GRANITE SETTS

Surviving Historic Street Surfaces
in Charterhouse Square, L.B. Islington
&
Ballast Quay, L.B. Greenwich

by

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HISTORIC STREET SURFACES

We are asked by Philip Davies to produce historical information and views relating to two areas richly endowed with early street surfacing: Charterhouse Square, LB Islington and Ballast Quay, LB Greenwich. This is to contribute to the discussion of listing policy regarding street surfaces, an on-going area of debate and an under-researched aspect of historic environment.

London Street Surfaces: a potted history

Paving was one of the clearest indicators of progress in the capital: fewer elements of the urban infrastructure made such a difference to urban life, and the management of roads was consequently one of the earliest aspects of local government to emerge.

Post-Great Fire dismay at the chaotic nature of London street surfaces led to several Acts which laid out demands for street surface treatments within the City. Regulations issued in 1671 insisted on cobbled main streets with flat stone footpaths. A flourishing trade in granite pebble stones was carried out with Guernsey, while Purbeck quarries supplied much of the paving stone, and those stones used to line the drainage channels in the centre of roads; Kentish ragstone was the most common alternative. Both were bedded in gravel, plentifully available in the Thames basin. Exotic variants for prestigious settings included stone from as far afield as Sweden. Surviving examples of 18th century paving[1] are now to be found principally in the Inns of Court. Many lesser roads outside the centre were made up from gravel and dirt.

Kerbs, protecting raised pavements, began to appear in the mid-18th century: previously, posts had protected pedestrians from the traffic on the street. Granite (or 'Moorstone') kerbstones became increasingly common: many were supplied from Devon (especially Dartmoor) and Cornwall. Granite was also used as a road surface: first as cobbles, and later in the form of setts. They came from a number of locations, including Cornwall and the Channel Islands, but Aberdeen supplied an increasing quantity of them from the later 18th century onwards. Isaac Ware, writing in 1768, observed that

> It will seem strange to say that the streets of *London* are paved with granite, but it is true; whoever is acquainted with the nature of stones, and walks out after a smart shower, will perceive this, the rain washing them, and giving them for a time a natural polish. These stones are brought from the island of *Guernsey*, where they lie upon the sea-shores; and it would be worth while to search that place for quarries.[2]

In 1765, the parish officials of Greenwich invited tenders 'for paving and repairing the

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[1]See Sally Jeffery's survey of surviving Purbeck paving in the City in ASCHB Trans. 13 (1988), 35-36.

[2]*A Complete Body of Architecture* (1756-7; 1768 ed.), 44.

streets with good Guernsey or Jersey pebbles and Kentish ragg stones'.[3]

Granite setts, as opposed to granite pebbles, required greater human input in that they had to be squared off by hand, but once worked were capable of much greater precision of laying, and could help construct a far smoother street surface. Their introduction to London as a street surfacing material is generally dated to the later 18th century.[4] Not until the next century were they commonly found, however: 'in general granite setts and certainly wood blocks are more a feature of the nineteenth century'.[5]

The precise source of granite setts is often hard for the non-specialist to determine. Subsequent other sources of setts were Mountsorrel in Leicestershire, the Midlands, the Lake District, Lowland Scotland, Ulster, and, of course, Aberdeen. Improvements in transport greatly facilitated the diversification of this trade, but shipping remained the most important means of delivery. Scandinavia supplied an increasing amount of granite in the later years of the 19th century.

As regards paving, the Isle of Purbeck initially supplied much of London's needs: Batty Langley described it in 1726 as 'best for Foot-ways, Pavements of Kitchens, Brew-houses, etc. and when laid in Square Work, makes a handsome Pavement'.[6] More local Kentish 'rag paving was formerly much used in London', wrote one 1812 commentator,

> but is very inferior to the pebbles; it is dug in the vicinity of Maidstone, in Kent, from whence it has the name of Kentish ragstone; there are squared stones of this material for paving coach tracks and footways.[7]

Canal-borne York stone was used increasingly from the late 18th century onwards, and by the 1830s had all but replaced Purbeck as the principal material. Portland stone was also used for paving, but was considerably more expensive. It was never used for road surfacing.

John Loudon Macadam (1756-1836) introduced a new system of road building based on the use of stone chippings and a cambered road surface, discharging into a lined drain: the road surface was compacted by use and became impervious to water. Thomas Telford (1757-1834), another Scot, developed a more costly, but longer-lasting, technique based around graded stones on a firm foundation: such methods do not seem to have been greatly used in the Metropolis, being more suitable for turnpike rather than metropolitan use. From the mid-19th century road surfaces were bound with tar (hence the trade name Tarmacadam) to reduce dust and loose stones, and produce a quieter and smoother surface:

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[3]Unidentified newspaper cutting in Greenwich local studies library.

[4]E.g. by Ashurst and Dimes (1990), 43.

[5]James Ayres, *Building the Georgian City* (1998), 98.

[6]*Ancient Masonry* (1726), 396.

[7]*Rees's Manufacturing Industry* (1812), quoted in Jeffrey (1988), 32.

Regent Street was re-surfaced with such a material in 1863, not necessarily for the first time. Wooden blocks were also used to this end.

It appears that the capital underwent major campaigns of re-surfacing in the middle years of the 19th century as part of the wave of metropolitan improvements of the time. Busy roads were given the highly durable surface of granite setts: unknown acres of these remain, hidden under later asphalt. Mountsorrel setts (frequently a dull red-brown in colour) were vigorously promoted following the arrival of railway links and enjoyed the advantage of being quarried much nearer to London than their rivals: they were extensively used by the Metropolitan Board of Works in their many public works.

Charterhouse Square Road Surface: outline history

The area to the south of the Charterhouse has always been a pentagon-shaped open space, semi-private in nature and unusual in character. Legally it is an extra-parochial area, subject to the unusual jurisdiction of a committee of Trustees, headed by the Master of the Charterhouse, which arrangement was created under an Act of 1742. The first volume of records, covering the period up to c1780, does not survive but subsequent records are pretty complete and have been studied by the Survey of London team.

The garden within the square was criss-crossed with rows of trees from the early 18th century: the diagonal paths were set out and laid with gravel in 1727. In 1743 palisades were laid out around the square, dividing it from the road surface, which was presumably cobbled. The earliest view of part of the square is a bird's eye view of the Charterhouse, published in Strype's 1753 edition of John Stow's *Survey of London.* The earliest view to show the street surface is an 1816 Ackerman print which shows there was no pavement around the inner side of the square, and that the road surface was smooth. A sketch of c1840 suggests that the road surface was made up of broad cobbles, largely covered with gravel or dirt.

The earliest photograph, by Valentine Blanchard of c1860, reveals that a pavement around the inner side of the square had by then been constructed, but the road surface is hard to determine. This has changed by the time of the next photograph, by York & Sons of c1870. The road is now paved with granite setts, to all purposes identical to the ones still found there today. It thus appears that the present road surface probably dates from the 1860s. No payments for such work have been located by the Survey of London, however.

The Charterhouse Square setts are in a variety of sizes, colours and granite types. The granite setts have endured much wear and are pleasingly irregular in surface finish: they contrast in character with the more regular setts of other Victorian streets, and may reflect the re-use of earlier material. If so, this would lend them extra interest. Small areas of end-set paving, possibly of Purbeck, survive in front of the western pair of gate piers. The coursing runs across the road surface, and changes direction abruptly at the corners: bands of narrower, closely-set setts run across the two northern corners of the Square, creating crossings which could have been swept and kept cleaner than the larger setts of the road

surface. These crossings also help to define the different zones of the surface lay-out. The Square's fabric is now marred by the creation of concrete parking areas on the outside of three sides of the Square, which seems to date from the 1960s: visually disturbing as the car parking is, it is nonetheless a major earner for the Trustees.

Ballast Quay and nearby streets: granite setts

Ballast Quay, just to the north-east of Greenwich power station, stands at the centre of a network of streets which have retained their granite setted surface. The other roads to have such a feature are the upper stretches of Hoskins Street and Lassell Street, and Pelton Street to the east of the junction with Banning Street.

These streets date from the first half of the 19th century: Ballast Quay (formerly Union Quay, and thus-named because ships with discharged cargoes were laden with local gravel from this point) possesses a number of houses of this date, and is shown as developed on Wyld's 1827 map, while Pelton Street is largely made up of houses of the 1840s and 1850s. This land, once owned by Morden College, was leased to William Coles Child, head of a prominent coal importing business, who began to develop the area from the 1840s.[8] It is possible that the homogeneity of street surfaces in the area around Ballast Quay owes much to the Coles Child estate.

The road surface is consistent throughout these streets, consisting of very regular speckled grey-mauve setts, 3" wide and from 5 to 9" long. The precise date of their laying is unclear, but a date in the 1860s (the same as for the Charterhouse) seems quite likely also. The pavement in Pelton Street was relaid in 1870, according to the records of the Greenwich Board of Works[9]. The creation of this body in 1855 (replacing a long-established parochial body) ushered in a new phase of road improvement.

The streets in question are located close to an important site in the history of granite sett importing. Just to the north of Ballast Quay and Lovell's Wharf stands Granite Wharf. Now owned by Tarmac (and before that, from 1936, by Wimpey's), this was originally the stone-unloading point of John Mowlem's flourishing building and masonry firm, established in 1822 and responsible for many of the major contracting projects of the time. The striking wall of miscellaneous stones in nearby Cadet Place testifies to the presence here of a stone importer: Mowlems established themselves at Granite Wharf in 1852:[10] in 1850, Mowlem purchased quarries on Guernsey, as well as ships, for transporting worked

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[8]Mary Mills, *Greenwich Marsh - the 300 years before the Dome* (1999), 69-73.

[9]The exact date of the laying of granite setts in these streets could probably be established from a thorough inspection of the Board of Works minutes: only those for 1869-71 were consulted, owing to shortage of time.

[10]Mary Mills, 75.

granite in the form of setts. Mowlem thereby entered into direct competition with the Johnson Brothers, well-established paviours who energetically promoted the use of Dartmoor granite from quarries which they had leased. He was thus a major promoter of the granite sett, and had been responsible for laying the first pavement of granite setts in the capital: a Telford technique which was first used in 1840 on Blackfriars Bridge. The records of the Greenwich Board of Works include numerous references to stone being supplied for local use by the firm. It is beyond coincidence that so fine a survival of granite setts as in the Ballast Quay area should be found so close to Mowlem's wharf.

Moreover, granite setts were a suitable street surface for areas in the vicinity of heavy industrial activities, the road traffic generated by which demanded stout roads. The Coles Child firm constructed a lime kiln nearby, and supplied coal for household delivery from the Greenwich waterfront. Stout roads surfaces were vital to deal with the resulting heavy traffic, and it is thus possible that the Coles Child Estate itself paid for the laying of granite setts in the surrounding streets.

Streets as Structures: thoughts on the protection of historic street surfaces

Granite setts require dressing, setting and consolidation in the same ways as a wall. While they possess the advantage of gravity to keep them in place, they have to endure the constant assault of heavy traffic which disturbs their settings and can shatter the setts. Paviours were a particular arm of the masons' trade, and the construction of roads was recognised as a branch of the building trades. The listing of bollards (sometimes themselves of stone) indicates that historic value can be officially accorded to elements of street construction. Several street surfaces have been listed in their own right, but have subsequently been de-listed following objections from traffic engineers: this was the fate of Elder Street, Fleur de Lys Street and Folgate Street in Spitalfields.

Street surfaces play a significant part in defining historic street character and contribute significantly to the setting of buildings. Recent directions in conservation thinking place an ever greater emphasis on concepts of Place: this ought to pay greater attention to elements such as street surfaces which help to define locality. Arguments such as these are used as grounds for not listing individual buildings: a more 'holistic' approach is advocated as the way forward, but in the interim, protection continues to be denied and street surfaces (as well as buildings denied listed status) continue to be at risk. Raised pavements with associated railings have been listed (in Islington: Cross Street? And in Brighton), but they have an obvious 'structure' element about them which differentiates them from flat pavements.

Just how much historic street surfacing survives is a moot point: a survey has been carried out of surviving early Georgian paving, but no inventory has to my knowledge been undertaken of later survivals.

Geology offers another strand of historic and scientific interest. In contrast to modern artificial street surfacing materials, natural street surfaces connect the pedestrian with

distant geological upheavals and the origins of earth history. In more recent terms they mirror changing developments in the stone trade, in street-laying techniques, in the impact of local municipal government, in local economic considerations, in changes in human behaviour: all are reflected in the humble road.

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SOURCES

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23 Crowley House and water-front. Watercolour, c.1820, showing area to west of Ballast Quay

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30 Ballast Quay and Lassell Street junction, to north-east 2000

31 Lassell Street, to south 2000

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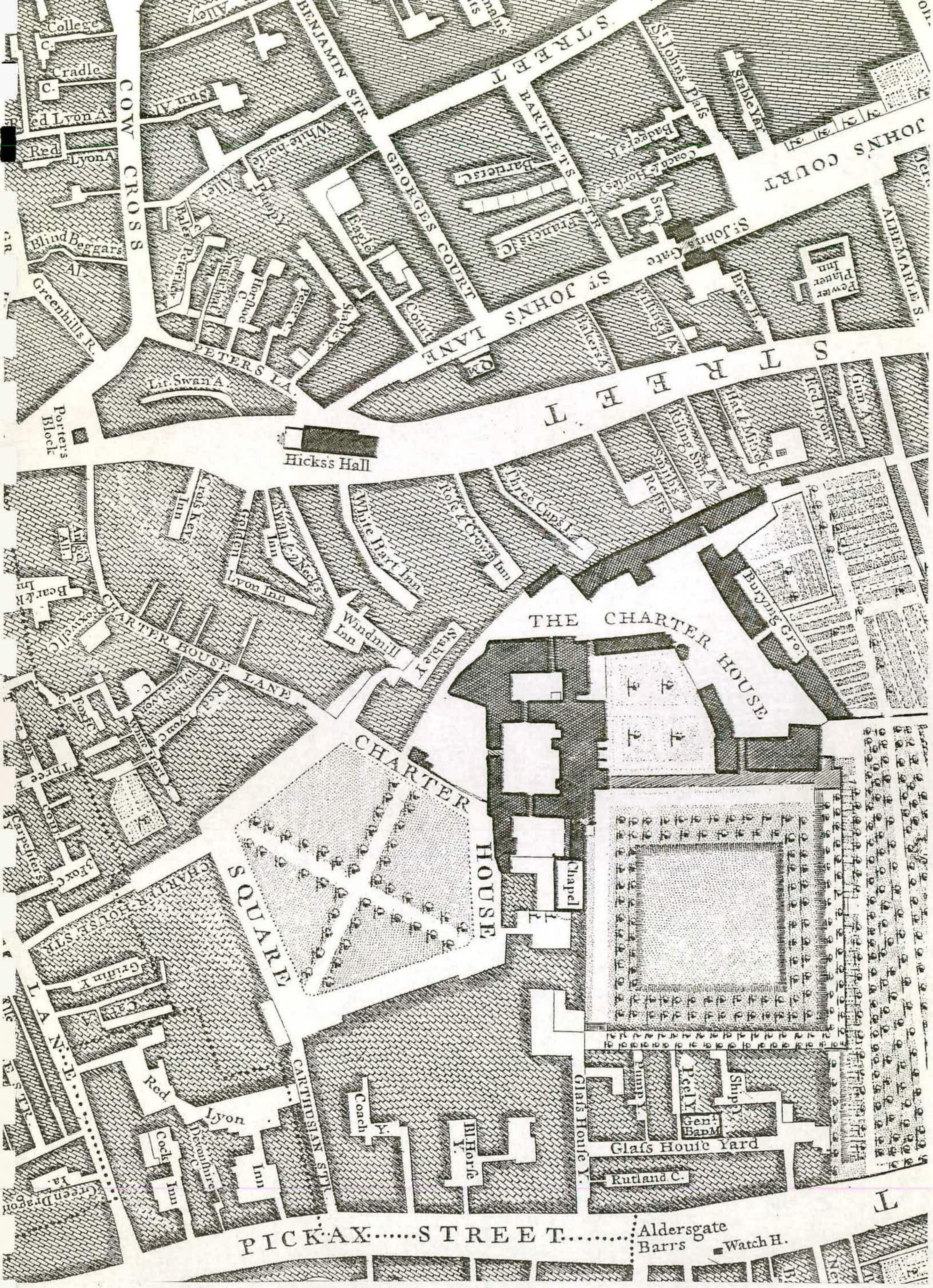
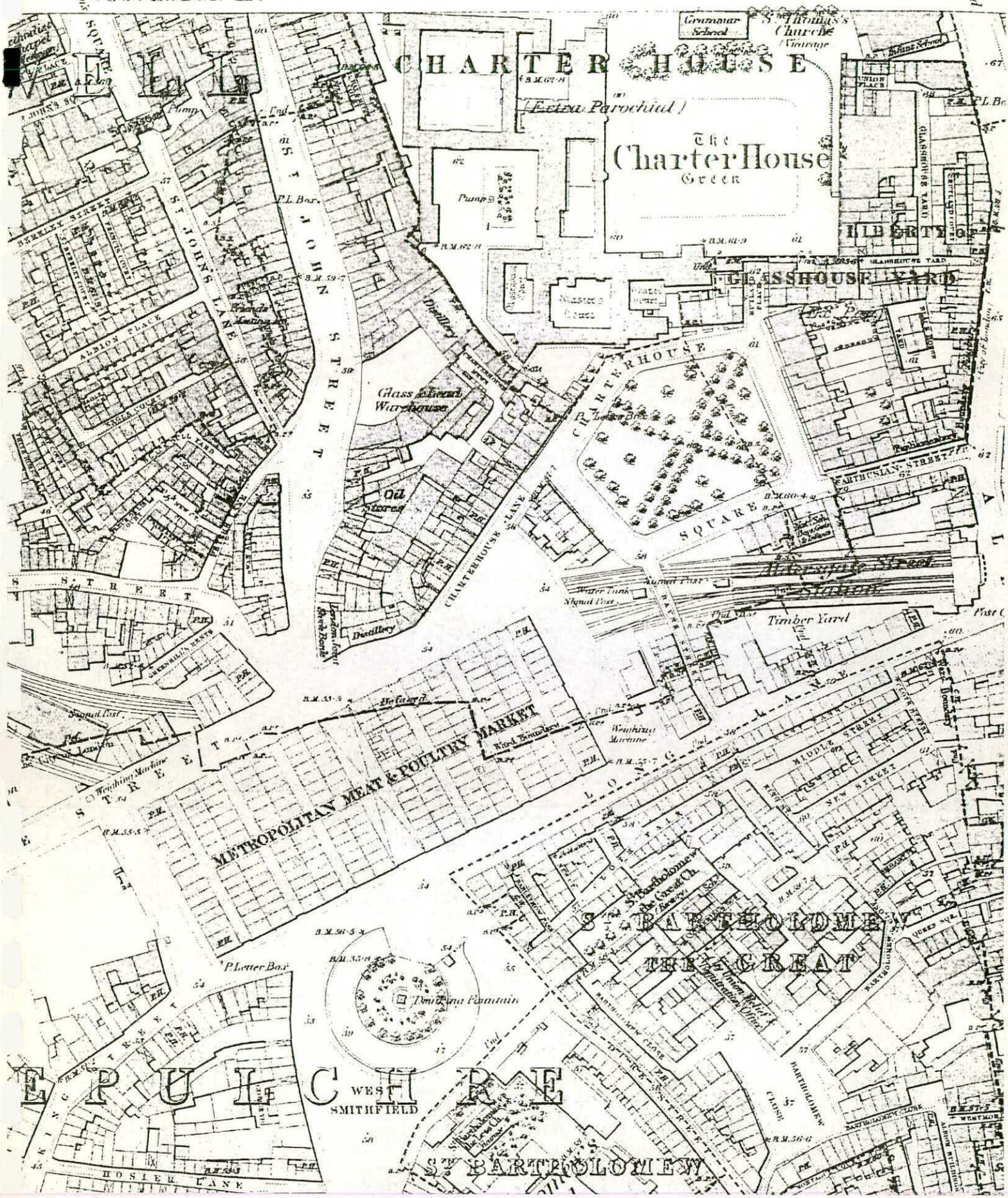
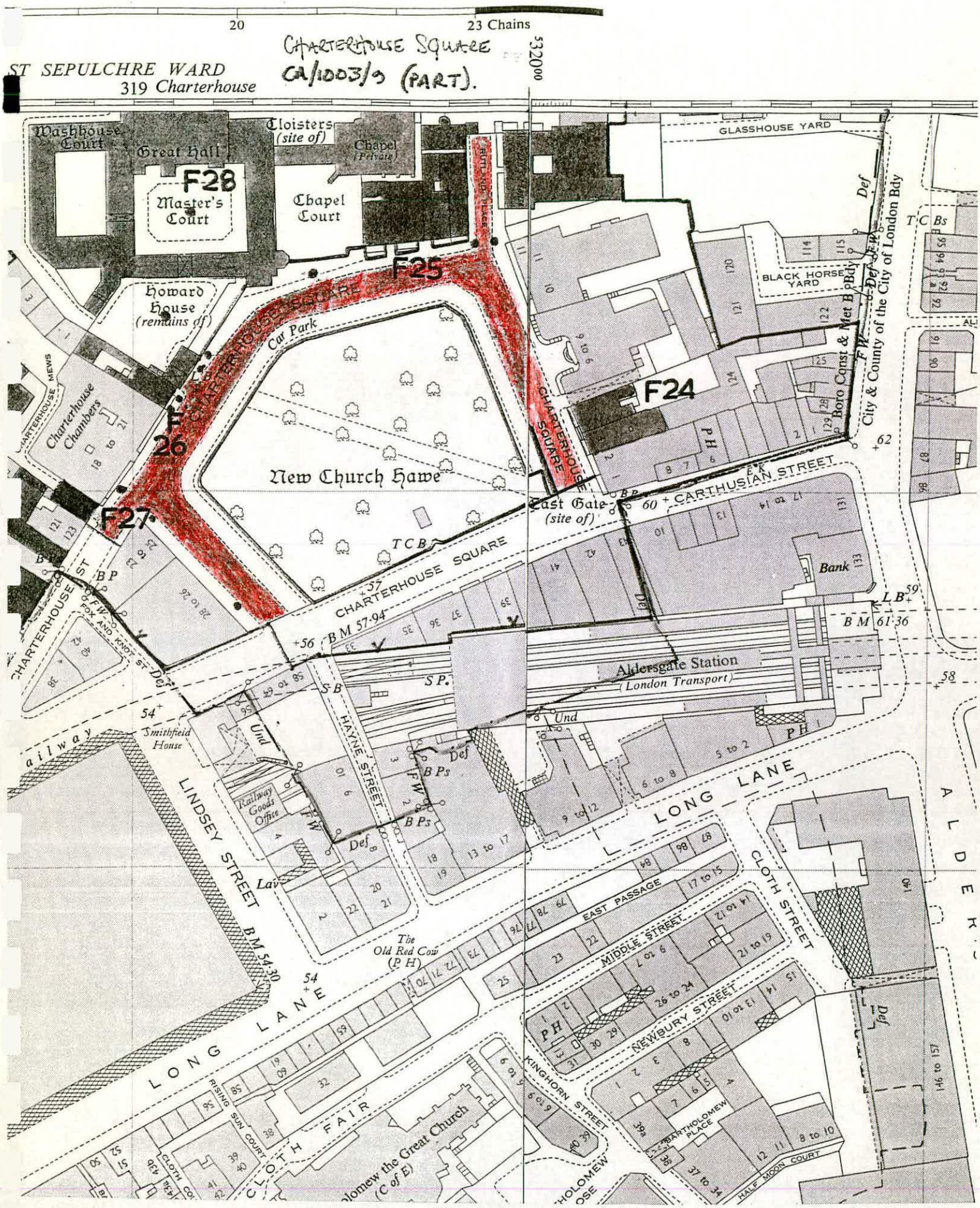


2 Roque's map of 1746, showing area of Charterhouse Square



3 OS 25" map of 1873, showing area of Charterhouse Square



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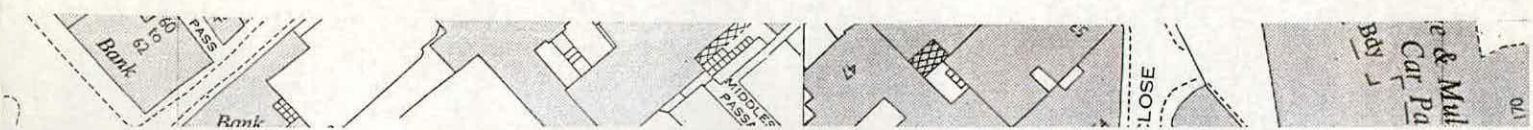

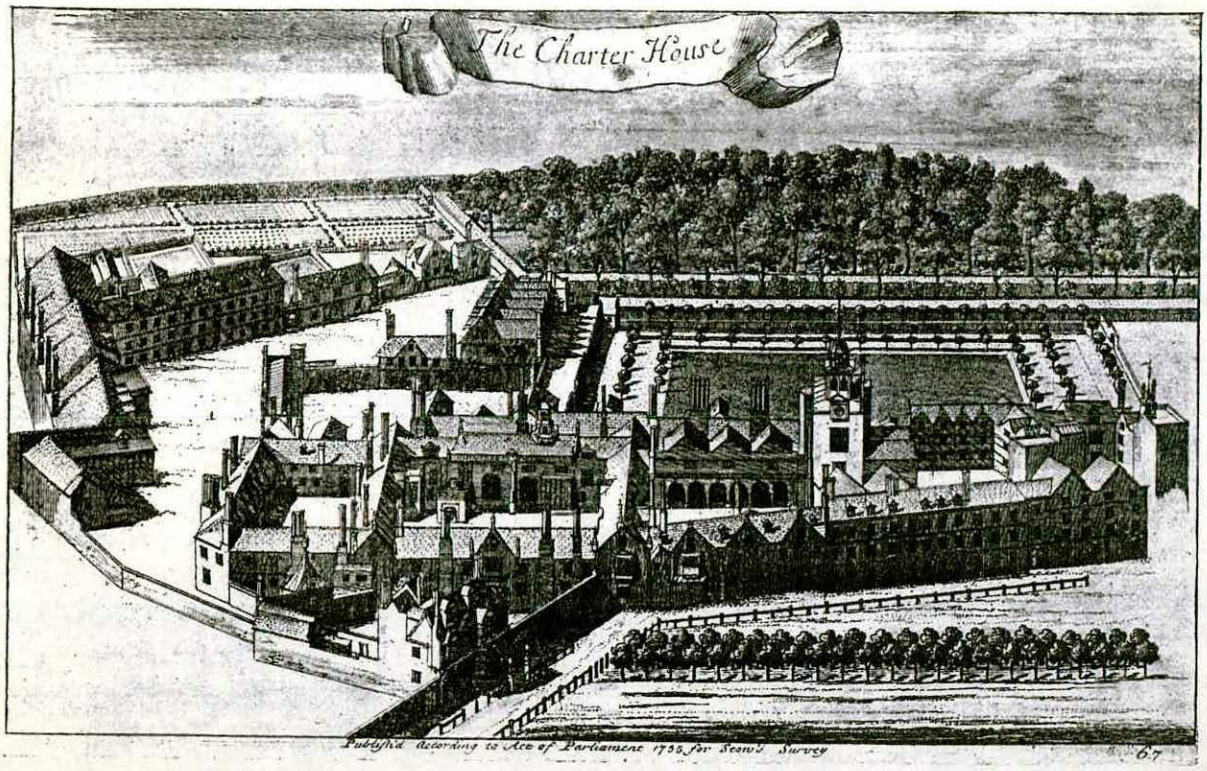

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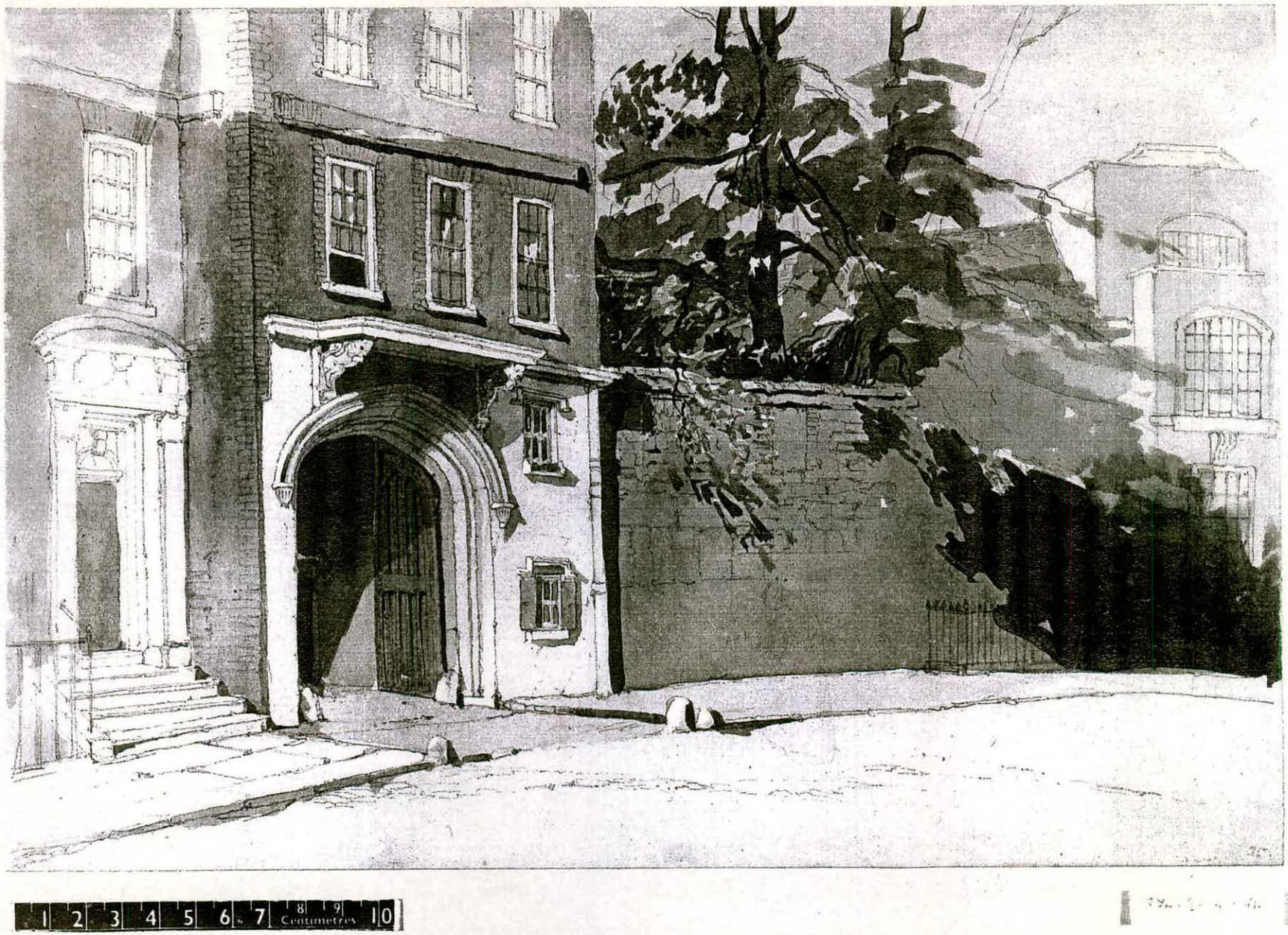

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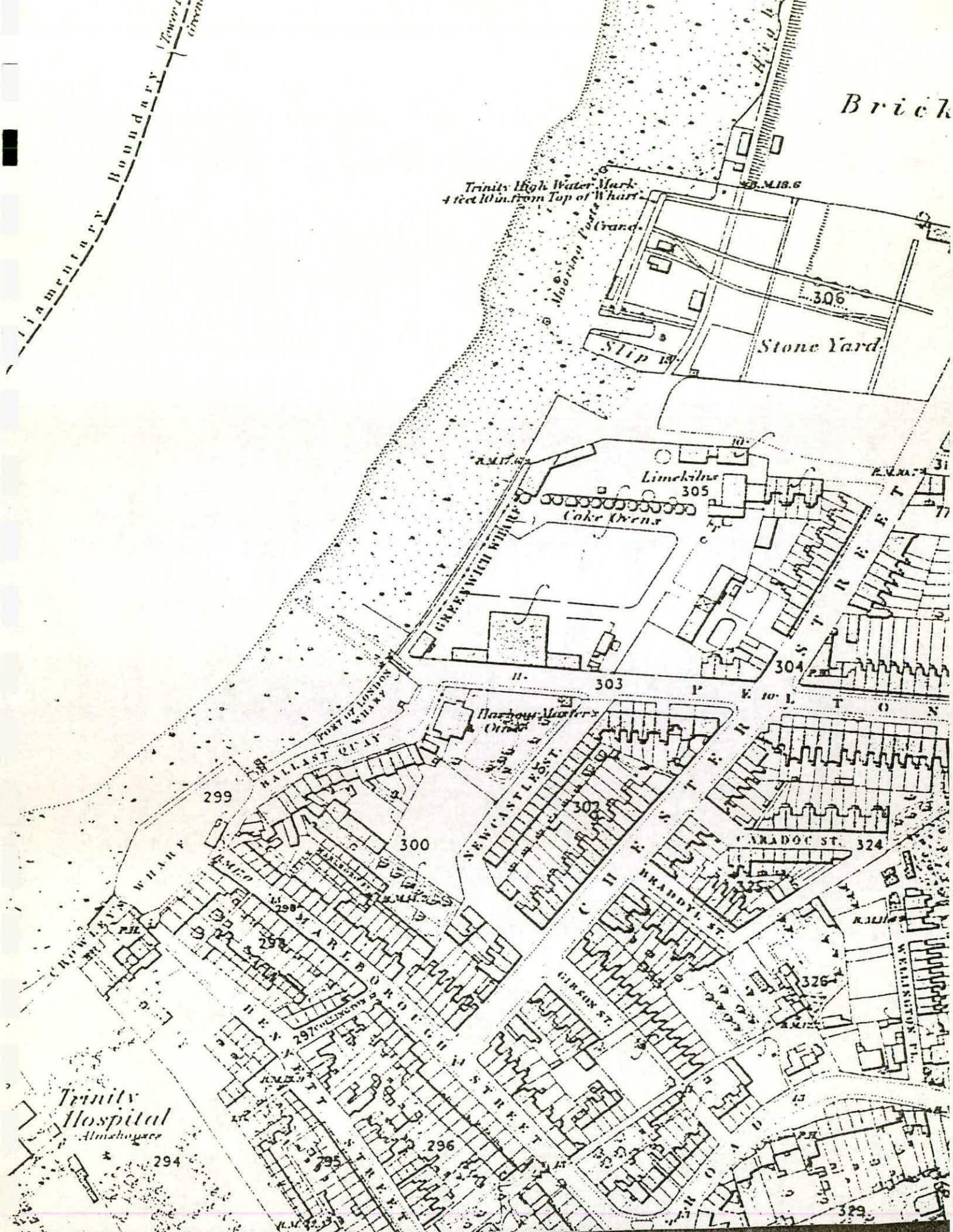

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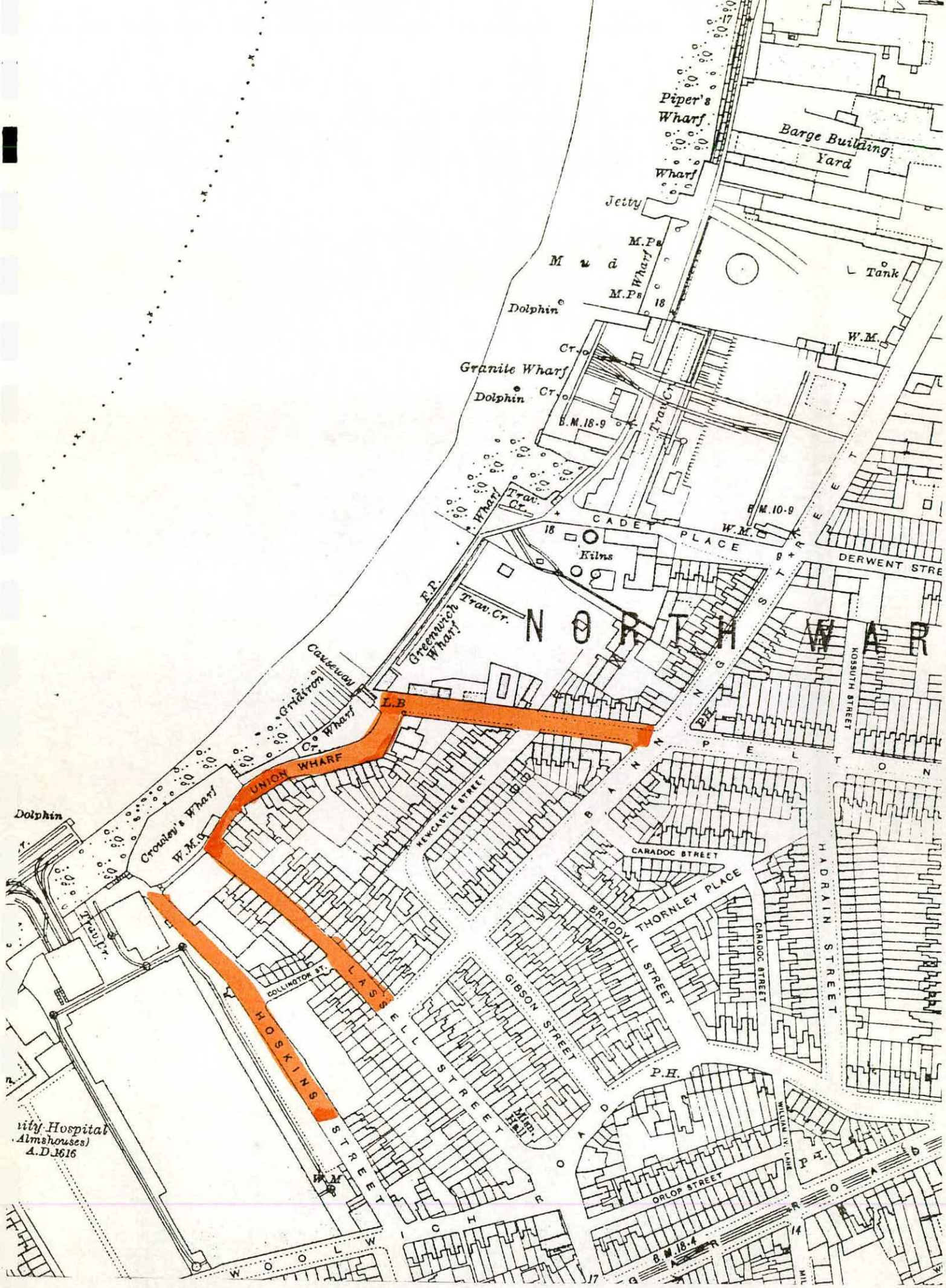

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