



Figure 87 Northeast-facing view of TT5-2C at the completion of excavations



Figure 88 Stone lined culvert for terracotta pipe in the northeast of TT5-2C

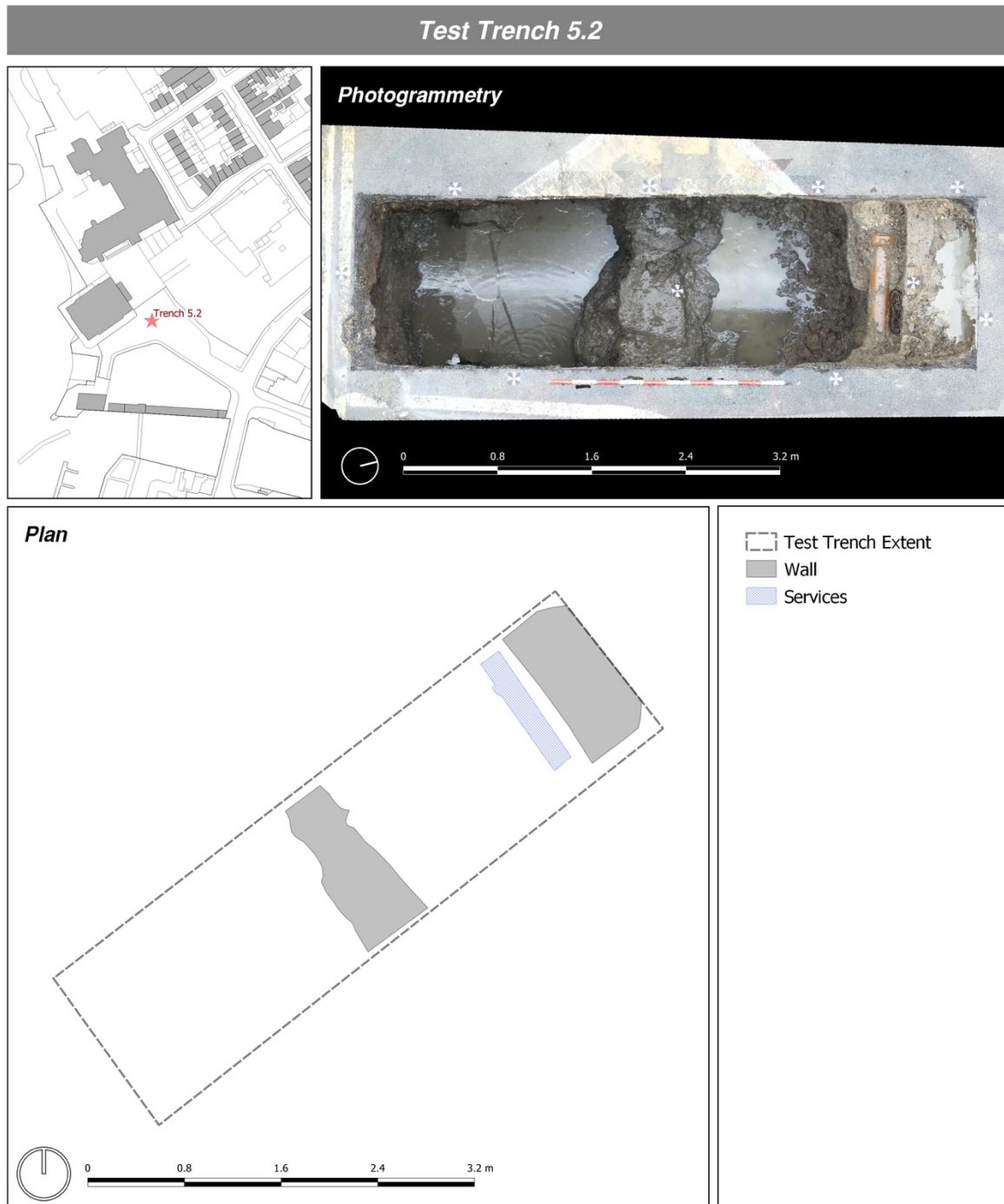


Figure 89 Plan drawing and photogrammetry of TT5-2

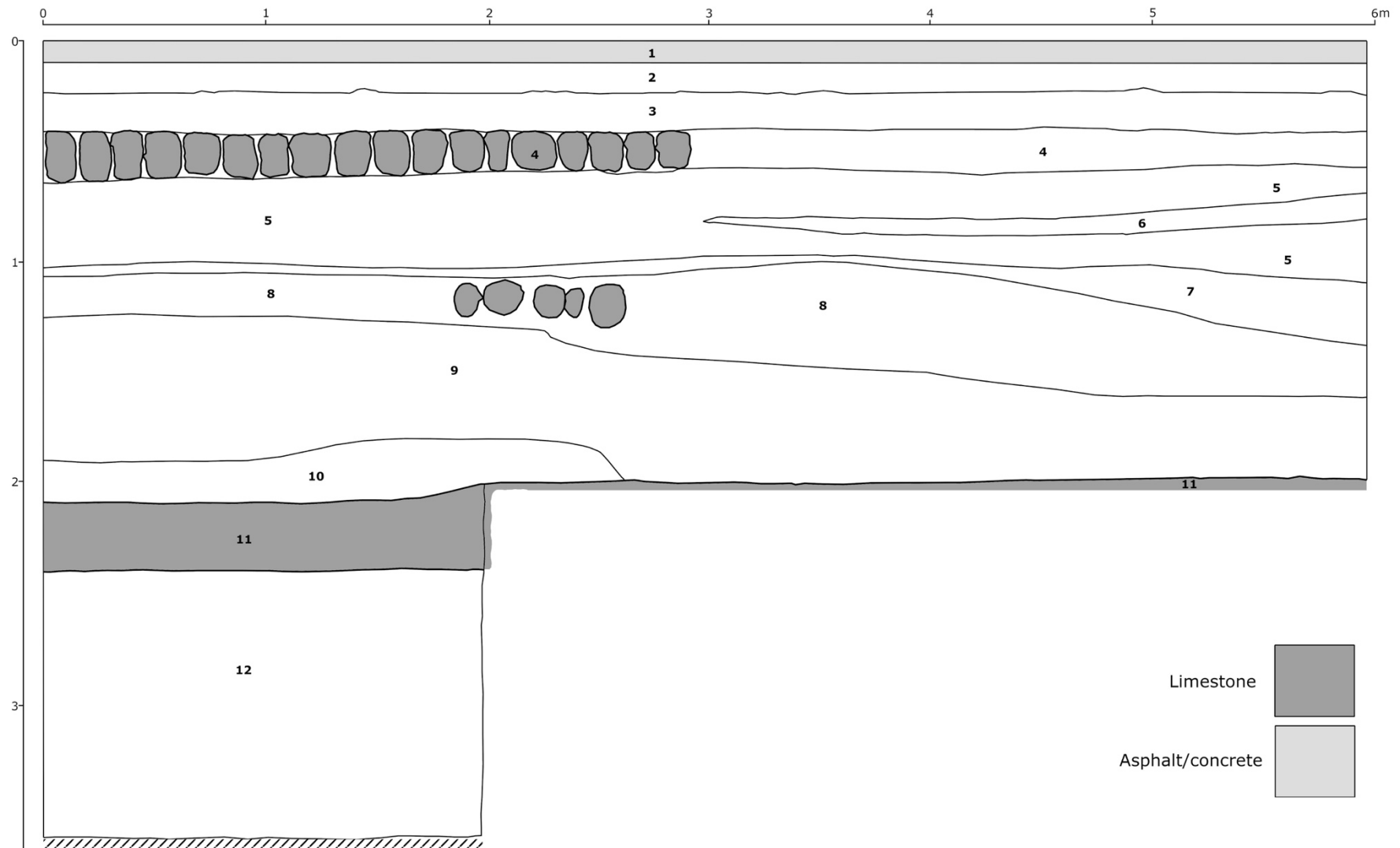


Figure 90 TT5-2A profile drawing of south-facing wall.

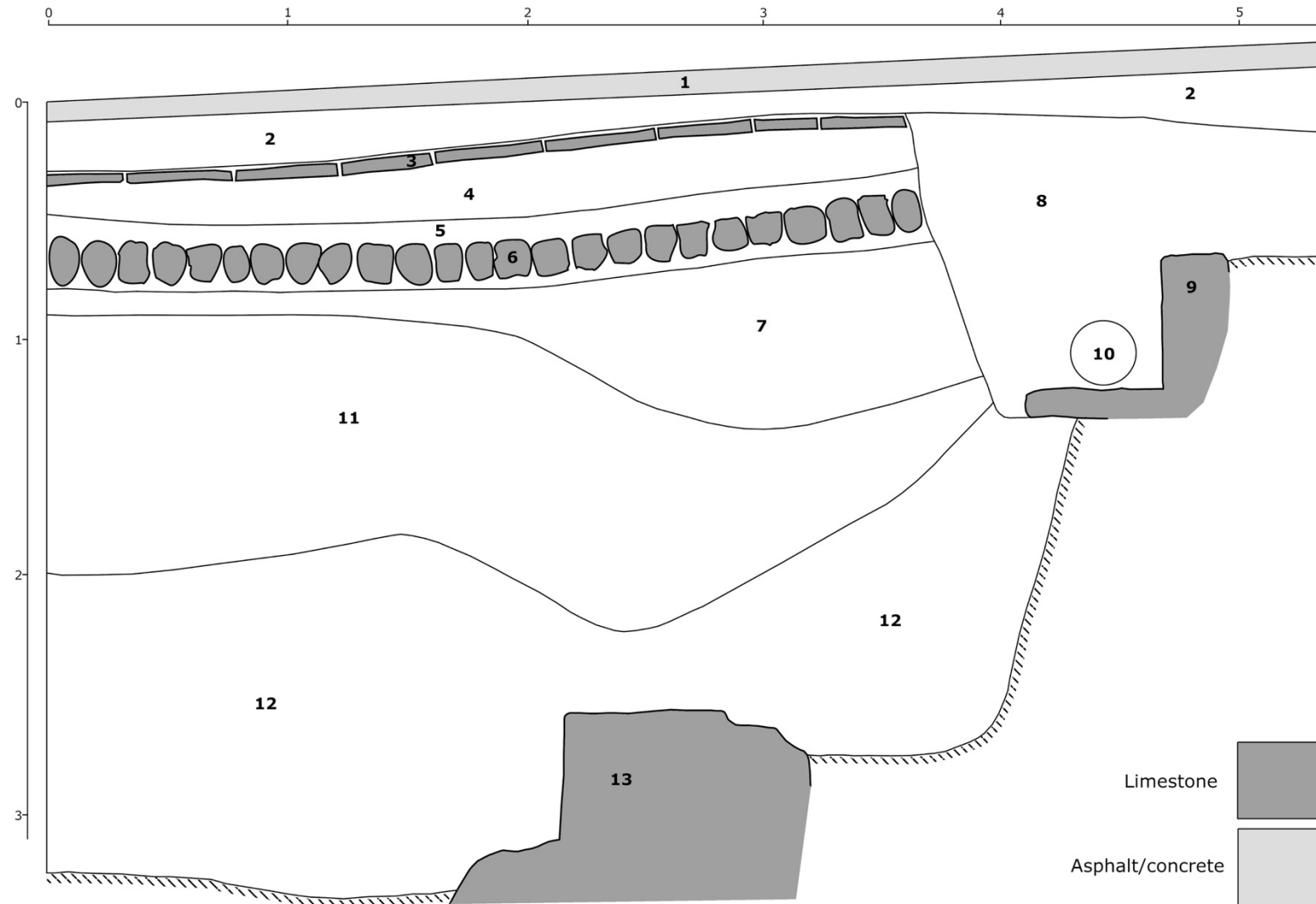


Figure 91 TT5-2C profile drawing of south-facing wall.

TT5-3

Trench TT5-3 was excavated on 9-13 July. The trench was 4.2m to the southeast of TT5-2C, on the Merchant's Quay roadway (Figure 92), aligned southwest/northeast, and measured 9.4m length by 1.5m width but due to services at the southwest end only 7.4m length was fully excavated. The ground rises slightly to the northeast, which is 140mm higher than the southwest end. The excavation uncovered the continuation of the quay wall identified in TT5-2, which here is more substantial and better preserved (C5-3-13); another wall abuts the back of the quay wall, running at a right angle to the northeast (C5-3-14), which is cut by the quay wall and is therefore an earlier feature.

Background

Similar to TT5-2 to the north, trench TT5-3 is thought to have crossed the west-facing edge of the historic quay in its 18th century configuration and may previously have been the location of medieval waterfront structures.

Results

The concrete surface (C5-3-01) and a second layer of asphalt (C5-3-02) were broken to reveal three plastic ducts at 550mm below the surface (C5-3-03) in the southwest of the trench. The decision was made to retain the ground below the ducts and excavate the remaining 7m of the trench as this would still comfortably capture the area into which the line of the wall identified in TT5-2 was expected to extend.

Below the road surfaces was a layer of aggregate consisting of grey gravel (C5-3-04) mixed with dark reddish brown soil and a thin layer of light red sandy mortar-rich fill containing brick and slate (C5-3-06). Across the northern two metres of the trench, this was cut by dark brown fill containing a stone lined culvert with ceramic pipe (C5-3-05). This was the continuation of the culvert revealed at the north of TT5-2C. Its base is at 1.38m, and it sits on a horizontal limestone slab. After revealing the culvert and pipe, this area was left in place and excavations focused on the centre of the trench.

Across the five metres in the centre of the trench, a series of modern fills were revealed. These consist of the light red sand (C5-3-06), dark brown coloured sand containing small stones and modern debris (C5-3-07), compacted grey sand with frequent small stones (C5-3-08) and looser, grey brown mixed fills containing larger angular stones (C5-3-09).

At 1.27m depth, the top of a limestone wall (C5-3-13) was revealed, aligned north-northwest/south-southeast, and continuing the line of the quay wall exposed at the base of TT5-2C (Figure 93). The upper two courses are of well-cut and dressed rectangular masonry with a rubble core and yellow sandy mortar bonding. A total of seven courses were revealed on the western face of the wall, which are regular towards the top but irregular below the upper three courses, where smaller stones and some brick have infilled gaps which may be the result of repairs and the stones are progressively angular and less worked (Figure 102). Towards the base, the wall is formed of rougher limestone boulders, and these sit upon limestone bedrock, which was revealed at 3.02m below the surface at the base of the wall and dropping to 3.4m below the surface 1m to the southwest of the wall.

The fills abutting the south of the wall support its identification as the 18th-century quay wall. At the top level of the wall was grey clayey sand (C5-3-10), and a lens of mortar-rich sand with brick which abuts the middle of the wall. Below that, and forming the basal layer which sits on the bedrock, was black silty sand which was wet and contains a large quantity of oyster shell as well as white earthenware, brick, slate and clay pipe stems (C5-3-12). This is identical to the alluvial deposits found in the equivalent position to the south of the quay wall in TT5-2C (C5-2C-12). After reaching the base of the wall and the bedrock, a trench box was installed to access the trench and clean, examine and document the wall's construction; a scale drawing was made of the wall's southwest facing elevation (Figure 101).

Having exposed the wall's western face and reached natural bedrock, the area on the north of the wall face was excavated by hand to determine the wall's width and examine other

suspected structural features. The width of wall (C5-3-13) was found to be 1m on its upper courses and expanding to 1.3m at the foundation level. Using a combination of mechanical and manual excavation, a second, lower wall (C5-3-14) was exposed, running perpendicular to the north of the quay wall, but not at right angles (the angle between the walls is approximately 75°) (Figure 96). The top of this second, east/west aligned wall was revealed at a depth of 1.4m, and it consists of a mortared rubble core which continued into the north wall of the trench so not allowing its full width to be exposed, though it is at least 1.1m. Its south face has small, square shaped cobbles of which two courses were exposed, below which were larger stones which may be the top of its foundations. The wall is cut at its east by the culvert (C5-3-05) and at its west by the quay wall (C5-3-13) so that a 2.3m length survived (Figure 97). Its western termination indicates that it pre-dates the quay wall and may therefore be associated with the medieval quay before its 18th-century transformation, though no artefacts or other dating evidence were found to support this theory.

Conclusion

The north/south aligned wall (C5-3-13) crossing TT5-3 is the southern continuation of the quay wall uncovered just to the north (C5-2A-12) and in a much better state of preservation. The stretch exposed in TT5-3 is preserved to a height of 1.75, with seven courses of intact facing stone, its foundations built on limestone bedrock. The abundance of oyster shell within the alluvial silty sand that abuts the base of the wall's western side support its identification as the quay's retaining wall. On the eastern side of the wall, a second wall was uncovered (C5-3-14), running at an irregular angle and of different construction which employed a larger amount of sandy mortar and smaller, irregular stones. This wall was exposed for a length of 2.3m and is cut at the east by a culvert (C5-3-05). These three features allow for a proposed sequence of construction: the earliest feature is the east/west aligned wall (C5-3-14) which was cut by the quay wall (C5-3-13) to its west and later by the culvert (C5-3-05) to the east. Though there is no definite dating evidence, it is possible that both the walls represent remnants of the medieval quay, possibly a projecting jetty. The east wall possibly being earlier, the north south wall refaced at a later stage.

Table 16: TT5-3 summary of results

Trench number	TT5-3
Dates excavated	9-13 July 2020
Location	Merchant's Quay
Co-ordinates (NW corner)	E 557765.6849, N 657566.5648
Dimensions, orientation	7.4m SW/NE by 1.5m NW/SE
Ground level (ASL)	3.9575m (SW end) to 4.1038m (NE end)
Maximum depth	3.2m
Services exposed	Flexi ducts at 550mm depth directly below concrete at southwest end (C5-3-03); terracotta pipe in stone lined culvert at up to 1.38m depth in the northeast (C5-3-05)
Archaeological significance	Limestone wall aligned NW/SE (C5-3-13), identified as the quay wall, continuing the same alignment as wall in TT5-2. Five courses survive, exposed to 1.75m height, with foundations sitting on bedrock. Abutting the north side of this wall, and on a NE/SW alignment was an earlier mortared limestone wall (C5-3-14) which was exposed for two courses, to a depth of 2.15m.

Recorded contexts	<p>C5-3-01: Asphalt surface</p> <p>C5-3-02: Concrete and gravel road base</p> <p>C5-3-03: Three plastic ducts</p> <p>C5-3-04: Aggregate, grey</p> <p>C5-3-05: Cut containing stone lined culvert with ceramic pipe at northeast of trench</p> <p>C5-3-06: Sand and mortar with brick and slate</p> <p>C5-3-07: Black sand with small stones and debris</p> <p>C5-3-08: Sand, grey, compacted, frequent stone</p> <p>C5-3-09: Silty sand infill, grey brown, frequent stone</p> <p>C5-3-10: Clayey sand, grey</p> <p>C5-3-11: Mortar with sand and brick</p> <p>C5-3-12: Sand, black, frequent oyster shell and including white earthenware ceramics, brick, clay pipe, slate</p> <p>C5-3-13: Limestone wall aligned NW/SE</p> <p>C5-3-14: Mortared limestone wall aligned SW/NE</p>
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Figure 92 Northeast-facing view of St Mary's Cathedral with excavation of TT5-3 to right



Figure 93 East-facing view of TT5-3



Figure 94 Southeast-facing view of TT5-3



Figure 95 West-facing view of TT5-3



Figure 96 Top view of features in eastern half of TT5-3



Figure 97 North-facing view of wall C5-3-14



Figure 98 West-facing view of junction between walls C5-3-13 and C5-3-14



Figure 99 *Western face of wall C5-3-13 at completion of excavation.*

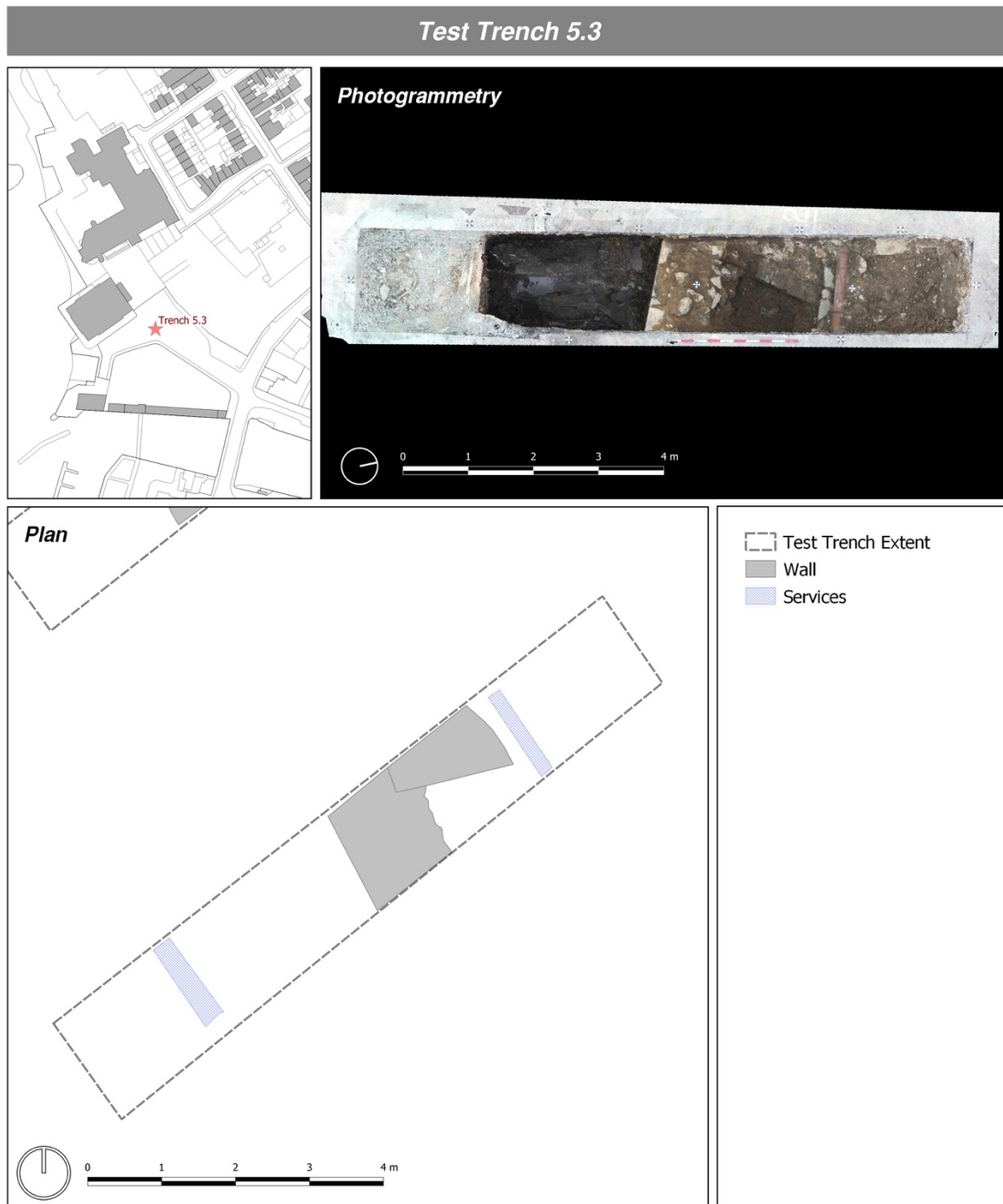


Figure 100 Plan drawing and photogrammetry of TT5-3

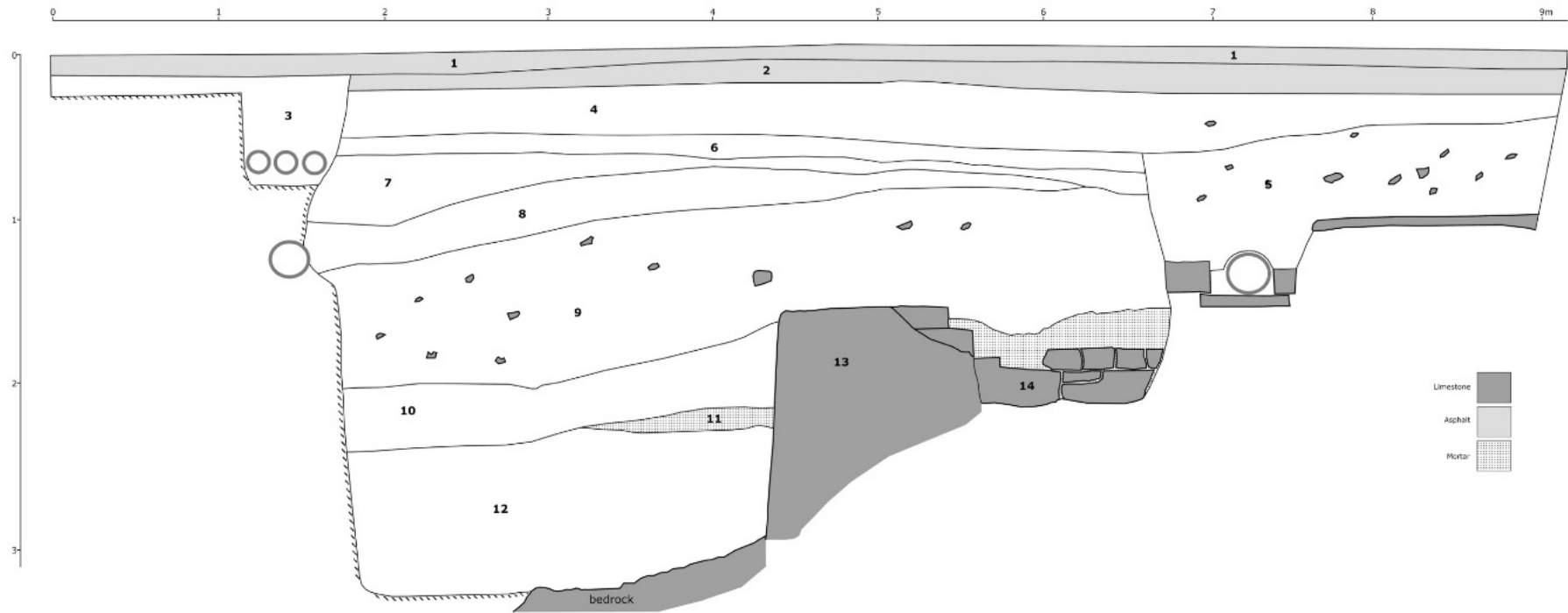


Figure 101 TT5-3 profile drawing of southeast-facing wall

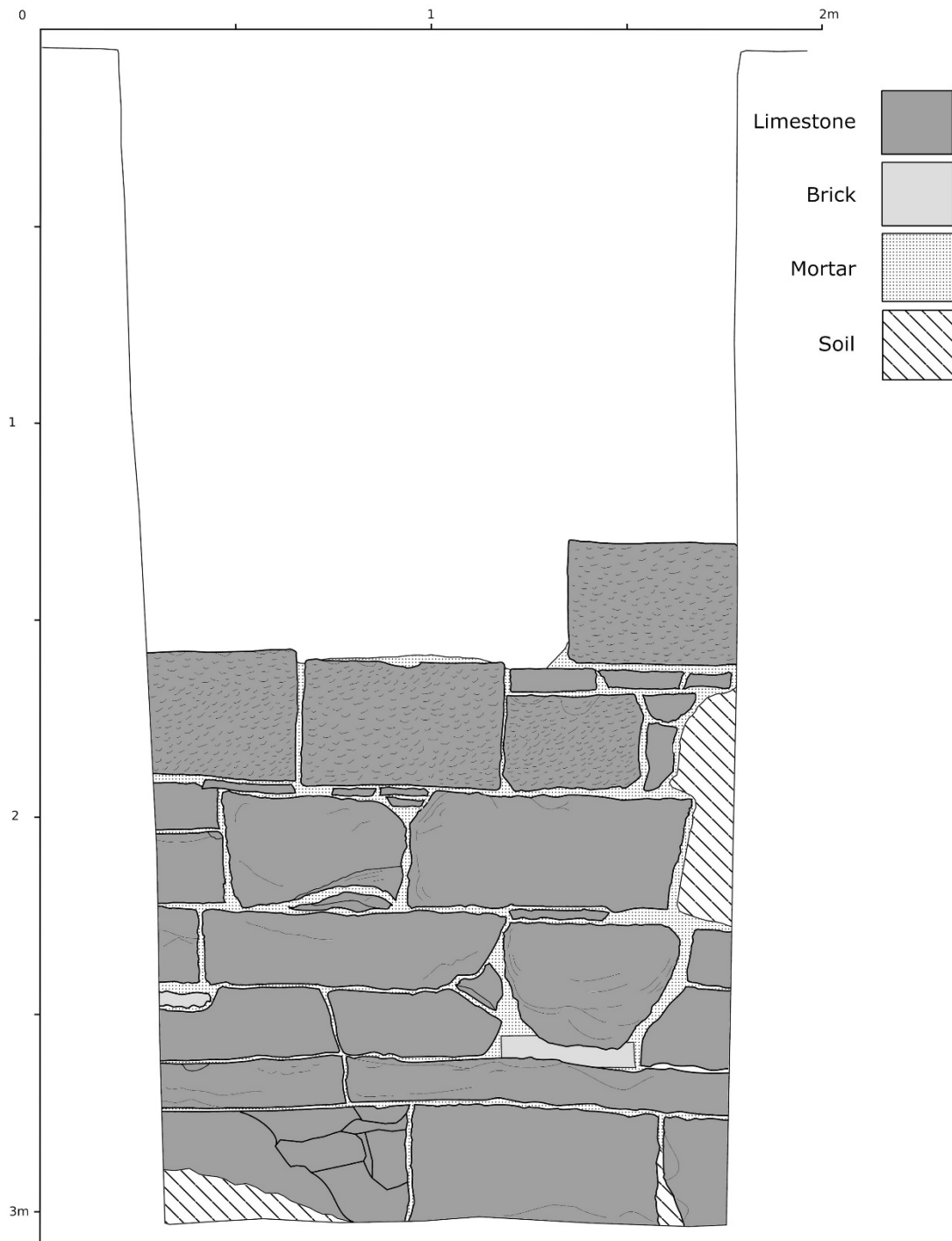


Figure 102 Elevation drawing of southwest face of wall C5-3-13.

TT5-4

Trench TT5-4 was excavated on 13-15 July at the northeast corner of the Potato Market (Figure 103). The trench was 7.2m parallel to the southeast of TT5-3, on the Merchant's Quay roadway, aligned southwest/northeast, and measured 6.5m length by 1.5m width. From the kerb at the southwest, the ground rises 325mm to the northeast end on the roadway. The excavation revealed several service pipes below ground and reached bedrock at just over 3m depth. No archaeological features were identified.

Background

Similar to TT5-2C and TT5-3 to the north, trench TT5-4 is thought to have crossed the west-facing edge of the historic quay.

Results

Excavations in TT5-4 found the ground here has been highly disturbed through the installation of services. Below the asphalt surface (C5-4-01) and concrete and gravel road base (C5-4-02) was a small patch of cobbled surface (C5-4-03), which is the only survival of a historic built feature. The cobbled surface has been broken up on either side by services. To the south are three plastic ducts at 300mm depth and to the north is a lead pipe at 500mm depth (Figure 104). Just to the north of this lead pipe was a substantial cut into which a ceramic pipe is set at a depth of 1.3m (C5-4-04) (Figure 105). To avoid damaging this pipe, earth was retained beneath it and excavations continued on either side. These revealed a series of redeposited sandy fills containing brick and mortar being mainly pale brown coloured on the north side (C5-4-05) and deeper and grey coloured on the south (C5-4-06) side of the ceramic pipe. From approximately 1.5m depth and continuing below 2m was a highly compacted and gravel rich fill with frequent stone and containing brick (C5-4-07) below which was a lens of grey sand which overlays black silty sand with no artefacts but frequent animal bone (C5-4-08). The basal fill was grey sand with infrequent angular stone (C5-4-09) which overlays bedrock at 3.1m depth.

Conclusion

Excavations in TT5-4 found the ground here has been highly disturbed by the installation of services and successive redeposition of soil from building activities. The only potential pre-modern soil deposits were below 2m depth and consist of black silty sand containing animal bone which overlays natural sand accumulated above the bedrock, which was revealed at 3.1m depth. Apart from damaged sections of cobbled surface at a shallow depth, no archaeological features were identified.

Table 17: TT5-4 summary of results

Trench number	TT5-4
Dates excavated	13-15 July 2020
Location	Merchant's Quay
Co-ordinates (NW corner)	E 557770.5600, N 657560.0218
Dimensions, orientation	6.5m SW/NE by 1.5m NW/SE
Ground level (ASL)	3.7758m (SW end) to 4.1012m (NE end)
Maximum depth	3.1m
Services exposed	Three flexi ducts at 300mm depth at southwest end; terracotta pipe at 1.3m depth in the centre; lead water pipe at 500mm in the centre; plastic water hose at shallow depth
Archaeological significance	No archaeological features or deposits identified

Recorded contexts	<p>C5-4-01: Tarmac surface</p> <p>C5-4-02: Concrete and gravel road base</p> <p>C5-4-03: Patches of cobbled surface</p> <p>C5-4-04: Cut and grey gravel infill for 6” ceramic pipe</p> <p>C5-4-05: Silty sand, brown redeposited building fill, lenses of mortar and brick and slate inclusions</p> <p>C5-4-06: Stony grey fill with charcoal and brick</p> <p>C5-4-07: Stony dark grey fill, highly compacted</p> <p>C5-4-08: Silty sand, black, moderate small stone, animal bone</p> <p>C5-4-09: Sand, grey, containing oyster shell</p>
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Figure 103 Location of TT5-4, facing northeast towards St Mary's Cathedral



Figure 104 Southern half of TT5-4, facing southwest



Figure 105 Northern half of TT5-4, facing northeast

TT5-5

Trench TT5-5 was excavated between 30 June and 1 July 2020 at the western end of Merchant's Quay (Figure 106). Its location is 10m southeast of the courthouse perimeter wall, 2.5m northwest of the Potato Market wall and 5m west of the harbour to the north of the Curragower Boat Club (Figure 107). The trench was aligned southwest/northeast and measured 8.9m length by 1.5m width. Excavations revealed the right-angled junction of two historic walls which can be related with pier walls depicted on 18th-century maps.

Background

Historic maps show that the location of TT5-5 would have been at the outer part of the medieval harbour. On Philips' 1685 map, TT5-5 is located in between the two towers that mark the entrance to the harbour, though because of the low accuracy of georeferencing this map, the actual position is likely to be further to the north, near the north pier. On Colles' 1769 map, showing the reconfigured quay, TT5-5 appears to cross the centre of the Long Dock's northern quay, though in this case the trench is probably further south and west than here, perhaps intersecting the southern wall of this pier. There was some potential for the trench to cross structures associated with both the medieval and the Georgian era quay.

Results

After removing the concrete surface (C5-5-01) and gravel base (C5-5-02), excavations revealed three adjacent fills along the trench. At the southwest end was dark reddish-brown clayey silt (C5-5-04) in which a 60mm iron pipe runs along the north of the trench for 1.6m at 500mm depth. In the centre of the trench was pale red gravel (C5-5-06), clearly imported fill, which extended up to 1.2m depth. At the northeast end of the trench was coarse yellow sand (C5-5-05) to depths up to 1.6m, above which was a patch of finer, yellowish brown sand (C5-5-03). Across the southwest half of the trench, from 0.6-1.1m depth, was fine-grained yellow sand (C5-5-07). All of these are fills are identified as modern building materials.

At the southwest end of the trench the top of a wall was exposed at 1.1m depth below the surface (C5-5-12) (Figure 108). It is marked by a change in fills, which above is fine, yellow sand (C5-5-07) and below the level of the wall is a band of dark grey sand (C5-5-08) below which is black clayey silt (C5-5-08). Fills were carefully removed from beside the wall with the mechanical excavator and the trench was then accessed to clean and examine the wall.

The wall (C5-5-12) is aligned west-northwest/east-southeast and constructed of variously sized and shaped limestone blocks tightly bonded with mortar in irregular courses. It is at least 1.1m wide and it extends into the back, southwest wall of the trench. A 2.2m-long section of the wall was exposed. In section, the northern face consists of three segments, separated by a projecting sill which is 230mm width, with the wall becoming progressively wider at greater depth (Figure 110). In total, the wall's north face was exposed to a height of 1.81m. The upper segment, of which 380mm height survives, is quite damaged; the central segment is 1230mm in height and is well preserved; the lower segment, which constitutes the wall's buttressed foundation, was exposed for a height of 200mm though its base was not reached.

Another wall adjoins this wall at a right angle, projecting to the north-northeast (C5-5-13). The top was revealed at 1.65m depth and it continued in six courses to the maximum depth of excavation (3.4m). It is also of mortared limestone, but in a different style with more regular coursing and more squared and evenly sized masonry. Behind the facing stones is a core of heavily mortared rubble. The walls are tightly tied together, but the north/south wall appears to pre-date the east/west aligned wall, which has been built up against it, encroaching into the rubble core (Figure 111). Fills abutting the lower courses of the walls include a zone of grey clay around the wall junction (C5-5-10); below that, covering most of the trench, was greyish brown silty sand (C5-5-11) with oyster shell, brick, tile and bone. The basal fill, continuing to the maximum excavated depth of 3.4m, was sand (C5-5-14) which abuts the foundations of the two walls. The high tide level in the trench was 2.6m below the surface, and after digging the sounding the trench was inundated (Figure 109).

Conclusion

Excavations in TT5-5 revealed two walls at the southwest end of the trench. The walls are both constructed of mortared limestone and are solidly built but display difference in masonry style and bonding. The later west/east wall (C5-5-12) aligns with the existing quay wall to the SW of the courthouse, part of the bay for the Curragower Boat Club. A match for this phase of wall, was found in trenches TT4-1 and TT4-2 in the Potato Market and relates C5-5-12 to the development of the 'New Quay' as featured in Colles's Map of 1769. The wall specifically corresponds to the south facing wall of the northern pier of the Long Dock. The lower, earlier wall (C4-1B-17) aligned NNE/SSW, may represent a remnant of the medieval north pier. In the absence of evidence for any other structures in this area this interpretation is reasonable. Based on historic mapping the northern pier arm was recorded as being 100ft (30m) from its corresponding pier to the south, its head terminating at a squat guard tower (Eyres's Map 1752, IHTAS, Map 17). The pier extended 100ft east west from the tower and returned at a sharp angle to the north. East of this return was the enlarged harbour, further north the pier connected with the town wall running along the river side. The solidity and generally alignment for this, albeit small section of, wall (C4-1B-17) is a fit for this early feature.

Table 18: TT5-5 summary of results

Trench number	TT5-5
Dates excavated	30 June-1 July 2020
Location	Merchant's Quay
Co-ordinates (NW corner)	E 557735.8780, N 657550.0756
Dimensions, orientation	8.9m SW/NE by 1.5m NW/SE
Ground level (ASL)	3.7757m (SW end) to 3.8763m (NE end)
Maximum depth	3.4m
Services exposed	Iron pipe at 500mm depth
Archaeological significance	Junction of two mortared limestone walls, one running N/S (C5-5-12), the other E/W (C5-5-13)
Recorded contexts	<p>C5-5-01: Concrete surface</p> <p>C5-5-02: Asphalt/gravel road base</p> <p>C5-5-03: Sand, brownish yellow</p> <p>C5-5-04: Dark reddish-brown clayey silt with modern debris around iron pipe</p> <p>C5-5-05: Yellow sand, coarse</p> <p>C5-5-06: Rounded stone, pale red, imported</p> <p>C5-5-07: Sand, yellowish red, fine</p> <p>C5-5-08: Sand, dark grey, fine, corresponds with upper course of wall C5-5-12</p> <p>C5-5-09: Clayey silt, black, frequent brick</p> <p>C5-5-10: Clay, dark grey, flecks of brick and charcoal</p> <p>C5-5-11: Silty sand, greyish brown, contains oyster shell, brick, tile and bone</p>