

Figure 142 Plan drawing and photogrammetry of TT6-3.

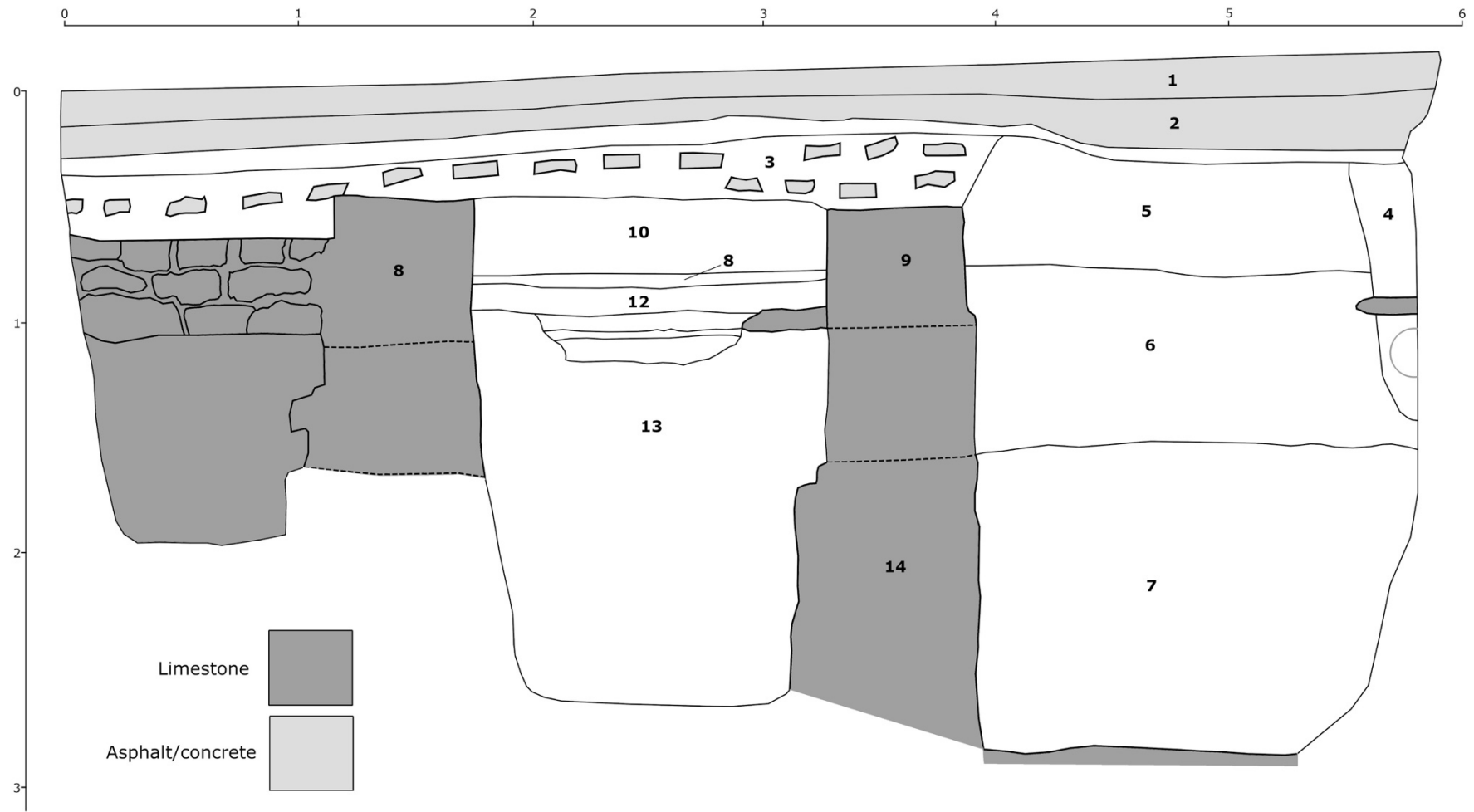


Figure 143 TT6-3 profile drawing of northwest-facing wall.

TT6-4

TT6-4 located at the NW end of Merchants Quay was orientated NE/SW and measured 6.1m by 1.5m.

Background

TT6-4 was located along the former line of a row of structures fronting onto the old quays. These houses were demolished in the 1870s to allow for an extension of the grounds of St Mary's Cathedral graveyard to the southwest.

Results

Testing of TT6-4 at the NW end of Merchants Quay exposed a layer of cobblestones under a thick mantle of asphalt, concrete and gravel. The cobbles, found at a depth of 380mm, were confined to a 1.8m stretch to the south of the trench and were cut to the north by a service for a 4" pipe running NW/SE. The cobbles overlay a mixed infilled layer of mid brown, silty sand with frequent small stones, shell and redbrick 700mm thick. At the northern end of the trench running N/S was a rubble stone feature, one course deep, set in thick, light brown clay. This unbonded wall was 800mm wide and sat on a layer of dark brown silty clay with shell inclusions.

At 2m long platform under the cobbles was left in situ and deep excavation was limited to a 3m long area north of the 4" pipe and south of the rubble feature. Excavation in this area exposed a dark silt with frequent mortar patches, 200mm thick under the builder's infill. A dark grey silty sand deposit (C6-4-07) 500mm overlay a base layer of dark grey gravelly sand (C6-4-09) with organic material and inclusions of bone with finds including incised glazed pottery, two floor tile fragments, one green glazed the other decorated with white clay inlay and a thin strip of hammered of gold. This 900mm thick archaeological layer, based on the artefacts retrieved, represents late medieval activity (c. 1400 to the 16th century AD). Below this was bedrock at 3.2m below the surface.

Conclusions

Excavations in TT6-4 exposed a cobbled surface overlying a poorly constructed wall to the north of the trench set in clay (C6-4-06). Below this were a succession of infills (C6-4-07 - C6-4-10) containing glazed pottery, two floor tile fragments and a thin strip of gold. The base layers of this trench contained late medieval artefacts.

Table 24: TT6-4 Summary of results

Trench number	TT6-4
Dates excavated	20/08/2020, Eve of storm, frequent heavy showers
Location	At NW end of Merchants Quay, asphalt surface
Co-ordinates (NW corner)	N 557766.9058, E 657579.2548
Dimensions, orientation	6.1m L NE/SW by 1.5m W
Ground level (ASL)	4.1448m
Maximum depth	3.2m, dug to refusal.
Services exposed	4" duct running NW/SE located 2m from the south end of the trench.
Archaeological significance	Recorded upper layers of infill overlying archaeological deposits including dark grey layer over bedrock with green glazed pottery possibly late Medieval.
Recorded contexts	C6-4-01: Asphalt surface 160mm thick

	<p>C6-4-02: Concrete 120mm</p> <p>C6-4-03: Dark grey modern gravel 80mm</p> <p>C6-4-04: Well sorted cobblestone surface in a sandy matrix found 380mm below surface at southern end of trench measuring 1.8m L by 1.5m wide. These cobbles were cut to the north by a service trench containing a 4" pipe running NW/SE.</p> <p>C6-4-05: Mixed infill, Mid brown silty sand with frequent small stones, shell and redbrick 700mm thick</p> <p>C6-4-06: Line of loose rubble stone in thick light brown clay found to the N of the trench running NW/SE. This feature comprised of a single course of unbonded stone 900mm wide and found at a depth of 800mm.</p> <p>C6-4-07: Dark brown silty clay with shell inclusions, 500mm thick.</p> <p>C6-4-08: Dark mortar rich, silty layer 200mm thick</p> <p>C6-4-09: Dark silty sand 500mm thick</p> <p>C6-4-10: Patch of green grey sand in north of trench 500mm L by 180mm deep</p> <p>C6-4-11: Bedrock</p> <p>Note: A 2m platform to the south of the 4" pipe was left unexcavated to allow access into trench. the deep excavation was 3m wide and continued to bedrock.</p>
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Figure 144 Location of TT6-4, facing northeast.



Figure 145 Cobbled surface in TT6-4.



Figure 146 TT6-4, showing depth of excavation at north; note stone set in orange clay (C6-4-06).

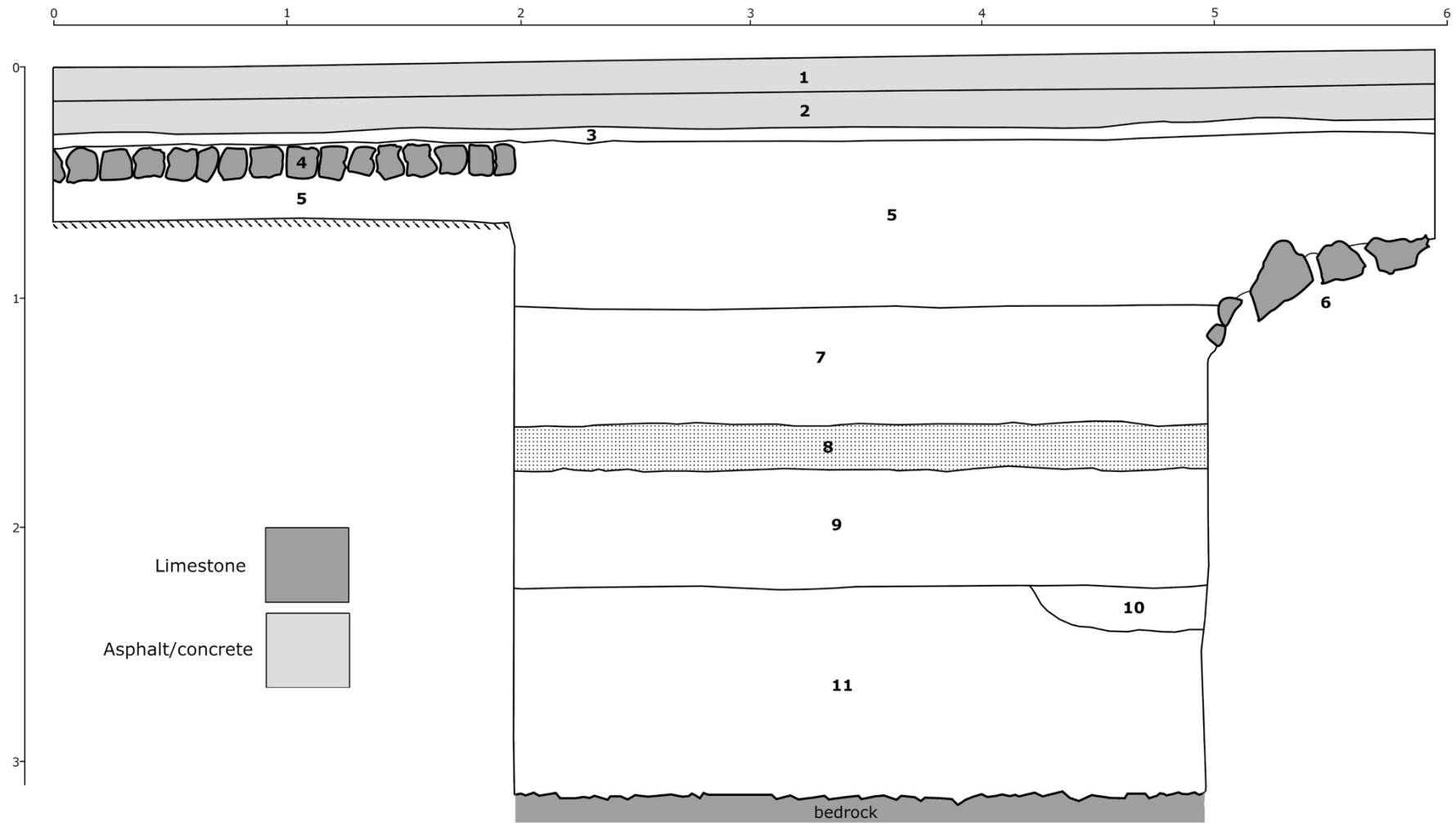


Figure 147 TT6-4 profile drawing of southeast-facing wall

TT6-5

TT6-5 was located outside Limerick Courthouse, it was orientated ENE/WSW and measured 6m by 1.5m. The works were undertaken on 27th of August.

Results

This trench was located outside the front entrance of Limerick Courthouse to assess the ground in advance of proposed works for a gravity sewer from the Council Buildings towards George's Quay. The trench was in a paved open area. The trench measured 6m by 1.5m wide and was excavated to an average depth of 2.2m. Groundworks exposed modern upper layers of brick on sand bedding, a layer of asphalt and a layer of concrete. Below this, at a depth of 430mm below present, was a cobblestone layer (C6-5-05), representing the ground level following the development of the courthouse. The cobbles were well sorted and set in a grey brown sand. The water rolled stones averaged 120-150mm long by 80mm wide and were set lengthways roughly orientated NE/SW. This layer was best preserved at the NW end of the trench. Through the centre, the cobbles were cut by a 800mm wide service trench running NW/SE containing a 6" cast iron pipe.

Below this were two successive layers of infill (C6-5-07 & C6-5-08). Both were composite deposits containing frequent fragmented brick and slate with root inclusions. At the base of the trench was a dark grey silty clay with occasional bone, mostly concentrated to the north (C6-5-09). To the south was a large angular boulder with associated smaller stones. This stone was not bonded but looked quarried and inset to provide a solid foundation.

Conclusions

Groundworks in TT6-5 exposed a layer of cobbles (C6-5-05) contemporary with the development of the Courthouse built in 1809 overlying earlier infills containing mostly 19th century material. At the base of the trench was some quarried unhewn stone blocks, likely used as solid infill.

Table 25: TT6-5 Summary of results

Trench number	TT6-5
Dates excavated	27/08/2020, Frequent heavy showers
Location	Merchant's Quay, in front of courthouse
Co-ordinates (NW corner)	N 557747.6786, E 657599.0214
Dimensions, orientation	6m L ENE/WSW, 1.5m W
Ground level (ASL)	4.0250m
Maximum depth	2
Services exposed	6" cast iron pipe across centre of trench and 4" pipe at very north
Archaeological significance	Layers of early 19th to late 18th century infill, over large quarried boulder at base of trench
Recorded contexts	C6-5-01: Paving bricks 80mm thick C6-5-02: Sandy bedding 100mm C6-5-03: Layer of asphalt 100-180mm C6-5-04: Concrete layer 100-150mm C6-5-05: Well sorted cobblestone surface found 400-580mm below the surface set in grey brown sand. The cobbles were water rolled stones averaging 120-150mm long by 80mm wide set lengthways and orientated roughly

	<p>NE/SW. This layer was best preserved at the NW end of the trench. Through the centre the cobbles were cut by a 800mm wide service trench running NW/SE containing a 6" cast iron pipe</p> <p>C6-5-06: Layer of yellow brown sand found to the north of the trench 2.2m L by 350mm thick.</p> <p>C6-5-07: Mixed infill layer, dark brown to yellow-red silt, found throughout length of trench 700mm thick.</p> <p>C6-5-08: Dark brown, mixed infill silt, with frequent inclusions of brick and mortar patches 0.9-1m deep</p> <p>C6-5-09: Dark grey silty clay (wet), confined to north of trench 2.6m long by 300mm deep.</p> <p>C6-5-10: Large boulder associated with two moderately sized stones at base of trench, the boulder appeared quarried, based on angular shape</p>
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Figure 148 Cobbled surface outside Courthouse in TT6-5.



Figure 149 Depth of excavation TT6-5, showing cast pipe service.



Figure 150 Conclusion of excavations in TT6-5, facing east

Area 7

Four trenches were excavated in Area 7; two along George's Quay directly east of Bridge Street along the north bank of the Abbey River and two on Creagh Lane, that runs north of George's Quay to Mary Street.

The area has high archaeological potential as it is close to recorded and suspected features including the southern course of the city wall within Englishtown as it ran along the north of the Abbey River, one of the tower and gateways along the wall known as Creagh Gate (Collins et al. 2008: 101) and the location of Fanning's Castle (LI005-017004, NM 383), a 16th-century tower house that stands east of Creagh Lane. George's Quay was built as part of the Georgian redevelopment of the area, and its construction was completed in 1763 (O'Flaherty 2010: 8). A key question was the impact that these works and subsequent activity have had on earlier archaeological features.

Creagh Lane, the narrow, sloping street that runs perpendicular to the north of George's Quay, has medieval origins, and its name is first documented by Hardiman in c. 1590 (O'Flaherty 2010: 15), though it was occasionally called Chapel Lane. The lane was the location of high-density housing in the 17th century consisting of wooden 'cage work' structures which were susceptible to fire and the area was badly damaged in 1618 and in the Cromwellian siege of 1651 (O'Flaherty 2010: 5-6). Creagh Lane was the site of a medieval Augustinian Friary whose exact location is not known, though it might equate to the position of the friary built along the west side of the lane in 1778 (O'Flaherty 2010: 23). Excavations in the 1990s identified the walls of a medieval house (LI005-017130-) at the northern end of Creagh Lane (O Rahilly 1997); at the southern end of Creagh Lane, archaeological testing reported remains of the town wall, at the junction with George's Quay (O'Donovan 1998).

Planned works for the KIFRS in Area 7 involve the installation of a gravity sewer. Two trenches on George's Quay (TT7-1 and TT7-2) were positioned to investigate the potential presence of the city wall, whose alignment at this location ran along the centre of what is now George's Quay; the trenches along Creagh Lane (TT7-3 and TT7-4) were excavated to investigate the presence of archaeological features at a location close to documented above- and below-ground medieval structures and deposits.

TT7-1

Trench TT7-1 was aligned northeast/southwest across the centre of George's Quay, 6m east of the junction with Bridge Street and directly south of the Locke Bar, 8.8m north of the parapet wall of the quay above the Abbey River (Figure 151). The trench was aligned northeast/southwest and measured 4m length by 1m width. The camber or slope of the road is pronounced here, such that the northern end of the trench is some 400mm lower than the southern end, as the ground rises to the northern side of the Matthew Bridge (Figure 152).

Background

TT7-1 intersects the likely alignment of the city wall as it ran east/west along George's Quay from Baal's Bridge to the Potato Market (Collins et al. 2008: 101-102). Sections of the wall have been identified from excavations further to the east, particularly at the Barrington's Hostel site north of Baal's Bridge at the junction of George's Quay and Mary Street, 200m to the east (Collins et al. 2008: 101-102; Moloney 2007, 1-10). Closer still, archaeological testing for drainage works at the foot of Creagh Lane, 60m from TT7-1, revealed masonry structures interpreted to be 'the location of the town wall running parallel to the river along the centre of the present road' (O'Donovan 1998). At Little Creagh Lane, organic deposits containing medieval ceramics were found to depths of 3m, though the city wall was not definitively identified (O Rahilly 1997. 354).

Results

Excavations began by removing the current brick paving surface and then breaking through two layers of concrete to a depth of 270mm. Below the concrete was yellowish red silty clay (C7-1-04) and beneath this dark brown clayey sand (C7-1-05) with frequent, angular stone

inclusions and containing mortar, brick, bone and shell. Two thin lenses of mortar (C7-1-12) and (C7-1-13) slice horizontally through this fill at the southern side of the trench. Cutting vertically through context (C7-1-05) is a trench containing an 80mm diameter plastic pipe (C7-1-11) whose top is 750mm below the surface (Figure 153). The cut for the plastic pipe (C7-1-10) is clearly visible in the profile as a straight slit trench filled with grey gravel with a flat base at 850mm depth (Figure 154). Below the cut for the pipe is a continuation of dark brown clayey sand, but with less frequent stone (C7-1-06), and this reaches a depth of 1600mm, below which is very dark brown humic clayey silt (C7-1-07) with a moist and organic consistency and containing glazed pottery sherds, bone, shell and fragments of stone adhered with mortar. The ceramics include sherds with slip painted and yellow glazed incised (sgraffito) decoration. The dark soil may be equivalent to the organic rich soils described from excavations at nearby Little Creagh Lane, which contained medieval glazed pottery (O Rahilly 1997. 354).

At a depth of 2m, a mortared stone feature (C7-1-08) was revealed in the centre of the trench (Figure 155). The feature was solid, immovable and clearly an *in-situ* structure. Once the top of the feature was exposed, the trench walls were secured so that the trench could be safely entered to clean and inspect the feature. The top and sides of the feature were cleaned with a trowel, and a small amount of soil on either side was excavated to establish the feature's alignment, its construction, coursing, facing and the nature of abutting fills.

Hand excavation and cleaning established that the feature is a stone wall bonded with mortar whose northern side is a straight line with a well-defined defined face but the southern side is rougher and either collapsed or has the facing removed or collapsed (Figure 156). The north/south width of the feature is 1.8m of which the northern 0.6m is better preserved. It is constructed of angular limestone set in plentiful mortar, which is coarse sandy and pale yellowish brown in colour. Excavation on the northern side exposed two irregular courses of stonework, approximately 100-150mm in height, and revealed the wall to a height of 240mm, though this is suspected to be just the upper part of what might be quite substantial remains.

On the north side of the wall, a different fill was distinguished, absent on the south of the wall, which is brownish grey clay (C7-1-09) with a firm and moist consistency. This clay abuts the wall, and though no artefacts were recovered, it appears to be introduced rather than natural, perhaps as a foundational support for the wall.

Conclusion

Excavations in TT7-1 identified the alignment of an intact, mortared wall at 2m depth. Above this depth, the fills result from deposition as part of repeated building works in the area, including the large-scale Georgian redevelopment and construction of the New Bridge in 1762, later replaced by Matthew Bridge in 1844-1846. Modern disturbance has been caused by the insertion of a plastic pipe, which had caused localised disturbance to a depth of 850mm. Below the top of the wall are suspected to be pre-Georgian deposits which may be medieval.

It is likely that the wall in TT7-1 can be identified as a stretch of the medieval city wall. First, it accords with the wall's projected location and alignment; second, its construction is comparable with other medieval masonry structures in Limerick but differs from later (18th-century) walls which used more regular sized and dressed stone elements and were bonded with less and finer-grained mortar. An alternative explanation is that the wall could be an earlier iteration of the retaining wall separating the Abbey River from George's Quay, however, this is unlikely as it appears too far north from the river's edge, as shown on historic maps and isometric illustrations of the area. The lenses of mortar (C7-1-12) and (C7-1-13) which slice through fill (C7-1-05) 1m above the top of the wall are conceivably traces from the medieval wall at the time it was dismantled from the 1760s for construction of George's Quay in 1763, or, more likely, relate to construction of Matthew Bridge in 1844-1846.

Table 26: TT7-1 summary of results

Trench number	TT7-1
Dates excavated	15-16 June 2020
Location	George's Quay
Co-ordinates (NW corner)	E 557831.8066, N 657515.9577
Dimensions, orientation	L: 4.15m NE/SW, W: 1.01m NW/SE
Ground level (ASL)	4.60-5.03m
Maximum depth	2.35m
Services exposed	Plastic pipe at 750mm depth; manhole directly to the west of trench and storm drain to the north
Archaeological significance	Mortared wall aligned E/W across middle of the trench from 2m depth is potentially a section of the medieval City Wall. Fills are modern to the depth of the wall, but potential medieval/early modern fills are present from below 2m depth (C7-1-07) and (C7-1-09).
Recorded contexts	<p>C7-1-01: Brick paving</p> <p>C7-1-02: Concrete surface</p> <p>C7-1-03: Concrete surface</p> <p>C7-1-04: Silty clay, yellowish red to brownish yellow, homogenous with no inclusions</p> <p>C7-1-05: Clayey sand, dark brown, with frequent angular stone inclusions; mortar, brick, bone and shell present; cut by plastic pipe at 750mm depth</p> <p>C7-1-06: Clayey sand, dark brown, with infrequent stone inclusions</p> <p>C7-1-07: Clayey silt, very dark brown; organic; moist</p> <p>C7-1-08: Mortared stone wall; 2000mm depth; 750mm width maximum; exposed for 240mm depth; courses 100-150mm height; fair faced on north side.</p> <p>C7-1-09: Clay, brownish grey, firm, moist</p> <p>C7-1-10: Cut of sewer pipe</p> <p>C7-1-11: Plastic sewer pipe, 750mm depth, 80mm width</p> <p>C7-1-12: Lens of mortar cutting through C7-1-05 at 730-740mm</p> <p>C7-1-13: Lens of mortar cutting through C7-1-05 at 1100-1200mm</p>



Figure 151 Location of TT7-1, facing south towards Matthew Bridge



Figure 152 Location of TT7-1, facing west along George's Quay



Figure 153 Northeast-facing view of TT7-1 at the completion of excavation



Figure 154 West-facing profile of TT7-1 at the completion of excavation



Figure 155 Downward facing view of wall C7-1-08



Figure 156 Close-up views of the wall C7-1-08

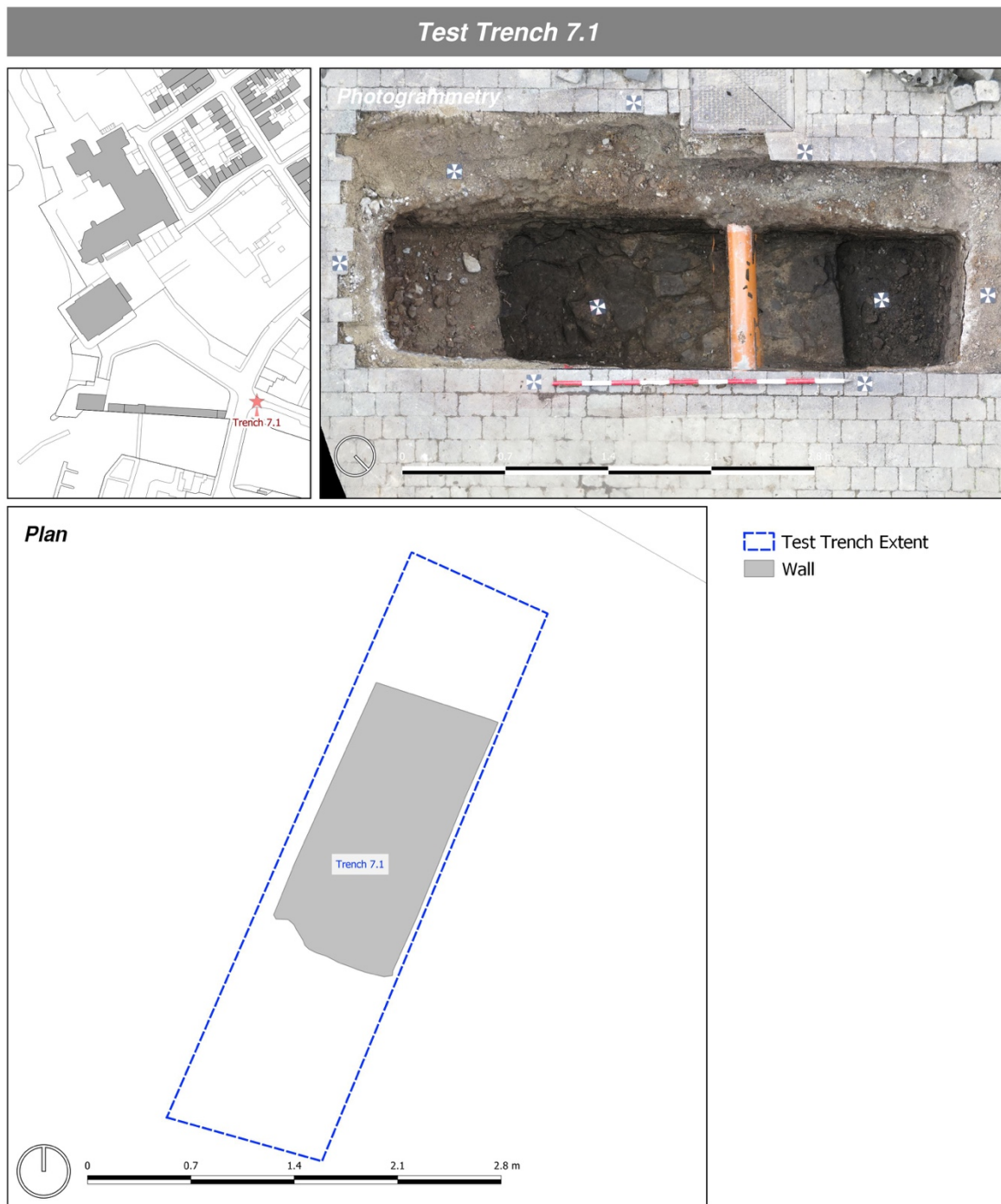


Figure 157 Plan drawing and photogrammetry of TT7-1.

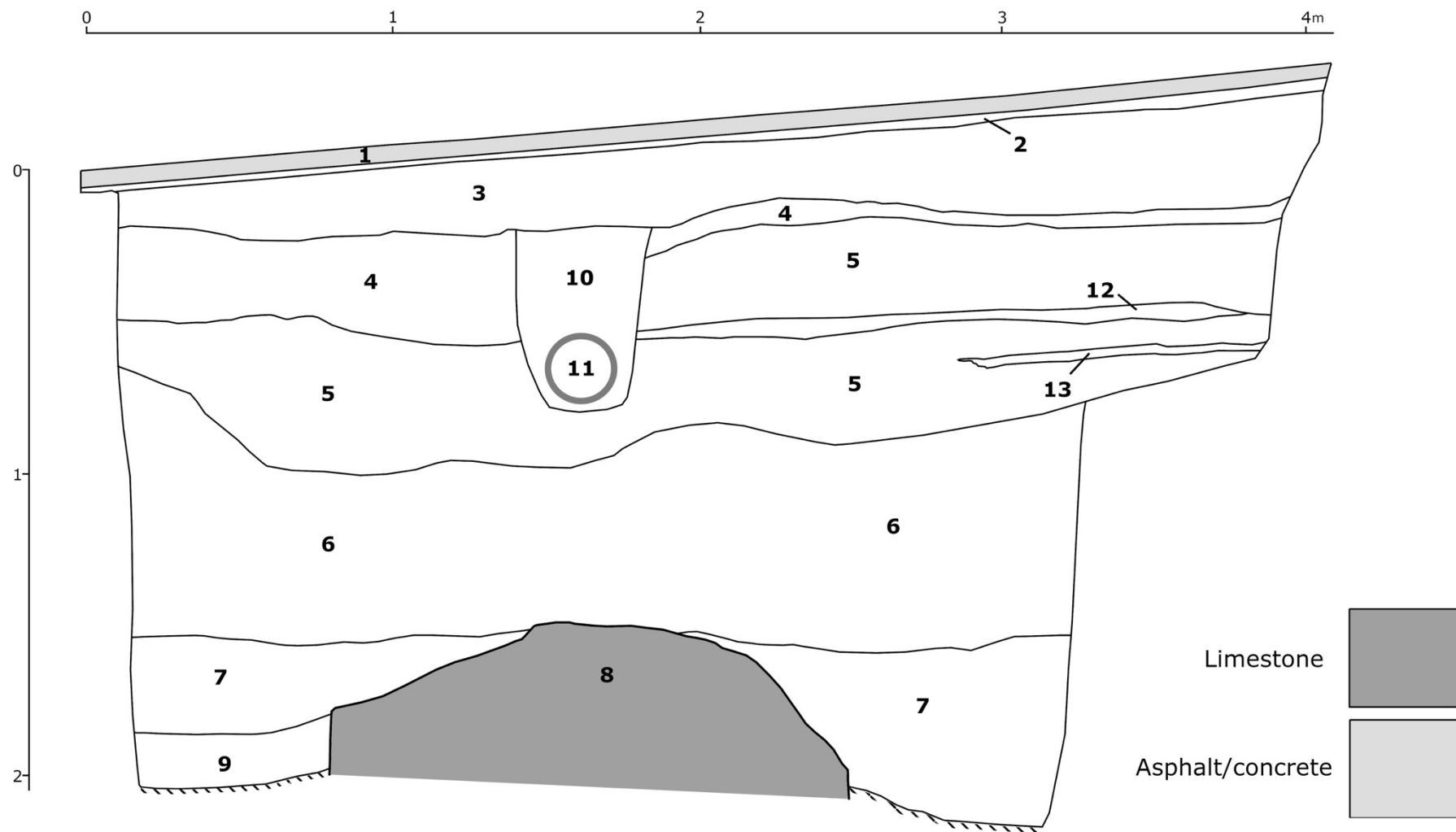


Figure 158 TT7-1 profile drawing of west-facing wall

TT7-2

Trench TT7-2 was aligned northeast/southwest across the centre of George's Quay, between the two kerbs of the street (Figure 159). The location is directly south of Little Creagh Lane, 25m east of TT7-1 and approximately 30m east-southeast of Bridge Street and 10m north of the parapet wall of the quay above the Abbey River. The trench was aligned northeast/southwest and measured 4m length by 1m width.

Background

TT7-2 is directly east of TT7-1, and sought to identify the possible alignment of the city wall which had been reported from earlier excavations slightly to the east (O'Donovan 1998). Another excavation, slightly north of the trench location along Little Creagh Lane, identified medieval deposits and structural remains of a late medieval house (O Rahilly 1997).

Results

The current brick paving surface and a layer of gravel road base was excavated. Immediately below, service pipes were exposed in the centre of the trench, consisting of a duct at 380mm depth, above a sewer pipe at 500mm depth, equivalent to that found in TT7-1. On the north side of the trench, a series of fills overlay a yellow pipe which runs along the east of the trench at 900mm depth (Figure 160). Below this, at 1.33m depth and crossing almost a third of the south of the trench, was a concrete cover which sits on a gas service; a manhole chamber is along the north edge of the trench and running along the west edge of the trench are two parallel 4" ducts. The presence of these services prevented any excavation in the northern half of the trench, where the services extend to a depth of at least 1700mm.

Excavations concentrated on the southern half of the trench where fills were removed to a maximum depth of 2.95m (Figure 161). These consist of orange-brown clay (C7-2-07), 630mm thick, overlaying dark brown clayey silt (C7-2-08) which contained brick fragments and some sherds of glazed earthenware. The more organic sandy fills revealed in TT7-1 below 2m depth were not present, and no archaeological features or deposits were identified, though a large rim fragment of yellow glazed sgraffito dish was recovered.

Conclusion

Excavations in TT7-2 revealed the highly disturbed nature of the ground at this location, with services (gas, water, sewage) extending to depths of at least 1.7m across the northern half of the trench. In the southern half of the trench, disturbance from the installation of modern services extends to depths of approximately 900mm. Below this are reddish yellow and dark brown fills containing tree roots and with brick and ceramic indicating their Georgian/post-Georgian date, likely deposited as part of the construction of George's Quay in the 1760s, though with a glazed sgraffito sherd being an intrusion of earlier, perhaps 17th century date.

Table 27: TT7-2 summary of results

Trench number	TT7-2
Dates excavated	19 June 2020
Location	George's Quay
Co-ordinates (NW corner)	E 557856.58, N 657507.84
Dimensions, orientation	L: 4m NE/SW, W: 1m NW/SE
Ground level (ASL)	4.5m (approximate – no signal for DGPS)
Maximum depth	2.85m
Services exposed	Concrete manhole chamber across north of trench; 4½" ducts at 380mm depth; 6" main at 500mm depth; yellow plastic pipe (gas?) at 900mm depth

Archaeological significance	No archaeological features or deposits identified
Recorded contexts	<p>C7-2-01: Brick paving</p> <p>C7-2-02: Sand bedding</p> <p>C7-2-03: Gravel road base</p> <p>C7-2-04: Chamber for manhole</p> <p>C7-2-05: Gravel, grey</p> <p>C7-2-06: Clayey sand, orange brown</p> <p>C7-2-07: Clayey silt, greyish brown, with roots</p> <p>C7-2-08: Clayey silt, dark brown; organic with tree roots; contains brick and 18th century pottery</p> <p>C7-2-09: Concrete cover over gas service, at 1.33m depth</p> <p>C7-2-10: Sewer pipe and cut</p> <p>C7-2-11: Rubble below gas service cover</p>



Figure 159 Location of TT7-2, facing north towards Little Creagh Lane



Figure 160 West-facing section of TT7-2



Figure 161 East-facing section of TT7-2

TT7-3

Trench TT7-3 was located on the level ground at the southern end of Creagh Lane, just north of the junction with George's Quay (Figure 164). TT7-3 was aligned north-northeast/south-southwest along the eastern side of Creagh Lane and measured 7m length by 1m width.

Background

Archaeological testing in advance of drainage works along George's Quay, at the foot of Creagh Lane, recorded masonry structures interpreted to be sections of the medieval city wall (O'Donovan 1998). The lower, southern end of Creagh Lane is also the suspected location of Creagh Gate which, according to Collins et al. (2008: 101) was '[was] named as such on White's map, but depicted as a rectangular mural tower on the 1590 and Speed's map. White located it at the end of Creagh Lane. Leask has suggested that it was a water gate'.

Results

Excavations in TT7-3 revealed that the ground at this location is highly disturbed by modern activity, particularly the installation of services. Multiple pipes (plastic, iron and terracotta) cross the trench. These works have erased any previously existing historic ground surfaces or deposits (Figure 163).

Below brick paving (C7-3-01), sand bedding (C7-3-02) and a layer of concrete (C7-3-03), multiple pipes were revealed criss-crossing the trench. Running along the western side of the trench were remains of a stone lined culvert containing a plastic pipe. This same culvert was more clearly further to the north in TT7-4. Along the east of the trench was a cast iron pipe. Towards the south of the trench were plastic ducts containing cables, at 370mm depth, and north of these was a terracotta pipe which runs east/west across the trench. Where the pipes and ducts were set in soil this was a dark reddish brown coloured clayey silt (C7-3-04).

Conclusion

Excavations in TT7-3 revealed highly disturbed ground where multiple modern services have been installed. The earliest of these is the stone-lined culvert that runs north/south along the western side of the trench. This culvert, which is heavily damaged and is mostly just a mass of stone, has been used to carry a modern plastic pipe which is in-filled with gravel. Excavations found no archaeological features or potential in this location.

Table 28: TT7-3 summary of results

Trench number	TT7-3
Dates excavated	5 August 2020
Location	Creagh Lane
Co-ordinates (NW corner)	E 557856.58, N 657507.84
Dimensions, orientation	L: 7m NNE/SSW, W: 1m
Ground level (ASL)	5m (approximate – no signal for DGPS)
Maximum depth	1.8m
Services exposed	Cast iron pipe 600mm depth on east of trench; plastic duct 850mm depth along west; 6" ceramic pipe crossing east/west; cable ducts 370mm depth at south
Archaeological significance	No archaeological features or deposits identified
Recorded contexts	C7-3-01: Brick paving C7-3-02: Sand bedding C7-3-03: Concrete C7-3-04: Clayey silt, dark reddish brown