
4 SUMMARY OF KEY RESULTS

The type of work taking place in each area heavily influenced the impact of the works on archaeological remains. In streets where the new mains were installed using pipe-bursting or slip-lining techniques very little archaeology was encountered, as these methods involved the excavation of small trenches over the existing main. Likewise, the replacement of house-to-main services required only small trenches over the old service, and the majority of the deposits in these trenches were also disturbed. In contrast, archaeological remains were frequently encountered when the new mains were installed in open-cut trenches, although in some cases the new pipe track lay directly alongside other services and either largely or completely in disturbed ground. The main open-cut trenches varied in depth between 1m and 1.5m, and were usually around 0.5m wide. Other interventions depended on the depths of the existing services.

There were several factors that affected the quality of the data gathered. The most important, as mentioned above, was the lack of archaeological monitoring along much of the High Street. Archaeological deposits located in a few of the smaller house-to-main services in this area indicated that the potential for locating significant remains in the open-cut trenches would have been high. A lesser factor affecting the data gathering was, in some areas, the depth of the open-cut trenches, which in places exceeded safe working depths and required recording to be done from the road surface. Along those parts of the High Street that were monitored, variation in water levels within the trenches, probably caused by the

tides, periodically added to the difficulties of the archaeologists!

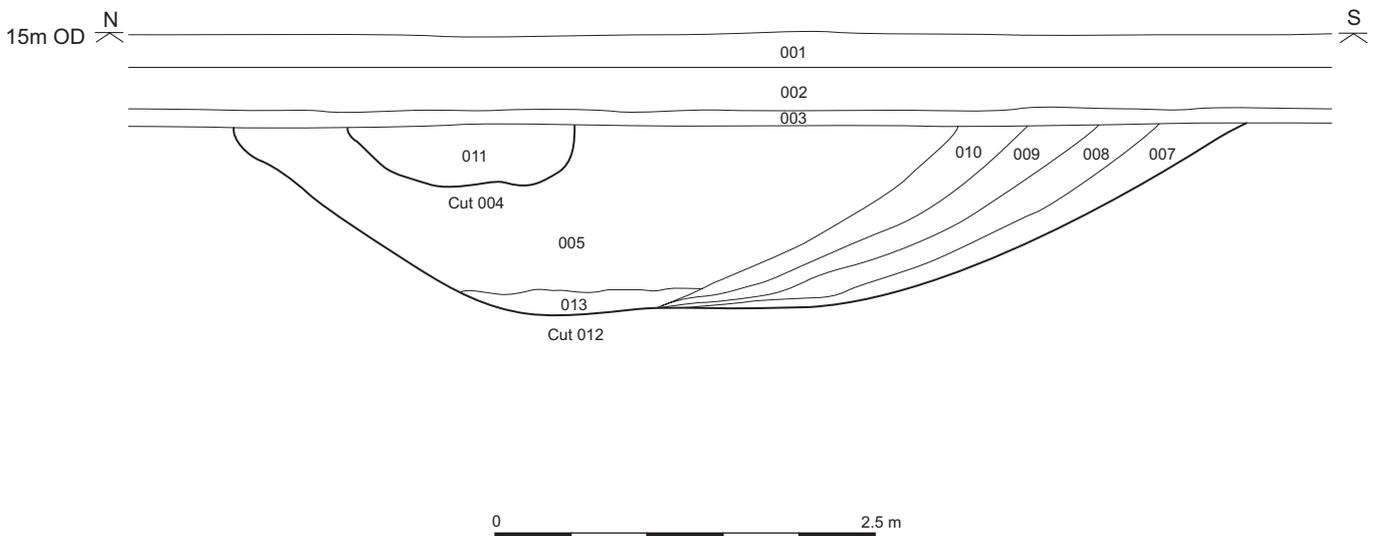
The final factor to be considered in assessing the quality of the results is the human factor. The course of the works was at times unpredictable or subject to short-notice changes of schedule in response to conditions on the ground. Levels of experience among the 13 archaeological staff engaged in the monitoring and recording also varied. Nevertheless the project archive is coherent and consistent, and provides a proper record of the nature, depth and extent of archaeological deposits beneath the road surfaces in Musselburgh.

4.1 Interventions around known sites

Several interventions took place in the vicinity of known sites ([illus 1](#), [illus 5](#)). The results of these interventions are presented here, along with a brief interpretation of their significance, and an assessment of the further potential of the area

4.1.1 The vicus

Level with the northern boundary of the Scheduled area of the *vicus* ([SAM 1182](#)) trenching along the southern part of Inveresk Brae located a ditch approximately 6.5m wide and 1.5m deep (T200/012; [illus 4](#)). This feature contained a number of weathering episodes (T200/007–010) along its southern edge, possibly indicative of the presence of a bank on the up-slope side. Fragments of glass, possibly



Illus 4 Section of Roman ditch on Inveresk Brae

Roman, were recovered from the first weathering episode. Following a brief period of stability, in which fine clay (T200/013) accumulated in the base of the ditch, the feature was backfilled (T200/005). A fragment of Samian ware was recovered from this deposit, which also contained fragments of sandstone and lime mortar, possibly indicating demolition in the vicinity. A shallow, sterile U-shaped feature (T200/004) had been cut into the final backfilling of the ditch, but yielded no dating evidence.

The upper fills of the ditch were sealed by a dark brown buried soil (illus 5: T200/003). In the vicinity of the ditch, this deposit contained fragments of roof tile and box-flue tiles, while further to the north it contained charcoal, oyster shell and small fragments of bone. To the north of the ditch this deposit ran beneath a layer of redeposited sand and gravel, which while relatively thin in the area of the ditch increased to a depth of around 1m to the north as the original ground slope fell away.

As mentioned above, Roman remains, including hypocaust structures using box-flue tiles, were encountered very near to this area during work at Inveresk House in the 18th century. It is also interesting to note that during this work the owner of Inveresk House apparently filled in the east ditch of the fort, which had been used as the public road to Inveresk from Musselburgh, and established Inveresk Brae in its present location to the east of this, in places cutting the road into the slope (de Cardonnel 1822, 164–5). The remains located in the course of the watching brief might be interpreted in relation to this information. The ditch seems to be a fairly secure Roman feature, and possibly formed some sort of boundary or enclosure related to the fort or to the *vicus*. Other archaeological work in the properties to either side of Inveresk Brae has been limited in extent (Rogers 2002; Thomas 1988b) and this ditch appears to be a previously unknown feature of the *vicus*. Its location, prior to the levelling effect of the made ground to the north, would have been at the top of a relatively steep slope. The buried soil overlying this feature, and extending down the hill, is probably the original post-medieval soil horizon prior to the establishment of Inveresk Brae. The Roman finds from this deposit and the shell, charcoal and bone may be material derived from the 18th-century disturbance of Roman buildings in this area. The substantial deposits of made ground to the north of T200/012 that seal the soil horizon are probably related to efforts during construction of the Brae intended to reduce the severity of the slope.

The work on Inveresk Brae has demonstrated the potential for Roman remains to survive beneath road surfaces within the vicinity of the Scheduled areas. Further work at the head of the Brae, on Inveresk Village Road, was almost entirely located over existing services. However, it is likely that undisturbed sections of the roadway in this area have similar potential to Inveresk Brae.

4.1.2 The Newbigging pottery

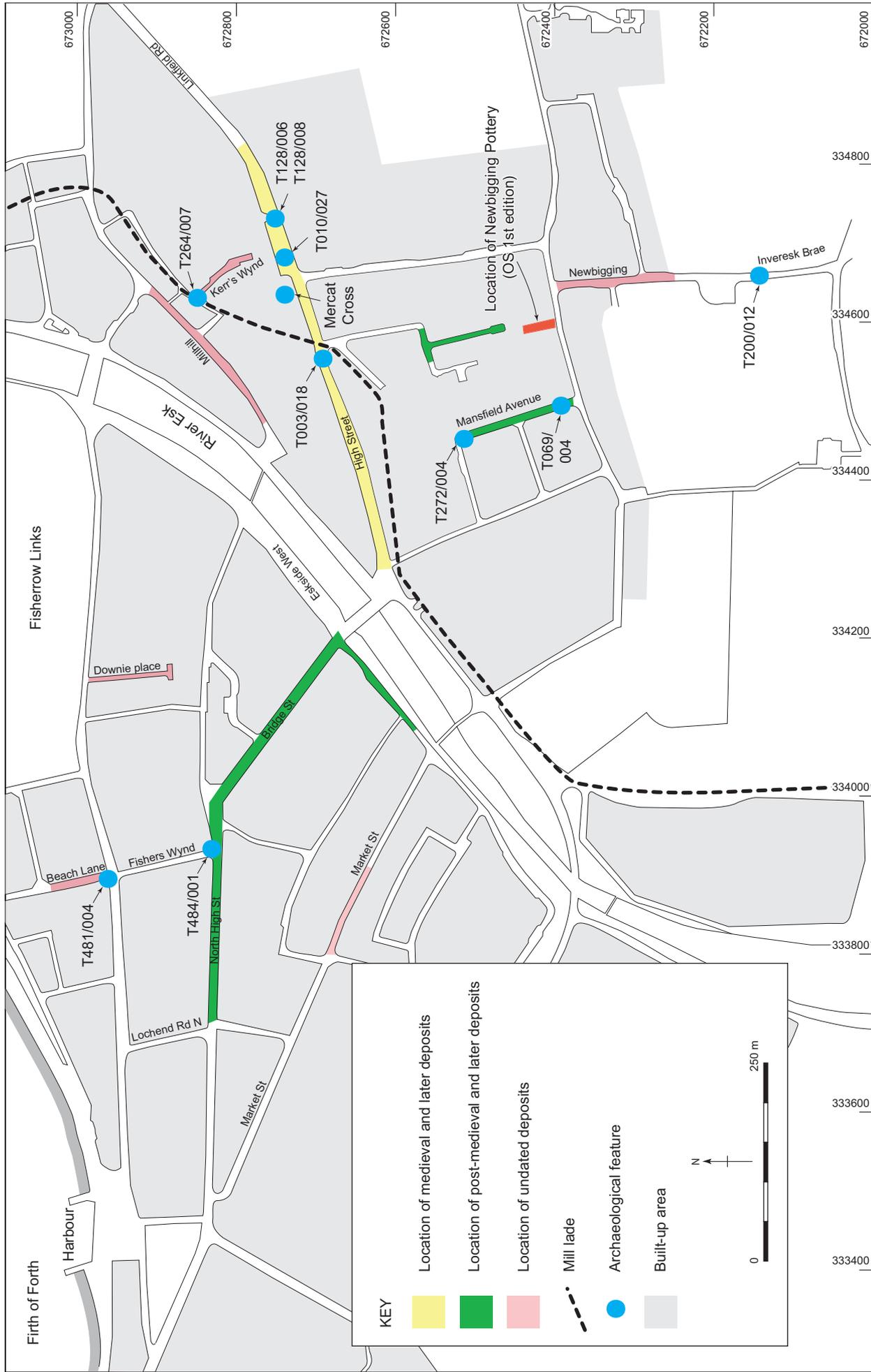
Open-cut trenching along the east side of Mansfield Avenue, towards the south end of the street, uncovered a substantial 2.5m wide ditch or pit filled with sand and large quantities of broken white china (illus 5: T69/004). A large deposit of brick and mortar demolition rubble, again rich in white china, was present in the northern end of the trench. Several other narrow-cut features crossing the northward continuation of this trench were probably furrows, the cultivation soil to which they were related contained fragments of early post-medieval pottery.

In 1987–88 a limited excavation at the site of the Newbigging pottery located a sequence of kiln bases, in addition to huge numbers of pottery sherds (Haggarty & McIntyre 1996). Unfortunately, the china discovered during the monitoring on Mansfield Avenue, some 60–70 m to the west of the location of the Newbigging pottery, was not sampled, as the potential significance of the deposit was not realised at the time. Without sherds from the watching brief to compare with those known to have been made at the pottery, it is impossible to say for sure whether the deposits of china and rubble located on Mansfield Avenue bear any relation to activity at the pottery. However, a hypothesis that could potentially be confirmed by further work in this area is that the owners of the pottery may have made temporary use of the vacant High Street backlands to the west of the pottery for the disposal of waste pottery and rubble resulting from rebuilding at the factory. The Ordnance Survey town plans (1853 and 1894) give no indication of structures in this area, so it is possible that any activity either predated OS mapping, or was very transitory in nature.

4.1.3 The mill lade

Trenching in Kerr's Wynd cut across a 3.5m-wide vaulted sandstone arch located directly beneath the road surface (illus 5: T264/007). The arch rested on substantial sandstone and brick walls, and was repaired in places with concrete and wooden sleepers. The interior of the arch was largely filled in with assorted demolition rubble and other detritus. A large modern pipe was visible within this material, which on inspection by the contractors proved to be carrying a strong flow of water.

A steady water supply was important to Musselburgh, not only for the industries that produced goods for trade and export, but for the mills that ground the corn for making bread. There is indirect evidence that the Esk was being harnessed for industrial purposes even before the end of the 13th century, and the town lade is historically attested from the 16th century when the existence of mills at the foot of Kerr's Wynd is also mentioned (Dennison & Coleman 1996, 19, 21). The existing mill lade runs to the rear of the southern frontage of the High Street, before crossing by the junction with Kil-



Illus 5 Location of key sites and archaeological deposits

winning Street and running along the rear of the burgage plots on the north side of the High Street. In the course of development within the burgh the lade has changed from a primarily open watercourse at the end of the 19th century ([Ordnance Survey 1894](#)) to one that is now largely culverted and piped. The structure located in Kerr's Wynd, while difficult to date in such a narrow slot, is part of a long tradition of lade bridges at this particular location.

A further section of the lade was identified on Kilwinning Place, to the south of the High Street,

during an archaeological evaluation, although the sandstone arch was not breached ([Mudie 2002](#)). The town lade is quite clearly still a part of the modern infrastructure of the burgh, and it would probably be unwise to compromise its structure should it be encountered during any future archaeological work. However, as the flow of water now appears to be piped, it is possible that future monitoring exercises will provide the opportunity to obtain samples from the base of the lade that could provide a date for the feature.