Naval shipbuilding came to Woolwich in 1512 and settled on the western riverside by the 1530s. Two water-filled docks still mark the spot (ills 74, 75, 76, 102). The royal dockyard expanded gradually as it became one of Europe’s principal shipbuilding establishments, pushing back into a hillside and out onto land reclaimed from the river. After the 1720s there was room to grow in only one direction, westwards. Despite the site’s unsuitability for ever larger vessels and other intimations of decline, more ground was taken and by the end of the Napoleonic Wars the dockyard extended as far as present-day Warspite Road.

The development of the western lands in the 1830s and 1840s as a base for the early steam navy was marked by innovations. But drawbacks could no longer be overridden and the dockyard closed in 1869. The site was subsequently used for military storage, as an annexe to the Royal Arsenal. In the 1920s western parts were sold off, principally to the Royal Arsenal Co-operative Society for its Commonwealth Buildings depot. The older eastern dockyard was not disposed of until the 1960s, when Greenwich Council acquired it for housing; here the Woolwich Dockyard Estate was built in the 1970s. Speculative housing developments to east and west followed from 1989. Little remains from the dockyard’s early centuries, the oldest survival being the Clock House, offices of the 1780s. There are more substantial remnants from the steam factory, and the former dry docks and two shipbuilding slips are linked by a long river wall, all naval construction of the 1810s to 1850s.

A separate part of the parish west of Warspite Road is also covered in this chapter. From the 1860s this was dominated by the Siemens Brothers factory, first producing telegraph cables, then telephones up to the 1960s. Several of Siemens’s large buildings remain in an industrial estate. An adjacent former board school of the 1890s faces the Woolwich Road as do other fragments of settlement from that time. There are also some independent river wharves and, to the far north-west, there has been clearance for facilities associated with the Thames Barrier, which is outside the parish of Woolwich.

**Woolwich Royal Naval Dockyard**

Henry VIII’s selection in 1512–13 of Woolwich and Deptford as places for the construction and repair of the state’s largest warships represented a reorientation...
Early history

By the end of the 1530s the Crown was operating in Woolwich from a different place, roughly two acres to the west of the parish church that were identified in 1546, when they were purchased outright, as 'Boughton Docks lying together environed wyth a Sandehill callyd Our Ladye Hyll'. This implies that the docks had private origins, the Boughton family having held manorial land in Woolwich since 1495. Perhaps the state’s activities near by had inspired a speculative venture. There were two docks on an unlevelled but probably previously quarried tract of Thanet sand very close to the churchyard, which evidently occupied the hillside right up to its margins, rising steeply away from the water’s edge. The water line, prior to embanking, may have been...
as much as 200ft (60m) further south than at present. A
hillside quarry may seem an inappropriate place for a
dockyard, but the site was exceptional on the downriver
Thames for not being floodplain and for having solid
chalk bedrock. Woolwich Dockyard took root on a two-
acre enclave, located around the inner ends of the two
extant dry docks towards the east end of the later much
larger complex (Ill. 75).³
There is little documentation for the physical make-
up of Woolwich Dockyard in the second half of the
sixteenth century, but large ships were launched, a tile
kiln was established, Elizabeth I visited in
1559, and a
ropeyard was formed near by in
1568. Peter Pett, Master Shipwright at
Deptford, who operated in the notably corrupt milieu of
shipwrights, reported on the poor condition of all the naval
dockyards. His recommendations for expenditure on new
buildings and repairs at Woolwich appear to have been
little heeded.³
But it was in Woolwich that the next century's most
prestigious sea-going ship, the Sovereign of the Seas, was
built in 1634-7. For the size and quantity of its vessels
compromised mud-cut, timber-lined, slip-like troughs with
gates, to permit ships to be floated in and propped up
prior to drainage for repair in the dry. On their uneven and
slipping margins there would have been a scatter of small
buildings; the site's constraints no doubt forced the sepa-
rating of the ropeyard. After 1570 Chatham Dockyard,
which rises more closely to the sea, challenged the supremacy of Woolwich
and Deptford and the founder of a fecund dynasty of ship-
wrights, Peter Pett, Master Shipwright at
Deptford, who entered the naval service in 1568, and
1570 became Master Shipwright. His recommendations
for new gates for 'Woolwich Dock', using an earthen coffer
dam to terminate beneath roughly hewn cliffs almost
200ft (60m) high (Ill. 74). The quarried sand may have been used to
reclaim land from the river behind an embankment, mak-
ing reconstruction of the eastern dock necessary. Some
such wharfing was built in 1625, when a brick perimeter
gate was added to provide a quay, built in
1635. Woolwich was among the most important shipyards of
seventeenth-century Europe. In large measure this was
due to significant improvements, under way by 1667. The
selection then of Woolwich for the building of the navy's
largest ship, the Prince Royal, was no doubt a stimulant.
These works were probably overseen by Phineas Pett (Ill.
256), Peter's son and now himself Master Shipwright at
Deptford, who operated in the notably corrupt milieu of
his patrons, Sir Robert Mansell, navy treasurer, and Sir
John Trevor, navy surveyor. Oak paling went up round
the yard, and in 1668 Pett supervised the making of new
gates for 'Woolwich Dock', using an earthen coffer dam
'so that we wrought always dry'.³ The western dock was
enlarged to provide space for two ships to be placed in
dock, one astern of the other. This 'galley dock' was and
long remained the state's only double dry dock suitable
for 'great ships'.³ The formation of this exceptional facil-
ity was followed by levelling of the yard, to get rid of the
slope to the south. Huge quantities of sand were moved in
a major engineering project that resulted in an artificially
flat tract extending some 200ft (60m) from the Thames
to terminate beneath roughly hewn cliffs almost
200ft (60m) high (Ill. 74).
as the single and double docks. An additional half acre on the yard’s east side was acquired in 1653; this made possible a new main entrance, from a river- and road-side esplanade near the church.

The First Anglo-Dutch War of 1652–4 impelled further improvement. The Admiralty decided against purchasing the East India Company’s Blackwall Yard, and in 1653 ordered the building of a new dry dock at Woolwich. Completed the following year, this must have been a reconstruction of the single or eastern dock – Woolwich never had more than two docks. There were new timber sheds, another domestic range replaced the tile kiln to the south, had more than two docks. There were new timber sheds, another domestic range replaced the tile kiln to the south, and there were new timber-built storehouses to the east. A visit to Woolwich in 1661 prompted Samuel Pepys to comment ‘strange it is

Despite these works, Woolwich receded in importance. At the end of the century the royal dockyards were compared in a survey prepared for William III by Edmund Dummer, Surveyor to the Navy Board. The value of Woolwich in 1688 was calculated at £7,664, which placed it ahead only of Sheerness (£3,435), and behind Deptford (£15,795), Portsmouth (£10,654) and Chatham (£14,496). Accompanying plans of the yards in 1688 and 1698 (Ill. 75) highlighted improvements overseen by Dummer. During these years of war with France there was great awareness of the importance of sea power and there were vast works elsewhere, including the beginnings of Plymouth Dockyard. But the Woolwich yard saw little more than clearance of its south-west corner for new perimeter buildings. Prime among these was a ‘Great Storehouse’ of timber (all in timber) that continued into the 1670s included a clock house – workforce discipline had become a pressing problem. This was between the two docks and incorporated a mould loft, an open floor on which ships’ lines were drawn and moulds or patterns for their parts made, above an open ground floor with sawpits. There was also another three-storey storehouse.

After the War of the Spanish Succession provided an early boost. The smaller dock was altered in 1701 to take first-rate ships and by 1713 seventeen new ships had been launched, far more than from any other British yard in this period. The leased western land was acquired freehold in 1705 and 1710. More physical growth followed in the 1720s, a period of relative peace, but one characterized by naval vigilance and armed diplomacy. Yet more came after the resumption of war in 1739. Other dockyards were also improved, and the semi-metropolitan sister yard at Deptford was comparably enlarged. Through the century both Thames-side yards remained indispensable for the construction of new warships and heavy repair. In addition both, though Woolwich less than Deptford, were well situated to serve other yards and the fleet as depots for stores that had to be purchased from London’s commercial markets. These strengths offset the problems of limited space and water depth, which became acute later in the century.

**Enlargements and rebuilding, 1720–54**

The first direction of expansion was eastwards on the sites that are now Mast Quay and Mast Pond Wharf. This involved the acquisition of part of the churchyard and the reclamation of a swathe of foreshore to permit the construction of a large mast pond, attendant buildings and three new slips, a great boost to shipbuilding capacity. The project was under way by 1720, when the single dock was also again rebuilt. Soon after this the mast-house and slip of the 1660s were replaced by another slip. The double dock was also remodelled, taking on straighter lines. All these works were probably largely complete by 1728. Around this time the main gate was relocated to a bend in the road, still facing east towards the soon-to-be-abandoned medieval church.

On the other lane, townsmen were cleared from the bend in the road, still facing east towards the soon-to-be-abandoned medieval church.

The next episode of expansion was northwards into the river. By 1737 wharfage had been pushed out along most of the old front to align more or less with the eastern extension. In addition a 3½-acre bullaward wharf abutting the west end of the yard was purchased in 1734 from Edward Bowater, who now held the manorial lands. An old brick house was cleared, and in 1746 the wharf was enclosed with a brick wall and equipped with a ‘house crane’ (one given, its 36p aide, a hut-like cover; Ill. 78).
CHAPTER TWO

The formation of the mast-pond, where mast timber was stored to prevent it cracking, was a major undertaking. Measuring about 280 ft by 200 ft (84m by 60m), this rectangular body of water had a double-gated lock entrance into the river and, unlike a wet dock, was capable of being pumped dry. On its west side there were slips up from the river and, unlike a wet dock, was capable of angular body of water had a double-gated lock entrance.

The construction of the shipbuilding slips would have been comparatively straightforward, as much a matter of reclamation as of excavation. That to the east (nearest the mast-pond) was built entirely on reclaimed land. Repeatedly rebuilt since, it survives at Mast Quay, as to the west, does another slip more or less where there was once a pair (ills 75, 76). The early Georgian slips were made with crude timber revetments, and these, at least, were lined with timber planks. The eastern slip was lengthened in 1755 when the wharf in front was pushed further forward and faced with brick. The slip that replaced the earlier mast-house in the western part of the yard, enlarged in 1764, was reinforced with timber piling and tie-backs. Much of this improvement would have been initiated and carried out by the yard's own officers, principally the Master Shipwright, John Hayward from 1715, and artisans, who had skills across the range of construction work. The same applies for the many new buildings that went up in the 1740s and 1750s. Along the yard's southern perimeter these included a large timber-framed smith's shop and a pay office, storehouse, lodgings and, south of the mast-pond, a stable range, all of brick. In 1740–1 two significantly larger buildings were erected. A brick rigging house, of three storeys and twelve bays on substantial brick-arched footings, rose up on the anchor wharf on the mast-pond's north side (ill. 80). Less plain was a sail and mould loft, an upshot of the bringing in-house of sail-making that provided an opportunity to obtain a much bigger floor for drawing and mould making. Situated east of the Great Storehouse, this looked like an outsized market hall; a long range with an open and arched lower storey below two full storeys and galleries; a shaped and pedimented gable faced the river (ill. 81). Hayward was still Master Shipwright, but designs for a building as large as this may have been prepared centrally, conceivably by Benjamin Glanville, Inspector of Repairs to the Admiralty and Surveyor of Works to the Victualling Office.

Integrated use of the western extension of 1749 required clearance of the houses that enclosed the yard to the west (ill. 78). They were replaced in 1749–54 by a terrace of five officers' houses, west of the Great Storehouse and facing the river, designed in-house but built by contract (ills 13, 75, 80, 81). Unlike the other naval dockyards, Woolwich and Deptford were under the Navy Board's direct control and did not generally have resident commissioners. The men of greatest consequence at the yard were the Master Shipwright (Thomas Fellowes from the late 1740s to 1752, then Adam Hayes), the Storekeeper, the Clerk of the Cheque, the Master Attendant and the Clerk of Survey. They were all now accommodated in this handsome row of double-fronted houses. They were also deep in plan and to the rear there were free-standing service ranges and, beyond a lateral passage, private gardens up to the road. This was ample, certainly, but less opulent than earlier and equivalent officers' housing at the other principal naval dockyards. The row most closely echoed at Woolwich was that built in Chatham in the 1720s. The terrace, Great Storehouse and mould loft were all demolished in the early twentieth century.

Late eighteenth-century problems and expansion

Neither the Seven Years War, which demonstrated inadequacies in the navy's dockyards, nor the subsequent peace, which gave rise to extension schemes at Portsmouth and Plymouth, had much impact on Woolwich Dockyard. Relative decline was in large measure a matter of awkward access. The larger size of ships, sitting in the Thames exacerbated by London's growth, and the deleterious effects on ships' bottoms of long exposure to fresh water all combined to work against Woolwich and Deptford.

There were other difficulties. Labour relations in the dockyards generally had become institutionally fractious. The large waged workforces, without parallel at the time, were well organized across the yards and quick to defend their status against management initiatives for change, most symbolically in relation to 'chips' or waste timber—a traditional right or perquisite to the workers, but theft to the Admiralty. There were frequent strikes, beginning at Woolwich ropeway in 1729, and in Woolwich and Deptford dockyards in 1739, 1742 and 1744. Stoppages in wartime, when demand for labour was at its peak, were not quiet events and troops were occasionally called in to quell riotousness. Inefficiencies, extending to jobbery, corruption and theft, were left to fester. Another clash between Woolwich shipswrights and the Navy Board came in 1732, after which the former's solidarity was strengthened through the formation of a retail society with its own corn mill (see pages 413–14). The most serious strike, in 1775,
St. Woolwich Dockyard and environs. Bird’s-eye view painted in 1790 by Nicholas Pocock, showing western areas of the yard (right) as then intended, though not carried through, otherwise as it existed.
was a reaction to the Earl of Sandwich’s introduction of a new pay system, ‘task work’ or piecework, to replace day rates. Resistance was not finally broken until the early years of the nineteenth century. Samuel Bentham, Inspector General of Naval Works from 1753 and an ardent proponent of reform through technological progress, was instrumental in reshaping dockyard production to underpin the shipwrights’ ‘republic of wood’. He had himself been an apprentice shipwright at Woolwich in 1731–4.

The yard’s compact size also compromised its efficiency, a state of affairs identified in a report of 1754 and apparent in a detailed model of the dockyard, one of a set presented to George III (III. 8). Cramped conditions meant that warships had to be built in private yards. This was addressed through the acquisition of substantial further lands to the west, almost doubling the size of the dockyard (III. 73). This western property was already in occasional naval use by 1750, as a frontage for mooring and land for laying up timber. In 1772 the younger Edward Bowater established himself as a ship- and boat-builder on the site, equipping a dockyard with two slips, a brick wharf, cranes, sawpits and a mould loft for the use of the East India Company. But two years later he was taken into the custody of the Marshalsea. The Crown then leased the lands, which, along with more western expanses of marsh and reedland, were purchased outright in transactions of 1779 and 1784. The main purposes of the extension seem to have been to provide space for storing the imported timber that was used for shipbuilding and repair, and to enhance mast-making capacity at a time when the increased size of English warships’ masts meant that only the royal dockyards could make them. Beginning in 1784 the marsh was reclaimed, Bowater’s slips infilled, the frontage extended north into the river and the yard enclosed by a high brick wall on piled foundations. Convicts provided the labour for much of this work.

The loss of the North American colonies as a destination for transportation had prompted legislation in 1779 that authorized the (initially temporary) use of hulks to detain convicts on the Thames. This provided a workforce for the yard’s most senior officials, resident in nearby terrace, and their subordinates, who operated in several discrete departments. Each department had its own suite of plain but well-proportioned rooms off a central staircase. This was the first time a purpose-built office building in a naval dockyard was given such interdepartmental links. Previously office departments had been ranged in series, with separate front doors. This step was perhaps inspired by the co-location of government offices to Somerset House, begun in 1766 and occupied by the Navy Board from 1794.

After a succession of office uses the Clock House was largely rebuilt in 1778–9 as a community centre for Greenwich Council, the council’s architects using direct labour and Norman & Dawbarn Associates as consulting engineers. Because of concerns about loadings, the interior was gutted and replaced with a concrete structure, while much of the brick walling was remade on a new concrete base. The Clock House, 1783–4, from the south in 2011.

82. The Clock House, 1783–4, from the south in 2011.
plinth and the porches were renewed. The bell cap was rebuilt in 1889. Inside there are pictorial Victorian tile floorings, and long stretches were cut up, and a somewhat smaller plot to the south that the then curvilinear Greenwich Road circumscribed (Ill. 73). At the east end of this plot, near the dockyard entrance, there stood a substantial farmer’s house, a three-storey house with twin bow windows to the west, in front of ranges of outbuildings. In its time it had been occupied by Samuel Harden (sometimes Harden, or Harding), the foremost farmer in the parish, who died in 1803. His son, also Samuel, died in 1830. The house was made a public house by the 1820s. It later accommodated the dockyard’s Commodore Superintendent before being adapted as offices. It was demolished around 1870. There were also some humbler houses along the road – Charlotte Place and Adams’s Cottage, but these did not last long.42

Wartime adjustments, 1914–18

The French Wars placed exceptional demands on the royal dockyards, which raced to build and maintain warships that would give Britain naval superiority. Such were the requirements that England’s merchant yards, many of them on the Thames, were engaged to an unprecedented degree, building some two-thirds of the navy’s ships during the years of conflict. Given the pressures and the demands posed by mud and location continued to trouble the eastern slip. Along with another boiler-house, attached to a temporary smithery on the site of the seventeenth-century mast-pond and mast-houses had been given over to boat building, and buildings along the perimeter wall near by had been replaced, most significantly with a boiler-house and detached chimney south of the eastern slip. Along with another boiler-house, attached to a temporary smithery, on the site of the seventeenth-century clock house between the dry docks, this marked the introduction of steam power to Woolwich Dockyard. Small steam engines may have been in place before 1802, when Bentham departed for Russia. His mechanism programme bore no other fruit in Woolwich, but there were initiatives. The idea that ropemaking could be moved into the dockyard had been ambitiously revived by John Bowater, and by the 1840s, as a second forge engine. Ships’ parts were not the only articles produced in the smithy, an iron replacement for John Nash’s Pagoda Bridge in St James’s Park, burned during the grand fire of 1814, was wrought in 1818.43

85. Former Master Warder’s lodgings, guard house and dockyard entrance, all of the 1790s. From the north, c. 1949


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The present entrance gate from Woolwich to the dockyard was not formed until the years of conflict. Given the pressures and the problems posed by mud and location continued to trouble the eastern slip. Along with another boiler-house, attached to a temporary smithery on the site of the seventeenth-century mast-pond and mast-houses had been given over to boat building, and buildings along the perimeter wall near by had been replaced, most significantly with a boiler-house and detached chimney south of the eastern slip. Along with another boiler-house, attached to a temporary smithery, on the site of the seventeenth-century clock house between the dry docks, this marked the introduction of steam power to Woolwich Dockyard. Small steam engines may have been in place before 1802, when Bentham departed for Russia. His mechanism programme bore no other fruit in Woolwich, but there were initiatives. The idea that ropemaking could be moved into the dockyard had been ambitiously revived by John Bowater, and by the 1840s, as a second forge engine. Ships’ parts were not the only articles produced in the smithy, an iron replacement for John Nash’s Pagoda Bridge in St James’s Park, burned during the grand fire of 1814, was wrought in 1818.43

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This smithery saw later use as a workshop for the Ordnance College (ill. 86). It was taken down in 1973–4, with a part of its iron frame salvaged and later re-erected at the Blakc Hill site of the Ironbridge Gorge Museum in Shropshire. There it survives, housing displays of wrought-iron manufacture.58

Another early application of steam at Woolwich was to the softening of large planks of wood to form curved ship’s hulls, a process assisted from 1813 by a plank-bending contraption devised by William Hookey, master boat builder. This helped offset difficulties with the acquisition of increasingly scarce and costly ‘compass’ timber. Artificially curved and laminated oak pieces were first used in the hull of the Black Prince, launched in 1814.59 Experimentation in the auxiliary process of rot-proofing the timber by impregnating it with a mineral solution using high-pressure steam engines proved less successful. In January 1813 a machine burst, killing eight, maiming many others and destroying the workshop and part of the dockyard wall.60

In 1821, Plan, as published by Baron Charles Dupin, Smithery

THE STEAM ERA TO 1849

Shipbuilding, repair and employment levels fell during peacetime, but once again Woolwich Dockyard recovered to enter another period of expansion through modernization. In the late 1820s, as Thames shipbuilders intensified the development of marine steam engineering and a growing number of steam vessels entered naval service, Woolwich became the principal naval yard for fitting out and maintaining the navy’s steam fleet. Deptford had been favoured initially, and the navy’s pioneer steamships were built there in 1822–4. But the Navy Board came to see Woolwich as having a more suitable scale and location for co-ordinating work derived from technological innovations. Crucially, Woolwich had the necessary space through the western lands that had been acquired in 1818–19, when employees of Maudslay, Son & Field were fitting out the Echo and Confiance, the first steam vessels built at Woolwich, though it was not finally complete until 1831. The younger John Rennie also oversaw the building in the late 1820s of two new slips (later 1 and 2) out of the mast-pond. Together these were significant developments, an embryonic first naval steam factory, and a severe blow to Deptford.61

There were plans for the further enhancement of this facility in 1831 when George Ledwell Taylor, Holl’s successor as the navy’s architect, prepared alternative layouts for a boiler-shop on the side of the new basin. This would have made the complex a real factory, but the timing was unfortunate. Further development was stymied in a climate of general cutbacks, measures imposed by Sir James Graham as First Lord of the Admiralty that included abolition of the Navy Board in 1832. A scheme from Marc Brunel for replacement of the Woolwich dry docks, which he thought the most defective anywhere in the royal dockyards, was stillborn.62 Taylor appears to have found his way round such constraints, even going ahead with works without sanction. For this, and the fact that he underestimated the costs of works at Woolwich, he was forced to resign as navy architect in 1835. The post was replaced by a Director of Engineering and Architectural Works to the Admiralty. Capt. Henry Rowland Brandreth, RE, was given this appointment at the head of an Admiralty Works Department, staffed by Royal Engineers through the Board of Ordnance. Brandreth’s input at Woolwich was secondary to that of his talented Woolwich-based subordinate, Lt. (Sir) William Thomas Denison, RE (1844–75), a highly effective manager and reformer who worked and lived in Woolwich until 1845, achieving much in the dockyard, not least the formation of the steam factory, and elsewhere in Woolwich. Knighted, he left England in 1847 to become Governor of Van Diemen’s Land (Tasmania), to which thousands of convicts were transported from Woolwich in the same decade. There he began a successful second career as a colonial governor, and rose to serve as Acting Governor-General of India in 1863.63

The planning of a new steam yard behind this frontage appears to have begun in 1825. The dockyard’s western grounds permitted the enlargement and conversion of the outer mast-pond to form a substantial enclosed steam basin of almost four acres (4212/’1/2m) by 330/’1/2m and 24ft (7m deep). Here boilers and engines could be fitted to the largest ships afloat. The elder Rennie having died, the engineer given responsibility for this was his younger son, John. The basin was already in use in 1827, when employees of Maudslay, Son & Field were fitting out the Echo and Confiance, the first steam vessels built at Woolwich, though it was not finally complete until 1831. The younger John Rennie also oversaw the building in the late 1820s of two new slips (later 1 and 2) out of the mast-pond. Together these were significant developments, an embryonic first naval steam factory, and a severe blow to Deptford.61

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Realignment of the central sections of the dockyard river wall, overwhelmed by mud, had been under consideration from at least 1818. But before that major project was definitively addressed a small triangle of land at the north-west corner of the yard, part of what had been Long’s Wharf (see below), was acquired to square off the site. Here, in 1831–7, a quaywalling bank was removed and, under Taylor, a new river wall of granite ashlar, about 20ft (6m) long, was formed. These works probably also

RIVER WALL, DOCKS, BASINS AND SHIPS

The western section of the dockyard’s river or wharf wall (about 350ft/107m) was taken down after a partial collapse and rebuilt in 1812–14 on a more recessed (southern) line, to create a straighter frontage and be less obstructive to the flow of the river. The work followed design proposals from Rennie, amended by Holl and others, possibly including Capt. Samuel Brown, the chain manufacturer and bridge designer. This stretch of brick wall has been refaced in late twentieth-century concrete.64

56. Plan, as published by Baron Charles Dupin, 1821

55. Interior as Ordnance College workshop, c. 1860
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This firm was certainly responsible for works of 1827–3 on the west end of the dockyard associated with the formation and early success of the steam factory. The late eighteenth-century mast-pond was now enlarged to be a 2½-acre inner basin off the south-east corner of the outer basin (III. 75). This enabled two steamships to lie alongside the factory to have their engines, boilers and other machinery fitted simultaneously. In addition, and instead of the failed western dock, a granite-lined dry dock was completed in 1843 off the outer basin’s south side. This (1 Dock) was designed by James Walker with John Baldry Redman for their firm, Walker & Burgess, in consultation with the naval architect Oliver Laing: the dock’s cross section mirrored that of Laing’s Trafalgar. At 263 ft (80m) in length and 22 ft (6.7m) in width at coping level (230 ft/70m and 6 ft/2m at the bottom) – big enough to anticipate future growth in the size of ships – this dry dock was considerably larger than any other yet made. This was the largest dry dock of all, with an 80 ft/24m-wide entrance, 230 ft/70m top length and 263 ft/80m bottom length. With the completion of this suite of masonry-lined docks Woolwich could accommodate three first-rate ships for repair, and there was room for a further three on the dockyard’s slips, an overall capacity exceeded only by Chatham and Pembroke. The two riparian docks (nos 2 and 3) are the earliest extant dry docks associated with the steam navy. They retain little of their mechanical ironwork, such as capstans, though there is a crane base to the south-east at 1 Dock. Modern steel caissons seal both docks, which, permanently flooded, are used for fishing and recreation as the South-East London Aquatic Centre (III. 112).

With the rebuilding of 3 Dock in the mid-1840s, the western end of the dockyard’s river wall, with Frances Street towers beyond. Photographed 2011

8. Dockyard river wall, 1834–5, with landing place in front of gun battery of 1827. Behind are the Clock House and Woolwich Dockyard Estate housing, with Frances Street towers beyond. Photographed 2010

88. Dockyard river wall, 1839–4, sections as begun (left) and as completed (right)

 included the granite-paved public river stairs and the stone-set causeway at the end of Trinity Street (Warpie Road) (III. 8g). All this survives. In addition, a stock-brick boundary wall with granite plinth and coping was built in 1833 along Trinity Street to seal the dockyard’s west side. This too is largely intact.6 The rebuilding of the central sections of the river wall, adopting a more northern and straight line, to help scour the mud, began in 1834. Taylor gave the contract for this work to William Ranger. In an early application of Ranger’s patent ‘artificial stone’ (lime concrete), following on from Brighton’s sea wall, his site agent, Charles Nixon, oversaw the use of gravel from the centre of the river for the concrete. It was poured between rows of timber sheet pilings for the wall’s back parts; precast concrete blocks were fixed to the front (Ill. 8f). Lengths of about 50 ft (15m) eastwards from the new slips (1 and 2) and 24 ft (7.3m) to the far east in front of Mast Pond Wharf (where there was no realignment) were up before doubts about stability, prompted by problems with a dry dock (see below), led to a redesign by James Walker, an eminent and elderly dock engineer. This introduced bearing piles below much thicker walling. By 1837 a further 500 ft (150m) had been built in this way, taking the western frontage past 3 Slip to a point in front of the dockyard’s old landing place. But the concrete spilled in the winter of 1837, so Denison, now on the scene, directed rafing – he had worked under Col. Charles Williams Pauley, RE, who had criticised Ranger’s system in 1836. Denison suggested granite, but settled for brick. Some years later he conceded that the concrete might have been sound if left. There was some rebuilding in the 1890s, but parts at least of Ranger’s concrete wall still are in place behind the brick, though much of that is further concealed behind late twentieth-century concrete. The blocked granite-aslar entrance to 3 Slip remains discernible north of Antelope Road. Another section of the river wall, from and including the central landing place, where there are opposed flights of stairs, as far east as 2 Dock, is probably datable to 1858 and was entirely Denison’s responsibility. It is faced with granite aslar, as are remaining sections from that point east to 6 Slip, which followed around 1843 (III. 8f). A second project undertaken by Ranger in 1834 proved an even less successful application of his patent concrete. This was to be a dry dock on the river at the new north-west corner of the yard. Obfided to deepen the dock after he had begun, Ranger was unable to resist ground water and the dock’s concrete bottom heaved ‘like the human breast’. It was to remedy this that Walker was first called on in 1835, but the work had to be abandoned. As Brunel had observed, the dockyard’s dry docks were in need of replacement. Another of Denison’s early tasks was the rebuilding of the western dry dock (the one-time double dock). This happened in 1836–41, once the new river wall had come this far east. The old timber-built docks were decaying, silted up and too small for contemporary large ships. Denison’s granite-lined mass-concrete dry dock (henceforward known as a Dock) drew on formal precedents by the elder Rennie and others, but was larger in scale with a 24 ft (7.3m) bottom length (25 ft/7.5m at coping level) and 6 ft (2m) entrance width (Ill. 90). The solid bedrock here, where the dockyard had begun 30 years earlier, permitted a flat base rather than the more usual inverted arch. The size of the altars or steps up the dock’s sides varied, some narrow to facilitate the shoring of vessels, some wider to permit easier circulation. The dock was fitted with an iron caisson, preferred to gates because of the problems with mud, and made by Ditchburn and Mare of Blackwall. The main contractors may have been Gruell & Petre. Back on the river, the eastern dry dock was rebuilt in 1844–6 as 3 Dock, once again of conventional granite-faced mass concrete, to designs by Walker & Burgess. The contractor was Peter Holt, a descendant of the Pett family, still involved in shipbuilding, and a timber merchant based in Rotherhithe. This was the largest dry dock of all, with an 80 ft/24m-wide entrance, 230 ft/70m top length and 263 ft/80m bottom length. With the completion of this suite of masonry-lined docks Woolwich could accommodate three first-rate ships for repair, and there was room for a further three on the dockyard’s slips, an overall capacity exceeded only by Chatham and Pembroke. The two riparian docks (nos 2 and 3) are the earliest extant dry docks associated with the steam navy. They retain little of their mechanical ironwork, such as capstans, though there is a crane base to the south-east at 1 Dock. Modern steel caissons seal both docks, which, permanently flooded, are used for fishing and recreation as the South-East London Aquatic Centre (III. 112). With the rebuilding of 3 Dock in the mid-1840s, the western end of the dockyard’s river wall, with Frances Street towers beyond. Photographed 2011

8. Dockyard river wall, 1834–3, with landing place in front of gun battery of 1827. Behind are the Clock House and Woolwich Dockyard Estate housing, with Frances Street towers beyond. Photographed 2010

88. Dockyard river wall, 1839–4, sections as begun (left) and as completed (right)
As ships became bigger, the slips needed to support ever greater weights. Further west, a single slip (5 Slip) replaced a pair in 1855–6. This is granite-paved with stone-coped brick side walls (Ill. 92). These slips saw a late return to use for shipbuilding in the 1970s and have since been preserved beside the housing blocks of Mast Quay.

Slip covers (demolished). After the Napoleonic Wars a new building type, the slip cover, appeared in the royal dockyards. Between 1814 and 1821 nearly all the state’s ship-building slips and dry docks were, for the first time, given roofs, reflecting Continental precedent and lessons learned about the consequences of using unseasoned timber. Roofs kept ships free of rot and allowed timber to season during construction. (Sir) Robert Seppings, Surveyor to the Navy, saw the initiative through and took up ideas promulgated in 1812 by Bentham, who thought roofs would also provide a more factory-like working environment. Seppings designed trussed timber frames, some, as for the Woolwich slips, being simple king-post structures. Others, with wider spans up to about 100 ft (30 m), involved some structural ingenuity. The first roofs over the Woolwich dry docks appear to have been of a wide-span sub-type devised by William Hookey. Those over the three western slips were made or replaced on a larger scale in the late 1820s, in timber and on the Seppings pattern (see front endpapers, Ill. 99).

In 1844 Brandreth and the Royal Engineers under his command began to introduce to naval dockyards a new kind of iron-framed slip cover. Two contractors, Fox, Henderson & Co. and George Baker & Son, supplied these. Structural iron offered advantages in span, rigidity and fire-resistance. The first of these innovative wide-span roofs erected at Woolwich, in 1844–5, covered 6 Slip.
Designed and fabricated by Fox, Henderson & Co., this measured 218 ft by 180 ft (66m by 56m) with a main span of 75ft (22m). The structure was close in form to Stepping's timber precursors and virtually identical to two slightly earlier slip covers put up at Pembroke Dockyard in 1844–5 (Ill. 94). I-section stanchions were linked by cast-iron arch girders with openwork webs. There was corrugated-iron cladding and a sprinkler system. The structure was moved in 1886 to Chatham Dockyard, where it was adapted as 8 Machine Shop, if still stands.\footnote{10}

The second iron-framed slip cover at Woolwich was erected in 1847–8 over 4 Slip, west of the dry docks. Here Fox, Henderson & Co. introduced a new design, probably devised for the firm by Edward Cowper, wider in span, more robust and about double the price. This corrugated-iron-clad structure measured 310 ft by 145 ft (94m by 44m) and had a central clear span of 88 ft (27m). In the construction of its frame it was a sophisticated and significant departure, using rigid framing or bracing through stiff joints (Ill. 95). Cast-iron framed aisles buttressed a tall nave with wrought-iron roof trusses that incorporated tapered openwork struts, perhaps the first such use of a component that was foreshadowed in the earlier Woolwich cover. Similar struts were used for major long-span roofs in railway stations (New Street, Birmingham, and Lime Street, Liverpool). This slip cover was also relocated in 1876 to Chatham, where it became a boiler-shop. It has recently been adapted to house a shopping mall, the Dockside Outlet Centre.\footnote{10}

A last iron-framed slip cover, for 5 Slip, was erected in 1856–8 and extended in 1859–60. This was probably designed in-house by Col. Godfrey T. Greene, RE, Brandreth’s successor, in a refinement of the Fox, Henderson & Co. type of a decade earlier, to provide taller aisles brought under a single roof. Made by Henry and Martin Grissell at the Regent’s Canal Ironworks, it was 250ft (80m) long and spanned 142ft (43m) overall, with a centre span of 82ft (25m). A travelling crane was incorporated. After 1860 timber shipbuilding declined and the slip covers became redundant. This one was also moved to Chatham, where it was adapted as a factory and subsequently demolished.\footnote{10}

**Steam factory**

The growing importance of steamships gained new functional recognition from the Admiralty in 1835. All captains were called on to familiarize themselves with the engines, boilers and paddle wheels of their vessels, to help expedite maintenance and repairs, and Peter Ewart became Chief Engineer and Inspector of Machinery. These were decisive steps for Woolwich. The elderly Ewart had been an agent and engine erector for Boulton & Watt during that firm’s formative years in the 1790s. His naval appointment was to procure suitable engines, boiler parts and labour from outside suppliers, but growing dissatisfaction with the failure of private firms to deliver compelled him to bring matters in-house. He died in Woolwich in 1842, after an accident overseeing work on a large boiler. By the beginning of 1837 G. L. Taylor had, in his last work for the Admiralty, overseen the preparation of plans for buildings at Woolwich for the making and repairing of engines and boilers for steam vessels. This scheme for a steam-engine factory was significantly more ambitious than the abortive boiler-shop plan of 1831. The Woolwich steam factory was episodically built, from 1838 to 1847, a drawn-out development whose stages reflected growth in demand, diversification and problems with available space (Ills 75, 96). Design and construction were supervised by Denison, who transformed Taylor’s somewhat inefficient plans to create an effective complex of buildings on a limited site. From 1842 Edwin Arthur Bernays had an important role as a clerk of the works. Building was carried out by Grissell & Peto and Peter Rolt.

The steam-factory project began in 1838 with a long-range slip south of the mast-pond, then earmarked for conversion into another basin (see above). Denison designed...
a longer (444ft/135m) block than Taylor had intended, to house fitting and erecting shops, a foundry and boiler-shops. He also made it taller, so that overhead travelling cranes could be introduced under wrought-iron trussed roofs, reordered the functions within and introduced communication between the various workshops. This building on the north side of the steam-factory site, of stock brick with sandstone dressings, was originally thirty-nine bays long. Its western two-thirds survive, facing Ruston Road. The only other components of Taylor’s scheme to be built, also in 1838, were a freestanding engine-house, south of the east end of the workshops, and a smithery near the yard’s western margin, presumably intended to function with the dry dock that had to be abandoned (see above). Demand for the factory’s services grew, so another range followed immediately, extending the engine-house south of the engine-house on a large L-plan. East of this cured in 1838 (Ill. 97). A steam-boiler factory extended north of the east end of the workshops, and a smithery ventilated yellow-brick building with twin entrance porches and bridged chimneys. Within Denison made it even more robust and fire-resistant, with jack-arched ceilings and cast-iron roof trusses—the prevention of fires in the dockyard was an absolute priority. During the financial year 1844/5 the steam factory repaired or relitted twenty-seven steamers and fitted seven boilers, figures that were exceeded in nine months during 1846, by which time 735 men were at work in the complex. The final phase of major improvements was effected in 1843–4 by Lt. Roger Stewart Beatson, RE, who came from Portsmouth in an exchange of posts with Denison. In 1845–7 Beatson oversaw the replacement of the inner parallel range with a substantial smithery, some two-thirds as long but twice as wide (444ft/135m) by 275ft/83m. It had comparatively lofty and symmetrical roofs; the smithery’s roof had early wrought-iron trusses and roofs, the smithery’s roof had early wrought-iron trusses in twin spans, making for another fire-resisting structure. Beatson was probably also responsible for the design of the school building that went up in 1844–5 on the west side of the steam-factory gate, facing the police station. The Woolwich Dockyard School for Apprentices had opened in 1844 in the wake of a dockyard education scheme that the Board of Admiralty had introduced the previous year. These specialist premises were for the teaching of marine engineering to apprentices drawn from all the royal dockyards’ steam factories. This was the first establishment in the country devoted to training for service in the steam navy and so was an important element in establishing Woolwich’s reputation as a home for engineer-expertise. The school survives substantially as built. Like the police barracks, it is executed in yellow brick with stone dressings, but here there are subdued elements of a Gothic idiom that seem a decorous acknowledgement of the building’s function. After the closure of the dockyard it served as offices, as did the former police station, before coming into co-operative society use in the 1920s. A unique cast-iron-plate tram-road network of the 1840s, to facilitate the transfer of heavy components around the factory on trucks driven by steam-traction engines, was due to Bernays. By 1858 sections of this tram-road between the fitting and erecting shops, the smithery and engine-house and the coppersmiths’ shop, had been glazed over for extra shop or storage space. The quality of the iron pavement meant that it found ready buyers at auction in 1870 after the dockyard closed.##

97. Engineers’ stores, 1844, exploded perspective view of cast-iron components of lower-storey frame.

98. Police station, police barracks and inspecter’s house, 1842–4, ground plan and section.
The Woolwich steam factory kept much of the navy in steam into the 1860s, undertaking virtually all naval steamship repair work (in the exclusion of private industry) and occasional new-build work, which was largely confined to the boiler-shop. The pioneering establishment stayed distinct, physically and culturally, from the rest of the dockyard: its employees entered at a different gate, worked under different conditions, were paid different rates and were presided over by a chief engineer, not the captain superintendent. The steam factory effectively accounts for the dockyard’s enlargement from thirty-six acres to over sixty-six acres, its greatest extent, and for much of its surviving historic fabric.44

Elsewhere in the dockyard other buildings went up during the busy 1850s, further reflections of the Admiralty’s wish to see Woolwich rather than the private sector supply other naval dockyards. These included steam-powered and fire-resistant sawmills and another building for steam hammers, both near the dry docks. There was also, near the Clock House, a hydraulically operated chain-cable proving house and a substantial guard house and surgery block, as well as a Greek Revival weigh-bridge house. Cranes and capstans of various types and capacities enhanced the yard’s handling capabilities, and giant mooring sheers' legs served both inner and outer basins.

A final addition to the dockyard in this decade, with no permanent precedent, was a gun battery erected in 1853 at the dockyard’s central landing place (ILL. 85). Or brick, granite-coped and fitted with gun carriages and platforms made in the Royal Arsenal, this battery was the focus of daily drill exercises by the dockyard’s division of marines (see page 369) – there was a parade ground behind. It survives in heavily restored guise, reconstructed in 1976-7 to plans by Norman & Dawbarn, architects. It has a spectacle-plan layout comprising two stepped platforms, on which the guns could swivel, behind low fort walls. Replacement wrought-iron gun carriages, for rested guns, were made by John Slough in 1839.45

**DECLINE, 1850–69**

Throughout the 1850s and 1860s Woolwich Dockyard declined in significance, initially losing its primacy as the home of the steam navy, then, despite its recent revitalisation, losing status as a shipbuilding facility. The establishment in the late 1840s of a larger and more strategically situated steam factory and basin at Portsmouth, a response to massive French developments at Cherbourg, added to its already significant precedent and enhanced the steamer-oriented workload. The third naval steam basin, a huge integrated facility at Keyham, next to Plymouth Dockyard, followed in the early 1850s.

The Woolwich steam factory did remain important in the 1850s, but its peak of productivity had passed. Refitting work came to be largely confined to older paddle warships as the basins were too small to deal with a new generation of screw-propelled ships. During the Crimean War the steam factory was making boilers for supply to other yards; none of the fleet that returned in 1856 while the importance of the steam factory fell away. As the Anglo-French naval arms race intensified, those decades saw the launch at Woolwich of a number of screw-steamer battleships, including the pioneering Agamemnon in 1872, and the conversion of wooden-hulled ships into ironclads, including the Rynale (1868).46

Building works that kept pace with these shifts were overseen by Berney, Resident Engineer from 1850 to 1860. They included the last and largest slip cover of 1856-60 (see above). Rolling mills were established around 1850, and an armour-plate shop was enlarged as late as 1869. In 1850–1 substantial buildings were erected to either side of the mast-house on the north side of the inner basin, to provide a rigging house and an engine store, with gable-end pediments to the river (ILL. 99). These were linked in 1856 by the addition of a range on the north side of the mast-house to provide workshops for riggers and sailmakers. This was, deceptively, given an arcaded brick façade to the river, but it was otherwise a cast-iron framed structure, probably designed by Col. Greene. Like the contemporary cover to 3 Slip, it was an innovative trial of rigid framing via bolted connections, and a significant precursor of a building that has great renown in structural history, Greene’s Sheerness Boat Store; all these were made at the Regent’s Canal Ironworks. This building came to be used as the premises of the Albion Sugar Company before it was demolished in 1961. A new of 1856 was a single-storey cable shed near the river north of the Clock House. This later served as a covered parade for pensioners and stood into the 1970s. Its cast-iron frame was clad in corrugated iron profiled to resemble weatherboarding.47

**Dockyard Chapel (dismantled)**

For more than 100 years no cause was found to build a place of worship inside the dockyard, though an upper-storey space had perhaps been adapted as a chapel prior to 1812. This changed in the context of post-Crimean military piety, with the dockyard’s division of marines in mind (see page 369). The Dockyard Chapel was built in 1856-8 to designs by George Gilbert Scott. The building contract was attributed to Smith & Appleford in 1856, but they may not have carried out or completed the work, as in 1859 William Higgs was credited as the contractor. The chapel accommodated 1,200, not just the marines, but also dockyard officials and artisans. It was given an Early English Gothic exterior of polychrome brick, red with black dressings, daily dressed with Bath stone (ILL. 107). There was a triple west entrance and an apse. Five aisle bays on each side were transversely gabled, and there was an octagonal bell turret to the north-east. The simple but capacious interior, galleryed on three sides (ILL. 101), was daring and exceptional in an Anglican context and in Scott’s
emigration was the only alternative to unemployment and London News used in up of operations took time. Indeed, the state dockyard was of a huge new steam yard at Chatham sounded the death clads, and such activity as there was in the dockyard could be redistributed to other yards or auctioned off. There had been assurances that the land would be sold in small parcels for private ownership, but, site sale, development with houses. But the War Office’s interest grew and, with competing claims, Sir William Tate oversaw the sale for the Admiralty. By late 1871 the War Office had secured everything west of 5 Slip, more than ninety per cent of the site, for use as a storage depot. A dividing wall was built of, which the southern slip remains, and the other four acres to the east were sold in 1873 to transport companies on the central riverfront. To the Court dockyard, Pariah Wharf (together now Mast Quay) and Mast Pond Wharf.

Woolwich Store
The War Office adapted the dockyard to form a military stores depot through its reconstituted Ordnance Stores Department, the headquarters of which were at the Royal Arsenal, where the Controller (later Commissary-General) to 1839 was Capt. (Sir) Henry William Gordon. From 1846, the successor Army Ordnance Department administered the site.

Haste and economy seem to have been governing factors in the yard’s conversion into an adjunct to the Arsenal and a complement to other stores established at Deptford. Cleared of contents, most of the factories, workshops and sheds were well suited to housing various overflow stores from the Arsenal. The west end, incorporating the outer basin and docks, and beyond, was given over to the Hennebique system. There had been earlier experiments for making and repairing motor vehicles, and tailors and boot-repairers had a workshop and warehouse in parts of the former steam factory, with frontages to Albion Road (now Woolwich Church Street) and Trinity Street (now Warspite Road). The burgeoning RACS had outgrown its accommodation elsewhere and wanted this land for the formation of a new factory, laundry and tea warehouse, as well as for its works department. But first, with the site renamed Commonwealth Buildings, the RACS were moved in March–April 1924 to hold the largest national co-operative exhibition ever staged. This was housed in four ‘bright and attractive exhibition halls’ fashioned as ‘areas of a magician’s wand’ from ‘unsightly buildings formerly used as Government stores’. The event attracted hundreds of thousands, and boosted RACS’ membership from 1,000 in 1922 to 3,342 by 1924. After the show, Commonwealth Buildings continued to house Commonwealth Co-operative Ltd (now Woolwich Church Street) and Trinity Street (now Warspite Road). The largest buyer was the Royal Arsenal Co-operative Society. It took ninety-two acres to the south-west, including part of the former steam factory, with frontages to Albion Road (now Woolwich Church Street) and Trinity Street (now Warspite Road). The burgeoning RACS had outgrown its accommodation elsewhere and wanted this land for the formation of a new factory, laundry and tea warehouse, as well as for its works department. But first, with the site renamed Commonwealth Buildings, the RACS moved in March–April 1924 to hold the largest national co-operative exhibition ever staged. This was housed in four ‘bright and attractive exhibition halls’ fashioned as ‘areas of a magician’s wand’ from ‘unsightly buildings formerly used as Government stores’. The event attracted hundreds of thousands, and boosted RACS’ membership from 1,000 in 1922 to 3,342 by 1924. After the show, Commonwealth Buildings continued to house Commonwealth Co-operative Ltd (now Woolwich Church Street) and Trinity Street (now Warspite Road). The largest buyer was the Royal Arsenal Co-operative Society. It took ninety-two acres to the south-west, including part of the former steam factory, with frontages to Albion Road (now Woolwich Church Street) and Trinity Street (now Warspite Road). The largest buyer was the Royal Arsenal Co-operative Society. It took ninety-two acres to the south-west, including part of the former steam factory, with frontages to Albion Road (now Woolwich Church Street) and Trinity Street (now Warspite Road). The largest buyer was the Royal Arsenal Co-operative Society.
range a grocery warehouse, with alterations to conform with the Building Acts. Commonwealth Buildings developed rapidly as an important regional distribution centre. By 1937 the site employed 1,426 workers and housed twenty-one industries and departments. An abortive plan that year was the first of its kind in Britain, based on an American design that placed the slaughter hall on an upper level to use gravity rather than manpower to move animal parts. In 1961 the funeral-furnishing department was enlarged, to plans by A. L. Foreman, the Society’s architect, with a road-side showroom and large sheds to the west of the former school (Ill. 96). It subsequently spread to the former police barracks and other grounds to the east and continues as Co-operative Funeralcare. Other RACS operations were gradually run down and wound up as the cooperative's centre.

Albion Wharf

The former rigging-house complex of the 1830s saw use by the army’s Inspection Department before 1938 when it was adapted as an invert, or brewers’, sugar and glucose factory for Gillman and Spencer, Bermondsey cereal millers who formed the Albion Sugar Company. A large mass was added in 1964, and there were further improvements later that decade for what became Carhill-Albion Glucose Works. But operations closed in 1962, and there were further maize silo was added in 1979, and it was then converted to provide lettable light-industrial units and retains the name Cable Depot.

Eastern wharves

The auction in 1872 of the four easternmost acres of the former dockyard led to redevelopment for private industrial and municipal uses. Royal Dockyard Wharf, to the west and taking in 5 and 6 Ships, was the largest plot, essentially the site that is now Mast Quay. Here G. E. Arnold & Co., timber and slate merchants, had possession by 1875 and built steam sawmills. Attractive roadside offices were added in 1886–7, with Percival Brown as architect. Eastern parts of the site had been let to other tenants by 1900 as St Andrew’s Wharf and St Mary’s Wharf, used as stone, manure and slate yards, and a van and bus yard, with a series of long low sheds. Among those who occupied and redeveloped these wharves were Thomas & Edge, the leading local building firm, here from 1901, with plain roadside offices. The south ends of the central and eastern shed ranges were rebuilt after war damage and the depot maintained its original use until the 1970s. It was then converted to provide lettable light-industrial units and retains the name Cable Depot.

General Post Office Cable Depot

In the early 1880s the north-west corner of the former dockyard, where there was just a coal store, was ceded to the General Post Office for use as a submarine cable depot. The telegraph system, nationalized in 1880, had expanded rapidly and internationally. This site, adjacent to Siemens’s Telegraph Works, and across and downriver from other cable factories, was well situated for storing telegraphic cable before it was taken out to sea. On a plot smaller than a fifteen-by-six-bay brick shed in 1882–3 to cover four circular 16ft (4.8-m)-diameter cast-iron tanks on 36ft (10.9-m)-thick concrete foundations. This, which survives, was designed by Edward George Rivers in the Office of Works and built by Kirk and Randall. Behind a blind arcade to Warspite Road a central row of cast-iron columns supported twin metal-trussed and louvred roofs. Cable was stored under water in the tanks before transfer to the state’s cable-laying ships, the first of which was launched in 1883. There were ancillary buildings to the east, and another store was added on the south side of the site entrance in 1893, around when stars were made down to a new causeway in front of the granite ashlars of the wharf’s eastern part. A third tank-shed range went up in 1928, when W. Eve was the Office of Works’ architect, Fairweather and Ranger the contractors. The south ends of the central and eastern shed ranges were rebuilt after war damage and the depot maintained its original use until the 1970s. It was then converted to provide lettable light-industrial units and retains the name Cable Depot.

Woolwich Dockyard area from the east, 2008
CHAPTER TWO

WOOLWICH DOCKYARD AREA

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but there was a last brief revival of repair work here in the early 1990s.28

Housing development since 1886

The War Office continued to occupy the parts of the dockyard that had not been sold in the 1870s and 1890s – all the land now between Mast Quay and Antelope Road along with the site of the Woolwich Dockyard Industrial Estate (Ill. 76). Use diminished as the Arsenal moved gradually towards the closure that was announced in 1965. A year later the Ministry of Defence accepted that this dockyard property could be cleared for disposal, and the Ministry of Housing and Local Government and local interests combined to promote redevelopment with council housing on what Christopher Mayhew, the local Labour MP, called ‘the finest possible housing site in London’.29 Woolwich Borough Council felt a keen lack of land for keeping up its proud and productive tradition of house-building, a matter not simply of housing need but also of keeping the authority’s large Direct Labour Organisation active. It was also felt important that the riverside should be accessible to the public. Those twenty-three acres were duly sold to Greenwich Council in 1969, the south-west section set aside for industrial and commercial use.30

First schemes for the Woolwich Dockyard Estate in 1967–8 envisaged up to 900 dwellings in tall blocks to the south and lower maisonette blocks near the river. A few old buildings and the dry docks were given protection through listing and the site was otherwise cleared. The Clock House was to be a community centre, the nearby ‘gathtown’ a pub (see page 96). A YMCA youth centre was erected on the site of the dockyard chapel, but multiple delays held back the rest of the project. First there were deliberations about the siting of the Thames Barrier. Once this was set to go further west in 1976, the council’s need for housing had become less pressing and, with new financial regulations, the costs of the dockyard scheme more problematic. A plan for collaborative redevelopment with Woolwich Property Co. was advanced, proposing many fewer houses and some office blocks, but by the end of 1971 the council had taken the project back into its own hands, the priority shifting back towards housing.31 John M. Moore, the council’s Chief Architect, prepared a new ‘master scheme’ in 1972 for the whole site. This still included offices, a refitted railway tunnel and protection for a well over 357 houses, with two twelve-storey slab blocks and sixty-eight houses. It included sheltered housing for the elderly, for whom there would also be a clubhouse, alongside a day nursery and an adult training centre for the disabled, as well as the community centre and the YMCA. The dry docks were to be recast as an aquatics centre for diving, canoeing and fishing, with a riverside promenade and pedestrianization of the dockyard’s railway tunnel. It was all, John Cartwright, the Council Leader, claimed, a ‘shining example of municipal enterprise’.32

In similar enlightened spirit and through the support of two councillors, Derek Pentfold and Dave Ramsey, who faced down reservations about cost, archaeologists were admitted in 1973–7 for pioneering excavations of a post-medieval industrial site, led by Terence Courtney. There were further delays. The council was now legally obliged to put the building work out to competitive tender, but no developers were interested because of the combination of slow-moving government approval processes and high inflation. Special permission had to be gained to go ahead through direct labour, though the council’s workforce had now shrunk to half the size it had been in the 1960s. Moore and his team substantially re jigged the plans for the estate in 1973–4, omitting offices, and the building of 491 new dwellings was carried out in 1974–80 (Ill. 102), with Elise Sargent as the lead job architect and Norman Dawbarn as consulting engineers. One twelve-storey block, St Domingos House, with 100 flats, was flanked at right angles by eight- and nine-storey blocks, Plantagenet House and Sovereign House, with forty-nine and fifty-eight flats respectively. There were also some two- and three-storey houses. The community buildings and sheltered housing were grouped to the west near Antelope Road – the new streets and buildings were named after ships built at the dockyard. The South-East London Aquatic Centre opened in 1979, with new perimeter walls around the flooded dry docks, for safety, and, between them, a clubhouse, of jaunty design, with no other than the estate, used in part for the storage of canoes. The estate’s taller buildings, faced with yellow stock brick, are severe and blocky. Lower ones are scarcely less so for the neo-vernacular gesture of some tile-hanging (Ill. 85). Short plain rows of brown-brick houses have pitched roofs.33

The riverside walk was decorated with mosaics in 1976–84 in a project led by the National Etruscan Bathstone Society through an arts workshop based at the Clock House Community Centre. A second foot tunnel that had been formed under Woolwich Church Street to provide safer access to shops on Kingsman Parade was enhanced in 2001 with mosaic murals and informative and illustrative panels about the dockyard’s history. This was done by the Greenwich Mural Workshop, with Stephen Lobb as the senior artist, working with Cardwell Primary School. In the same year the floodwall at the north-east corner of the housing estate was bridged for westwards continuation of the riverside walk. The sculptural white-coated steel footbridge, ‘linkbridge’, which includes a viewing platform, was a public funded Millennium Commission project. The 353 flats between which there are 136 terraced houses, all of 140 to four storeys. The first phase, the houses along Spindle Close, was for housing association tenure, maintained by Greenwich Council as part of the Woolwich Dockyard Estate. To the south-west, between Ruston Road and Warspite Road, two big blank sheds were put up in 1999–2000, these have commercial tenants and, since 2010, incorporate a Metropolitan Police patrol base.34

There were plans in the 1990s for the former dockyard’s easternmost wharves to be redeveloped as a residential complex that would have included a nursing home and a hotel. Instead the Comer Homes Group, through a Guernsey-based company called Mast Quay Developments Ltd, gained permission for a luxury housing project. The first phase was built as Mast Quay in 2004–6. This was designed by Nigel Upchurch Associates, architects, and Lancashire Construction Ltd was the main building contractor (Ills 93, 102). It provided 158 apartments in two fourteen-storey towers and a two- and three-storey western range, all with red- and two-tone grey-panel facing and taking monopitch roofs – an upmarket Thames-side idiom that is characteristic of its decade. The blocks seem on blue stilts above car parking, in part a precaution against flooding. Nos 5 and 6 Ships are left open, crossed by the extended riverside walkway. To the east, Mast Pond Wharf Ltd with Alan Camp Architects has plans to replace the former Aquatic Centre between the listed dry docks, which anglers continue to use.35

West of Woolwich Dockyard including the Siemens Works

The parish of Woolwich includes a block of riverside land to the west of the former naval dockyard, now bounded by Warspite Road to the east, the Woolwich Road to the south, and a strip of park that has displaced...
Harden’s Manor Way to the west (ills 76, 103). This was open marsh north of farmland fields and in manorial ownership in the late eighteenth century, held from John Browne by Richard Tithe and then Samuel Hardin. On both sides there were ‘manor’ paths to the river, the east leading to a ‘sand wharf’ for the trans-shipping of materials taken from the hillocks further south. In 1806-7, after the older Hardin’s death, and as the Bowater estate unreviewed, leases were granted for the development of parts of this property. Thomas Claxton, a timber merchant, took over lands for a wharf of the sand wharf, but he was quickly displaced by John Long, who was now exploiting the sand and chalk pits on the site of the Morris Walk Estate and in Charlton parish. Long took the whole eight-acre river frontage. At the same time the Woolwich Road frontage was beginning to be developed as part of what was known as New Charlton (see below).”

**Riverside Wharves**

Long began making a road along the south side of his riverside property in 1796-9. Called Marsh Street (now Bowater Road), it turned at right angles to lead to a new river landing at what is now the west end of the Millwall Industrial Estate. A few houses were built along this road, but that kind of development was not its main purpose. Long and his business partner’s widow, Sarah Blight, had a scheme for a new ferry, to cross to a point in the Plaistow marshes, a speculation that is difficult to fathom – this was not part of any likely development. The Woolwich Ferry Company gained an Act in 1797/8. A pier was built at the mouth of the creek (now Marsh Pier), which was opened in 1799 and was still trading in 1844. The baths were vacant by 1858 but not demolished until the 1870s when it became the baths. The baths were replaced with Hennebique-system buildings. The baths were occupied in the late 1970s by part of the College of South Bank University. The remainder of the site was developed in the late 1980s.

Trinity Wharf was a coal wharf in the later nineteenth century. A short row of massmate flats of 1866 stood south of the cottage, which was demolished around 1900. In 1902 the wharf was sold and J. Watt Torrance & Co., of Glasgow, established sawmills and a bottle-crane factory. A large brick shed was immediately built and it seems it still stands, much altered. The adjoining office block was added in 1914-16. The sawmills continued through the 1930s. Latterly, up to 1950, Trinity Wharf was occupied by Pims Ltd, marlbe suppliers. The nineteenth-century stone-coped brick house is still there and further west is concealed behind steel campsheding.

The adjoining wharf to the west, occupied in the 1790s by J. and C. Rigby, Woolwich builders, had reverted to being called Long’s Wharf by 1872 when a lease was taken by Henry Castle & Sons’ ship-breaking company. From beginnings in 1838 in Rotherhithe this firm had moved to Vauxhall and Charloeton before adding this wharf to what had become the leading ship-breaking company in London. An essay in 1864 described the premises. The works almost tripled in size in 1870. The western part housed a gutta-percha mast-making shop, the central and eastern parts rubber cleaning, mixing and core covering. There is also still a three-storey former core-tanks building of 1873 to the west. The cable for the Platino-Brasiliera contract was initially transported by chartered steamship, but the loss of two vessels prompted Siemens Brothers to launch their own cables-laying vessel in 1874. The Faraday, designed in part by William Siemens and named in tribute to a former associate, was capable of shifting 360 tons (ca. 400 metric tons) of cable. It was said to be ‘one of the ugliest vessels afloat’. The company’s fortunes fluctuated throughout the later 1870s, but stabilized into profitability by 1880 when the firm became Siemens Bros & Co. Ltd. William withdrew from close involvement after 1880, turning to the exploration of electrical engineering into Germany. Among many initiatives that opened up new fields for his firm that involved cable-laying, the company was appointed to the Ion and Steel Institute at the Woolwich works in 1881. Knighted in 1885, he died the same year, leaving the firm under the chairmanship of Werner Siemens. The English company stayed in the family thereafter through their cousin’s son, Alexander Siemens.

Siemens’s ventures. In 1857, at the request of the Siemens Brothers. It was as Siemens and Halske that in 1865 the firm relocated a five-year-old submarine-cable business from Millbank, Westminster, to the north-west corner of Woolwich, adjoining the Marine Society’s baths (ills. 105). Karl Wilhelm Siemens had come from Prussia to England in 1843 as a young man to develop initiatives and inventions in electrical engineering that he devised with Werner, his elder brother. Werner founded Siemens and Halske in Berlin, invented a method of insulating telegraph wires with gutta-percha and began laying cables in the 1840s. Karl Wilhelm became a naturalized British subject in 1846, changing his name to William. He became the firm’s London agent and then a partner in an independent English subsidiary of the Berlin operation, for which J. S. Newall & Company made cable. The down-river Thames had seen significant experiments and developments in submarine-cable making since the late 1830s, including those for the first attempts to span the Atlantic, in particular at Endler’s Wharf in Greenwich. In 1859 William and his cousin’s son, Alexander Siemens, bought the patents of the Siemens Brothers and formed a new company, Siemens Brothers. In 1881, the English subsidiary of Siemens Brothers moved into new premises in Woolwich in 1883, allowed his firm to begin to make its own cable. In 1865 the London company reformed as Siemens Brothers (Wortley and Wilson) and William Siemens took over his cousin’s business. Later, another Karl, William alone was in England. It was an ambitious venture and an immediate success. With global reach, this was one of the first private British submarine-cable making shops, which was able to supply cables to the Siemens’s ventures. In 1857, at the request of the Siemens Brothers. It was as Siemens and Halske that in 1865 the firm relocated a five-year-old submarine-cable business from Millbank, Westminster, to the north-west corner of Woolwich, adjoining the Marine Society’s baths (ills. 105). Karl Wilhelm Siemens had come from Prussia to England in 1843 as a young man to develop initiatives and inventions in electrical engineering that he devised with Werner, his elder brother. Werner founded Siemens and Halske in Berlin, invented a method of insulating telegraph wires with gutta-percha and began laying cables in the 1840s. Karl Wilhelm became a naturalized British subject in 1846, changing his name to William. He became the firm’s London agent and then a partner in an independent English subsidiary of the Berlin operation, for which J. S. Newall & Company made cable. The down-river Thames had seen significant experiments and developments in submarine-cable making since the late 1830s, including those for the first attempts to span the Atlantic, in particular at Endler’s Wharf in Greenwich. In 1859 William and his cousin’s son, Alexander Siemens, bought the patents of the Siemens Brothers and formed a new company, Siemens Brothers. In 1881, the English subsidiary of Siemens Brothers moved into new premises in Woolwich in 1883, allowed his firm to begin to make its own cable. In 1865 the London company reformed as Siemens Brothers (Wortley and Wilson) and William Siemens took over his cousin’s business. Later, another Karl, William alone was in England. It was an ambitious venture and an immediate success. With global reach, this was one of the first private British submarine-cable making shops, which was able to supply cables to the Atlantic and an immediate success. With global reach, this was one of the first private British submarine-cable making shops, which was able to supply cables to the Atlantic
CHAPTER TWO WOOLWICH DOCKYARD AREA

Ft M 100
HARRINGTON ROAD
WICHARDEN MANOR WAY
SPITE HERHAM ROAD
WESTFIELD STREET
EAST MOOR STREET
WOOL ROAD
YATELY ST
WAR ROAD

1946 – 1958
1870 – 1874
1900 – 1918
1919 – 1945
1881 – 1899

BOWATER ROAD
SIEMENS ROAD

Early 1870s

1926
1923
1942
1937
1911–12
1903
1917
1925–26
1937
1957
1953
1956
1911
1911

104 (above left). Northern parts of the former factory from the south-west, 2008

105 (below left). Plan showing phases of development, 1863 to 1958

106. Bird’s-eye view from the north drawn by E. Neale, 1928, showing the works with Maryon Park School in the distance

107. Distant view of the works from the south, showing New Charlton and Maryon Park School in the middle distance, c. 1910

Siemens Brothers’ Telegraph and Telephone Works
Siemens probably accounted for a third of total British electrical and telegraphic production when it laid its last Atlantic cable in 1894, by 1900 the world’s telegraph system was considered complete but the closing of gaps. But in 1893 Siemens had laid the first British submarine telephone cable. The firm was well positioned to divert its energies into new fields of activity and there was substantial further growth of the Woolwich works. Siemens Road had been laid out across the open field south of the works in the 1880s, and the Bowater Estate followed with Westfield Street and Tateley Street in 1887 and 1901 when the west end of Bowater Road was taken into Siemens’s premises and closed to the public with a gate in front of the office block. Further long Bowater leases that ran from 1897 and 1901 gave Siemens all the land on the west side of the northern part of Tateley Street (between Bowater Road and Westfield Street). This was not much developed at first, save with scattered small sheds and a larger ‘line-department’ building of 1903 at the south-east corner. Here batteries, telegraph and telephone-line material were produced in low sheds, outwardly of arcaded brick, internally steel-framed. An electrically driven overhead telpher system conveyed light materials and equipment between the wharf and the line department on ‘long clanking journeys’.

In 1904–5 Siemens’s dynamo and motor department moved to Stafford and the eastern block of buildings between Bowater Road and Harrington Road was converted for the production of paper-insulated cable and related components – there was growing demand for lead-cased paper cables and insulated wires for telephone, telegraph, electric-light and power lines (II. 111). Cables were made in the range fronting Bowater Road, which now incorporated a steel-framed gallery fitted with vertically mounted core-making machines. The west end of the site between Bowater Road and Harrington Road was reconfigured to manufacture equipment such as galvanometers and Morse-telegraph and laboratory instruments.

Significant further building did not come until 1910, when large blocks on the west side between Westfield Street and Bowater Road and new offices, central on the south side of Bowater Road, started to sprawl across the site’s south-west quadrilateral (IIIs 103, 106). As the submarine-cable business receded, access to the river became less significant.

Among these additions, to the north-west, were the rubber shops (now 37 Bowater Road and 3–4 Faraday Way), a factory for making rubber-coated copper-wire cable (IIIs 104, 112). This vast five-storey and basement L-plan building, which survives substantially as built, was one of London’s largest factories when new. It marked not just a shift up in the site’s scale of building, but also the adoption of new structural technologies. Its lighting for the site, the buildings of which were linked by electric tramways. (Siemens had built and from 1881 operated the world’s first electric tram system in Berlin.) ‘The Woolwich complex had become a “long, grim reach of masonry”’.

101. Siemens factory range of 1871–3 on north side of Bowater Road, originally a gutta-percha masticating workshop. In 1900 workshop range to its east that housed dynamo shops and milling machinery and, further east backing onto Trinity Street, a chemical department. John Grover of New North Road was the builder, as he was of an eastwards extension of the workshops in 1889. This was then linked to the Trinity Street block by a taller workshop block and, to the rear along Harrington Road, armouring and lead-sheeting workshops were added in 1887–9, when John Mowlem & Co., were the builders (IIs 104–7, 109, 110). The eastern parts of this complex survive, western buildings were replaced in the early 1990s. The firm also began to colonize portions of open land further south with some short-lived packing sheds. Steam power was replaced (except for heating) around 1892 when an electricity generating ‘central station’, said to be the first of its kind for the electric driving of a factory, was formed on the south side of Harrington Road in a building close to the core-tanks block. This also provided electric power to the site. (Siemens had built and from 1881 operated the world’s first electric tram system in Berlin.) ‘The Woolwich complex had become a “long, grim reach of masonry”’. 102. Siemens’s dynamo and motor department moved to Stafford and the eastern block of buildings between Bowater Road and Harrington Road was converted for the production of paper-insulated cable and related components — there was growing demand for lead-cased paper cables and insulated wires for telephone, telegraph, electric-light and power lines (II. 111). Cables were made in the range fronting Bowater Road, which now incorporated a steel-framed gallery fitted with vertically mounted core-making machines. The west end of the site between Bowater Road and Harrington Road was reconfigured to manufacture equipment such as galvanometers and Morse-telegraph and laboratory instruments.

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arrangements were devised by W. Dieschhorst, Siemens’s general-works manager, and the building was designed by Herbert and Holland, in-house architects, probably from the mid-1880s. The first official engineer who later became the company’s architect. The building contractor

was Bowater Bowater & Partners. The building was completed and

opened in 1883 (Ill. 107). The building was extended to the south in 1911–12, when D. Humphreys of Knutsford as builder. In the same years there were also substantial enlargements of the battery department, to the east between Siemens Road and Westfield Street, and of the telephone factory to the west. In 1936 Siemens introduced the ‘chondit’ form with one that became ubiquitous for decades – a semi-pyramidal black Bakelite base with a circular dial and a cradle on top for a bracket-shaped handset. To start with these were made exclusively at Woolwich. There was further major building in 1937. A two-storey reinforced-concrete cable shop (also still standing) was built by Griggs & Sons, of Victoria Street, on the south side of Bowater Road east of the offices, its elevations articulated by chamfered piers. There was also a multi-roofed single-storey machine shop was also added, taking the works south of Westfield Street near Harden’s Manor Way. Laboratories and experimental workshops were unified, and garages and bicycle sheds were built for a workforce that had grown to more than 9,000 on a site that covered three-fifths of an acre. There was also correspondence restructuring. Most of the submarine-cable work was transferred to Submarine Cables Ltd at Greenwich, a new company owned by Siemens Brothers and the Telegraph Construction & Maintenance Co. Ltd (Telcon). Siemens was on its own path, taking the works south of Westfield Street near the much expanded Siemens in 1962 an assembly factory, another low-brick-faced building that serves as a warehouse. The works were also extended further into Charlton near the river for making super-tension oil-filled cables. Siemens Brothers had undergone fundamental corporo-

realities, and a final disentanglement from its German roots, and then in 1924 when Associated Electrical Industries (AEI) Group, formed by gradual amalgamation, took over the whole company. This umbrella Siemens Edison Swan Ltd was created in 1927. Despite rationalization and further investment, including the concentration at Woolwich of the wider company’s super-tension cable department and the building in 1962 of a new experimental workshops plant, the layout and age of much of the Woolwich works stood in the way of new production methods. By 1957, when AEI was taken over by the General Electric Company (GEC), the Woolwich factory was principally engaged in making electro-mechanical Stronger to go on to the Post Office, though some production was also sold for use in overseas telephone exchanges. The company soon was worked on by Harry Harrington. There had been earlier development across the road in Charlton par-

lish, thanks to which the place was already known as New Charlton. Harrington granted long leases of large roadside buildings. The Siemens works stood until 1969 (Ill. 124).}

New Charlton

The Woolwich Road south of the former Siemens works was a residential area in the nineteenth century. In 1807–8, when John Bowater was imprisoned for debt, fourteen acres of ‘marsh’ on the north side of what was then called the Greenwich and Woolwich Lower Road (turnpiked in 1794) passed to George Henry Harrington. There had been earlier development across the road in Charlton parish, thanks to which the place was already known as New Charlton. Harrington granted long leases of large roadside buildings. The Siemens works stood until 1969 (Ill. 124).
residents around 1870. In the early 1890s it was a clubhouse with a bowling alley.44

By the 1890s this northern part of New Charlton was densely but incognitiously built up (Ills 10, 107). There were small groups of alluringly named houses – Charlton Vale and Elysium Cottage to the west, Eden Place to the east. These had large gardens, but bucolic identities were belied by cramped courts of small houses, even some back-to-backs, stitched in behind. The main developer here in the late 1840s was William Bowles, who was presumably building to rent to artisans employed in the dockyard’s steam fac-

ility. At the Trinity Street (Warspite Road) corner the Lord Howick public house had appeared in the 1850s with a large garden and skittle alley. It was rebuilt in 1885-6 for Meux’s Brewery through the landlord, Alfred Saunders (Ill. 113). H. L. Holloway of Deptford built the tall three-storey and attics establishment. Damage from an explosion in 1929 necessitated some reconstruction, and the pilastered ground floor was recast in 1935-6 by J. E. Evans, a Plasmead builder. The pub continues as Clancys.45

Round the corner on the west side of Trinity Street was Trinity Cottages, a mean early nineteenth-century terrace, pulled down as dangerous in 1875-6. At its south end was a beech house, known as the Lord Derby by the early 1850s when further houses were going up. Another row of small houses was built further north in 1878-80 and the earlier group was replaced in 1883-6 as 11–20 Trinity Street, mostly maisonette flats, with eight more such flats further south. Behind Trinity Street on and around Boxter Road there was scattered early housing, supplemented in the early 1880s on Boxter Road and, with a long row of thirty dwellings, mostly maisonette flats, on Siemens Road. When Yateley Street and Westfield Street were formed in 1880 and 1901, the London County Council insisted that no more houses should be built. Those already in the area came to be engulfed by the Siemens factory, where many occupants worked. The Derby Arms public house was rebuilt in a neo-

Georgian brick mode in 1830 by Frederick Saunders. He built a stable-yard and a large barn, possibly for The Woolwich Road was again widened, most recently in 2010 when the Woolwich Road was again widened, most recently in 2010 when the Woolwich Road was again widened, most recently in 2010.

Local population growth prompted the School Board for London to take the Glen Mohr Cottage site in 1894 for the building of Maryon Park School. The name derived from the former Hanging Wood and Charlton sandpits land to the south that had been given to the London County Council in 1891 for a park named after the Charlton landowners, the Maryon Wilson family. The catchment, largely working class and associated with the Siemens works, was densely housed, most of it outside the parish of Woolwich. The school was built in 1894-6 to plans by the Board’s architect, J. J. Bailey, with Kirk and Randall as builders (Ills 106, 107, 114). At the outset it comprised just the southern classroom range and a central triple-decked hall block (for infants below boys below girls) with more classrooms on the east side, built on arches to create a covered play area. The original capacity was 795 (209 infants, 240 boys and 240 girls). Foundations were laid for northward extension to make the whole symmetrical, as was usual with board schools. The layout, polychromatic brick elevations and overall architectural form are typical of Bailey’s work, though this is rather more blockish than many of his schools. Internally the building has steel girders and Homan’s hollow-brick fireproof floors. The infants’ playground was to the south, with a play shed to the west. To the south-east there was a three-storey building for a cookery and laundry centre under a schoolkeeper’s house. Because entrance to the site from the busy road proved dangerous, land was acquired to permit access from Westfield Street through the older children’s playgrounds. Extension to Bailey’s plans duly ensued, in two phases, first in 1909-10 when the main block was completed, again by Kirk and Randall, with a second ogee-capped staircase turret and six more east-side classrooms, taking the capacity up to 1,035. Further enlargement followed in 1914-15, with F. J. Goodham of Greenwich as the builder of the northern cross range. This fails to carry through the symmetry and does not project to the west like its forerunner. It provided seven more classrooms above another covered play area. The overall capacity did not increase this time, as the LCC, the School Board’s successor, insisted that the children should be too densely packed in.

In the 1950s the school mixed primary and secondary accommodation before becoming Charlton Secondary School and gaining hut-like additions in the playgrounds. The Woolwich Road was again widened, most recently in the 1980s when the schoolkeeper’s house was demolished. By then the Inner London Education Authority had made the school a further-education college. It has continued as such, but as Holborn College, a private institution established to prepare international students for London University law exams. In 2013 Greenwich Council acquired the premises for a return to use as a primary school.59

Maryon Park School (now Holborn College)

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