

AMA 8

Three trenches, 801, 802 and 803 are expected to define the exact location and state of preservation of the Derby Silk Mill leat. Previous excavations have identified small segments of this feature, but a comprehensive view has never quite been achieved. Trenches 801 and 802 are complete, with Trench 803 to commence upon receipt of relevant permissions.

The maximum depth that trenches 801 and 802 were expected to reach was 1.7m which is the greatest depth of impact relating to the proposed development.

Trench 801

The excavation of Trench 801 successfully identified the northern extent of the Silk Mill leat 1m below the modern ground surface (figure 1). The uppermost southern extent of the leat (not the basal channel) was not revealed and is expected to either exist beyond the southern limit of the trench.



Figure 1. Photograph of Trench 1 looking north

The wall which lined the edge of the leat was constructed from brick and sandstone blocks. The brick portion was three courses thick and six courses high and was bonded with a mortar. Beneath the brick course were roughly hewn sandstone stone blocks which measured approximately 380mm x 200mm (figure 2). Given that the excavation had to cease at 1.7m as a consequence of the maximum zone of impact, a hand auger was used to assess the depth of the leat and to glean a more in depth knowledge about the sequence of deposits. The bore hole was positioned in the centre of the lower tier trench and reached a depth of 1.3m (which equates to 44.613m AOD) where the auger reached solid material which is presumed to be the base. The top of the leat wall was recorded at 47.133m AOD indicating that the leat measured approximately 2.52m in depth (not accounting for any truncation which may have occurred to the wall post abandonment).



Figure 2. The mill leat wall

The results from the auger survey suggest that the leat may have been closed off and the flow of water either stopped completely or flowed very slowly. The stagnant conditions lead to a build up in peat and organic clays with a possible flood event which deposited a layer of sand which was sealed by a further layer of peaty organic clay. Subsequent to the formation of the clays and peats it appears that the leat received a large quantity of imported sand to partially fill the channel. A considerable quantity of compact de-saturated clay was then used to fill the remaining void up to the upper course of the brick work. An easterly oriented obsolete cast iron pipe was revealed abutting the sandstone blocks.

A concrete slab was revealed to the north of the leat at 1m below the modern ground surface. The slab was recorded at 47.28m AOD.



Figure 3. East facing section of Trench 801 showing location of concrete and 33kVA cables

During the excavation of the trench, the construction cut for the southerly oriented 33kVA cables was exposed in the east facing section and appears to have been excavated down to the top of the concrete slab (figure 3). The cut was backfilled with sand and does not appear to have compromised the structural elements of the mill leat. The trench has been signed-off by the Derbyshire Development Control Archaeologist and is expected to be backfilled by the middle of next week.

Trench 802

Trench 802 was excavated to 1.2m in depth, stepped in, and excavated to a further 0.5m in accordance with agreed safe working practices (figure 4). The 1.7m maximum depth reached by the excavation appropriately evaluated the archaeological features and deposits which may be compromised by future ground reductions sited between the Silk Mill, Sowter Road, the River Derwent and Causey Bridge.



Figure 4. Photograph of Trench 802 looking east

The eastern extent of the trench exhibited a very compacted conglomeration of brick, tile and other ceramic building materials (figures 5 and 6). An absence of early modern/post medieval pottery or general Victoriana suggests that its deposition is likely to have occurred in the last 50 years.



Figure 5. Compacted ceramic building materials

The ceramic building material partially sealed a concrete slab and a black clayey silt approximately 1.1m below the modern ground surface in the western part of the trench (figure 4). The concrete formed a relatively flat surface at 46.716m. The concrete slab observed in Trench 801 is likely to have served the same purpose and may have been deposited at the same time. The black clay silt continues beneath the concrete slab as evidenced by two additional test pits excavated within the trench towards the eastern and western limits of the trench (figure 7).



Figure 6. Stepped in test pit towards the eastern limit of the trench



Figure 7. Stepped in test pit towards the western limit of the trench

Trench 802 has been visited by Steve Baker, the Derbyshire Development Control Archaeologist, who has subsequently signed it off. The trench has now been backfilled.

AMA 7

The seven trenches in AMA 7 are expected to define structural remains associated with the Britannia Foundry and Engineering Works and Coal Wharf. The results will be used to inform the investigation of the condition of sub-surface remains, inaccuracies in historic mapping as well as past land-use and development. Each of the trenches, with the exception of Trench 707, has been targeted on features present on 1884 OS mapping.

The results so far appear to suggest that the area to the south of Trench 704, south-east of Trench 705 and surrounding the enclosure which Trench 706 is in the centre of, may have served one of two purposes. It was either a waste ground which was barely utilised and received demolition material during the redevelopment of the larger industrial area or it contained earlier industrial buildings or cellaring which were demolished by the time the other structural remains in the trenches were constructed. The historic mapping hints at the former interpretation.

Trench 701

The targeted remains in Trench 701 were identified 310mm below the modern ground surface (figure 6). As predicted, the easterly oriented wall which exists on the 1884 OS map is located laterally within the centre of the trench (figure 8). The area within the trench to the north of the wall was occupied with a floor surface, indicating that it may represent the interior of the Britannia Foundry and Engineering Works (figure 9). The space to the south of the wall is likely to have been a coal wharf. Numerous engineering activities over the last century have disturbed the *in-situ* remains.



Figure 8. Photograph of Trench 701 looking north



Figure 9. Elevation of brick wall and floor surface

Trench 706

A brick surface was revealed 1.1m below the modern ground surface in Trench 706 (figure 10, 11 and 12). The historic mapping indicated that a north-easterly aligned wall would be revealed centrally in the trench which could be used to infer if the structural remains demarcated internal or external space. As it happens, the trench appears to have been sited within the interior of the walled enclosure, visible on the 1884 mapping. Although no evidence was provided within trench 706 for what may exist beyond the perimeter of the wall, evidence provided by Trench 704 tentatively suggests this was external space or perhaps used as an area to deposit demolished building material on.

A similar shaped enclosure, albeit smaller in scale, exists to the north and is bisected by the route of the flood wall. It will be interesting to see if the structural remains are in any way similar.



Figure 10. Easterly looking photograph of a brick surface in Trench 706.



Figure 11. Brick surface looking west



Figure 12. Brick surface looking east

Trench 704

An easterly aligned wall, as indicated by the 1884 mapping, was revealed in Trench 704. The brick structure was three courses thick and was identified 1.1m below the modern ground surface. Abutting the northern face of the wall was a weathered tarmac surface. Material to the south of the wall was loose mixed material which may represent demolition material or a lightly compacted external area (figures 13, 14 and 15).



Figure 13. North facing photograph of Trench 704 being excavated



Figure 14. Trench 704 looking south



Figure 15. Trench 704 looking north

Trench 705

Progress was hindered by the identification of a concrete slab which required removal with a portable pneumatic drill (figure 16). Once the concrete slab was removed a depositional sequence very similar to that observed in Trench 704 was revealed. The targeted wall was revealed crossing the trench laterally and was of a construction style similar to the one identified in 704. The space to then north of the wall was occupied by a

layer of degraded tarmac whilst the southern side contained loosely compacted material which may have derived from demolition events (figure 17).



Figure 16. Photograph of partially excavated Trench 705



Figure 17. Photograph of Trench 705 looking south-east

Trench 707

The excavation of Trench 707 was not intended to target any specific feature on the historic mapping. Based on evidence from the excavation of the other trenches in AMA 7, its situation suggests that the trench may locate floor surfaces associated with the Britannia Foundry and Engineering Works. As anticipated, a floor surface was revealed. It extended across the entire trench and was identified 1.15m below the modern ground surface. The composition of the floor surface was regarded as being very similar to the surface located in the northern half of Trench 704 (figure 18). This may in fact represent the same structure.



Figure 18. Trench 707 looking south

AMA 4

The four trenches in AMA 4 (Etruria Gardens) are intended to reveal the degree of survival of the sub-surface remains of the former foundries, works and yards. Each trench has targeted a structural facet present on the 1884 mapping.

Trench 401

The excavation of Trench 401 was expected to reveal the structural remains from the former Union Iron Foundry. According to the 1st edition OS mapping, the footprint of the evaluation trench crosses an easterly oriented foundation from the now demolished works. The results from the trench actually revealed a northerly oriented brick wall suggesting that the foundry, or subsequent building, has been remodelled since the 1880s which has destroyed any evidence of the earlier building (figure 19). This trench is completed and awaiting inspection from the Derbyshire Development Control Archaeologist.



Figure 19. Photograph of Trench 401 looking south

Trench 402

The excavation of Trench 402 revealed a thick layer of concrete (figure 20). This required excavation with a machine mounted hydraulic breaker due to the depth of the concrete. A series of iron anchor bolts were revealed within the concrete indicating that the material has been deposited to support heavy lifting machinery such as a crane. The absence of concrete in this style of construction in other trenches suggest that it only exists in a location local to Trench 402 which supports this suggestion that this acted as a temporary base.



Figure 20. Excavation of Trench 402. Concrete to the right and upper part of the photograph.

Surprisingly, archaeological remains were found to exist beneath the concrete base (figure 20 and 21). Multiple phases of building were identified, the earliest of which appears to have acted as an industrial feature such as a flue. Later additions to the building including a floor indicate that the building was redeveloped at some stage prior to the buildings abandonment and demolition.



Figure 21. Photograph of Trench 402 looking north

Trench 403

The exact location of Trench 403 was not tenable on account of the presence of plants and shrubs which were planted by the current residents of Etruria Gardens. As a consequence, the trench was moved 2.5m to the north. The repositioning of the trench still successfully identified the northerly oriented brick wall of the Sun Foundry which was targeted by the trench (figure 22). The remains of the wall were partial. Later features such as the installation of drains and a possible wall or industrial feature had badly damaged it. The wall/industrial feature was identified in the north-eastern corner of the trench and can be characterised as a formation of bricks within a broad cut backfilled by crushed brick or heat affected clay.



Figure 22. Photograph of Trench 403 looking south

Trench 404

The location of Trench 404 was to be determined based on the results from the other trenches in Etruria Gardens. The decision was made to excavate the southernmost trench based in the findings from Trenches 401 and 402. Given that the structural remains in Trench 401 have been remodelled and destroyed the earlier building, and Trench 402 demonstrated potential *in-situ* industrial remains, it seemed prudent to excavate closer to Trench 402. It would also determine if the concrete witnessed in Trench 802 extended to the north.



Figure 23. Photograph of Trench 404 looking north-east

Trench 404 was targeting a large north-easterly oriented brick wall which is present on the 1884 historic mapping. The wall was identified 300mm below the modern ground surface. In addition to the brick wall were concrete slabs which respected the wall and appear to be either contemporary with the brick structure, or acted as a later improvement to the building (figures 23 and 24). Unfortunately, no stratigraphic relationship could be observed with which to determine a sequence of events although it seems likely that the concrete slab may have been a later addition.



Figure 24. Photograph of Trench 404 looking south-west