

5. DISCUSSION

The narrative above winds through a variety of aspects of the industrial and commercial history of the city of Edinburgh, and the area of Beaverbank specifically. The excavation aimed to contribute to an understanding of the tanning process by examining the evidence available. However, the limited presence of both artefactual and ecofactual remains has limited the ability to delve into the intricacies of this process, particularly the understanding of the specific utilisation and interconnections of the individual pits. Despite this, the site has proved a focus for a more linear and historical account of its development and growth. Additionally, some important threads can be teased out of the excavated evidence.

5.1 The linen mill

The stone structure found at the south of the site, predating the remains of the tannery, is most likely relating to the linen-bleaching undertaken by Clarke's Mill (or Clark's or Clerck's Mill), also known as Logie Mill, operating on-site in the early 19th century. Although the structure spanning the mill lade illustrated in mid-19th century Ordnance Survey mapping is unlikely to be that found during the excavation (the location does not match), it indicates the presence of structures along this part of the lade prior to the development of the tannery. The structure was, at the time of the excavation, below the water table and it was assumed during the excavation that the moss found in the bonding was used for making the structure watertight. Moss was commonly used for caulking in boats in Scotland during this period (Seaward & Williams 1976: 174).

A wall was seen on the southern side of the structure within a sondage, but it may have had an entrance or gap along it, leading into the presumed position of the mill lade. Given the map description of the area as being a bleach field, it is possible that the structure was used as a retting pit for the processing of flax to make linen. After harvesting flax, the fibres must be loosened from the stalk. This is achieved by immersing the plants in water and using bacteria to decompose the pectin that binds the fibres together. Historical records show that the area was used as a bleach field for linen by

1814 and that tenants in this area included linen bleachers (*Cal Merc* 1814, 1817, 1822; *Scotsman* 1824). The structure is an important addition to a key industry of Edinburgh in the late 18th and early 19th centuries.

5.2 The Beaverbank Tannery in context

There is a growing body of archaeological evidence for Edinburgh tanneries though for the most part these are of late medieval to early post medieval date, when tanneries were clustered around the Grassmarket and Cowgate. Tanneries of this period are generally characterised by barrel-lined tanning pits, occasionally stone-lined pits. These are frequently associated waste material predominantly in the form of animal bone with cuts deriving from skinning and, where burial conditions allow for good preservation, waste leather trimmings and animal hair. Tannery remains of this period have been identified archaeologically at the Holyrood Parliament Site, Holyrood Road (Stronach 2010: 124–9); the Holyrood North site (Mel Johnson, CFA, pers comm) and India Buildings, Cowgate (Franklin 2023: 8).

An archaeological excavation of a 19th-century Edinburgh tannery of a form similar to the present site was undertaken at Jeffrey Street in the Old Town, where the remains were linked to Hewit's tannery (Masser et al 2014: 22–6). The same grid pattern of tanning pits was seen there, though only a fraction of the number was revealed. At Jeffrey Street they were better preserved, however. They were stone-built, and lined with wood and clay for waterproofing. Wood chippings found might be the remains of organic material used in the tanning liquids. The backfilled pits also contained a considerable amount of artefactual material, including waste leather that probably related to the work undertaken there. This material was notably absent from Beaverbank, but remains found during fieldwork at the neighbouring Logie Green Road site (van Wessel 2009) of organic deposits containing cow horn and leather fragments must relate to the workings of the tannery. Therefore, waste material, it appears, was not disposed of within the Beaverbank Place excavation area.

Historic building recording and a limited amount of excavation was undertaken at a later Hewit's

tannery, the Kinauld Leather Works, located some 15km to the west, in Currie, on the banks of the Water of Leith (Sproat 2011). It was of a considerable size, spread over four storeys. However, no record was made of tanning pits at this site, though it is not clear if they had been filled in or whether this function was served by another mechanism, such as free-standing vats.

Beaverbank Place is by the far the most complete excavated floor plan of an Edinburgh tannery of this period and the accompanying historical research means it is possible to theorise about the tannery's development by comparing archaeological, cartographic and historic evidence.

The outline of the excavated structures corresponds well with the historic maps of the area and this provides some useful information about the dating and function of various areas. The structures overlap the outline of the building labelled 'Tannery and Skinner' on the 2nd edition OS map surveyed in 1877. The map depicts a rectangular building aligned NNW to SSE that measured 18.7m in width and 35.5m in length. The north-east and south-east corners of the building coincided with the outline of the site boundary. The map shows that almost the entire tannery was exposed during the excavation except for one row of tanning pits along the east side.

During the excavation, it was noted that Block E, which originally contained eight tanning pits, had been added onto the south side of Block D and not keyed into the wall, although the original partition walls followed on from those in Block D. This evidence suggests that Block E was a later addition to the tannery. However, the layout of the cast iron columns built into the south wall of Block E indicates that it was part of the original design of the building. The solution to this apparently conflicting evidence may be found in the documentary sources. Just two years after the Tannery had been built in 1868 it suffered a devastating fire and burnt to the ground. The building was fully insured and rebuilt soon after and Block E might represent the post-fire phase.

The brick-built tanning pits which were all set into the ground and mostly filled with liquid would probably have survived the fire largely undamaged and indeed there was no visible sign of this fire in the pit fabric. It is likely that most of the old tanning

pit complex would have been retained when the tannery was rebuilt after the fire. However, the fact that Block E was added to the original pit complex at a later stage while still having new structural columns incorporated, indicates that this block was added during the rebuild after the 1870 fire.

The tannery was leased to Robert Pringle in 1884 and later to William Walker in 1903. The two tenants are likely to have had different requirements in terms of the layout and size of the tanning pits, which may be reflected in the evidence of subdivisions and enlargements of the original pits.

Although the structure of the tanning pits had not been drastically altered, at some point in the intervening century, they had been deliberately backfilled with building rubble. The amount of brick present within the rubble might indicate that this occurred more recently, at the point when the whole of the building was demolished, and the site levelled. As such, it seems possible that any alteration to the main structure for repurposing of the tannery would have involved laying a solid floor over the pit complex and reinforcing areas where heavy machinery was to be located. Potentially the large concrete lumps which lined the edges of the building, in some places cutting through the brick walls of the pits, may date to this period.

The annexe to the south-west corresponds well with the archaeology and map evidence (Illus 2c). The terminus of the west wall in the middle room coincides with the south side of an apparent vestibule in the middle of the entrance from the street. The remains of a brick wall foundation exposed along the western edge of the site coincide with the west side of a small rectangular yard to the south of the 'vestibule'. The architectural plan from 1909 identifies this building as the office fronting Beaverbank Place.

The development of the north area is well documented through a series of Ordnance Survey maps. While the outline of the tannery to the south remains largely unchanged from 1876 until 1931, the layout of the north area undergoes significant changes during this time, and these are reflected in the three different phases identified in the archaeological excavation.

The first building in this area was rectangular in shape and located along the east side of Beaverbank Place as shown on the 1877 OS survey. It is

depicted on all later OS maps up to and including the architect survey from 1909 where it is labelled as 'wooden shed'. The remains of this building, uncovered during the excavation, comprised a row of substantial postholes, some of which contained solid wooden posts confirming the documentary evidence.

The dimensions of the posts appear to indicate that this was a substantial two-storey structure similar to the ones shown in a 19th-century photo from Rhayader Tannery in Wales (Museum Wales website). In this instance, the building was used for storage and drying of skins hence the open slats in the wall in the background to allow good ventilation as shown in a tannery in Jedburgh where louvred openings are typically found in areas for 'drying hides after tanning' (Hume 1976: 26). Its ground plan is considerably larger than the tannery at Jeffrey Street, Edinburgh (Masser et al 2014), although it is not known how many storeys the latter occupied.

By 1894 a series of structures were added within the north area. There were minor changes in the layout over the next 15 years and most of these are labelled 'wooden shed' on the architectural plan from 1909 (Illus 2c).

A second structure identified in the north area appears to correspond to features mapped from this period. This was the square brick and concrete plinth located within the western half of the area. Its dimensions indicate that it may have been a crane base. It is shown on the 1894 survey, published at a scale of 1:500, as a square with a straight line running from its north-west corner up to the middle of a building to the north-west. The feature was not depicted in the architect's plan from 1909 and may have been taken down by then (Illus 2c). A crane located at this location could have been used to hoist goods up to the upper floors of the adjacent buildings.

A rectangular brick-built structure was recorded at the northern edge of the area [046]. Remnants of a tiled floor surface were found on its south side and are likely to be contemporary with the structure. Stratigraphic evidence indicates that this pre-dates the later garage built in the early 1920s and it is likely that it also pre-dates the clearance of the area around 1912. Its outline, however, does not correspond with any mapped

buildings from this period and it might be possible that it represents a building erected and demolished during the 18 years between 1876 and 1894.

Two brick-built pits were uncovered towards the northern edge of the excavated area. None of these can be directly stratigraphically linked to any of the mapped buildings. Both pits are aligned with the plot boundary as are all buildings in the area. The pit to the north-east is shorter and wider than the other. Its location indicates that it cannot be contemporary with the buildings mapped in 1894 and 1909 and is not likely to lie within the building mapped at this location in 1905. Its position may suggest that it is contemporary with the 'cavity walls building' to the west; if so, it could pre-date the 1894 survey. The dimensions of the pit are comparable to many of the tanning pits recorded in the south area and given the proximity to the tannery, it seems likely that it was a separate tanning pit. It is difficult, however, to explain why a single pit was built away from the main complex unless it was part of a separate smaller business.

The narrower pit to the west lies within the outline of a rectangular building located in the north-west corner of the site and originally mapped in 1894 (Illus 2c). It is very likely, although not provable with certainty, that this pit was originally located within this building. The pit is similar in size and proportion to the north tanning pit in Block E. The inside walls were rendered to make it watertight, and it had a drainage hole at the base presenting therefore all the characteristics of a tanning pit.

5.3 Garage

The 1912 OS survey shows that all the buildings in the north area recorded on the architect's plans three years earlier had, at this point, been demolished. This may have been the initial stage of the planned redesign by Beaver Tanning Co that never took place as the company was liquidated in 1913 (NRS, BT2/5354).

As seen above, in 1915 Robert Lamb & sons took over the area. They erected a large rectangular building along Beaverbank Place and in 1912, expanded the workshops eastwards and, as such, part of the property was let to Beaverbank Motor

Works. The buildings are mapped on the 1931 survey and labelled 'Garage' on the 1944 OS map.

The two pits along the north edge of the site lie within the footprint of the original garage and could therefore be part of the garage structure, possibly used as car inspection pits. However, the pit to the north-east was 1.2m wide internally, which would have been too wide for most vintage cars.

The pit to the south-west was significantly narrower and longer and perhaps more suitable to be used as a car inspection pit. As with the previous pit, this was located within the garage footprint. This made the existence of an inspection pit much more likely. As this pit shared many characteristics with the tanning pits, it may have originated as one and was later re-used for car inspections during the garage period.