slip road excavations

