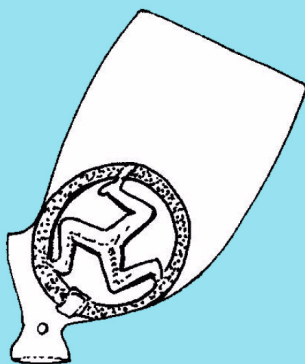


**A mid-nineteenth-century clay tobacco pipe works in
Drumgold Street, Douglas, Isle of Man**

D A Higgins
with a note on the kiln debris by **A A Peacey**



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A mid-nineteenth-century clay tobacco pipe works in Drumgold Street, Douglas, Isle of Man

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ABSTRACT

The only firm evidence for clay tobacco pipe production on the Isle of Man is confined to a twenty year period between 1837 and 1857. This paper sets out the documentary evidence for this industry before going on to describe a small group of tobacco pipe kiln waste which was recovered from the principal kiln site in 1995. This closely dated group shows that up-to-date English kiln technology and pipe forms were being combined with local motifs to produce a range of distinctive Manx pipes during the 1840s and 1850s.

INTRODUCTION

In February 1995 the author was invited to contribute to an archaeological dayschool on recent work in the Kerrowdhoo area of Bride. This visit to Man provided an opportunity to pursue research interests into the clay tobacco pipes found on the Island and, in particular, to try and trace documents relating to a pipemaker called Culum from Douglas. Culum was only known from a single nineteenth-century stem fragment stamped 'CULUM, MAKER, DOUGLAS' which had been shown to the author by Mr Frank Cowin of Douglas. Although an apparently insignificant artefact in itself, this fragment provided the only known reference to this maker, and the only firm evidence for the manufacture of pipes on the Isle of Man.

Research in the Manx Museum Library soon showed that a William Culum was recorded working as a pipemaker in Drumgold Street, Douglas, during the 1850s. Enquiries were then made to try and locate the site of his works and to see whether any mid-nineteenth century buildings survived in this area. It quickly became apparent that not only had most of the mid-nineteenth-century buildings been demolished but that the whole of the western part of Drumgold Street was being redeveloped for a new Marks and Spencer store (Anon, 1995). Following a visit to the building site, permission was kindly given by Bovis to search the spoil heaps for evidence of the pipeworks. This allowed a small group of pipes and kiln waste to be recovered just days before the site was sealed by concrete (Overty 1995; Higgins 1996).

This paper provides an account of the documentary evidence which has been collected for the manufacture of pipes on the Isle of Man, together with a description and discussion of the finds recovered from the site in

Drumgold Street.

Manx Pipemakers

There is a letter in the Manx Museum library from John Rowe, comptroller, to William, ninth Earl of Derby, dated 30 August 1692 (MD401/1719/15). In this letter it was reported that an un-named brickmaker had left the Island for the winter, but that he had promised to be back the following February to set up a pottery and pipeworks. It is not known whether this pottery and pipeworks was ever established but the importance of the letter lies in the fact that, by 1692, there was considered to be sufficient demand for pipes on the Island to warrant establishing a works. Despite this early indication of demand there are no known eighteenth-century references to pipe making on the Island. At present, it must be assumed that the nineteenth-century industry was established on the Island using imported technology rather than drawing on native traditions.

The first firm evidence for the Manx manufacture of pipes occurs in Pigot's directory for 1837 when James Fell was recorded as a tobacco pipe maker in Duke Street, Douglas. There were no pipemakers listed in the 1824 directory, and so this appears to have been a new venture. Further information about Fell is provided by the 1841 census which shows that he had by then moved into the neighbouring Drumgold Street, that he was then about 35 years of age and that he was Manx born. Living with him was Arthur Culm, a 40 year old pipe maker from England and William Fell, presumably James's father, who is listed as a 70 year old gardener born on the Isle of Man. A William Fell, painter, plumber, glazier and paper hanger, had been listed at North Quay in a directory of 1824. This may have been the same person, in which case it would provide a background for James in the building and decorating trade. James continued to be listed as a tobacco pipe maker at 18 Drumgold Street in the trade directories of 1843 and 1846, but he was not listed there in the 1851 Census and, by 1852, directory entries show that the pipeworks was being operated by William Culum.

William Culum was the son of Arthur, who had been working for James Fell in 1841, and it seems likely that William joined him there during the 1840s. By 1849 he was described as a pipemaker of Drumgold Street when

he married a local girl, Maria Lace, from Bride. William may well have already taken over the works from Fell by this date. The 1851 census shows that William was then a 30 year old Englishman living with his wife, Maria (age 33) and daughter Emma (age 11 months) in Fell's Court, Drumgold Street. Old William Fell, now 80, was also living in Fell's Court, still working as a gardener. The Census entry is important since it not only shows the particular association of the Fell family with this courtyard complex, but also that Fell's Court can be equated with 18 Drumgold Street.

William Culum was listed at 18 Drumgold Street in the trade directories between 1852 and 1857 but had clearly moved on by 1861 since he was not listed there in the Census of that year, nor in the 1863 Trade Directory for Douglas. In the 1861 census the property at Fells Court appears to have been occupied by a carpenter and joiner, thus marking both the end of the pipeworks on that site and the end of known pipemaking on the Island. William Culum would have only been about 40 at that time; too young to have retired. The relatively short lived nature of this venture might suggest that pipemaking on the Island did not prove to be very profitable and it is possible that Culum moved back to England in search of better markets.

Although the census returns give Arthur and William Culum as having been born in England there is no indication as to which part they were from. There were, however, documented Culm pipemakers in Chester and Manchester during the eighteenth and early nineteenth centuries and, given the proximity of these places to the Irish Sea, the families are almost certain to be connected. In fact, one of the eighteenth-century Chester pipemakers was called Arthur (died 1783; Rutter & Davey 1980, 232) and the Douglas maker of this name may well have been descended from him.

A summary of the evidence for the known Manx pipemakers can be found in Appendix 1. From the details set out above it can be seen that the manufacture of pipes in Douglas appears to have been quite a short lived affair with documented production spanning just 20 years. The first works was established by James Fell in Duke Street at some point between 1824 and 1837. Fell does not appear to have come from a pipemaking background and may well have been employing Arthur Culm to provide the technical expertise required. By 1843 the works had been moved to 18 Drumgold Street where, within a few years, it had been taken over by William Culum, the son of Arthur. The works continued until at least 1857 but had closed by 1861. This provides an unusually narrow date range of just some 15-20 years for pipe production on the Drumgold Street site. Furthermore, this period can be split into an

early phase, up to the late 1840s, when Fell was operating the works, and a later phase, after about 1850, when it was operated by Culum. The final point to note is that Culum is only actually documented as running the works between 1851 and 1857 and that it had certainly closed by 1861. This means that any of his marked pipes can be dated to within a single decade. This makes his products an unusually precise dating tool for any archaeological deposits in which they are found.

THE DRUMGOLD STREET SITE

The Census Returns showed that the pipemakers were living at Fell's Court in Drumgold Street, the site of which is clearly shown on the 1869 map of Douglas, Sheet XIII.12.2 (Figure 1). Fell's Court lay on the south side of Drumgold Street at modern map reference SC 3819 7566 and was approached through a covered passage. The courtyard appears to have given access to buildings on its southern and western sides which, presumably, included the workshops and kiln necessary for pipemaking.

By the time the location of the pipeworks in Drumgold Street had been identified, the site was already in the process of being redeveloped for a new Marks and Spencer store. The site was visited on 27 February and 1 March 1995 in an attempt to locate any evidence for the kiln structure or waste associated with it. The new development was found to straddle the western end of Drumgold Street with blocks of old buildings on both the north and south sides of the street having been demolished. The site had been cleared of rubble and piles for the new building were already under construction. The working surface had been very compacted and rutted by site machinery and was dotted with piles of subsoil (sands and gravels) which had been heaped up. These conditions made it very hard to see whether any archaeological features or deposits had survived the site clearance. The collection of artefacts was limited to those pieces left on the disturbed surface or those which could be recovered by digging through the spoil heaps. Where small sections were visible it appeared that this part of Douglas has been built directly on clean sand and gravel deposits which had been very little disturbed. There was hardly any evidence for *in situ* archaeological deposits and, where these did occur, they appeared to be very shallow and sandy in nature.

Although it was not possible to identify or separate the material from the different nineteenth-century plots, it was possible to collect the finds from either side of Drumgold Street. There is no guarantee that the developers had not moved spoil between these two

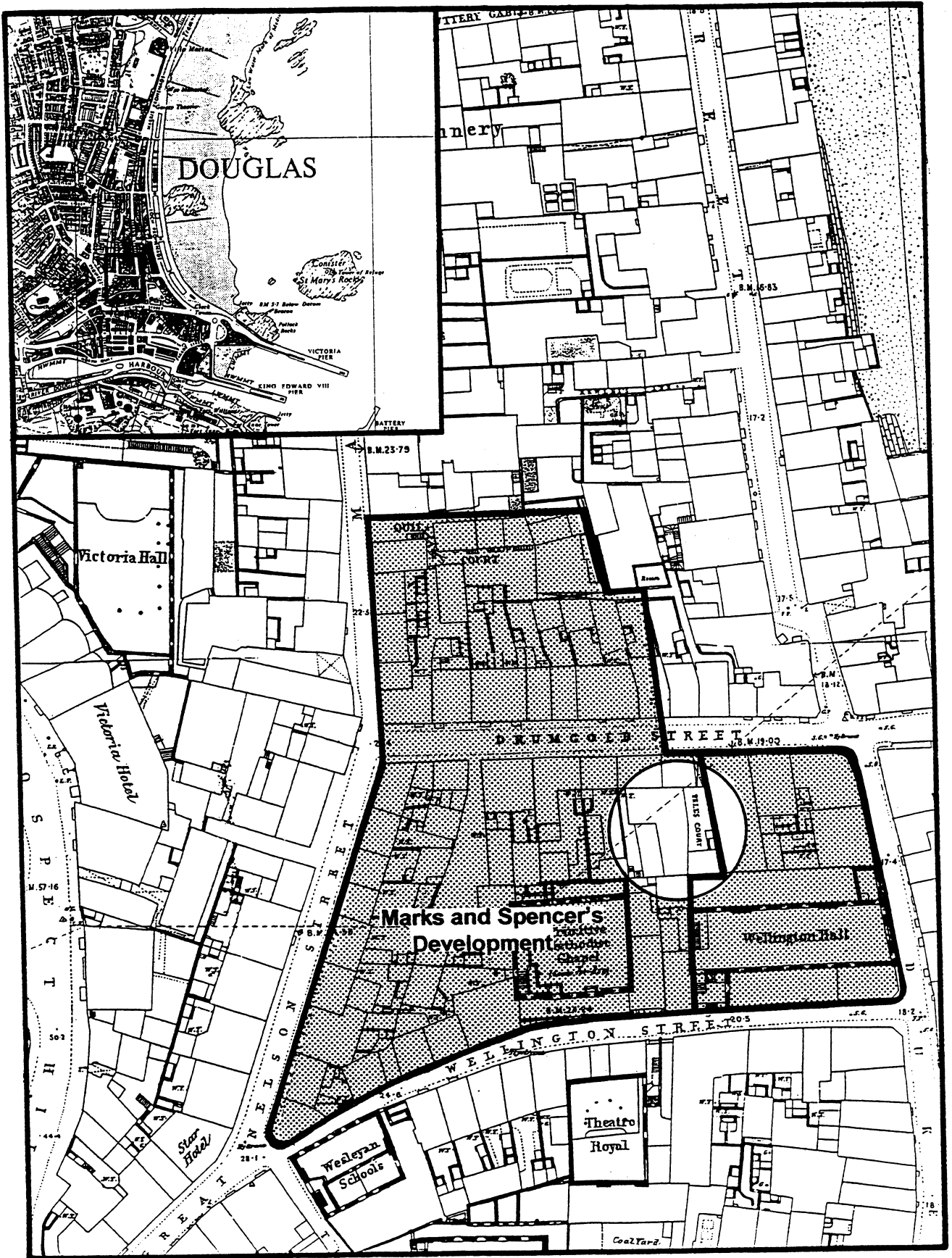


Figure 1: Location map based on the 1869 OS survey of Douglas. The position of Fell's Court is circled and the extent of the new Marks and Spencer development is shown stippled.

areas, although differences in the distribution of finds suggested that this was not the case. To the north of Drumgold Street there was a thin scatter of eighteenth- and nineteenth-century pottery but only a very few pieces of pipe. In this area only three stem fragments were recovered; two plain and one with part of a decorative stem border stamped on it (Figure 3, No. 1). To the south of Drumgold Street there was also a general scatter of pottery, but with rather more pipe fragments distributed amongst it.

In one place a deposit of very black soil was found containing a much larger number of pipe fragments and pieces of pipe kiln waste. This deposit formed a layer within other, lighter, soils and as much of it as possible was dug out in order to recover the pipemaking waste. During this process it became apparent that the black soil had already been redeposited by the builders since it contained new nails and pieces of freshly discarded wood.

Although the black layer had been disturbed by the builders it seems likely that it had not been moved far. The surrounding area contained a concentration of pipe fragments as well as some large fireclay objects which may have been associated with the kiln. All of this material occurred in the southern part of the area which had formerly been occupied by Fell's Court and around the site of the small building to its south which is shown on the 1869 map (Figure 1). It is not known how much further clearance was done before the new foundations were laid, nor could the precise source of the black soil be identified. It is possible, however, that disturbed pockets of kiln waste, and even *in situ* layers or features, may still survive beneath the modern development.

THE FINDS

Although none of the finds are strictly stratified the circumstances of their discovery do allow certain conclusions to be drawn. The kiln debris, for example, must all have come from the pipe works in Fell's Court. The majority of the pipes were also recovered from this area and, in particular, from the deposit of black soil. This soil not only contained kiln debris but also some small pipeclay trimmings which had inadvertently become fired (Figure 2). These small pieces were formed in the part of the mould where the guide channel for the wire which formed the bore met the end of the pipe stem. Their presence clearly demonstrates that this is production waste and so it is reasonable to suppose that the pipes found in this area were also discarded from the kiln. The clay tobacco pipes and kiln waste recovered are discussed separately below. All the finds collected from the site have been deposited

with the Manx Museum (Accession No MM 95.39).

The Clay Tobacco Pipes (Figure 3)

The pipe fragments recovered can be divided into two groups: a small number of pieces which are likely to represent general domestic debris while the bulk of the material formed part of a deposit of production waste from the pipe works. The general domestic debris comprises stray finds of pipe-stem from around the construction site, including two decorated stems which clearly pre-date the mid-nineteenth-century pipeworks.

The first of these stems (No. 1) was found on the northern side of Drumgold Street and is decorated with part of a roll-stamp comprising a plain border with alternating dots and five-pointed stars. The decoration on the surviving section appears to spiral up the stem, which is unusual, since this type of decoration would normally be expected to form the edge of a broad, zoned band. As the surviving fragment is very small, it may simply be that it is a border which has been applied at a slight angle and fortuitously overlapped in such a way that the surviving portion appears to form a spiral. The most obvious origin for this piece is Chester, which specialised in producing elaborately decorated stems throughout the eighteenth century. The narrowness of this stem and its small stem bore (4/64") both argue for a later eighteenth-century date for this piece. Alternating dots and stars are only known on one Chester border, Type 52 (Rutter & Davey 1980, 177). The Type 52 border, however, dates from c1690-1715 and so the Drumgold Street example seems likely to represent part of a previously unrecorded border, dating from the late eighteenth century.

The second decorated stem is rather harder to place (No. 2). This example was found with the kiln waste on the south side of Drumgold Street, but is typologically earlier than the waste and so must be residual. Once again the thin stem and small bore (4/64") argue for a later eighteenth-century date. As with the other example, this piece also includes part of a damaged stem border, in this instance comprising of series of little square cells with dots in. Similar borders are known from Chester but, once again, no exact parallel for this particular arrangement can be found. The oval stamp across the stem is also extremely unusual (National die No 1752; Higgins, in progress). The Chester makers often used stem ovals containing animals but these occurred either in plain ovals or, more usually, with a plain or beaded border (Rutter & Davey, 1980, 150-9). There are no known examples from Chester with such an elaborate scroll-work border, and, when rampant lions were used there, they were

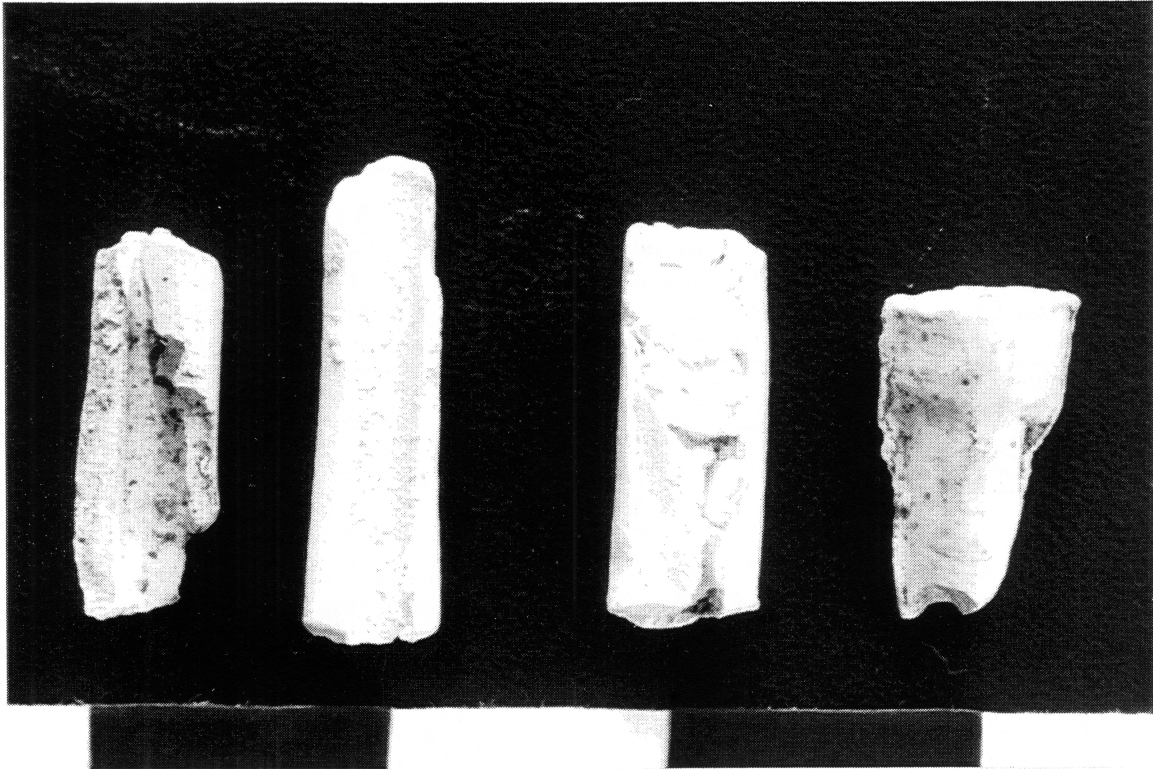


Figure 2: Trimmings from the mouthpieces of clay tobacco pipes, removed during the manufacturing process and inadvertently fired in the kiln. Scale in cm.

never accompanied by the royal symbols (orb, sword/sceptre and crown) that appear on the Drumgold Street example.

Although the style of the lion stamp is rather different from known Chester products, there are a few other English finds which parallel some of the features of it. There are, for example, two examples of a double headed eagle standing on a crown from near Ross-on-Wye and two examples of a bull stamp from Gloucester, both of which occur within elaborate scrollwork borders (Peacey 1985). The closest parallel for this mark, however, was excavated by Tees Archaeology at Yarm, near Stockton-on-Tees.

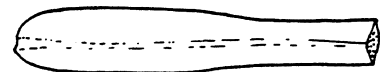
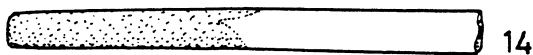
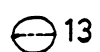
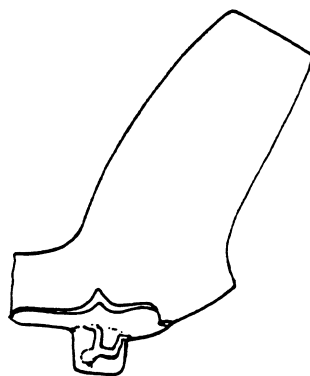
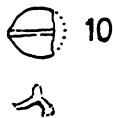
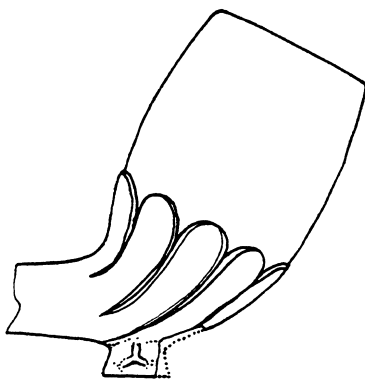
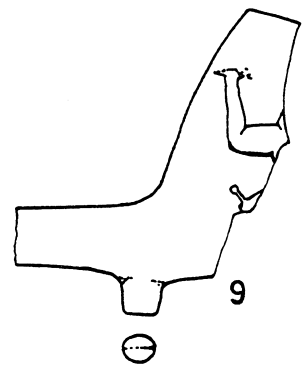
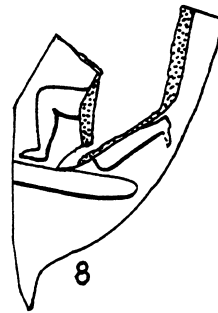
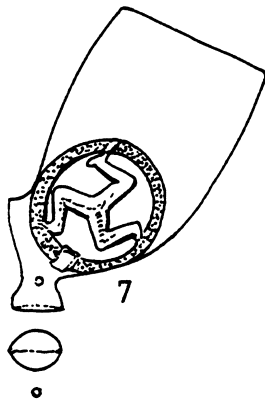
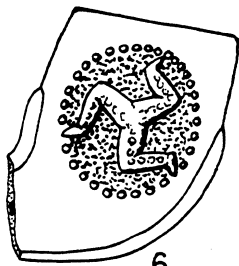
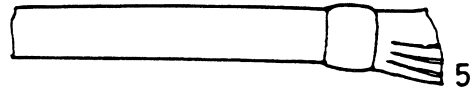
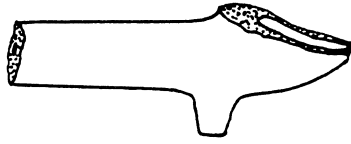
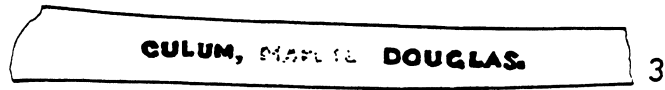
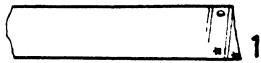
The Yarm example consists of an almost identical rampant lion holding a sword and sceptre, surmounted by a crown and surrounded by foliage scrolls. The two dies from which these marks were produced are superficially identical and it is only through detailed comparison that differences can be observed. The main significance of the Yarm example lies in the fact that it is accompanied by an unusual spiral stem mark reading 'VERNON'. This form of mark is extremely unusual and the only other known British examples were either found in Yarm (other VERNON mark, a stamp reading 'NO EXCISE' and part of a stamp which appears to end '...APE', presumably a maker's name) or were made there (a stem marked 'YARM YORKSHIRE' from

Piercebridge.

Although these spiral stamped stems are generally thin and with relatively narrow bores, which would usually indicate a late eighteenth- or early nineteenth-century date. The 'NO EXCISE' mark could relate to a campaign organised by Ben Bradley in 1737 against the heavy duty which had been imposed on tobacco while the 'VERNON' marks could relate to Admiral Vernon's famous victory of 1739 rather than to a pipemaker of that name. Regardless of whether these distinctive marks date from the 1730s or from towards the end of the century, their distribution and variety suggests that they were locally produced in the North-East. If so, it is likely that the Douglas stem mark also originated in that area, perhaps in Yarm itself. This unusual piece underlines the maritime trading connections of the Island and the distances over which goods could be carried.

All of the remaining diagnostic finds are of mid-nineteenth-century date and were found concentrated around the former location of Fell's Court. In total approximately 60 bowl and 300 stem/mouthpiece fragments were recovered from this area. Many of the bowls had been compacted by machines and so were recovered in an extremely fragmentary state. Wherever possible these fragments have been stuck together.

CULUM, MAKER, DOUGLAS.



Reconstruction drawings of the forms have been prepared using both the reassembled examples and other overlapping fragments from the same mould, where these can be identified (Nos 3-16).

The most obvious evidence that the pipes were produced in Douglas was provided by two of the stems which were stamped CULUM, MAKER, DOUGLAS (No. 3). The style of the mark - a long, single line stamp giving the maker's name and origin - was commonly used in the north-west during the first part of the nineteenth century, for example, in Chester (Rutter & Davey, 1980, Fig 68, Nos 1-2) and Liverpool. The Douglas examples, however, are different in two respects. First, they have been placed along the right

hand side of the stem rather than along the top. Second, they are formed of incuse, sans-serif, letters rather than relief letters with serifs. While the general form of the mark can be linked to north-western antecedents, these differences suggest that Culum had an innovative approach and was prepared to introduce by the 1850s. The two stamped marks are likely to new styles of Manx mark. The narrow date range for Culum, c1849-57, is also important since it demonstrates that *sans-serif* lettering was being used for pipe marks have come from long-stemmed pipes, with plain bowls. There are quite a number of plain bowl fragments amongst the group and one spur fragment which has probably come from such a pipe (No. 4). The fact that only two stem stamps were recovered suggests that a

Figure 3: (opposite) Clay tobacco pipe fragments recovered from Drumgold Street. Scale 1:1 with stamp details at 2:1. Numbers 1 & 2 are residual but 3-16 were probably all made on the site c1840-60.

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| <p>1 Stem with part of a stem border decorated with alternating dots and stars; stem bore 4/64". Probably a previously unrecorded Chester product of c1760-1790.</p> <p>2 Stem fragment with part of a border consisting of dots within square cells and a rampant lion oval (National die No. 1752; Higgins, in progress). The lion is accompanied by an orb, sword/sceptre and crown and surrounded by decorative scroll-work. Stem bore 4/64". Probably made at or near Yarm, c1730-1790.</p> <p>3 Stem fragment stamped 'CULUM, MAKER, DOUGLAS' on the left hand side and 2:1 composite detail of the mark drawn from the two examples recovered (National die No. 1725; Higgins, in progress). Stem bore of both examples 5/64". William Culum is recorded at Drumgold Street from 1849-1857.</p> <p>4 Plain spur bowl fragment with a stem bore of 5/64". Single example.</p> <p>5 Stem fragment with the end swelling into a decorated bowl. Single example with a stem bore of 4/64".</p> <p>6 Spurless 'Cutty' pipe with raised seams and both sides decorated with the Legs of Man in a roundel. Single example with a stem bore of 4/64".</p> <p>7 Bowl with a flared heel, both sides of which are marked with a dot. Both sides of the bowl are decorated with the Legs of Man within a garter. Single example with a stem bore of 5/64".</p> <p>8 Bowl decorated with the Legs of Man above a raised line.</p> | <p>Composite drawing made from three fragments from two different pipes.</p> <p>9 Heel bowl decorated with the Legs of Man on both sides. The Legs on the other side have dots running along them, as in No. 6 above. Composite drawing made from two overlapping fragments, one with a stem bore of 5/64".</p> <p>10 Composite drawing made from 16 joining and/or overlapping fragments from a number of different examples. Legs of Man mark on either side of a flared heel. One stem fragment survives with a bore of 5/64". Note similar basic bowl form to No. 11 below.</p> <p>11 Plain bowl with decorative motif around the heel, which is marked with the Legs of Man. Note similar bowl form to No. 10 above. One example with a stem bore of 5/64".</p> <p>12 Single heel fragment marked with the Legs of Man. Stem bore 5/64".</p> <p>13 Single fragment with plain heel. Stem bore 4/64".</p> <p>14 One of seven plain cut mouthpieces, four of which have traces of a brown varnish on them. This example has a stem bore of 5/64".</p> <p>15 One of five nipple mouthpieces. This is the only one with traces of a brown varnish it. It has a stem bore of 5/64".</p> <p>16 One of three flattened oval mouthpieces, none of which have any trace of a finish on them. This example a stem bore of 4/64".</p> |
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bowls with decoration elsewhere, so the actual number of plain bowls produced is likely to have been small percentage of the pipes were marked, perhaps just the best, long-stemmed ones. The plain bowl fragments amount to roughly half the number of pieces recovered. Some of these are almost certainly parts of somewhat less than half. This suggestion is supported by the mouthpieces recovered. There are seven mouthpieces with plain cut ends (No. 14), five with nipple ends (No. 15) and three with expanded oval ends (No. 16). The plain cut ends are usually associated with long-stemmed, plain bowls while the other two types are normally found on short-stemmed 'cutty' pipes. Several of the mouthpieces, of both nipple and plain cut type, have been coated with a brown coating, probably varnish, to prevent them sticking to the smokers lips (Nos 14 & 15).

The fact that at least eight of the fifteen mouthpieces are likely to have come from cutty pipes is borne out by the remaining bowl forms (Nos 6-13), all of which are likely to have come from short-stemmed pipes. These exhibit a range of basic bowl forms and rim angles and include a spurless type (No. 6) as well as forms with various sized heels, some of which are flared. The spurless form is interesting since this type was only just being introduced in the mid-nineteenth century. This example not only places its introduction firmly in the 1840s or 1850s but also shows that new fashions were being taken up on the Island. It is also notable that most of the bowl forms are only represented by single examples. This suggests that the workshop was producing a wide range of different patterns of which those recovered form just a small sample.

One feature of particular note amongst these pipes is the use of a miniature Legs of Man motif where the maker's mark would usually be (Nos 10-12). This

novel use of the motif not only reinforces the innovative nature of the designs produced in Douglas, but also shows the strong sense of place which was being projected through the pipes. This Manx identity is also apparent in the bowl decoration since four of the examples have the Legs of Man as their primary motif (Nos 6-9). Although this motif was also used by English and Scottish makers they usually employed just the Legs, as in Nos 8 and 9. In one of the Drumgold Street examples the Legs are placed within a beaded border on a rusticated ground (No. 6), while on another they are within a garter (No. 7). The Legs of Man occurs in one form or another on all of the substantially complete bowl forms recovered from the site.

The design of the Drumgold Street pipes is interesting in a number of ways, for example, the way in which

they show the fusion of contemporary English bowl forms and Manx motifs. The moulds in which the pipes were made are of a good design and quality and so cannot be seen as simply a local attempt to emulate current fashions. Since mould making is likely to have been a fairly specialised job it seems probable that the moulds would have been ordered from off the Island to specially commissioned designs. This dynamic interaction between pipemaker and mould producer suggests that nineteenth-century pipe manufacturers were not as confined to 'pattern book designs' as might have been supposed. It also shows that the physical location of the Island did not isolate the local population from prevailing standards or fashions. In fact, the close dating afforded by this group provides a benchmark against which the equivalent English forms can be dated and compared.

The Drumgold Street finds date from a period of transition in pipe design. During the first half of the nineteenth century almost all pipes had long stems and were decorated with a restricted range of motifs; generally incorporating flutes and/or foliage. Where other elements were present they tended to occur in conjunction with the flutes or foliage. In the second half of the century, short-stemmed pipes became dominant and the use of the earlier motifs was generally superseded by new and bolder forms of decoration. The precise chronology and typology of these changes has yet to be defined.

The documented pipemaking activity at Drumgold Street is limited to the period 1841-1857. Fell was working in Duke Street in 1837 and so first use of the site must lie between 1837 and 1841. Likewise, the premises were occupied by a carpenter and joiner in 1861 and so the last use of the site must lie between 1857 and 1861. To all intents and purposes the pipemaking activity on this site can be regarded as

dating from c1840-60 with the business being run by Fell in the 1840s and Culum in the 1850s. Although the only marked pipes relate to Culum, the finds are unstratified and so it would be unwise to attribute all the pipes to his running of the business. Any moulds in use by Fell would almost certainly have been taken over by Culum, thus making it impossible to separate their products. In any case, they may well have worked in partnership as the works established itself during the 1840s.

The importance of this group lies in the fact that it bridges this transition of pipe forms and styles of decoration. The mixture of long-stemmed and cutty pipes together with the new bowl shapes and decorative motifs places this group firmly in the later

nineteenth-century tradition. The end date of c1860 for this group provides an important *terminus ante quem* for the introduction of these forms within the British Isles.

The Kiln Material A A Peacey

In accordance with the methodology set out in Peacey 1996 the tobacco pipe kiln debris recovered from Drumgold Street has been divided according to composition of the fabric. Fabric type numbers, allocated on a first come first served basis, have been used to distinguish them. In the catalogue eleven distinctly different fabric types are listed. Eight of the fabrics are based on light coloured clays, two on commercial fire clays. The distinctions have been made on the presence and types of inclusions and are as follows:-

- Fabric 1 White clay fabric with rounded quartz, heavily grogged with crushed pipe fragments and voiding from included organic material.
- Fabric 2 White clay fabric with crushed pipe fragments and organic voiding. Vitrification hindered observation and so may be the same as Fabric 1 but fired to a much higher temperature.
- Fabric 3 White clay fabric with rounded mineral inclusions up to 1mm in size and liberal organic voiding.
- Fabric 4 White clay fabric liberally grogged with round quartz and other mineral inclusions up to 4mm in size, similar sized crushed pipe fragments and organic voiding.
- Fabric 5 Soft white clay fabric with red clay pellets 2-3mm in size and rounded mineral inclusions up to 8mm in size.
- Fabric 6 Soft white clay fabric with red clay pellets 2-3mm in size.
- Fabric 7 Soft white clay fabric with liberal organic voiding.
- Fabric 8 Commercial fire brick fabric.
- Fabric 9 Red clay brick fabric.
- Fabric 10 Commercial fire brick fabric.
- Fabric 11 Fine white clay fabric; no visible inclusions.

The rounded mineral inclusions in these fabrics may occur in the parent clay whereas the crushed pipe and organic material are clearly additions. The capital letters appearing in brackets after the fabric type are fabric codes as used in the national survey of pipe kiln assemblages (Peacey 1996). These codes inform as to the general content of the fabrics and allow easy comparison between assemblages. They also identify the common adjustments or selection of fabrics for specific purposes.

CATALOGUE

Fabric type Category	Weight grams	No.obj /frags	Description
W1 (W.QPO)	1311	18	Muffle Wall
	290	1	Internal shelf
	195	2	Shelf raise
	9	2	Core fragment
	55	3	Daub
	335	6	Pierced tile
	3	2	6mm thick sheet
W2 (W.PO)	270	1	Buttress or prop
W3 (W.MO)	205	1	Prop (Figure 4)
	232	1	Bat or sagger fragment
W4 (W.QMPO)	420	1	Tile fragment (Figure 5)
W5 (W.Red Clay M)	15	1	Daub
W6 (W. Red Clay)	45	1	Daub
W7 (W.O)	110	bag	Thin sheet fragment
	57	5	Daub
FB8	1000	3	Fire brick
R9	15	1	Red Brick
FB10	5000	1	Fire clay slab
W11 (W.)	480	223	Stem fragments
	25	10	Mouthpieces
	2	1	Glazed mouthpieces
	2	1	Encrusted stem
	130	47	Slagged stem

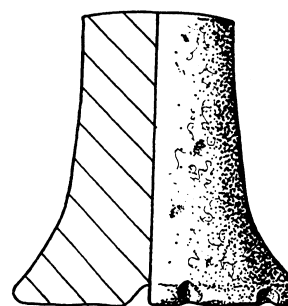


Figure 4: Kiln prop (scale 1:2).

The finds from the site also included a quantity of non-specific building materials, pottery fragments and iron plates. Although omitted from this catalogue these items have been included on the archive record sheets.

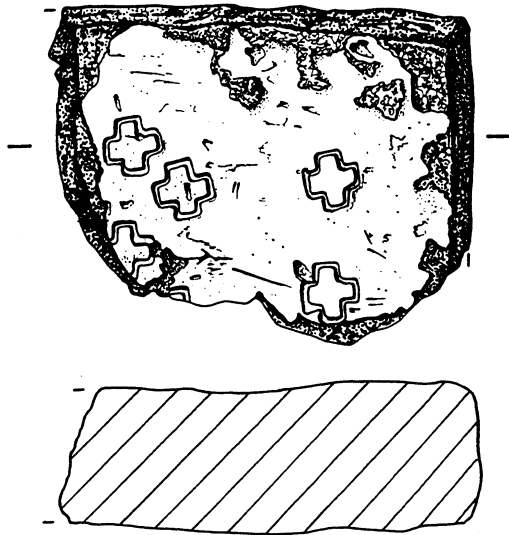


Figure 5: Fireclay tile fragment with impressed cross decoration (scale 1:2).

Slagged stem A total of 47 fragments of stem have a degree of adhering slag. Of these:-

30 fragments have small beads or patches of slag insufficient to deduce contact or alignment.

11 have a significant quantity of slag confined to one half of the stem circumference. There is sufficient that if these stems are laid out on a flat surface with the slag in contact with that surface, their upper parts are consistently slag free.

One fragment consists of two parallel stems sealed together and encrusted with slag.

Two fragments measuring 75mm and 39mm long have regularly spaced patches of slag adhering to one surface.

One fragment of slag mat has two stems sealed on one surface. A third stem completely sealed within the slag mat lies across the first two at an angle of c.45 degrees.

One fragment of slag mat has one stem sealed on one surface.

One fragment of slag mat has one stem sealed within one surface.

This body of material is consistent with a known corpus termed slag laminates (Peacey 1996, 168-171) which derives from the covering constructed over the top of the muffle for each firing. These covers consisted of a framework of pipe stems covered over with a fusible mixture of earthy materials. The firing process caused these fusible materials to form a slab trapping the upper layers of the pipe stem framework. Although only a very small amount of material is represented in this group it is sufficiently typical to allow positive identification of this process.

DISCUSSION OF THE KILN DEBRIS

The evidence collected from this site is sufficient to identify some aspects of the technology employed. It is clear that a muffle kiln was used to fire the clay tobacco pipes and that this muffle kiln was of a type and construction in common use throughout the British Isles at this period. There is evidence to show that the muffle was of circular plan, that it was vertically divided by a number of internally projecting peripheral shelves, that it was open at the top and sealed for each firing with a framework of pipe stems covered over with fusible earthy material. All of this conforms to the established norm.

The site has also produced some material which is less easily allocated. Six fragments of pierced tile c45mm thick, with slag from fire contact on one side only, have no direct parallel. A fragment from a second tile c35mm thick with random impressions from a cross shaped stamp is also unusual (Figure 5). These may derive from an ancillary process. A single glazed stem piece suggests the probability of stem tipping on the site. The tile fragments may be associated with this aspect of the manufacture.

CONCLUSIONS by D A Higgins

This paper has documented a Manx pipemaking industry which flourished in the middle of the nineteenth century. The manufacture of Manx pipes appears to have been started during the 1830s by James Fell, probably using expertise imported with the Culum family from the North-West of England. William Culum took over the business in the late 1840s and continued to work on the Island until the late 1850s. During this 20 year period innovative and fashionable pipes designs were produced at the Drumgold Street works. Fell and Culum produced a range of long- and short-stemmed pipes, many of which were decorated with distinctive Manx motifs. Their pipes were fired in a kiln which employed the latest kiln technology and it

is clear that the Isle of Man was fully participating in the stylistic changes which were taking place at this time. This tightly dated kiln group provides an important benchmark against which these changes can be compared throughout the British Isles.

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APPENDIX 1 - List of known manx pipemakers

This list was initially compiled by searching the principal towns listed in the Manx trade directories for pipemakers. The trade directories which were searched are as follows:-

Brent's directories of 1902 & 1907
Brown's directory of 1894
Pigot & Co's directories of 1824 & 1837
Pigot & Slater's directory of 1843
Slater's directories of 1846, 1852 & 1857
Thwaite's directory of 1863

The only individuals identified from directories were working in the Duke Street/Drumgold Street area of Douglas between 1837 and 1857. To provide additional information on these makers, and to identify any others living in the area, the 1841, 1851 and 1861 Census Returns for this part of Douglas were also searched. Finally, the IGI index of Parish Registers, together with microfilms of the original Registers, were used to check family details where the individuals concerned could be traced.

Arthur Culm Born c1801 in England (1841 Census). Recorded working as a pipemaker, presumably for James Fell, in Drumgold St, Douglas, in 1841 (Census). He was the father of William Culum (below) but does not appear in Drumgold Street in the 1851 Census.

William Culum Born c1821 in England (1851 Census), the son of Arthur Culm above. William's surname appears to be spelt Calum in the 1851 Census but is spelt Culum on his pipes and in most other records. On 14 May 1849 William was recorded as a pipe maker of Drumgold Street, Douglas, when he married Maria Lace at Kirk Braddan. Maria was the daughter of a farmer, William Lace, and Margaret (née Laithwaite). Maria had been baptised at Bride church on 18 November 1826 and she and William are known to have had at least two children, both of whom were baptised at St Barnabas's Church, Douglas: Emma Maria, baptised 25 April 1850 and Alice Ritchdale, baptised 16 September 1852. William was described as a pipemaker at both baptisms and is recorded as a pipemaker at 18 Drumgold Street, Douglas from 1851-7 (Census & directories). He had left Drumgold St. by 1861 and is not subsequently recorded as a pipemaker on the Island.

James Fell Born c1806 on the Isle of Man (1841 Census). Recorded operating a works in Duke Street, Douglas in 1837 and at 18 Drumgold St, Douglas 1841-6 (Census & directories). He was not listed in Drumgold St in the 1851 Census, nor subsequently as a pipemaker on the Island.