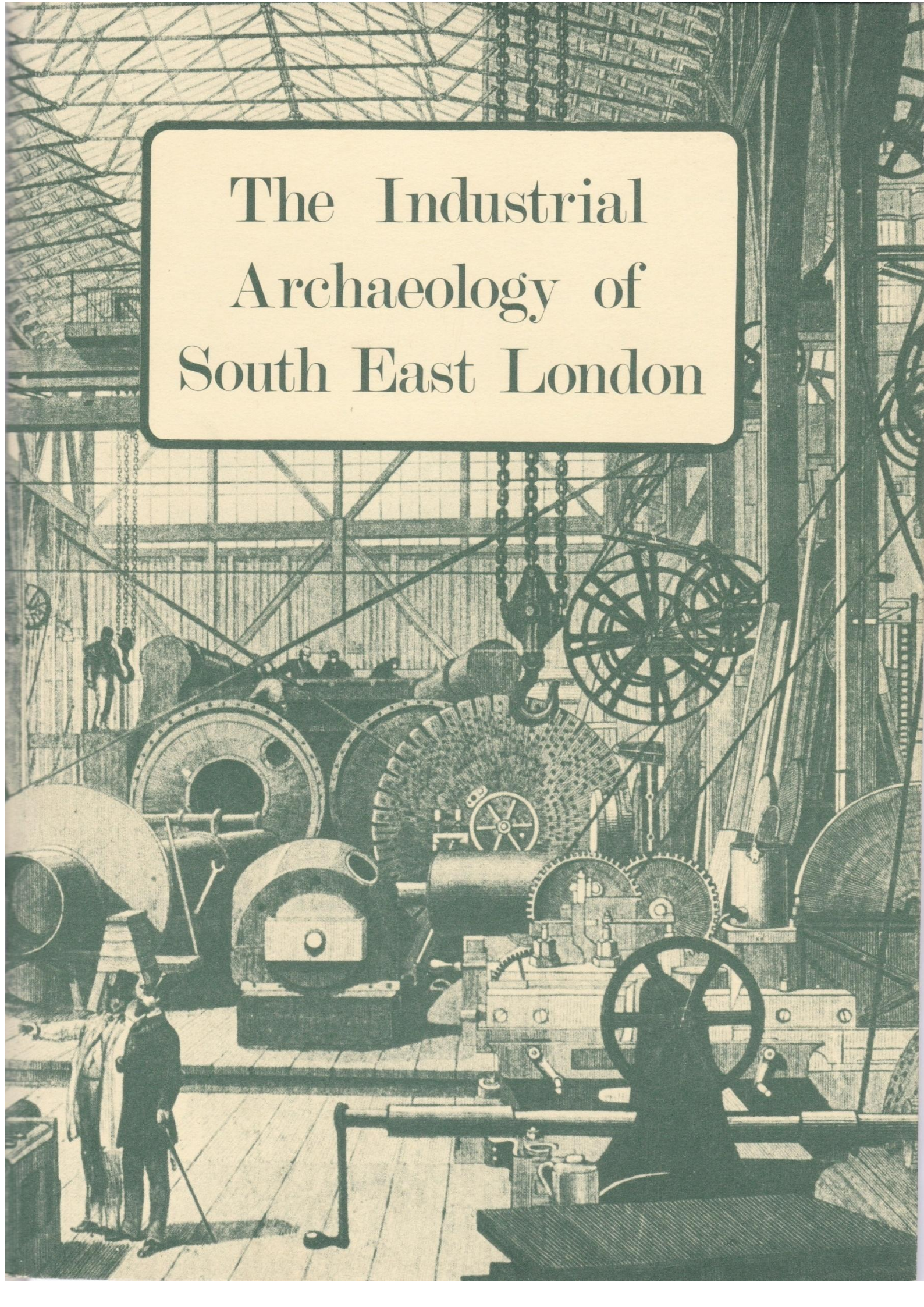


The Industrial Archaeology of South East London



BROMLEY AND BECKENHAM

Bromley and Beckenham had very different histories before 1965 when they were incorporated into the London Borough of Bromley. Bromley became a local board in 1867; an urban district council in 1894 and a borough in 1903. Beckenham became a local board in 1877; an urban district council in 1894 and obtained borough status in 1934. There has been a good deal of friendly rivalry between the two in providing services for their respective ratepayers - especially in the fields of gas and electricity. Beckenham has more of what manufacturing industry there is in the area whilst Bromley has concentrated more on providing homes for the commuters. As in other peripheral areas of the G.L.C., what is significant in the industrial archaeology of the district is the provision of road and rail links as well as public services and housing.

BASIC MATERIALS

B1. Farm Buildings: Rear of 15 Hawthorne Road, Bickley

TQ 429688

These are the remains of Bickley Park Farm which functioned until the 1920s. There are brick outbuildings with low, pitched slate roofs and these have recently been converted into a dwelling.

MANUFACTURING INDUSTRIES

B2. Blacksmith's Forge: Rear of 39 Chancery Lane, Beckenham

TQ 379693

A blacksmithing business has been carried on here for at least 150 years and served the Beckenham area. It has two forges, one with leather double-blast bellows and the other with a hand-cranked centrifugal fan, both of which are still in working order. There is also a large number of hand tools including anvils, tongs and shears together with a tool-grinding stone. The fate of the building and its contents is uncertain although it is in the centre of a pleasant conservation area.

B3. Electrical Engineering Works: Croydon Rd., Beckenham

TQ 358683

Demolished

Muirhead's original factory building and offices can still be seen here. These are of London stock brick with slate roofs. On the second storey there is a group of terra cotta panels bearing the legend 'Muirhead's Electrical Engineers' (this probably dates from the 1890s). In the late nineteenth century Muirhead's applied to take on the electricity generation for the Beckenham area but the local council refused and undertook it themselves.

B4. Millpond: Glassmill Lane, Bromley

TQ 401690

Although all traces of a mill house have disappeared there is still an extensive mill pond on the river Ravensbourne near the centre of Bromley. This is an ancient site and even in the nineteenth century there was a mill here for the grinding of glass and this has given the road its name. The houses at 18-19 Glassmill Lane, on the edge of the pond, are attractive weather-boarded cottages with Dutch gables and date from the last century.

B5. Bakery: Market Square, Bromley**TQ 402694**

The hamburger restaurant was formerly Maunders' bakery. A bakery had existed on this site since at least 1773, Maunders being the proprietors from 1871 to 1977. One of the pair of cast-iron oven fronts (c.1871) from the rear bakehouse has been preserved by the Museum of London. The new owners undertook to reinstate the attractive Georgian shopfront, the only survivor in the Market Square.

TRANSPORT**B6. Milestone: Corner of High St. & Bromley Rd, Beckenham****TQ 375696**

This ancient milestone was extensively restored in 1976 and repositioned on the south side of the junction from its former site on the churchyard corner.

B7. Chinese Garage: Park Langley Roundabout, Beckenham**TQ 379685**

Despite the nickname of the 'Chinese Garage' this distinctive structure is of Japanese design, built in 1929 to coincide with the current ideas of the local landowner. The garage was at first only a filling station but workshops at the rear, including a very early hydraulic vehicle hoist, were added in 1934 and the office in 1936. If a customer wanted his car serviced there was a bus service run by the garage to take him to Beckenham station. During the last war the workshops were turned over to making aircraft parts, this war work being aided by the fact that the garage possessed its own electricity generating equipment. The drive-in pagoda, with pumps inside, has been described by Pevsner as 'road to Mandalay style'. There are even ornamental pagodas in the gardens.

B8 Railway Station: Station Approach, Beckenham**TQ 374698**

The original Beckenham Junction station was built in 1857 as the temporary terminus of the South Eastern Railway which came from London via Lewisham. This became a junction in 1858 with the opening of the Bromley Junction - Bickley line. In 1859-60 the line was joined to the London, Chatham and Dover Railway. Some of the fittings of this date still exist, such as the cast-iron canopy supports, some valancing and some round-headed windows. Rutland Cottages, which back on to the coal yard, are typical railway cottages in stock brick and with decorative barge-boards: these also date from the 1860s.

B9. Railway Station: High Street, Bromley**TQ 405686**

The original Bromley South station was built in 1858 but when the lines were widened in 1893 the station was rebuilt almost as it appears today.

B10. Railway Station: Lennard Road, Beckenham**TQ 367706**

The original New Beckenham station, built by the South Eastern Railway on the Mid Kent line, was constructed in 1864. There were originally four platforms serving the through line and the curve to Beckenham Junction. In 1866 the station was rebuilt a short distance to the north of the junction. The station master's house and indications of the platform of the original station can still be seen from Bridge Road. The present station has attractive iron brackets.

B11. Railway Station: Plaistow Lane, Bromley**TQ 406703**

Sundridge Park station was built in 1878 for the South Eastern Railway and is a good example of a typical halt with its weather-boarded shelters. It was built as a private station for Sir Charles Scott of Sundridge.

B12. Railway Station: Tweedy Road, Bromley**TQ 403696**

The original terminus at Bromley North of the 1878 Bromley branch of the South Eastern Railway was reconstructed by the Southern Railway in a neat red brick design with a three-span glazed roof dating from 1925 when the station was altered in readiness for an electrified service the following year.

B13. Railway Station: Station Approach, Chislehurst

TQ 431694

This station, on the South Eastern Railway, was rebuilt in 1900 after a widening of the tracks. It is in red brick with stone and blue brick dressing and there is some cast-iron work.

B14. Railway Tunnel: Elmstead Woods

TQ 419710

This tunnel on the Sevenoaks line, which was opened in 1865, lies between Grove Park and Elmstead Woods stations and is c.525 yards long. In 1901, when the line was widened a second time, a second tunnel was bored alongside the first and the whole scheme was completed in 1904.

B15-B18. Railway Bridges

B15. South Hill, Chislehurst	TQ 423705
B16. Yester Road, Chislehurst	TQ 426703
B17. Chislehurst Road, Chislehurst	TQ 430696
B18. Barfield Road, Chislehurst	TQ 434691

These bridges on the Sevenoaks line were all built to a similar design. They are all massively built, brick, round-arched bridges through the embankment between Elmstead Woods and Chislehurst stations. The line was opened in 1865 and the bridges were widened in 1901 when the line was quadrupled.

TRADE AND COMMERCE

B19. Builder's and Funeral Director's House: Gravel Road, Bromley Common

TQ 422657

The stuccoed 1830s house was used for a long time as a builder's and funeral director's office. In the rear garden there is a large wooden structure, probably dating from the eighteenth century. This served as the workshop and is weather-boarded with a pantiled roof and is an interesting example of workshops in an almost rural setting.

PUBLIC UTILITIES

B20. Water Pumping Station: Valley Road, Shortlands

TQ 395691

In 1867 the Southwark and Vauxhall Water Co. renounced its rights in this area in favour of the Kent Waterworks Co. whose first well (1868) was powered by a 33hp Cornish 'Bull' engine made by Harvey & Co. of Hayle (broken up in 1936). The second well (1873) was similarly powered but by a 70hp Bull engine. Together they could pump 5 million gallons per day. The building which housed the two engines is still extant although unused. The two half beams of the original engines remain and were used after the engines were demolished as lifting points over the wells. The building is in Kentish ragstone which is somewhat unusual for a pumping station. A third well was sunk by the Metropolitan Water Board in 1910 and was worked by an inverted triple-expansion steam engine. This engine has also gone but the ragstone-faced pump house remains. In 1949, to increase output, electric booster pumps were installed to draw water from Honor Oak reservoir: these were replaced in 1960.

B21-B24. Sewer Vent Pipes

There are a number of cast-iron pipes with gas lamp brackets still attached. These are in the Shortlands/Beckenham area and date from the 1860s.

B21. 35 Shortlands Road, Shortlands	TQ 391690
B22. Next to Shortlands railway station	TQ 395692
B23. Foxgrove Road, Beckenham	TQ 385700
B24. There is also a sewer vent pipe converted to an electric light standard at the junction of The Avenue and Westgate Road, Beckenham	TQ 381699

B25. Gas Works. Homesdale Road, Bromley **TQ 415688**

A gas works was established by Jonathan Hutchinson in Farwig Lane in 1837 and in 1854 was sold to the Bromley Gas Consumers' Co. In 1894 it moved to the Homesdale Road site. No evidence of the first works now remains. In 1912 the Bromley and Crays Gas Co. was absorbed into the South Suburban Gas Company. Maximum production from the works was approximately 2.6 million cubic ft. per day from both horizontal retorts (1883) and carburetted water gas plants (1909). The spiral-guided holder is of modern construction. Coal was supplied to the works by a siding connected to the London, Chatham and Dover Railway at Bromley South. Gas manufacture ceased in 1954.

B26. Electricity Generating Station: Churchfields Road, Beckenham **TQ 361690**

Beckenham Urban District Council took over the running of the borough's electricity supply in 1905 and continued to supply electricity from this generating station until nationalisation in 1948. Some of the old station remains although the siding for coal supply has now gone as has the original refuse destructor. The last modernisation took place in 1938 and supply finished in the 1950s. Part of the site still belongs to the electricity board and part to the G.L.C.

In Beckenham and the surrounding area there are a number of road-side kiosks, both single and double door, marked 'Beckenham U.D.C. Electricity Supply'.

B27. Electricity Showrooms: High St., Beckenham **TQ 374697**

These showrooms replaced earlier ones on the same site. They demonstrate the municipal pride that Beckenham had in its electricity supply as they are incorporated in the grey brick municipal buildings of 1932, designed by Lanchester and Lodge. The showrooms were taken over by the London Electricity Board after nationalisation.

B28. Electricity Generating Station: West Street, Bromley **TQ 403694**

Bromley's electricity undertaking was run by a private company from 1898 until 1927 when it was taken over by Bromley council. Little generation went on after the 1940s and only the workshops and showroom remain on the site. The property belongs to the London Electricity Board but the showrooms are now used for other purposes.

B29. Fire Engine House: Kelsey Square, High Street, Beckenham **TQ 373694**

This picturesque red-brick building with a clock tower was formerly the fire engine house. On the side wall is an ornate cast-iron drinking fountain.

B30. Fire Station: South Street, Bromley **TQ 404695**

The station was built in 1910 by the Borough Engineer and Surveyor, Stanley Hawkings, to replace the original depot which still stands in West Street. Both are in red brick with white stone dressings; the later building is three-storeys with accommodation and offices above.

B31-B32. Pillar Boxes

Edward VIII reigned for only ten months so pillar boxes from his reign are very rare. There are two examples in this area and both were made at the famous Carron Ironworks.

B31. Junction of Southend Rd., and Brackley Rd. Beckenham TQ 374703

B32. Junction of Cumberland Rd., and St Mary's Ave. Shortlands TQ 396686

OTHER SERVICES

B33. Cinema: High St., Bromley. (East side) TQ 401695

This pre-World War I cinema, originally known as the Palais de Luxe, later became the Pullman and latterly the Astor, before its degeneration into a bingo hall. The Odeon opposite dates from c.1937.

B34. Cinema: High Street, Beckenham TQ 370695

The Regal, now the A.B.C., was opened in 1930 and designed by Robert Cromie who also designed the Prince of Wales and Royal Court theatres. The cinema, which possessed a famous organ, restaurant and ballroom, has now been redeveloped.

B35. Cinema: High Street, Bromley TQ 404688

This building was erected in 1936 as a Gaumont cinema. It was converted into a department store in the 1960s and is now part of the Debenhams chain. The front has been substantially altered but the side and rear still display typical cinema features.

B36. Bandstand: Croydon Rd. Recreation Ground, Beckenham TQ 369690

This exceptionally well-maintained bandstand was manufactured by MacFarlane and Hope of Glasgow and probably dates from the opening of the recreation ground in 1891.

B37. Homeopathic Hospital: Widmore Rd., Bromley TQ 406695

The first Phillips Memorial Hospital was built at the junction of Park Road and Widmore Road in 1889, in memory of the founder of an earlier hospital who had died at the age of 38. The hospital was later rebuilt on a site where it was destroyed by bombs in World War II. The original building still stands.

B38. Primary School: College Road, Bromley TQ 402696

This is a National Society School, built in 1855 and extended in 1871. Despite their urban surroundings, these buildings betray their former rural setting and resemble a typical country school.

B39. Primary School: West Common, Hayes TQ 405662

This nineteenth century Church of England school is now enveloped in urban sprawl. Although not in use, the bell over the classroom and teacher's house can still be seen.

B40. College of Art: Tweedy Road, Bromley TQ 404695

This was built in 1878 with additions of 1894 and was designed by John Sulman. Until 1977 this was used as Bromley Public Library and is now used as council offices. The decorative terra-cotta panels which represent 'Science', 'Art' and the Kent County Council symbol should be noted.

B41. Public Hall: Bromley Road, Beckenham TQ 375695

This 1883 Arts and Crafts style building in yellow and red bichromatic brickwork was designed by George Vigers who was also architect to the London Dock Company. The building is somewhat avant-garde for its date, turreted with gabled dormers.

B42. Ice Houses: Sundridge Park grounds, off Plaistow Lane, Bromley

TQ 410700

In Sundridge Park grounds, which are now used as a golf course, are two ice houses.

B43. Ice Well: Kelsey Park, Beckenham

TQ 378687

The ice well in Kelsey Park, at the east end of the lake, is the former ice well for the Kelsey Park Estate. It consists of a mound of earth with a bricked-up entrance. Other remains of the old Kelsey Park Estate are the Bailiff's Cottage, Manor Way and the red-brick, mock Tudor lodge house at the Wickham Road entrance.

B44. Gravestones: Beckenham Cemetery, Elmer's End Rd., Beckenham

TQ 352687

Beckenham Cemetery contains the grave of Thomas Crapper, famous for his invention of the siphonic flush water closet¹. In 1902 Crapper moved to Thornsett Road, Anerley, and lived there until his death in 1910. Dr. W.G. Grace, the famous cricketer, is also buried in the cemetery and his grave depicts stumps and balls.

¹ Crapper manhole covers still exist in the streets of London - a good example is to be found outside 75 Ladywell Road, SE13.

CRAY VALLEY AND ERITH

The river Cray rises at Orpington and flows north-eastwards for eight miles to join the river Darent which in turn flows a further one and a half miles into the Thames just downstream from Erith. As with all London tributaries of the Thames, the economic importance of the river was considerable for many centuries and several Cray mills are mentioned in the Domesday Book. No fewer than eight parishes grew up along the course of the river - Orpington, St Mary Cray, St Paul's Cray, Ruxley, Footscray, North Cray, Bexley and Crayford. Erith had a different origin, being once an important Thames port. Agriculture, particularly hop and fruit growing, was the other main activity of the area. Most of this has gone with the sprawl of London although the strictly controlled 'green belt' has preserved some of the rural character of the east side of the valley. The villages were grouped into the Urban Districts of Orpington, Chislehurst & Sidcup and Crayford as well as the Boroughs of Bexley and Erith. In 1965 the area was removed from Kent and apportioned to the London Boroughs of Bromley and Bexley.

BASIC MATERIALS

C1. Ballast Pit: Fraser Road, Erith

TQ 5078

Fraser Road and the engineering works beside it lie at the bottom of extensive ballast pits, digging of which began in 1808. The surface material, used for ballast, and the loamy soil below, which was ideal for making moulds in iron foundries, were taken directly by two tramways to the Upper and Lower Ballast Wharves. Still to be seen are: the tramway tunnel under Erith station; Parish's Wharf (West Street, opposite Walnut Tree Road); and the site of the crossing over West Street for Cory's Wharf.

C2. Gravel pits: St Paul's Cray

TQ 4770

Extensive pits exist in the area between Sevenoaks Way and Sandy Lane. These are now filled with water from the Cray and used as balancing reservoirs to control flooding. The area is a nature reserve and access is restricted.

C3. Brickworks: Stone Cross Lane, Crockenhill

TQ 504682

The site of the exhausted Bournwood brick works, formerly served by sidings from the St Mary Cray - Swanley railway line.

C4. Barn: Tripes Farm, Chelsfield Lane, Orpington

TQ 479659

An old, small, timber barn and granary with a steeply pitched tiled roof.

C5. Barn: Sheepcote Farm, Sheepcote Lane, St Mary Cray

TQ 488680

A large sixteenth or seventeenth century timber barn with a queen-post roof of six bays. The walls are weather-boarded externally and the roof is pantiled. It is part of an attractive group of Kentish farm buildings.

C6. Barn: Howbury Farm, Whitehall Lane, Slade Green

TQ 527767

A very impressive structure with a timber queen-post roof of nine bays. Each bay has a central 3 inch slit in the side walls to ventilate the corn. The barn probably dates from the early seventeenth century.

C7. Osier Beds: Skeet Hill, Orpington**TQ 4965**

These are the remains of the osier beds which provided willow rods used in the basket-weaving industry in St Mary Cray. In the nineteenth century this industry supplied the market gardens in the area with a large number of fruit baskets.

C8 & C9: Hop Pickers' Huts, St Paul's Cray

Two separate terraces of brick huts, each with a door and single window, and with a continuous flat roof, typical of the temporary accommodation provided for the hordes of seasonal hop pickers.

C8. Off Hockenden Lane

TQ 495690

C9. Off Cookham Lane

TQ 494696

MANUFACTURING INDUSTRIES**Industries dependent on the river**

The river Cray not only provided a source of power but its chalky quality was ideal for use in paper making and fabric processing. Today ten sites can be identified along the course of the river although in some cases only scanty traces remain of these once very important industries.

C10. Water Mill Site: High St., opposite Rookery Gdns., St Mary Cray**TQ 472677**

Only a culvert and some riverbank brick work remains of Snelling's Mill which was in use from the seventeenth century until c. 1870.

C11. Paper Mill Site: Mill Brook Rd., St Mary Cray**TQ 472684**

Only a few lengths of wall remain on this ancient mill site. Its most active period was after it was taken over by William Joynson in 1833 and began producing fine quality paper and from 1860, security paper for stamps and banknotes. Production ceased in 1931 and caused serious local unemployment.

C12. Paper Mill: Main Road, St Paul's Cray**TQ 473694**

This still active concern of Wm. Nash dates from the early nineteenth century. Numerous extensions and alterations have taken place since then but traces of the earlier mill race can still be seen.

C13. Water Mill: High Street, Bexley**TQ 496734**

This large corn mill building probably dated from 1779 with nineteenth century alterations and extensions. It at one time had a 14ft. 3in. diameter x 10ft. wide water wheel, undershot as in all Cray mills. Although steam power was introduced in 1884, water power remained in regular use well into the twentieth century. The building was destroyed by fire in 1966 but has since been rebuilt as a pub/restaurant called the 'Old Mill'.

C14. Water Mill: Bourne Road, Bexley**TQ 502743**

The most picturesque section of the Cray is where it passes the sixteenth century mansion of Hall Place and it is hard to imagine the intense activity which once took place here. There was a mill on the site in 1664, while a lease of 1820 lists the following buildings: water-cornmill with two large wheels, calico mill, 'Blue House', winch house, engraving and cutting house and granary. Although the main mill building has gone, some of the other buildings can be identified, especially the very fine seventeenth century barn with its steeply-pitched tile roof and very low eaves.

C15. Silk Printing Works: London Road, Crayford **TQ 511747**

This silk and calico printing works was established in 1800 by Augustus Applegarth and was taken over by David Evans in 1830. Several of the original buildings are obviously still in use (the small-scale brick buildings with attractive pantiled roofs). Hand block printing of fabrics is still carried on here. The quality of the firm's work has for long been internationally acclaimed.

C16. Fabric Printing Works: Swaisland Drive, Crayford **TQ 517747**

Some of the conglomeration of buildings on this site were originally part of Charles Swaisland's extensive silk and calico printing works of the nineteenth century and indeed the site had been used for such since the arrival of Huguenot refugees in 1685. The two-storey timber workshop building with its extensive high-level glazing appears to have been added as one of the improvements to the works by G.P. & J. Baker Ltd. when they took over in 1893. For a long period this works was regarded as the finest in the world, partly because of the wide range of fabrics to which their printing process could be applied. Production ceased in 1962.

C17. Water Mill: Maiden Lane, Barnes Cray **TQ524750**

The old cottages and outbuildings by the river were associated with the mill which stood on the site in the nineteenth century.

C18. Iron Mill: Thames Road, Crayford **TQ 528755**

The site of the flour mill here, which started producing its special 'Vitbe' flour in 1927, has a much longer history as an iron mill which was described in the late eighteenth century as 'anciently made use of for the making of plates of armour'. Wrought iron was still being slit and flattened here in the nineteenth century.

C19. Barge Works: Crayford Creek, off Thames Rd., Crayford **TQ 532756**

Below the Iron Mill the river is navigable and is known as Crayford Creek. On the west bank were extensive brick works. The last brick company, Messrs. Rutters, also built some pitch-pine sailing barges here from 1881 and the two slipways can still be seen.

C20. Windmill: St Paul's Rd., off Mill Rd., Barnehurst **TQ 502772**

Only the circular brick base (two storeys internally) remains of this early nineteenth century smock mill. It was last used about 1880 and the mill collapsed in a gale in the early 1890s, at which time the base was given its present conical slate roof.

C21. Bakery: Station Road, behind Lime Tree House, St Mary Cray **TQ 472685**

The small brick building with a square brick chimney was once the village bakery.

C22. Forge: High Street, St Mary Cray **TQ 472682**

A similar building to the above bakery, but near the viaduct, was once a blacksmith's forge.

C23. Armaments Factory: Nordenfeldt Road, Erith **TQ 509784**

On this site a works was built in 1887 for the manufacture of the heavy calibre multi-barrelled, hand-cranked gun, designed by the Swedish engineer Helge Palmkranz and financed by the Swedish armaments tycoon Torsen Nordenfeldt. The gun was used by the Royal Navy against fast torpedo boats

and remained in use until 1903. In 1884 Hiram S. Maxim patented his machine gun operated by recoil action and in 1888 he took over the works at Erith which then became the Maxim-Nordenfeldt Gun and Ammunition Co., Ltd.

In 1897 the works was taken over by Vickers and became Vickers, Son & Maxim. After 1898 the factory was extended to employ 4,000 people, manufacturing the Vickers-Maxim machine gun and the 37mm 'Pom Pom' later used in the Boer War. From 1907 to 1910 the works was producing Siddeley Autocars, a branch of Wolseley cars, but this work was transferred to Birmingham in 1910. The works reopened in 1912 and in 1914 production was extended to cope with the demands of war. (see also C26).

**C24. Engineering Works: Sandcliff Road, and complex
north of Fraser Road, Erith**

**TQ 506785
TQ 508781**

i) The single storey building on the corner of Sand cliff Road and Church Road has the letters and date 'V S & M 1906' in contrasting coloured brick on the gable ends facing Sandcliff Road. This stands for Vickers, Son and Maxim who were responsible for putting up this building.

ii) A triangular site, bounded by the Erith to Belvedere railway line on the North-east and Fraser Road on the South side, contains remnants of the Vickers' gun and carriage works.

Apart from guns, this site was also used for the production of aircraft. The first aircraft, built in 1911, was bought for the 1912 Australian Antarctic Expedition; it crashed in Australia but the fuselage was taken to Cape Denison, Antarctica, in an unsuccessful attempt to use it as a propeller-driven sledge. The remains of the steel fuselage are reputed to remain there still.

From 1913 the works built 31 'BE2a' aircraft, designed by the Army Aircraft factory at Farnborough, Hants. In late 1914 aircraft production was transferred to Crayford.

C25. Engineering works: Fraser Road

TQ 507783

The London branch of Fraser and Chalmers of Chicago was formed in 1890 and immediately acquired control of its American parent. In 1891 a site for an engine works was purchased from the Maxim-Nordenfeldt Gun Co. and production started in 1893 under the personal supervision of David Ross Fraser. In 1901 the American works were sold off, becoming Allis-Chalmers, whilst the Erith works continued as Fraser and Chalmers until acquired by G.E.C. in 1918. Initially the firm specialised in mine winding engines and associated plant, the bulk of which was exported.

Between 1893 and 1936 the firm made 108 large steam winding engines, a few of which still remain in operation. For example, two winders from 1908 are still to be seen at Bentley Colliery in South Yorkshire. From 1905 the Erith works also made electric winders; a total of 392 up to 1965. Under G.E.C. the production of mechanical handling plant increased; every aircraft lift in every H.M. carrier was made here. G.E.C. Mechanical Handling still occupy the large steel-framed three-storey erecting shop dated 1907.

C26. Engineering Works: Swaisland Drive and Crayford Road, Crayford

TQ 519748

Hiram S. Maxim invented his 'improved' automatic gun in 1884 and was producing it in some of the buildings on this site in 1888. In 1897 the works was acquired by Vickers' and improved machine guns were produced. After making Siddeley Autocars from 1907 to 1910, the works closed until 1912 when the manufacture of munitions was commenced, employing some 14,000 people by 1914.

Special car and bus bodies were produced from 1925 to 1929. The company has since diversified and moved to new premises in Maiden Lane, abandoning their motley collection of buildings of various dates

including the multi-storey, concrete-framed structures which are the ugliest buildings in Crayford and probably the world.

C27. Engineering Works: Wheatley Terrace Rd

TQ 523778

In 1864 the firm of Easton, Amos & Anderson (established in 1822 with a works in The Grove, Southwark) built a new steam engine manufactory in Erith. From 1872 the firm's entire manufacturing operation was concentrated in Erith and the works occupied an extensive riverside site, with substantial erecting and machine shops together with a large foundry. The area covered by this works has been reduced by piecemeal demolition over the years and little of significance now remains to be seen. The company built a large number of steam engines, some of which survive. The rotative beam engine from Cliftonville Waterworks at Northampton, which now operates at Kew Bridge Pumping Station, and the two large engines at Goldstone Pumping Station, Brighton, now on public display, were made by Easton and Anderson Ltd. at Erith. The firm later diversified into electrical engineering, particularly lift manufacture, but closed in 1911, selling off the site.

C28. Brewery: Bourne Road, Bexley

TQ 497738

The premises of W. M. Owlett & Sons were previously Reffell's Brewery. The mid-Victorian, stock-brick buildings include a water tower and the shop and office on the street frontage.

C29. Oil Works: Church Manorway, Erith

TQ 507749

The 24 concrete silos of 1916 comprise the first major work in this country of Christiani & Nielsen, the Danish pioneers of reinforced concrete techniques. These silos form part of the British Oil and Cake Mills Ltd. factory which includes interesting multi-storey framed structures. The main building bears the date 1908-14. Between the silos and the riverside run two concrete sheds over 350 ft. long and spanning nearly 100 ft.

C30. Industrial Estate: Sidcup By-pass, Footscray

TQ 469704

In true by-pass style, both sides of the road were zoned for industrial use and there are two factories of note. At the Sevenoaks Way Roundabout the Crittall Metal Windows factory of 1927, now Ranks, was well placed to supply the builders of the semi-detached houses in these sprawling suburbs.

C31. Factory: Sidcup By-pass, Footscray

TQ 478705

The second factory worthy of note, on the south side, is the Richard Klinger works, designed in 1935 by Wallis Gilbert, and is a good example of industrial architecture of the period.

C32. Industrial Estate: Cray Avenue, St Mary Cray

TQ 470678

In 1936 Mr. Morphy and Mr. Richards took over a barn here and began to produce gramophone pick-ups and electric fires. When the Sevenoaks Way/Cray Avenue road was built in 1937 and the industrial estate created, Morphy Richards moved to the largest site. The company has now gone, however, and the only building worthy of especial note is the Tip-Top Bakery built during the war in true 1940s style.

TRANSPORT

C33. Thames River Wall, Erith

TQ 53 77

The river wall, which in fact stretched from Greenwich to the Isle of Grain, can be seen at its best east of Erith. It must be regarded as a remarkable piece of early civil engineering, whether one believes it to be Roman or fourteenth century, but recently the bank has been much enlarged.

C34. The Riverfront: Erith**TQ 519780**

The town has a long history of maritime importance and Henry VIII had a vast naval storehouse erected here in 1512, on the land between West Street and the shore. The existence of too many sandbanks forced the King to abandon his plans for a Royal Dockyard here, the Woolwich site being selected instead. From 1808, wharves and jetties were constructed along the West Street frontage for ballast loading and in 1862 for the gas works. These have recently been obliterated by flood defence works. In an apparent attempt to transform Erith into a seaside resort, a 450 ft. long pier, and hotel and ornamental gardens were constructed in 1842. The pier extended from the end of Avenue Road (TQ 519780), with the hotel and gardens adjacent. Not very surprisingly, the venture failed and the land was taken over for industrial purposes the pier has been replaced by a modern concrete one.

C35. Stables: Church Hill, Orpington**TQ 465665**

The fifteenth century half-timbered outbuildings of Orpington Priory have been most carefully restored and converted into offices.

C37. Tram Depot: Walnut Tree Road, Erith**TQ 512780****Demolished**

A substantial building erected with obvious civic pride in 1905 by Erith U.D.C. for their new electric tramway system. The four distinctive, tall narrow doorways can be seen in the imposing frontage. Lengths of the track leading out to Walnut Tree Road are still visible. The building ceased to be used as a tram depot when the rest of the Erith system was transferred to the London Passenger Transport Board in 1933. The trams through Erith were replaced in 1935 by trolleybuses which lasted until 1959.

C38. Railway Station: Stonewood Road, Erith**TQ 511781**

Built in 1849 for the South Eastern Railway, Erith station is substantially the same with its unusual staggered platforms designed by Samuel Beazley.

C39. Railway Station: Station Approach, Bexley**TQ 493734**

The original (1866) white, weatherboarded station with cast-iron fittings, probably also designed by Beazley.

C40. Railway Sheds: Whitehall Lane, Slade Green**TQ 525762**

This very extensive workshop and train shed complex was erected in the nineteenth century by the South Eastern Railway.

C41. Railway Viaduct: High Street and Millbrook Road, St Mary Cray**TQ 472683**

A massive nine-arch viaduct carrying the London, Chatham and Dover Railway across the valley. The two tracks on the north side are carried on the red brick viaduct built c. 1858 while the southern half was built in concrete with brick cladding to match when the track was quadrupled in 1959. By comparing the two, it can be seen that the older side is leaning to the west as a result of the braking action of trains stopping at St Mary Cray station.

C42. Railway Viaduct: North of Thames Rd., Crayford**TQ 528755**

A much lower viaduct carries the South Eastern Railway across Crayford Creek. It was built in 1849.

TRADE AND COMMERCE

C43. Market Building: Market Place, Bexleyheath **TQ 492752**

A small market building with an arcade of rounded arches.

C44. Shops: High Street, St Mary Cray **TQ 472684 TQ 472682 TQ 471675**

There are several examples of early village shops: 5-9 and 50 High Street are seventeenth century timber-framed buildings with later shop fronts and 316-318 High Street is an eighteenth century brick building.

PUBLIC UTILITIES

C36. 'Five Arch Bridge', North Cray **TQ 512780**

This ornamental, brick and flint bridge across the Cray was built in 1782 as a picturesque feature in Lancelot Brown's landscaping of both the North Cray Place and Footscray Place parks which it connects.

C45. Gas Works: London Road, Crayford **TQ 506749**

This was the West Kent Gas Company's Nettle Bottom Works and production started in 1852.

C46. Gas Works: Leasons Hill St., St Paul's Cray **TQ 470686**

This works was established by William Joynson who lit St Mary Cray village by gas in 1862. The Cray Gas Company took over and manufacture here ceased in 1909 after the formation by amalgamation of the Bromley and Crays Gas Company.

C47. Sewage Pumping Station: Crayford Rd., Crayford **TQ 552745**

A small building with an ornamental clock tower bears the inscription 'Sewage Lift Station, Dartford R.D.C., 1902' and commemorates the coronation of Edward VII.

C48. Electricity Generating Station: Walnut Tree Rd., Erith **TQ 513781** **Demolished**

Erith U.D.C. electricity undertaking was established in 1903 and these works doubled in size when required to provide power for the local tramways. These typical stock brick buildings are still used for electricity distribution.

C49. Electricity Generating Works: Bourne Road, Bexley **TQ 497736**

This rendered building with red-brick surrounds to the round-arched windows, was built by Bexley U.D.C. in 1903. It supplied A.C. current for public lighting, and until 1935 D.C. for the trams. Although the site was over a mile from the tramway route, it was selected for its proximity to the river for condensing water and to the railway for coal supplies.

OTHER SERVICES

C50. Police Station: High Street, St Mary Cray **TQ 472681**

An attractively detailed building in bright red brick with stone dressings, akin to Scotland Yard, dating from 1896. It replaced the original police station established in 1851.

C51. Police Station: High Street, Erith **TQ 515781**

Built in 1908 in the typical style with red brick and stone dressings, along with a separate block of River Police offices overlooking the Thames.

C52. Fire Engine House: Market Meadow, St Mary Cray **TQ 471681**

A small, red brick building, erected in 1899 to house the village's horsedrawn fire engine.

C53. Primary School: Wellington Road, St Mary Cray **TQ 470671**

The school was founded in 1867 by mill-owner William Joynson in this ornate Victorian building with its attractively decorative brickwork and run on a philanthropic basis until taken over by the Orpington School Board in 1892. Two of the original three blocks have been demolished.

C54. Primary School: Rectory Lane, Footscray **TQ 474710**

A typical Victorian village school with an eye-catching clock tower. It was rebuilt in 1882, the original school dating from 1815.

C55. Primary School: Bourne Road, Bexley **TQ 496738**

This National Society School of 1834, now disused, has a charming pair of Dutch gables.

C56. Branch Library: Bourne Road, Bexley **TQ 496738**

This tiny building, with attractive lettering on the gable, was designed in 1912, in a rather elaborate style, by E.B. Maufe, who later designed Guildford Cathedral.

C57. Workers' Housing: Barnes Cray Road and Maiden Lane, Barnes Cray **TQ 523751**

In 1914 the Crayford Cottage Society began to lay out this cottage estate in 'garden-city' fashion, for those employed at the Vickers' works. This village was known affectionately as 'Mud City' to its first inhabitants.

C58. Memorial: Petts Wood, St Paul's Cray Road **TQ 450693**

A sundial surmounting a square stone pillar commemorates the local builder William Willett (1856-1915) who campaigned for the adoption of daylight saving. This was only adopted a year after his death as an aid to wartime industrial production. Willett is buried in Chislehurst Churchyard.

DEPTFORD

Deptford first became a settlement of national importance during Tudor times when Henry VIII began shipbuilding here in 1513. The site had previously been that of a monastery, parts of which were used as naval storehouses. Deptford quite early became a thriving, self-contained community whilst areas nearer to London remained open fields. Trinity House was founded in Deptford by Sir Thomas Spert and incorporated by Henry VIII in 1512. The old house and hall behind St Nicholas' Church were built in the fifteenth century on what is now the site of Deptford Power Station.

The East India Company received its first charter from Elizabeth I in 1600 and built its own ships at Deptford until the 1780s. Its storshed near the Ravensbourne was originally called 'the Storage' but the street is now known as 'Stowage'. Experiments with steam boats in Deptford in 1822 led to the formation of the General Steam Navigation Company in 1824, possibly the earliest steamship company in the world. The naval background and proximity to the river encouraged industries connected with the sea.

Towards Deptford Creek, the river Ravensbourne supported a variety of non-maritime industries such as milling and the general prosperity of the area was greatly improved by the coming of the London and Greenwich Railway which brought a proliferation of engineering workshops in its wake.

The closing years of the nineteenth century saw the pioneering efforts of S.Z. de Ferranti's high voltage power station. The families working for these industrial ventures led to an increased population and the children were cared for by the pioneering efforts of Rachel and Margaret Macmillan who set up a nursery in the shadow of the power station. Deptford, once so intimately connected with sea-faring, has now lost its position as a maritime and industrial centre.

MANUFACTURING

D1. Galvanised Metal Works: Grinstead Rd., SE8

TQ 364782

Demolished

The present Johnson & Jorgenson's plastic works were formerly Frederick Braby's works which began on this site in 1867. Braby was noted for his benevolent attitude towards his workpeople and he provided a library as well as other recreational facilities. The canalside works is in three main sections. The offices are of yellow brick with red brick dressings and an open pediment with scroll support over the main entrance; the workshop has a north-light roof and the main shop has metal-framed windows and a curved steel corrugated roof with clerestory lights. Following the First World War and the increasing use of electricity for cooking, Frederick Braby pioneered the use of aluminium in the manufacture of pots and pans.

D2. Cycle Workshop: bottom of Tanners Hill, SE8

TQ 372769

The showroom of Witcomb Cycles occupies an eighteenth century cottage with a storeroom above and the workshop to the rear. This is one of the few makers in London where bespoke cycles are still hand built on the premises.

D3. Deptford Dockyard and Foreign Cattle Market: Prince Street, SE8

TQ 371778

Henry VIII established this yard in 1513 as his chief naval dockyard. Some of the storehouses and residences and an iron-roofed ship shop still exist. The dockyard closed in 1869, the last ship to be built in that year being the screw corvette 'Druid' of 1,322 tons.

The yard was purchased by the Corporation of London who adapted it for use as a foreign cattle market which opened in 1871. Covering 22 acres, it was designed to hold 4,000 to 5,000 live cattle and had pens for 14,000 sheep as well as 80 slaughterhouses. The market was closed in 1913 although some of the buildings remain. It was used as a supply depot in the First World War but is now divided into separate warehousing units.

D4. Boilermakers' Shop: Borthwick Street, SE8

TQ 372781

The only evidence of John Penn's occupation on the land side of this building is a cast-iron bollard inscribed 'J. Penn and Son, Deptford'. The more impressive view of this building, the riverside facade, can only be obtained when the tide is out by walking along the deteriorating ferry-hard, the access to which is along the alley at the west end of the building. The six-bay facade has semi-circular arched windows with stucco mouldings and keystones. Above is a central parapet with end scrolls and the painted inscription 'J. Palmer Ltd., Paynes Wharf'. At the present time the site is occupied by Londegg Ltd., manufacturers of egg products.

D5. Engineering Works: Arklow Road to Rolt St., SE14

TQ 365776

The company later known as J. Stone & Co. was started by Josiah Stone in railway arches at Deptford Station in 1842. Early products included patent portable steam pumps supplied to the Royal Navy, foreign governments and British shipping companies. Propeller founding was also carried out on the site. Electric lights, ventilation and steam heating equipment for railway carriages were later products and began the company's long association with railways. The company has now moved to Harlow, Essex, but several of their buildings remain in other uses.

D6. Locomotive Works: 37 Pomeroy Street, SE14

TQ 353768

This works, now the Reliance Foundry, has a mid-nineteenth century two-storey facade, with pilasters and round-headed windows. George England & Co. established a locomotive works on this site in 1839. Francis Fairlie (1831-1885) was the son-in-law of England and designed the famous 'Fairlie' locomotive. Together with G. England, Jnr., and J.S. Fraser, he formed the 'Fairlie Engine and Steam Carriage Co.' at Hatcham in 1869. The steam carriage referred to in the company's title was a combined engine and passenger carriage, built in 1869, and resembled the 'railmotors' popular in the 1900s. Only one is known to have been built here.

Although only five examples of the articulated 'Fairlie' locomotive were built at Hatcham, the success of this design in foreign markets led other manufacturers to build similar engines.

A notable feature of the works was a circular test track designed to be of sharper curvature than any likely to be encountered in normal running. Locomotive production ceased at the end of 1870. A stone on the south wall of the building reads 'G. E. & Co. 1853'. 56 Kender Street was the home of England and backed onto the site.

A locomotive by G. England survives on the Ffestiniog Railway in North Wales.

D7. Locomotive Works: Brighton Gro., New Cross Gate, SE14

TQ 361770

Demolished

New Cross Gate locomotive works operated from 1838 to 1949 under the control of a variety of railway companies. The site was at the foot of a two-mile gradient towards Croydon which made it the ideal point to keep banking engines used for assisting trains up the incline. The works survived changes in ownership from the London and Croydon Railway, through the London, Brighton and South Coast Railway to the Southern Railway (1923) and although suffering severe damage during the Second World War was not closed until 1949. Some parts survive.

D8. Engineering Works & Foundry: 455 New Cross Rd., SE14**TQ 369771**

This was the works of Clark, Bunnett & Co. There is an office frontage of six bays with a narrow central entrance framed by an open pediment and columns. The remaining four cast-iron lamp posts on the pavement have cast, in relief, 'Clark, Bunnett & Co. Engineers, London, Paris and New York'. Among the products made by this company were roller shutters and the cranes installed at Surrey Docks and Woolwich Dockyard. Clarke, Bunnett was also the patentee of a 'concentric steam engine'. Clarke, Bunnett & Co. was formed by the merger of two separate firms; Bunnett & Corpe, established c. 1835, and Clarke & Co. They merged in 1880 and moved to these premises. Works behind in Glenville Grove.

D9. Glass Works: Cold Blow Lane, SE14**TQ 356779**

In 1908 Ronald Gale & Co., bottle merchants and importers of bottles from the Continent, decided to open a glassworks on this canalside site. The choice of site was partly due to the location of many customers nearby, including Heinz, Escoffier and Eno's Fruit Salts all of Peckham; Robertson's of Catford and Sharwoods of Bermondsey. It amalgamated with the City Glassbottle Co. in 1952 which was in turn absorbed into the United Glass Group in 1962. The site includes 1908 offices; warehouses and storage sheds for sand and chemicals; electric and oil-fired furnaces and moulding shops in steel-framed, corrugated-steel-clad buildings. The triangular site is bounded by the disused Surrey Canal to the north and railway embankments on the other two sides.

D10. Distillery: Deptford Bridge, SE8**TQ 373768**

An original building of the Hollands Distillery, established in 1799 at 14-16 Deptford Bridge. The faint inscription can still be read over the entrance. The building was purchased in 1922 by Seager Evans and closed in 1971.

TRANSPORT**D11. Turnpike Property Mark: Grove Street, SE8****TQ 365786**

This stone, dated 1855, is inscribed 'This land is part of the Bermondsey, Rotherhithe and Deptford Turnpike Roads'.

D12. Grand Surrey Canal:

This ran from Greenland Dock in the Surrey Commercial Docks (TQ 361790) three miles to Camberwell although the original Thames entrance lock was at Rotherhithe (TQ 356802). There was also a branch of just over ½ mile from Glengall Road (TQ 339777) and thence to Peckham (TQ 341768). The canal, engineered by Ralph Dodd, was opened in 1807 and the Peckham Branch in 1826. It was closed by the P.L.A. in 1971. The canal has now mostly been filled in but had a busy timber trade to yards until closure. Some of the yards still remain.

D13. Canal Bridge: Evelyn Street, SE8**TQ 365783**

Deep plate-girder bridge of late nineteenth century date.

D14. Canal Bridge: Ilderton Road, SE16**TQ 352780**

Shallow plate-girders with jack arches.

D15. Railway Cutting: Vesta Road, SE4**TQ 362768**

An original cutting which was the site of locks on the Croydon Canal. The canal was purchased by the London & Croydon Railway and the cutting widened and deepened in 1839.

D16. Railway Viaduct and Station: Deptford High St., SE8

TQ 373774

London's first steam-hauled railway, the London and Greenwich Railway, opened in February 1836 from Spa Road, Bermondsey to Deptford. The whole of the railway from London Bridge to Deptford is carried on an 878-arch brick viaduct, the world's longest brick structure. The viaduct was originally flanked by a tree-lined boulevard, access to which was charged at one penny (1d.) per person. Subsequently, to increase the number of tracks, the viaduct was widened over the boulevard, except from near Deptford to Greenwich, where sections of the footpath, e.g. Mechanics' Passage, Deptford, are still open. The L&GR had planned to fit out the arches as dwellings but the scheme failed and now most arches are occupied by small businesses. At the first Deptford station, carriages drove up to platform level via the inclined plane which still survives running parallel to Deptford High Street on the south side of the present station which opened in 1926.

D17. Railway Station: New Cross Road, SE14

TQ 362770

New Cross Gate station is on the line of the former London and Croydon Railway which ran from London Bridge to Croydon. The railway was opened in 1839 but the present structure is mid-Victorian. Originally called New Cross LBSC, it was renamed New Cross Gate in 1923. From 1845 to 1846 it was the northern terminus of the abortive atmospheric railway. A wall of stone block sleepers, perhaps from the original London and Croydon Railway can be seen at the southern end of the station. The line to Wapping via the Thames Tunnel was opened by the East London Railway in 1869.

D18. Tram Depot: New Cross Road, SE8

TQ 359767

Built by the L.C.C. for electric trams in 1906, it was the largest tram depot in London (326 trams). London's last tramcar ran into this depot in the early hours of 6 July 1952. It has now been converted into a bus garage.

TRADE AND COMMERCE

D19. Trade Sign: 405 New Cross Road, SE14

TQ 367777

Hanging above what is now a Post Office is a tobacco roll, a trade sign reminiscent of the days before mass literacy. This is an extremely rare survival of a once common means of advertising.

PUBLIC UTILITIES

D20. Waterworks: Brookmill Road, SE8

TQ 375766

Deptford Waterworks was founded in 1701 as the Deptford works of the Ravensbourne Water Company. John Smeaton, the famous civil engineer, became the proprietor in 1771 and installed his own equipment in 1779, which has now gone. In 1809 it became the Kent Waterworks and in 1811 and 1826 Boulton and Watt pumping engines were installed (these were removed in 1921). Parts of the engines' parallel motions are now incorporated in a hand rail at Kempton Park Pumping Station. The 1811 engine house in grey stock brick still survives and is used as a store. The dominant feature of the site is the engine house built in 1927-32 to house two Hathorn-Davey triple-expansion steam engines. The first deep well was sunk in 1856 and the river Ravensbourne was abandoned as a source of supply in 1862. The filter beds, still extant, were built in 1844 and 1849. The works manager's house, adjacent to the entrance, is now the Thames Water Authority's local offices.

Reservoirs

D21. Jerningham Road Reservoir, New Cross, SE14 **TQ 360763**

163 ft. above Ordnance Datum, capacity 1,500,000 gallons.

D22. Greenwich Park Reservoir, SE10 **TQ 389771**

158 ft. above Ordnance Datum, capacity 1,750,000 gallons.

D23. Woolwich Common Reservoir, SE18 **TQ 427768**

248 ft. above Ordnance Datum, capacity 1,125,000 gallons.

D24. Electricity Generating Station: Stowage, SE8 **TQ 374779** **Demolished**

Deptford was the world's first high pressure (originally 5,000, later expanded to 10,000 volts) electricity power station. Built in 1889 by Sebastian Ziani de Ferranti, engineer to the London Electricity Supply Corporation which had been founded in 1887. The engine house contained 1,000kW alternators driven by 1,500hp Hick Hargreaves Corliss-valve steam engines. All that remains of this station is the engine house wall, with Gothic arches on the south face of the present 1940s station.

D25. Victualling Yard: Grove Street, SE8 **TQ 366787**

The Royal Victoria Yard was originally founded in 1742 when the storehouses on Tower Hill became insufficient for the Navy's needs. It became the Royal Victoria Yard after a visit by the Queen in 1858. The yard originally occupied a river frontage of 1,800 ft. with storehouse cover of over 36 acres for the storage of provisions and clothing for the Navy, including rum vats, one having a capacity of 32,000 gallons. Most of the area is now the G.L.C. Pepys Estate. The remaining buildings include the gateway and colonnade of 1768, probably by Samuel Wyatt; an attractive 1780s Georgian terrace and the 1781-89 rum warehouses and superintendent's house, the basement floor of which is now imaginatively restored as a library and the upper floors to flats.

D26. Fire Station: Queens Road, SE14 **TQ355767**

An early L.C.C. fire station with flats over, it has a circular exercise tower reminiscent of the earlier example at Woolwich.

D27. Town Hall: New Cross Road, SE8 **TQ 364769**

This florid local government building, dating from 1903, was built for the Metropolitan Borough of Deptford. The statues and reliefs of famous seamen and battles indicate Deptford's maritime past. The architects, Lanchester and Rickards, also designed Westminster Central Hall. (For the adjoining public baths, see Lewisham L43)

OTHER SERVICES

D28. Cinema: Near corner of Queens Road, New Cross Road, SE14 **TQ 357768**

The Electric Palace opened in 1909 with seating for 350 and closed in 1925. This building is reputed to have been purpose built but a 1906 picture shows the same building in use by a horse dealer. It is distinguished by its archway and is now used as a car bodywork treatment centre.

D29. Cinema: Deptford High St., opp. Albury St. SE8 **TQ 371776**

The Deptford Electric Palace was built by Ralph Marrable and opened on Christmas Eve 1910. The cinema had a seating capacity of 400; it was closed in 1961 and is now a bingo hall.

D30. Cinema: New Cross Road, SE14

TQ 364775

The New Cross Super Kinema, designed by James Watt, was opened in 1925. The Kinema had a spectacular illuminated rising organ, a twenty-piece orchestra, ballroom and tea rooms. This former cinema stands on the corner of Clifton Rise and a supermarket now occupies the ground floor.

D31. Cinema: Deptford Broadway, SE8

TQ 374769

Demolished

The Odeon was Deptford's last cinema, opening in 1938 and closing in 1970, in typical Odeon style.

D32. The Fairground: Deptford High Street, SE8

TQ 372773

The entrance to the fairground, at the corner of Giffin Street, is distinguished by the iron hoops which were once gas lamp brackets. The passageway is now used for the storage of market barrows.

D33. Public House: Deptford Broadway, SE8

TQ 373769

'The Centurion' is an unexceptional Victorian pub, still retaining some of the original pub fittings. In the public bar is a large ceramic mural of the 'Royal George' being launched at Woolwich Dockyard.

D34. Public House: Deptford Broadway, SE8

TQ 374769

The 'Dover Castle' is a rebuilt coaching inn, dated 1880, and bears a Bridge House Estates property marker. It was a stop for the Dover Mail coaches in the early nineteenth century. The first inn on this site was built c. 1400 as the 'Christopher'; in 1675 it was renamed 'The Castle' and in the mid-eighteenth century became the 'Dover Castle'.

D35. Public House: 405 New Cross Road, SE14

TQ 367771

Impressive nineteenth century tiles are retained in 'The Walpole', a modernised Victorian pub. Free-standing cast-iron gas lamps may be seen on the pavement in front.

D36. Primary School: St James' Hatcham, SE14

TQ 364768

This school was built in 1831 and opened by the Earl of Shaftesbury. This single storey, yellow stock-brick building with red brick decoration around the pointed Gothic windows and down the edges of the building, was designed by W. Granville. The west corner contains a two-storey caretaker's house. The building is now part of Goldsmiths College and the school has been housed in a new building which incorporates the original foundation stone.

D37. Lodging House: Brookmill Road, SE8

TQ 373768

Built in 1902, Carrington House is a monumental red-brick lodging house intended to accommodate 803 men. It was designed by W. E. Riley, architect to the L.C.C. and was one of the last lodging houses to be built in South London. Named after Lord Carrington, Chairman of the L.C.C., it was opened by Countess Carrington in 1903.

D38. Workers' Cottages: Brookmill Road, SE8

TQ 373768

These refurbished cottages adjoining Carrington House were built in 1902 and were some of the first municipal housing in the area.

D39. Property & Boundary Markers: Vesta Road, SE8

TQ 361762

Adjacent to Haberdashers' Askes School are two cast-iron posts in the pavement; one is a Haberdashers' Askes property mark, the other is inscribed 'Kent' and 'Surrey' and this would appear to be a county boundary marker but is not on the former county boundary.

ELTHAM AND SIDCUP

This area is compact and sensible on the map but complex to describe as far as local government is concerned. There are three main sections - Chislehurst, Sidcup and Eltham. From 1889 to 1965 both Chislehurst and Sidcup were in Kent: Chislehurst became an urban district council in 1900: Sidcup in 1902. They amalgamated in 1934. After the local government reorganisation in 1965, Chislehurst became part of the London Borough of Bromley while Sidcup became part of the London Borough of Bexley. Eltham, meanwhile, had joined the L.C.C. in 1889, having previously been part of the Metropolitan Board of Works area. It became part of Woolwich Metropolitan Borough in 1899 and in 1965 part of the London Borough of Greenwich.

Despite this chequered background these three areas are remarkably similar. There is little manufacturing industry and the industrial archaeology that remains is allied to the commuter belt. Communications in such an area are obviously important as can be seen by the many railway lines and two important trunk roads - the Rochester Way and the Sidcup By-pass.

Other important features are connected with providing services for residents. Of particular note is the housing provided from the early twentieth century Progress Estate in Eltham to the 1920s and '30s. vernacular architecture of Sidcup.

BASIC MATERIALS

E1. Caves: off Old Hill, Chislehurst

TQ 432697

These ancient chalk workings, dating from the seventeenth century, were worked until the late nineteenth century. They served as air raid shelters during the Second World War and this part of the workings can still be visited. Much of what remains dates from this period with pitch numbers stencilled on the wall to provide 'addresses' for the sheltering families. There is also a 'hospital' cave.

E2. Conservatory: Avery Hill, Bexley Road, SE9

TQ 444744

The site was purchased by John Thomas North who made a fortune out of the Chilean nitrate trade. In 1889 he diverted the road to allow a fifty-room, red-brick, Italianate house to be built to the design of T.W. Cutler. It is now used as a training college. Of particular interest is the conservatory, adjoining the main house. The main hot house is approximately 100ft. square with a steel and glass roof. Rivetted steel girders support an octagonal lantern in the centre, the whole being supported on an arched framework resting on cast-iron columns. The machinery room was rebuilt after the war and used to house boilers and electric generators. The campanile water tower/chimney still remains.

MANUFACTURING INDUSTRIES AND TRANSPORT

E3. Motor Works: Perry Street, Chislehurst

TQ 455708

A purpose-built structure designed by E.J. May of Chislehurst. Western Motor Works was built in 1908 in dark red bricks with blue diaper bands and blue and white tiles spelling the name of the firm. This is an interesting early example of a building specifically designed for the new motor age. The modern showroom dates from 1967. May was a pupil of Decimus Burton and of Norman Shaw, with whom he collaborated in the design of Bedford Park in West London.

E4. Milestone/War Memorial: Christ Church, Shooters Hill, SE18**TQ 432765**

Following an accident to the early eighteenth century milestone, involving a steamroller, the vicar of Christ Church had the stone erected as a war memorial on the opposite side of the road in 1922. One side reads '8 miles to London' and the other 7 miles to Dartford'. It also bears a tablet 'Ypres 130 miles. In defending the salient our casualties were 90,000 killed, 70,000 missing and 410,000 wounded'.

E5. Bridge: Eltham Palace, SE9**TQ 424741**

A red-brick medieval bridge of four unequal pointed arches carries the roadway across the moat into Eltham Palace. The bridge is surmounted by a modern parapet.

E6. Arterial Road: Sidcup Road, SE9**TQ 46 71**

The Eltham by-pass was constructed by the L.C.C. in 1919-22, being one of the first phases of the London Arterial Roads Programme which commenced in 1919. It was later extended as the Sidcup by-pass.

E7. Railway Station: Well Hall Road, SE9**TQ 423749**

Following much local opposition to the proposed route of the Bexley Heath Railway from Lee to Dartford, a new alignment to Blackheath, which necessitated a 12 chain radius curve at Well Hall, was built in 1895. This tight curve has been an operating nuisance ever since and was the scene of a major accident on 11th June 1972.

E8. Railway Station: Westmount Road, SE9**TQ 432750**

Eltham Park station was originally known as Shooters Hill & Eltham Park station (opened 1st July 1908) and remains virtually unaltered; it is far more impressive than the traffic warrants and has covered walkways on both sides of the tracks leading down to the platforms. The platform buildings are in red, white and black decorative brick and hexagonal cast-iron columns support steel trusses for a timber and glass roof. There are also intricate cast-iron brackets and a decorative valence on the canopy.

E9. Tunnel: Cator Estate, Blackheath. SE3**TQ 405759**

This 437yd. long railway tunnel was opened by the Bexley Heath Railway in 1895 after protracted negotiations with Mr. Cator, the local landowner.

E10. Old Shop: 90 Eltham High Street, SE9**TQ 427744**

This shop is the sole survivor of a terrace and is thought to date from 1720. It is a two-storey brick building with a mansard roof and dormer windows. It is weather-boarded at the rear and on the side facing the alleyway and has a Victorian shop front with bow windows on either side of the door. There is a separate entrance to the accommodation above. This was previously a pharmacy with a dentist's surgery above and is now a restaurant.

E11. Greyhound Inn: Eltham High Street, SE9**TQ 428743**

This two-storey brick building is thought to be contemporary with the above site and was rebuilt in 1720. The two most notable features are the mid-sixteenth century stone fireplaces. The building was restored in 1978.

PUBLIC SERVICES**E12. Sluice House: Rear of 53-57 Southend Crescent, SE9****TQ 435743**

A small red-brick structure which formerly housed a sluice controlling the water supply to the nearby Eltham Palace.

E13. Pillar Box: Parkhurst Road/Parkhill Road, Bexley

TQ 491737

This is a well-preserved example of an increasingly rare type of hexagonal Victorian pillar box.

E14. Pillar Box: Radnor Avenue, Welling

TQ 467748

This is an example of a rare Edward VIII pillar box.

OTHER SERVICES

E15 Thatched Cottage: The Thatch, Perry Street, Chislehurst

TQ 449704

An unusual survival in Greater London is this quaint nineteenth century single storey cottage.

E16. Housing Estate: Well Hall Road, SE9

TQ 42 75

By working round the clock the Progress Estate, covering some 96 acres, was completed in only 11 months between February and December 1915. The houses were designed by H.M. Office of Works under Sir Frank Barnes. There are 1,300 dwellings of four main types. By using 'found' materials a pleasing variety of styles has been achieved. The average cost of each dwelling (£620) was some four times that of a typical cottage of the period and no further munitions estates were built in this manner. The estate, originally built to house the rapidly expanding workforce at the Woolwich Arsenal, was sold in 1925 for £378,000 to Progress Estates Ltd., a subsidiary of the Royal Arsenal Co-operative Society.

E17. Police Station: High Street, Sidcup

TQ 462718

Stylistically, this 1902 building of red brick with white stone dressings is similar to several Metropolitan Police stations of this period.

E18. Ice Houses: Lamorbey Park, Sidcup

TQ 465732

There are two ice houses in the park, one dating from 1790, the other from c. 1840.

FARNBOROUGH

The area between Farnborough village and the edge of Greater London has remained essentially agricultural and has so far resisted the urban sprawl of the metropolis.

In spite of its rural nature the area can boast manufacturing industries past and present as well as several notable civil engineering developments from the new Farnborough Hill of 1866 to the 1920s by-pass. Formerly part of Bromley Rural District Council (until 1934) and later Orpington Urban District Council, Farnborough was included within the boundary of Greater London in 1965.

The village itself shows evidence of several periods of development from the timber-framed houses on Church Hill to the speculative ventures of the nineteenth and twentieth centuries.

Still surrounding the village are arable, dairy and fruit farms and towards the G.L.C. boundary villages such as Downe and Cudham remain substantially rural in aspect.

BASIC MATERIALS

F1. Farnborough Village

TQ 443643

The village centre, somewhat spoilt by the bus terminus, provides some typical examples of Kentish building materials in its half-timbered, timber clad, stock-brick and red brick cottages.

F2. Barn: Orange Court Farm, North End Lane, Downe

TQ 434626

A 1779 building incorporating timber from a medieval one. There are five bays with the threshing floor in the centre. The side walls are weatherboarded and set on a brick base. There is a complicated roof structure which is tiled.

F3. Thatched Cottages: Crofton Road, Orpington

TQ 439657

A pair of thatched cottages, reputed to have been built on a narrow strip of waste ground resulting from horse-drawn traffic taking an alternative route due to the poor road conditions and thereby widening the highway. It was not an uncommon practice for the 'King's Waste' to be enclosed in this way. This possibly also applies to the adjacent cottages on the corner.

MANUFACTURING

F4. Brewery: High Street, Green Street Green

TQ 456637

This site, now occupied by Telcon Plastics, was once Fox's Old Oak Brewery. Some brewery buildings remain as well as the chimney but the main building on the High Street has been demolished.

F5. Keston Windmill: Heathfield Road, Keston Common

TQ 415640

A weatherboarded post mill, listed Grade I, with a brick roundhouse and fitted with patent sweeps, stands on private land but is visible from the public road. Still in place are the middlings and clasps, the remains of one sweep and most of the striking gear. Winding of the mill is via a tailpole protruding through the steps in the traditional manner. The date 1716 is carved on a post in the roundhouse. The body of the mill has three floors with most of the machinery intact. Two pairs of stones on the second floor are

underdriven. Other machinery on the second floor includes a sack hoist driven by slack belt from the cast-iron wind-shaft. There is also a flour dresser. The mill last worked in 1878 and received major repairs in 1914 via local support and help from the Society for the Protection of Ancient Buildings. In 1935 S.P.A.B. reported that the restoration of the sweeps was not recommended as it was considered that the mill would be unable to support the additional weight.

F6. Horse Gin: The Old Clock House, High Elms Road, Farnborough

TQ 443630

This octagonal weatherboarded horse gin, which can be seen from the road, dates from the early nineteenth century. The horse walking in a 13ft.6ins. circle drove bevel gears through a 5ft. diameter cast-iron crown wheel. The enclosure for the gin itself was once open but has now been converted into a studio. The gin drove water pumping machinery.

F7. Mill: Commonsides, Keston

TQ 414649

The present mill was erected in the 1870s on the site of an old post mill and is a two-storey grey brick and flint building with gable ends. There was originally steam on site but the chimney was demolished in 1973. Outbuildings include a corn store and cart shed in timber with a low-pitch slate roof. Old millstones on the site are used as paving. Once known as Olive's Mill, it is now converted into church rooms.

F8. Tile Kiln: Holwood House, Keston

TQ 421636

This medieval tile kiln can be seen on open days on the Holwood Estate. It has been excavated and is now preserved under transparent cladding.

TRANSPORT

F9. Ancient Roadway: Biggin Hill

TQ 390634 TQ 408563

The boundary of the London Borough of Bromley follows the line of the old Roman road which was constructed to take Wealden iron from Kent to London. A kink in the road at TQ 400539 is still reflected in a deviation of the borough boundary.

F10. Bus Garage: Bromley Common

TQ425659

This London Transport bus garage of 1924 in red brick was originally run by Thomas Tilling, the famous private bus operator. It is interesting to note that London Transport continue to use the garage code 'TB' standing for 'Tilling's Bromley'.

F11. Railway Bridge: Sevenoaks Road, Orpington

TQ 458651

This bridge passes through an enormous railway embankment built by the South Eastern Railway c.1865. The embankment runs from TQ 455659 to TQ 464696 and attains a height of 80ft. The tunnel for the road is brick-lined, 170ft. long with the crown of the arch some 30ft. above the road.

F12. Railway Bridge: Tubbenden Lane, Orpington

TQ 455657

A round-arch bridge similar to the one in Sevenoaks Road.

F13. Railway Bridge: Warren Road, Chelsfield

TQ 468641

This is a skew bridge of unusual design carrying Warren Road over the railway at Chelsfield station.

F14. Railway Tunnel: Between Chelsfield and Knockholt stations **TQ 477632**

This tunnel is c.500 yds. long and was built in 1868 when the Sevenoaks line was opened.

F15. Aerodrome: Biggin Hill **TQ 415605**

This Battle of Britain airfield is now operated by the local council and is divided between civil flying and R.A.F. training. Some of the buildings date back as far as 1916. The post-war R.A.F. control tower is to be used for the civil airfield. The R.A.F. part of the airfield has its own water supply system with large water tanks and the underground nerve-centre built during the Second World War is reputed still to exist. There are three runways, the shortest of which is no longer in use. On the west side of the road is the Officers' Mess a typically 1930's building - neo-Georgian in red brick. There is also extensive R.A.F. housing here.

TRADE AND COMMERCE

F16. Dairy: 92-100 Kent Road, West Wickham **TQ 379660**

The Express Dairy building is 'turn of the century' in a surprising neo-Queen Anne-Dutch style. The brickwork has now been painted over but the original slate roof is retained.

F17. Baker's Shop: 5 High Street, Farnborough **TQ 439644**

This newsagent's shop, weatherboarded in the local style, was once the bakehouse for the village.

F18. Barber's Shop: 7 High Street, Farnborough **TQ 439644**

This two-storey weatherboarded house was once the barber's shop. There is still a board over the window and the door as well as gas flares. The house itself is still gas-lit.

PUBLIC UTILITIES

F19. Old Post Office: Church Hill, Farnborough **TQ 442642**

This half-timbered house was the local post office in the early part of the nineteenth century. It is now a private house and has been renovated.

OTHER SERVICES

F20. Public House: High Street, Farnborough **TQ 442643**

The 'Woodman' pub is turn-of-the-century in style with a rather pleasing exterior reminiscent of Voysey. The interior has been converted although the public bar has a not unattractive counter with heart motif.

F21. Agricultural Housing: 27-37 High St., Farnborough **TQ 439643**

This pleasant terrace of four houses and two shops was erected in 1913 by a local farmer for his men. Originally two-up and two-down, they were illuminated by gas; indeed, one of the terrace is still lit in this manner. The original brick exterior has been refaced but without spoiling the simple charm of these cottages.

F22. Union Workhouse: Locksbottom **TQ 434650** **Demolished**

The Bromley Poor Law Union was formed after the Poor Law Amendment Act of 1834 and the workhouse was built at Locksbottom c. 1844-5. The Bromley Union was dissolved in 1930 and its responsibilities

transferred to Kent County Council and after that the workhouse developed into Farnborough Hospital. The early buildings are still in use as nurses' accommodation.

F23. Parochial Workhouse: 4 Green View, Leaves Green Rd., Leaves Green TQ 416616

The cottages here were once the workhouse which was opened in 1731 for the poor of the parish of Cudham. The buildings are flint-faced with red-brick dressings and a slate roof.

F24 Police Station: Locksbottom TQ 430650

This was opened as a police station shortly after the formation of the Metropolitan Police Force in 1820. The building is supposed to have been there at the end of the eighteenth century as a butcher's shop.

GREENWICH

From being the home of royalty, Greenwich was increasingly dominated after 1700 by its naval and scientific communities.

In 1836 it was still an independent market town in Kent but of sufficient importance to be the destination of London's first proper railway. The London and Greenwich Railway opened to Greenwich in 1838, traversing a landscape of market gardens and nurseries with little evidence of industrialisation. By 1876 Thorne was able to say that... 'the town itself has not much in it to interest the visitor... having considerable trade and extensive manufactories including engineering establishments, steel and iron works, artificial stone and cement works, iron shipyards, rope yards, a flax mill, an extensive family brewery and maltings'. The centre of the town was partly protected from the industrial changes that engulfed Deptford and Woolwich by the Royal Park and the associated Royal buildings. Apart from some developments on the east bank of Deptford Creek, such as a gasworks and Rennie's shipyard, the major industrial works were constructed to the north-east of the town. Here the marshland provided suitable sites for such concerns as the shipyard of Maudslay, Sons & Field in 1865 and the massive works of the South Metropolitan Gas Company which were started in 1881. The last major building in the area was the L.C.C. Tramways power station of 1906.

BASIC MATERIALS

G1. Disused Gravel Pit: Folly Pond, Charlton Way, SE3

TQ 391767

In 1871 Blackheath became the responsibility of the Metropolitan Board of Works and in 1875 they created Folly Pond from an old gravel pit. The pond was intended to be used for recreational purposes. The Heath Keeper's house, at the corner of Charlton Way and Shooters Hill Road, bears the initials M.B.W. and the date 1880.

G2-G4. Gravel Pits:

Many disused gravel pits are to be found in this area and some of the more interesting examples are located at:

G2. Eliot Hill, SE10	TQ 385763
G3. Blackheath Vale, SE3	TQ 393764
G4. Vanbrugh Park, SE10	TQ 398771

Other pits on Blackheath and at Waterwomans Bottom were filled in after World War II with bomb rubble. (TQ 395763, TQ 388766 & TQ 395768). Removal of gravel for ships' ballast was permitted by Crown lease early in the nineteenth century but excavation was ended by the Metropolitan Commons Act of 1866. Ballast Quay (qv) was probably the loading site.

G5. Cavern

TQ 383768

A large cavern, 'The Denehole', below The Point, probably results from chalk workings.

MANUFACTURING

G6. Remains of Workshop for the Blind: Burney St., SE10

TQ 383774

This workshop was founded in Greenwich High Road by Major General Bainbrigge, Professor of Fortification at the Royal Military Academy, Woolwich, to give work to the blind of Kent. James Nasmyth (1808-1890), inventor of the steam hammer and friend of Bainbrigge, made a bequest for the building of new premises which were opened in 1892. This institution employed 30 men and 8 boys making rope fenders, baskets and mattresses. It became the Workshop for the Blind of Greenwich in 1931 and ceased to be a voluntary institution in 1958. The workshops were moved to Peckham in 1972 and the old building was demolished two years later. The stone dressings of the building now lie forlornly in the corner of the car park in Stockwell Street: the inscriptions to the founder and benefactor are still visible.

G7. Pattern Makers Shop: Blackheath Road, SE10

TQ 377767

On the site of what is now Broomfields Bakery, alongside the charmingly named Ditch Alley, is the site of John Penn & Son's pattern maker's shop. The shop is the only Penn building left on this site. It is a three-storey, yellow stock brick building with a grey slate hipped gable roof; the windows have semi-circular brick arches, now partly bricked-up to take smaller modern windows. On the long east face is a large opening, now bricked up, which extends to the full height of the building and betrays its former use.

G8. Fire Engine Works: Greenwich High Rd., SE10

TQ 375771

Moses Merryweather joined the firm of Hadley, Simkin & Lott of Long Acre in 1807 and eventually bought the business in 1830. As Merryweather's they exhibited a manual fire-engine at the Great Exhibition of 1851. Steam engines were made from 1840. Moses Merryweather's son, James, took over the firm in 1865 and continued until 1917. The company moved to its present site in 1876.

The road frontage is in three rows of two- and three-storey buildings. These contain offices, machine shops, assembly and paint shops. The collection of buildings at the rear includes the foundry, for gun metal and brass casting, and a hose weaving shop.

A steam-propelled engine was produced in 1890 and sprinkler systems have been installed for customers since 1887.

G9. Workshop: Holmwood Villas, SE7

TQ 404784

G.A. Harvey & Co's impressive offices, of one large bay in red brick with white stone dressings, are adorned with an impressive sunburst and clock: they hide a more pedestrian six-bay workshop at the rear.

G10. Cable Works: Riverside, Nr. Blackwall Lane, SE10

TQ 395786

Glass, Elliott & Company were founded here in 1854 and later took over the Enderby Hemp and Rope Works. In 1864 they amalgamated with the Gutta Percha Company to form the Telegraph Construction and Maintenance Company Ltd. At this time Sir Daniel Gooch, the famous designer of Great Western Railway engines, became a member of the board of directors.

The first successful transatlantic cable was made here in 1866 and was laid by Brunel's 'Great Eastern'. In 1880 the Electric Light Department was formed and in 1882 the works was lit by electricity. Sir Daniel Gooch used his influence to ensure that the company was chosen to light Paddington station and the Great Western Hotel from 1886. Enderby House, home of the Enderby family, is now an office on the river front. Its impressive bay window afforded an uninterrupted panorama of Greenwich and Black wall reaches. General Gordon, Enderby's nephew, spent his last night in England in this building.

G11. Barge Repair Works: Bay Wharf, East Greenwich, SE10

TQ 390792

demolished

A noteworthy reinforced concrete structure in three bays, two of which are open-sided. The concrete roof is of five arched spans running parallel to the river. There were cast-iron tramways in each open bay, with capstans for hauling up lighters.

G12. Barge Repair Works: Wood Wharf, Thames St., SE10

TQ 381779

Two two-storey brick buildings are joined by a footbridge across the alleyway.

G13. Grain Silo: Greenwich High Road, SE10

TQ 375770

The tidal reaches of Deptford Creek have traditionally been the site of corn mills. Mumford's Flour Mill is the last surviving relic of this trade. The area is dominated by this tall trapezoidal-plan building with concrete interior structure. It is faced with yellow stock brick with diaper patterns in red brick. Alternate lozenges carry the monogram 'M'. The silo has white stone decoration and an octagonal staircase on the west corner, topped with a cupola. The south-east face below the parapet bears the inscription '1790 Mumford's Greenwich Flour Mills 1897'. The building was designed by Aston Webb who later gained fame with his new frontage for Buckingham Palace and Admiralty Arch. The flour mill has now been demolished but the silo, meanwhile, remains.

G14. Brewery: Greenwich High Road, SE10

TQ 378773

Lovibond's Brewery offices are now Davy's Wine Vaults. The road frontage is in five sections in various architectural styles, consisting of an off licence, offices, vaults and residence. The brewery building is at the rear, and the stone-dressed chimney base is still visible. The public footpath beside the off licence has granite kerb stones, some of which were sleepers from the original London & Greenwich Railway, disposed of when the railway was converted to wooden sleepers shortly after opening.

TRANSPORT

G15. Road Tunnel: Tunnel Avenue, SE10

TQ 390796

Plans for the Blackwall Tunnel were prepared for the Metropolitan Board of Works by Sir Joseph Bazalgette but the structure was not completed until 1897 and then by the L.C.C. engineer, Sir A. Binnie. The builder was S. Pearson & Sons. This first road tunnel under the Thames was bored to an external diameter of 27ft. using a Greathead shield and compressed air. The tunnel is 3116ft. long, the underwater section being 1221ft. When the tunnel was duplicated in 1967, the gatehouse at the southern entrance - a pleasant sandstone building with Art Nouveau detail - was retained.

G16. Foot Tunnel: Cutty Sark Gardens, SE10

TQ 383781

Built between 1899 and 1902, this tunnel has an external diameter of 12ft. 6ins., is 1,200ft. in length and runs at a depth varying between 44 and 66 feet. Access is by spiral staircase, or by the lifts which were installed in 1903. Opened by the L.C.C. on August Bank Holiday 1902, the engineers were Sir Alexander Binnie and Maurice Fitzmaurice.

G17. Sailing ship: Cutty Sark Gardens, SE10

TQ 383781

The square-rigged ship 'Cutty Sark' of 963 tons was built in 1869 by Scott and Linton at Dumbarton for the shipowner John Willis. She is a composite ship of teak planking and wrought iron frames. She was designed for the tea trade. The opening of the Suez Canal in the same year as she was built gave an enormous advantage to steam ships. After her last tea cargo in 1877 her owners turned to the Australian wool trade. Sold to a Portuguese company in 1895, she traded as the 'Ferreira' until bought by Captain

Dowman in 1922. After serving as a training ship alongside H.M. S. Worcester at Greenhithe from 1938, she was brought to Greenwich in 1954. The 'Cutty Sark' is a listed building - Grade I.

G18. Branch Railway Line: Angerstein's Wharf

TQ 406781 to TQ 403791

This line was built in 1852 and leased to the South Eastern Railway. Mr. Angerstein's Branch runs from a junction with the North Kent line near Charlton station to a wharf at Bugsby's Reach on the Thames. As the mile-long line was built wholly on private land, except where it crosses the Woolwich Turnpike, none of the usual Parliamentary sanctions were required. Although little traffic uses the wharf, a number of connections were made giving rail access to East Greenwich Gas Works (qv), G. A. Harvey's engineering works (qv), the former L.C.C. Tramways repair depot (qv) and the United Glass Bottle Company (qv). The branch was electrified in 1959 by the overhead wire system.

G19. Railway Station: Greenwich High Road, SE10

TQ 381774

The terminus of the London & Greenwich Railway at Greenwich was moved to its present site in 1877 in preparation for the extension of the line to Dartford via Maze Hill. Greenwich station stands virtually as completed in 1878. It is a neat, two-storey brick building of seven bays with Portland stone ornamentation, fronted by a large courtyard. The full-length canopy has now gone but the corbels are still visible. The spacious accommodation is now used for other than railway purposes.

G20. Railway Station: Blackheath Village, SE3

TQ 396760

George Smith designed a single-storey facade with attractive round-headed windows for the South Eastern Railway station at Blackheath for the opening in 1847. The larger section at the north end was built in 1864.

G21. Central Tramway Repair Depot: Felltram Way, SE7

TQ 405784

The central maintenance and overhaul workshop for the L.C.C. Tramways was opened here in 1909; the layout is said to have been based on that of the erecting shop at the G.W.R.'s Swindon Works. As well as overhauling trams, and later buses, new trams were assembled here, these having been delivered by rail in 'knocked-down' form to the adjacent Angerstein's Branch (see G18). The large building and some remaining tram track may still be seen.

G22. Power Station: Old Woolwich Road, SE10

TQ 388781

The last important station built for slow speed reciprocating steam engines rather than turbines, it supplied the whole tramway network operated by the L.C.C. and was opened in 1906 with four generators, each rated at 3500kW. The engines, by Musgrave & Sons of Bolton, were of the rare 'Manhattan' type, with one vertical and one horizontal cylinder. By 1922, the last of the original engines was scrapped and replaced by steam turbines. The station was fired by coal brought to its own coaling jetty on the Thames. The station has now been converted to gas/oil turbines. It is interesting to note that the date of construction, traditionally given on the rainwater hoppers, varies from 1903 to 1908. The present inheritors of the old L.C.C. Tramways, London Transport, now use this station for peak load generation to supply London's underground.

G23. Harbour Master's Offices: Ballast Quay, SE10

TQ 389783

Built in 1840-43 and in use until 1890, the main function of these offices was to control colliers entering the Thames Docks. These offices, together with nearby cottages, pub and cobbled street, form a most attractive group. The quay derives its name from the gravel which was used as ship's ballast and was loaded at this point.

TRADE AND COMMERCE

G24. Fruit and Vegetable Market: Greenwich, SE10

TQ 383777

There are dated and inscribed entrances for vehicles and side footpath entries. It was built by Joseph Kay in 1831 and carries a most delightful inscription over the entrance, which reads 'A false balance is abomination to the Lord but a just weight is His delight'. The surrounding streets, Nelson Road (1829), College Approach (1831) and King William Walk (1833) were also laid out by Kay.

G25 Gentlemen's Outfitter: Nelson Road, SE10

TQ 384777

This store is typical of those opened in large numbers by Montague Burton, 'Tailor of Taste', in the inter-war period. This particular branch sports the unusual feature of elephant head decoration at high level. It was opened in 1932. Following Mr. Burton's policy, a temperance billiard hall was provided on the first floor.

G26. Shop: 18 Dartmouth Row, SE10

TQ 384767

A small two-storey building of about 1800 with a double shop front, restored in character, with a projecting side shop window. This shop has existed here for c170 years.

PUBLIC UTILITIES

G27. Sewage Pumping Station: Norman Road, SE10

TQ 376772

Deptford Pumping Station was opened in May 1864 to lift dry weather flow and storm water 18ft. into the Southern Outfall Sewer running to Crossness (qv). The original machinery, now removed, consisted of four Slaughter & Gunning 125hp beam engines capable of lifting 107,000 cubic ft. per minute and these were supplied with steam from a set of Cornish boilers. The cast- and wrought-iron coal sheds, covering 18,000sq. ft., remain. Only the South Wing (enlarged 1930-31) is at present in use and houses the vertical electric pumps, three Allen diesels and two Crossley horizontal gas engines converted to diesel, all installed in 1934. The station, built in light-coloured brick with darker pilasters (Allen's Ballington salmon and brimstone coloured bricks) is Italianate in style and consists of a central boiler house flanked by two wings containing the pumps.

G28-G32. Gas Works: Grenfell St., Blackwall Lane, SE10

Demolished

This works of the South Metropolitan Gas Company started production in 1886 from 2,250 horizontal retorts. Extensively modernised after nationalisation in 1949, with the construction of coke ovens and water gas plant. Its first hydrocarbon reforming plant was in production by 1963. Coal gas production ceased in 1968 and water gas production in 1971. Following final conversion of South East London to natural gas in 1976 the reforming plant was closed down. At its zenith, this was the largest gas works in Europe. The 200-acre site also included a tar works and a chemical by-products works. Most of the site, including much of the recent reforming plant is now disused. Of the many features of the works, the two holders are particularly noteworthy and can be seen from outside the works.

G28. Jetty

TQ 395800

The T-shaped jetty, one of the few remaining remnants from the original works, is a massive example of Victorian engineering and is 500ft. long and at one time its hydraulic cranes, still remaining, handled 1,250,000 tons of coal yearly. The best view is from the river.

G29. Gas Holder

TQ 393794

Gas Holder No. 1, built in 1886, was the world's first four-lift holder and is 250ft. in diameter with guide columns 198ft. high and has a capacity of 8.6 million cubic feet.

G30. Gas Holder

TQ 392794

Gas Holder No. 2., built in 1891, was then the largest gas holder in the world. Built as a 6-lift holder to contain 12.2 million cubic feet, the top two lifts (flyers) were destroyed in the Silvertown explosion of January 1917. Although its capacity has been reduced, the structure still holds 8.9 million cubic feet. The diameter is 303ft. and the guide columns are 148ft. high.

G31. Bridge,

TQ 392794

The railway bridge over River Way, surmounted by a signal cabin, was the rail connection to the works from the Angerstein's Wharf sidings of the South Eastern Railway.

G32. Windlass.

One of the original windlasses from Black wall Point, c. 1800, has been removed to this works.

G33. Electricity Substation: Greenwich High Rd., SE10

TQ 377771

This substation of the London Electricity Supply Company retains the company initials on the lintel.

G34. Fire Station: Tunnel Avenue, SE10

TQ 401783

East Greenwich Fire Station was built in 1901 by the L.C.C. Works Department. Like many L.C.C. buildings of the time it displays Art Nouveau overtones. A triangular site with galleried married quarters at the rear.

OTHER SERVICES

G35. Theatre: Croom's Hill, SE10

TQ 384775

Built in 1869 and originally known as Crowder's Music Hall (and Temple of Varieties), this theatre later became Barnard's Palace, the Parthenon and then, in 1898, the Hippodrome. It was derelict by 1962 but was reopened as the Greenwich Theatre in 1969. The front is new but remains of the music hall can be seen at the side in Nevada Street.

G36. Bandstand: Greenwich Park, SE10

TQ 392772

This somewhat plain bandstand is in cast iron and was cast in 1880 for Deane & Co. of London by the famous Coalbrookdale Company.

G37. Hardy Cottages: Eastney Street, SE10

TQ 388779

The building of 51 cottages was started in 1886 by the Metropolitan Board of Works but was not completed until 1901 (then by the L.C.C.). This is one of the earliest municipal housing schemes in London.

G38. The Paragon: Blackheath, SE3

TQ 400764

Each house in this impressive Georgian terrace is replete with mounting blocks. The stone-flagged pavement in front of the houses is lit by working gas lamps, probably the last in South East London.

G39. Almshouses: Morden College, St German's Place, SE3

TQ 403764

These almshouses for 'decayed Turkey merchants' were founded in 1695 and opened in 1700 by Sir John Morden. Sir John kept twelve decayed Turkey merchants here. At his death in 1708 he bequeathed all his estate to the college 'for the maintenance of poor, aged and decayed merchants of England, whose fortunes had been ruined by perils of the sea or other unavoidable accidents'. Preference was given to those who had traded with the Levant. Designed by Sir Christopher Wren, this is a Listed Building Grade I. Property marks² on college-owned buildings display a lion rampant with 'M.C. 1695' below. Examples of such marks can be seen at:

Christchurch Way, SE10	TQ 393783
Whitworth Street, SE10	TQ 394783
Ballast Quay, SE10	TQ 388783
Maidenstone Hill, SE10	TQ 382769

G40. Almshouses: Greenwich South Street, SE10 **TQ 381769**

John Penn died in 1878 and in his memory his wife, in 1884, erected the John Penn Almshouses. They are ornate, two-storey, red brick buildings with limestone dressings and a central memorial stone above the ground floor windows.

G41. Miller Wing, Greenwich Hospital: Greenwich High Rd., SE10 **TQ 377770**

Most of the buildings on this site have now been demolished. The only surviving part was built in 1885 to accommodate the Royal Kent Dispensary which had moved there from Deptford Broadway. The chapel, which was used as the hospital's Rehabilitation Department, contains balconies with attractive iron balustrading.

G42. School: St Alphege Passage, SE10 **TQ 382776**

The Greenwich National School was built in 1814 and catered for 170 pupils. The interesting inscription on the east face of the building gives details of its use.

G43. Primary School: Old Woolwich Road, SE10 **TQ 388780**

A comprehensive example of School Board of London architecture complete with caretaker's house, bell tower and entrances labelled 'Boys', 'Girls' and 'Infants'. Built in 1888 and enlarged in 1903, when a third storey was added, it still has the wall plaque bearing the legend 'L.C.C. Old Woolwich Road School'. A charming 'Art and Industry' group, a recurring Victorian theme, may be seen on the north gable.

G44. Town Hall: Greenwich High Road, SE10 **TQ 382774**

Designed by Culpin and Bowers in 1939, this striking brick edifice is one of the best examples of 1930s architecture to be seen in London. The 165ft. tower is as much a landmark physically as the building is architecturally.

G45. Observatory Time Ball: Greenwich Park, SE10 **TQ 388773**

The present time ball was erected on the northeast turret of the Royal Observatory Octagon Room in 1833 and was made by Maudslay, Sons & Field of Lambeth. The original ball was a wooden frame 5ft. in diameter covered with leather. The ball was dropped down its 15ft. pole each day as a time signal for shipping on the Thames and for chronometer makers in Clerkenwell.

² * not to be mistaken for fire insurance company plaques.

G46. Conduit Head; Corner of Hyde Vale and West Grove, SE10

TQ 386768

A red and yellow brick structure with a modern tablet inscribed "This conduit head, part of the water supply of Greenwich Hospital for Seamen, was built about 1710'.

G47. Conduit House: Near George Street Gate, Greenwich Park, SE10

TQ 385774

Beneath the Conduit House is the Standard Reservoir, which was fed by conduits running from Hyde Vale and Royal Hill, and from which outlets ran downhill towards St Mary's Gate and the Hospital. In 1434, Henry VI gave permission to his uncle, Duke Humphrey, to 'construct a subterranean aqueduct between the house he was building and a certain fount in Greenwich called Stockwell'. After 1700 Wren repaired underground passages of conduits and added at least two pipes to each. Several conduits were abandoned in 1732 and the sale of water ceased.

G48. Music Hall: Greenwich, SE10

TQ 383777

The Greenwich Fruit and Vegetable Market was built by Joseph Kay in 1831 and over the north entrance, on the first floor, was the Royal Clarence Music Hall, a concert room dating from 1839 and originally part of the adjoining 'Admiral Hardy' public house. This concert room remains and whilst no longer a music hall is an almost unique survival in London.

LEWISHAM

The river Ravensbourne and its road crossing gave rise to the settlement now known as Lewisham. The road out of London to the southeast of England crossed the Ravensbourne at this point and provided a natural artery for the produce of Kent to the Metropolis. The Ravensbourne was of sufficient size to provide power for the numerous mills along its banks, some of which were mentioned in the Domesday Book. Flour milling has continued from the earliest times until within living memory. There are no longer any water mills left working in this area but the now-tamed river still meanders through the heart of Lewisham. From an independent manufacturing township, Lewisham has been transformed by its proximity to London into a typical suburban area. The advent of railways in the mid-nineteenth century started a gradual process whereby suburban villas were built to house the growing middle class from London. The growth of Lewisham continued throughout the nineteenth century and the cheapness of rail fares brought the town within travelling distance of the metropolis for all but the poorest. Lewisham is not devoted wholly to providing housing for commuters and still possesses a variety of light industry.

MANUFACTURING INDUSTRY

L1. Mill & Pond: Southend Road, SE6

TQ 383717

The site of a Domesday mill on the river Ravensbourne, it has been put to various uses in the past including the manufacture of cutlery and the milling of mustard. The tomb of the cutler, John Howe, dated 1736, may still be seen in Lewisham parish churchyard. In the late nineteenth century, it was a corn mill. The present building is two-storeyed in yellow brick and bears a date panel (1865) over the east entrance. An extension on a brick arch is built over the river at the rear and there are vestiges of an integral chimney.

L2. Former Bakery: Molesworth Street, SE6

TQ 381754

John Penn Senior established a bakery on this riverside mill site. A four-storeyed mill building (c. 1828) in yellow brick with a slate roof and weather-boarded lucam (covered sack hoist), remains.

L3. Beer Bottling Plant: Lewisham Road, SE13

TQ 382760

Established as a brewery in 1840. The building with a curved, corrugated iron roof contains a bottling plant installed in 1891. Of the same date are the boiler house and fine chimney and a two-storey, stuccoed brick building, now used as offices, with a slate hipped gable roof. Now Whitbread's.

L4. Biscuit Bakery: Manor Lane, SE13

TQ 394740

Demolished

A complex of buildings, c.1920, with 'Chiltonian Biscuits' boldly proclaimed in blue and white mosaic. The product flavours the air around.

L5. Instrument Makers' Workshop: Boone St., SE13

TQ 392753

A former bakery, the two-storey, yellow brick building, now occupied by Lowne Instruments Ltd., has cast-iron-framed windows and York stone flags inside. The yard is floored with blue bricks and was possibly a stable area. The machinery on the ground floor is still driven by line shafting.

TRANSPORT

L6. Road Bridge: Clarendon Rise, SE13**TQ 384755**

A road bridge over the river Quaggy is constructed of cast-iron beams with a span of approximately twenty feet. The balustrades of cast-iron segments in an elaborate lozenge design are in need of repair.

L7. Driving Test Centre: 4 Burnt Ash Hill, SE12**TQ 400741**

In this converted Victorian house was established, in 1934, one of the first driving test centres in South London.

L8. Tram Depot: Rushey Green, SE6**TQ 378736**

The depot was built in 1890 by the South Eastern Metropolitan Tramways for its horse trams. The original entrance remains next to the Black Horse public house but much of the rest has been rebuilt. Since 1923 the garage has been occupied by Timpson's, now part of the National Bus Company.

L9. Bus Garage: Bromley Road, SE6**TQ 378726**

Catford Bus Garage was opened in 1914 by the London General Omnibus Company but from 1920-23 it was used by Thomas Tilling's. Buses garaged here by London Transport still bear the running code 'TL' (which stands for Tilling's Lewisham).

L10. Railway Station: Lewisham**TQ 381759**

This station is situated at the junction of the North Kent Line to Gravesend via Woolwich (1845-7) and the Mid-Kent Line to Beckenham (1855-7). The booking office at the angle of the two lines (a single-storey building with arched facade) is of the latter date. The canopy over platform 2 has florid brackets and is supported on slim cast-iron columns.

L11. Railway Station: Ladywell, SE13**TQ 377748**

The line between Lewisham and Beckenham was opened by the South Eastern Railway in 1857 and the part of the present station building containing the main passenger entrance is believed to originate from this time. The remaining section of the building, however, is later and probably dates from the 1890s.

TRADE AND COMMERCE**L12. Department Store: Lewisham High Street, SE13****TQ 383757**

The Royal Arsenal Co-operative Society store is typical for its period and was built in 1933. Architectural features include bas-reliefs illustrating contemporary transport.

L13. Wine & Spirit Shop: 308 Lewisham Road, SE13**TQ 382761**

Fells' was established in 1889 and retains its period fittings. The till is of particular interest.

L14. Grocer's Shop: 312-314 Lewisham Road, SE13**TQ 382761**

This rare survival of a Victorian grocer's shop has a wooden shopfront, period fittings and cast-iron pillars on either side of the entrance. Almost every detail of the interior is untouched by the hand of progress.

PUBLIC UTILITIES**L15. Urinal: Linden Grove, SE22****TQ 352755**

At the corner of Brockley Footpath, next to Nunhead Cemetery, is a fine example of a cast-iron urinal. It is free-standing and was made to Macfarlane's Patent at the Saracen Foundry, Glasgow.

L16. Beachcroft Reservoir, Cheltenham Road, SE22

TQ 353747

Many residents of South London, who were unfortunate enough to live in parts of the extensive area supplied by the Southwark & Vauxhall Water Company, received water on only an intermittent basis until after the Metropolitan Water Board took over in 1904. In an attempt to improve their supply, the Company built four service reservoirs with a total capacity of 18 million gallons at Linden Grove (TQ 352754) in 1871. The water was brought through 30-inch and 42-inch mains, 16 miles long, from the Company's Thames intake at Hampton. These proved inadequate, and a well and pumping station built at Cheltenham Road in 1901. They were followed by the massive covered reservoir, completed by the M. W. B. in 1909 and named after the Board's first Chairman, Sir Melvill Beachcroft. The grassed-over roof of the structure, which holds 56 million gallons, can be seen clearly from Brenchley Gardens.

L17. Gas Works: Bell Green, SE26

TQ 364720

Sydenham Gas Works was the main production works of the South Suburban Gas Company, which was originally founded as the Crystal Palace Gas Company in 1854. In 1912 the company amalgamated with both the Bromley and Crays Company and the West Kent Company; with the Dartford Gas Company in 1918 and the Northfleet and Greenhithe Company in 1929. The area served at this time was 172 square miles which was extended to 254 square miles in 1933 by amalgamation with the Sevenoaks and Tonbridge companies.

Maximum production from the Sydenham works was 13 million cubic feet per day from retorts and carburetted water gas plant. Four holders remain on site; the larger pair date from 1890 and have the unusual feature of flying lifts. Two Fairey horizontal steam engines were used as standby equipment and in the 1950s the SEGB installed their pilot plant to manufacture gas from oil.

L18. Livesey Memorial Hall: Bell Green, SE26

TQ 364720

On the same site as Sydenham Gas Works is an elaborate yellow brick building erected to provide educational facilities for the workers and continuing to do so. It was aptly dedicated to Sir George Thomas Livesey, who was born in 1834 and inherited the positions of Secretary and Manager of the South Metropolitan Gas Company from his father on the latter's death in 1871. In 1885 he had been elected as Chairman of the company and soon also held a position on the boards of both the South Suburban and Commercial gas companies. His influence on the gas industry was vast. In particular he furthered the welfare of the workers and initiated his famous profit-sharing or co-partnership scheme, which lasted until nationalisation in 1949 and led to a long period of industrial harmony within the South Metropolitan Company. In 1902 he was knighted and he died in 1908, 'the occasion of his funeral calling forth many impressive manifestations of sorrow of his loss, and of the great affection in which he was held'.

L19. Cemetery: Linden Grove, SE22

TQ 353757

The South London Cemetery at Nunhead was established by the London Cemetery Company as a private venture on a 51-acre site in 1840. The layout was designed by J. Bunstone Bunning, architect of the London Coal Exchange, and the chapels by Thomas Little in 1844. Notable among the deceased was Livesey. The cemetery closed in 1969 and is now a nature reserve and park.

L20. Lamp Posts

In the areas of Lewisham, Hither Green and Catford can be found lamp posts originally erected by the South Metropolitan Gas Company, identified by the raised letters 'S.M.G.Co.' and dated variously from

1914 to 1920. Some of the posts are also marked with the name of the manufacturer 'Bailey Engineering Company, 81 Bankside, SE' or 'Thames Bank Iron Company'. Examples of these posts are in:

Blashford Street, SE13	TQ 389739
Dowanhill Road, SE6	TQ 390731
Honley Road, SE6	TQ 380739
Springrice Road, SE13	TQ 386743
Wellmeadow Road, SE6	TQ 392735

L21. Fire Station: Lewisham High Street, SE13 **TQ 380748**

The original Lewisham fire station, built in 1899 for the L.C.C., is now used by Lewisham Council for accommodation. It was built by Messrs. Holloway Bros. and was responsible for a smaller outstation in Breakspears Road, Brockley.

L22. Fire Station: Perry Vale, SE23 **TQ 361725**

Forest Hill Fire Station was built in 1901-2 by the L.C.C. It is a four-storey building including an attic storey, with a distinctive octagonal look-out tower. The station has now been converted for use as council offices.

L23. Post Office Depot: Woodyates Road, SE12 **TQ 401742**

This is a former sorting office situated immediately outside Lee railway station and has old stables in the yard. An ornate crest on the entrance door is inscribed 'V.R.'.

L24. Post Office Sorting Office: Coulgate Street, SE4 **TQ 365757**

One of the earliest uses of the royal cipher of Edward VII appears on this 1901 terracotta office. This small building comprises twin halls and carries decorative plaques with fleur-de-lys rainwater hoppers.

L25. Hexagonal Pillar Boxes.

Letter posting boxes with an oak-leaf embellishment were installed by the Post Office for 13 years from 1866 and there are two examples in Devonshire Road, Forest Hill (TQ 357738 and TQ 358741). These are of a design by J. W. Penfold and were manufactured by Cochrane, Grove & Co. of Dudley. Other examples can be found at Crystal Palace (qv).

L26. Experimental Letterbox: Junction of Further Green Rd. and Pasture Road, SE6 **TQ 395732**

This is an example of a pillar box incorporating a stamp vending machine within its elliptical shape. Fifty were made for London by Andrew Handyside & Co. and were erected in 1932. These boxes, however, proved unpopular with the postmen as they were difficult to empty and the design was therefore discontinued.

OTHER SERVICES

L27. Cinema: 306 Lee High Road, SE13 **TQ 393753** **Demolished**

The 'Lee Palace' was closed in the 1930s but the original gable can be seen above the modern facade of Wital's Car Showrooms. The cinema was used as a munitions factory during World War I.

L28. Cinema: Lewisham Road, SE13 **TQ 383758** **Demolished**

The 'King's Hall' has since been renamed the 'Rex' and is now 'Studios 6 & 7'. It opened in 1912.

L29. Cinema: Staplehurst Road, SE13 **TQ 390744** **Demolished**

The Globe Picture House is now used as offices but was opened as a cinema in 1913 and was renamed the Playhouse in 1914.

L30. Cinema: 404-8 Lee High Road, SE12 **TQ 398750** **Demolished**

The Imperial Picture Palace was opened in 1913 and was subsequently known as the Savoy and the Pullman. It closed in 1950 and the very impressive building is now the display premises of a firm of shopfitters.

L31. Cinema: Loampit Vale, SE13 **TQ 382758** **Demolished**

The Gaumont cinema was designed by W. E. Trent, a noted cinema architect, and is amongst the largest in London, with a seating capacity of 3,500. The cinema was renamed the Odeon in 1962.

L32. Temperance Billiard Hall: Lewisham High Street, SE13 **TQ 382751**

This was built c. 1910 in an ornate Art Nouveau style, complete with dome, and was one of a series of similarly designed halls built around London at this time. In keeping with changes in popular entertainment, this establishment has now been converted into a bingo hall.

L33. Steel Houses: Bromley Hill and Dowderry Road, Downham **TQ 392708 and TQ 391718**

Three pairs of semi-detached houses built by the L.C.C. in the 1920s as an experiment. The construction is of sheet steel and has butted, rivetted joints with cover strips.

L34. Lewisham Hospital: Lewisham High Street, SE13 **TQ 379746**

This is the former workhouse of the Lewisham Poor Law Union. The entrance and some buildings survive.

L35. Hither Green Hospital: Stainton Road, SE6 **TQ 388742**

Originally a fever hospital with well-separated ward blocks and a tall water tower, Hither Green Hospital opened in 1897 and the architect was Thomas Dinwiddy.

L36. Goldsmiths' College: Lewisham Way, SE15 **TQ 365768**

The college was designed in 1843 by John Shaw, originally as the Royal Naval School. The frontage has 16 bays with an arched portal. The original courtyard was covered in 1907-8 using four remarkable curved, wrought iron girders, designed by Sir Reginald Blomfield and manufactured by the Thames Ironworks.

L37. Public Baths: Ladywell Road, SE13 **TQ 378749**

Ladywell Baths is a two-storey brick neo-Gothic building, fronting two bath houses with a round three-storey central water tower which is now open at the top but was once surmounted by a conical, tiled roof. The architects were Wieson, Son and Aldwinckle and the foundation stone is dated May 1884. The front wall has been pitted by the admission pennies of many small children.

L38. Ice House: Manor Lane, SE13 **TQ 393749**

The ice house for Lee Manor consisted of this notable subterranean structure with a series of brick-vaulted chambers, apparently dating from the eighteenth century.

L39. Clock Tower: Lewisham High Street, SE13

TQ 383755

This Portland stone clock tower, a well-known local landmark, was erected in 1897 to commemorate Queen Victoria's Diamond Jubilee.

L40. Gravestones: St Margaret's Churchyard, Belmont Hill, SE13

TQ 390756

At the north-west corner of the church stands the family vault of the Penn family. The side commemorating the life of John Penn is, unfortunately, badly weathered.

The churchyard across the road contains the grave of Robert Cocking who plunged to his death in Burnt Ash Fields, Lee, whilst demonstrating a parachute of his own design, shaped like a dandelion seed, and released from Green's Great Nassau Balloon after an ascent from Vauxhall Gardens in 1837.

Another stone reads 'Here lieth interred the body of Mr. Henry Knight of the Parish of St Paul's Deptford and master caulker of his Majesties yard Deptford who departed this life the 23: day of March 1742-3 in the 67th year of his age'.

Also buried in the churchyard are two astronomers royal, Edmund Halley and Nathaniel Bliss.

L41. Engineer's Dwelling: The Cedars, Belmont Hill, SE13

TQ 388757

This present-day convent was the home of John Penn (1805-78) from 1856 to 1878. During Penn's occupancy of the house a telegraph was installed for communicating with the works at Deptford and Greenwich.

L42. Biographer's Dwelling: 11 Granville Park, SE13

TQ 387762

This building, one of his many local homes, bears a plaque to the biographer Samuel Smiles (1812-1904). In 1830, whilst secretary to the South Eastern Railway, he wrote the best-selling book 'Self Help', to be followed later by his famous 'Lives of the Engineers' and 'Life of George Stephenson'.

L43. Public Baths & Wash-houses: Laurie Grove, SE14

TQ 364769

Near Deptford Town Hall (see D27). A French-Renaissance style facade of 2½ storeys in brilliant red brick and Portland stone: the architect was Thomas Dinwiddy. Built 1896-8. Note the prominent chimney and the separate entrances for men and women.

PENGE

During the nineteenth century Penge was administered as a detached 'hamlet' of the Parish of Battersea and this continued until 1899 when the Penge U.D.C. was formed. In 1900 Penge was transferred from Surrey to Kent and in 1965 was absorbed into the London Borough of Bromley. Penge was totally rural in character until the twenty years from 1850 when, as a consequence of railway development, the population grew from 1,000 to 13,000 and the area was covered by typical suburban sprawl, except, of course, for the land absorbed into the Crystal Palace Park. The character of the upper part of Penge was fundamentally altered by the decision to re-erect the Crystal Palace on this hill top. The area has seen a remarkable variety of modes of transport, including the Croydon Canal from 1809-1836; four forms of rail traction (steam 1839-1928, atmospheric 1845-46, overhead electric 1911-28, third rail electric from 1928); and on the roads there were electric trams (1906-1936) and trolleybuses (1936-59) as well as motor vehicles which were served by a nineteenth century petrol filling station!

BASIC MATERIALS

P1. Concrete Church: Waldegrave Road, SE19

TQ 340703

This represents an unusual use of mass concrete in a large building. Built in 1883 to the design of W.J.E. Henley (manager of the Concrete Building Company of Blackfriars Road), it is constructed of red-coloured Portland cement concrete, the ballast for which was burned on site. The walls are basically two feet thick and are decorated with concrete turrets, trefoil ornament and a large circular window.

MANUFACTURING INDUSTRIES

P2. Factory: Green Lane, SE20

TQ 358702

The premises of Small Electric Motors Ltd., previously a laundry, comprise an interesting group of small scale Victorian buildings, including a neatly designed chimney. The street facade has been given special 'architectural' treatment.

TRANSPORT

P3. Toll Gate: College Road, SE21

TQ 335726

This tollgate is still in use on a privately owned through road, formerly one of the main approaches from London to the Crystal Palace.

P4. Garage: Top of Anerley Hill, SE19

TQ 338707

This is an 'emancipation garage' dating from the Emancipation Act of 1896 which raised the speed limit for motor cars from 4 to 14 mph and dispensed with the requirement for a man carrying a red flag to precede each car. The garage has been in continuous use since 1896 but has been much rebuilt.

P5. Tram Depot: Oak Grove Road, SE20

TQ 352696

Demolished

Built in 1906 for the South Metropolitan Electric Tramways and Lighting Co., Ltd., to service the Croydon-Penge and Croydon-Crystal Palace tram routes, it closed in 1936. The long, narrow, red-brick building stands on a steeply sloping site reached from Oakgrove Road, where indications of the tram track can still be seen in the road surface.

P6. Croydon Canal: Betts Park, SE20

TQ 346697

A section, 190yds. long, of the former canal has been completely rebuilt with concrete base and sides to form an ornamental feature in the park. The canal was opened in 1809 from the Grand Surrey Canal near New Cross to Croydon, but closed in 1836 for the building of the London and Croydon Railway partly along the same route. The canal curved round the contours at Anerley and this section was therefore not suitable for the railway. Traces of the bridge under Anerley Road may still be seen.

P7. Canal Reservoir: South Norwood Lake, Off Woodvale Ave., SE25

TQ 340693

This lake, originally a reservoir for the Croydon Canal, is now used for recreational purposes.

P8. Railway Station: Sydenham Road, SE26

TQ 353716

The unusual platform layout here is said to be due to the station having to be built in the narrow corridor of the Croydon Canal. The line was opened in 1839.

P9. Railway Station: Crystal Palace Station Rd., SE19

TQ 341706

The original Low Level station was built in 1854 to serve the Crystal Palace but the present building, a combined through- and terminal station, dates from 1875. It has an impressive interior structure with fine stairways and brick load-bearing walls with high level arches. The large booking hall now contains a chapel, and there was previously a restaurant on the first floor. The remains of the extraordinary station master's house can be seen between the tracks below. Unfortunately, much damage has been done to the building; the large, barrel-vaulted, iron train shed roof was removed after the collapse of a similar roof at Charing Cross in 1905; the external front canopy has now gone and recently a large part of the roof structure over the booking hall was removed amid much controversy.

P10. Railway Bridge: Thicket Road, SE20

TQ 345704

A fine example of a brick skew-arch bridge, with an ornate brick parapet. The Sydenham-Crystal Palace branch of the London, Brighton & South Coast Railway was opened in 1854 but the bridge's impressive design suggests that it may have been rebuilt at the same time as the reconstruction of Crystal Palace station in 1875.

P11. Railway Bridge: Penge High Street, SE20

TQ 349706

A lofty triple-arch brick viaduct which carries the Crystal Palace branch mentioned above.

P12. Railway Tunnel: Between Crystal Palace Low Level and Gipsy Hill, SE19

TQ 338709

This 746yds. long tunnel was built in 1856 by the West End of London and Crystal Palace Railway.

P13. Railway Tunnel: Between Penge East and Sydenham Hill stations, SE26

TQ 339718

The longest of the four railway tunnels under this part of Sydenham Hill is the Penge Tunnel of 1¼ miles and was built in 1863 by the London, Chatham & Dover Railway.

P14. Railway Tunnels: Between Crystal Palace High Level and Sydenham Park, SE26
TQ 340715

TQ 342722

These two tunnels, on the Crystal Palace and South London Junction Railway's line from Nunhead to Crystal Palace, were built in 1865. The line is now gone (closed 1954) but the tunnels remain.

TRADE AND COMMERCE

P15. Co-op Store: Green Lane, SE20

TQ 359702

'P & B, Justice for All', the worthy motto of the former Penge and Beckenham Co-operative Society, is still proudly proclaimed from the ornate, wrought-iron weather vane which surmounts the corner turret of their store. This building, at the Parish Lane junction, is dated 1900.

PUBLIC UTILITIES

P16 & P17. Hexagonal Pillar Boxes.

There remain in this part of London two 'Penfold'-type pillar boxes. The design, although slightly different in each of these examples, has an oak-leaf pattern on the top. This type of box was made by Cochrane and Co. of Dudley between 1872 and 1879.

P16. Belvedere Road, SE19

TQ 338703

P17. Sydenham Hill, SE26

TQ 346727

P18. Fire Station: Croydon Road, SE20

TQ 355700

The red-brick ambulance station, with stone dressings, was built as the local fire station in 1906 but bears the date 1905.

OTHER SERVICES

P19. Crystal Palace Park, SE19

TQ 34 71

After housing the Great Exhibition of 1851 in Hyde Park, Sir Joseph Paxton's famous iron and glass structure was re-erected on this hill top (to a modified and enlarged design). The first pillar was placed ceremonially on 5th August 1852 and the completed building was opened by Queen Victoria on 10th June 1854. Between those dates road and rail waggons brought 9,642 tons of iron and 500 tons of glass to form this vast structure. Its overall length, 1,608ft., was a multiple of 8ft., as were all its structural dimensions including the ornamental terracing which still remains. These fine terraces, balustrading, steps and statuary have been allowed to decay since the famous conflagration on the night of 30th November 1936.

The gardens below the palace were formally laid out with lakes and fountains incorporating no fewer than 11,788 water jets. Only a few components remain of these waterworks which stretched Victorian ingenuity to its limits. The water was drawn from a deep well at the lowest part of the park and pumped into the lower reservoir (now the boating lake). From there pumping engines forced it up to the intermediate lake, now used by anglers, and thence to the rectangular upper reservoir which is now dry. To produce sufficient head of water, two towers, each some 200ft. high, were erected at each end of the Palace (TQ 337707 & TQ 339714) in 1856 to the design of I.K. Brunel, previous attempts having proved unsuccessful. These towers escaped the blaze of 1936 but were demolished in 1940 and only their bases remain. The park also included permanent educational displays of geology and prehistoric animals and these still largely remain. From the rustic bridge by the lower lake one can still examine the artificial cliff (TQ 345712) with seams of old red sandstone, limestone, millstone grit, ironstone, coal and new red sandstone. Of the original 33 monsters, 27 now remain and must be London's most bizarre listed buildings of architectural or historic interest. They consist of artificial stone on an iron framework and, for example, the iguanodon (inside which the designer, Waterhouse Hawkins, held a dinner party on 31st December 1853) comprises four iron columns 9ft. long by 7ins. diameter: 100ft. of iron hooping; 640 bushels of artificial stone and '20ft. of cubic-inch iron ore'.

Visitors to the Crystal Palace arrived at the Low Level station (qv) or alternatively, from 1865, by the London, Chatham & Dover Railway's branch to the High Level station (TQ 337708). From the platform of the High Level station visitors could pass under Crystal Palace Parade through a beautifully constructed brick-vaulted subway (TQ 338709). This 24-bay fan-vaulted subway was designed by E.M. Barry and remains one of the finest examples of the bricklayer's craft. The High Level branch line and station were closed in 1954 and the station demolished in 1961.

Of the extraordinary variety of activities which took place in the palace and its grounds, only a few can be mentioned. The world's first aeronautical exhibition was held here as early as 1868 and Claude Grahame-White flew in an aeroplane from the park in 1910. A special gas supply was laid on from Bell Green Gas Works (qv) from 1859 to serve the famous Crystal Palace balloonists. Brock's fireworks displays have taken place here since 1856. During the Festival of Empire in 1911, visitors could tour the three-quarter-scale replicas of the parliament buildings of all the Commonwealth countries on a special narrow gauge railway. In 1864, one Thomas Rammell patented a pneumatic railway which apparently ran for some 600yds. near the eastern corner of the park and the rumour that this railway tunnel, complete with carriage, was simply bricked up and still remains below ground has given rise to some enthusiastic speculation and digging in recent years.

P20. Almshouses: King William IV Naval Asylum, St John's Road, SE20

TQ 353705

Twelve almshouses for widows of Naval officers, founded by Queen Adelaide in 1847. These are very ornate, Jacobean-style buildings, designed by Philip Hardwick, the famous railway architect, and are in red and grey brick with the royal arms of William IV in the centre. It is hoped that they will be fully restored in the near future.

P21. Almshouses: Royal Watermen's & Lightermen's Asylum, Penge High Street, SE20 TQ 355704

A charming architectural grouping of 46 neo-Gothic almshouses built 1839-40 by the architect George Porter, on three sides of an attractive courtyard. The central arch has a chapel/meeting room over, flanked by twin ogee towers, one with a clock face, the other with a weather-vane face. There are two cast-iron hand pumps at the rear. The almshouses have been very sensitively rehabilitated by the G.L.C., the scheme winning a European Architectural Heritage Year Award in 1975.

P22. Police Station: Penge High Street, SE20

TQ 356702

This mid-Victorian yellow-brick building with its simple, symmetrical facade, would appear to be earlier than most of the police stations in South East London. Remains of the stables may be seen at the rear.

P23. Town Hall: Anerley Road, SE20

TQ 345699

In 1876, Penge Vestry obtained the sanction of the Local Government Board to the building of a Vestry Hall. Mr George Elkington resigned from the Board and was promptly appointed architect for the project. The two-storey building, at that time symmetrical about its clock tower, was opened in 1879 and considerably extended in the early twentieth century.

P24. Boundary Markers: Penge and Crystal Palace areas

There are boundary posts of both cast-iron and stone types of the former Camberwell and Lewisham Boroughs on the east side of Crystal Palace Parade (TQ 338710); and cast-iron posts embossed 'Beckenham Parish 1868' on the former Penge/Beckenham boundary at Kingswood Road (TQ 352707) and the north end of Penge Lane (TQ 356704). At 25 Fox Hill (TQ 337702) and on the gable of 106a Edward Road (TQ 357703) are interesting cast-iron wall plaques 'Hamlet of Penge, 1875'.

SURREY DOCKS

This area of low-lying land, formed by a loop in the Thames some two miles downstream from London Bridge, saw little internal development prior to 1800. From Tudor times a number of small shipyards had occupied the river frontage and later London's first dock, The Howland Great Wet Dock, was built here.

The first years of the nineteenth century produced two abortive schemes which were to foreshadow changes that would alter the area beyond recognition. In 1799 Ralph Dodd published a plan for a 'Grand Surry Canal from Rotherhithe to Croydon' and in 1805 there followed the formation of the Thames Archway Company to build a communication under the Thames from Rotherhithe to Wapping according to the plans of Robert Vazie. Neither of these schemes, as such, was completed but they sowed the seeds of the docks and tunnels which are now such a prominent feature of the area.

The parish of St Mary, Rotherhithe, historically part of Surrey, was included in the Metropolitan Borough of Bermondsey in 1899 and this became part of the London Borough of Southwark in 1965.

BASIC MATERIALS

S1. Concrete Church: Dilston Grove, SE16

TQ 352788

Clare College Mission Church is a simple, early reinforced concrete building, designed in 1911 by Simpson and Ayrton.

S2. Boundary Stone: Plough Way, SE16

TQ 363788

The stone, set in the boundary wall near the canal bridge, marked the Kent/Surrey boundary prior to the formation of the L.C.C. in 1889.

S3. Thames Tunnel: Tunnel Road, SE16

TQ 353798

A much-altered vent shaft and refurbished engine house with chimney are the surface remains of Marc Brunel's tunnel. Started in 1825, but not completed until 1845, this was the world's first underwater pedestrian tunnel. Never completed for road traffic, it was sold to the East London Railway in 1865, modified, and opened in 1869 as a north-south link for the line to New Cross. The railway, which now forms the New Cross Branch of the Metropolitan Line, was electrified in 1913. The twin portals of Brunel's tunnel can be seen from the platform at Wapping station.

S4. Road Tunnel: Brunel Road, SE16

TQ 352797

The second road tunnel beneath the Thames, at Rotherhithe, was started in 1904 for the L.C.C. and completed in 1908 under the direction of Mr (later Sir) Maurice Fitzmaurice. The 6,278 ft. tunnel was cut using a Greathead-type shield and a section of the shield lining forms the entrance arch to the southern approach road. There is pedestrian access via a spiral staircase located in the vent shaft on the river front in Rotherhithe Street (TQ 355802) which is only for the adventurous urban Rambler.

TRANSPORT

S5. Railway Station: Brunel Road, SE16

TQ 354799

Opened in 1869 by the East London Railway, Rotherhithe station's single storey building is substantially complete.

TRADE AND COMMERCE

S6. Warehouses: Rotherhithe Street, SE16

TQ 352798

These represent an increasingly rare section of the waterfront buildings typical of the Thames. A narrow road way separates the riverfront warehouses from the landward ones, the two being connected by overhead walkways. These c1,800 warehouses, some with timber frames, are being restored as dwellings, craft workshops and a picture library.

S7. Warehouse: Globe Wharf, Rotherhithe St., SE16

TQ 359805

A fine six-storey 15-bay grain warehouse built 1883, now rice mills. Adjoining are Globe Stairs, traditional wooden steps leading to an anchorage.

S8-S14. Surrey Commercial Docks

These are the only docks on the south bank of the Thames and originated with the Howland Great Wet Dock (Act 1696; opened c1700) which was London's first enclosed dock. Surrey Docks developed to their present form during the London dock boom of the early nineteenth century. In 1807 a basin was constructed by the Grand Surrey Canal Co. which was the first of the four original dock companies. The others were the Commercial Dock Co., 1807; the Baltic Dock Co., 1809 and the East Country Dock Co., 1811. The four gradually amalgamated to become the Surrey Commercial Dock Co. in 1865 and were finally amalgamated into the Port of London Authority in 1914. The docks specialised in the timber trade as indicated by their individual names. The Docks reached a final extent of 460 acres before closing in 1969 and the area is currently undergoing major redevelopment.

S8. Dock Offices: off Lower Road

TQ 353794

Two-storey red brick offices, dated 1892, with four-storey brick clock tower.

S9. Lock

TQ 356802

The 250 ft. x 50 ft. Surrey Lock which leads into Albion Dock of 1860 is now partly infilled but the lifting road bridge still survives. The original entrance lock to the Grand Surrey Canal was slightly further downstream.

S10. Pumping House

TQ 363804

Dated 1929, over the former Lavender Lock (1862).

S11. Lock and Dock

TQ 366792

Greenland Dock, built on the site of the Howland Great Wet Dock, was extended to its present size (2250ft. x 450ft.) in 1893-1904 to the plans of J. A. McConnochie. He died before construction started, and Sir John Wolfe Barry modified the plans to increase the dimensions of the entrance lock to 550 ft. x 80 ft. The lock, complete with hydraulically operated lock gates and winches, remains. A hydraulic swing bridge takes a public footpath over the lock from which the expanse of the dock and remaining warehouses can be seen.

S12. Swing Bridge

TQ 366791

A wrought iron footbridge over the entrance to South Dock, by James Walker, dates from the building of the lock in 1851-55.

S13. Swing Bridge TQ 364791

A footbridge of unusual stayed construction in wrought and cast iron, by Henry Grissell, 1862, now crosses the passage from the South Dock to Greenland Dock.

S14. Swing Bridge TQ 361793

Remains are now preserved of a hydraulically operated swing bridge, c.1890, over the lock between Russia and Greenland docks.

PUBLIC SERVICES

S15. Gas Works: Rotherhithe Street, SE16 TQ 357800

This is the works of the Surrey Consumers' Gas Co., founded in 1849, which amalgamated with the South Metropolitan Gas Co. in 1879. Maximum daily gas production was 9.5m. cubic ft. obtained from horizontal retorts, built 1851-60, and a producer gas plant. Gas manufacture ceased in April 1959. The most substantial structure remaining on the site is a holder of recent construction.

S16. Hydraulic Pumping Station: Renforth St., SE16 TQ 354796

Between 1883 and 1977 Londoners could receive water from the pumping stations of the London Hydraulic Power Co., this being delivered at 700 lbs. per sq. in. The supply, by a maximum of 184 miles of underground pipes, drove at its peak in 1927 some 8,000 machines such as lifts, hoists, lock gates, theatre safety curtains and even hydraulic vacuum cleaners. The Rotherhithe pumping station, built in 1902, first supplied power in 1903. Water was pumped from the adjacent Albion Dock and stored in the typical large cast-iron tanks on the boiler house. The brick-built complex also includes the former engine house (originally housing triple expansion steam engines to drive the hydraulic pumps), an accumulator tower, a boiler chimney and workshops. Two cottages for employees are situated in the yard. The station has been converted to form the company's head offices.

S17. Southwark Park: Gomm Road, SE16 TQ 353790

A 63-acre open space, including a 22-acre lake, created by the Metropolitan Board of Works in 1869.

OTHER SERVICES

S18. Public House: Gulliver Street, SE16 TQ 366794

An old dockland pub with well-preserved exterior, including gas lamp brackets but with a modernised interior. The name, the 'Ship and Whale', is derived from the whaling associations with the nearby Greenland Dock.

S19. Housing; Odessa Street, SE16 TQ 366794

An L.C.C. block with a distinctive parabolic arch leading to an inner courtyard.

S20. Housing: Plough Way, SE16 TQ 360788

Sutton Dwellings comprise three pleasant red-brick, three-storey blocks, erected in 1915 under the will of Mr. W.R. Sutton of Golden Lane, E. C.

WOOLWICH

'Warlike Woolwich' grew as a result of the naval and military demands of the country. Prior to the present century, Woolwich was an independent township in Kent, 10 miles downstream from London Bridge, and of substantial size (population 35,000 in 1875). It became the Metropolitan Borough of Woolwich in 1899 and since 1965 has been part of the London Borough of Greenwich. The military connection started with the formation of the Royal Dockyard in 1513 by Henry VIII and at later dates victualling stores and a rope walk were added. Following the growth of the steam navy in Victoria's reign the dockyard proved unsuitable for use and closed in 1869. The need for ordnance works near a dockyard is obvious and the 'Gun Wharf' is known to be of early date. In the seventeenth century the artillery stores were known as Tower Place, later becoming the Arsenal and eventually the Royal Arsenal (1805). Gunfounding started here in the early eighteenth century and the Arsenal became the principal ordnance works of the nation, employing some 50,000 workers during the First World War. Woolwich is now enveloped by London but the military importance still lingers on in the Royal Military Academy.

BASIC MATERIALS

W1. Sandpits: Maryon Road, SE18

TQ 418786

These disused sandpits have been converted into Maryon Park.

W2. Concrete Terracing: Hector Street, SE18

TQ 451785

Remains of terracing visible in gardens and behind the Roman Catholic Church are part of the one-time home of the famous Royal Arsenal Football Club (1891-93). The club moved to the Manor Ground by Griffin Manorway for the 1893-4 season and thence to Highbury after the 1912-13 season.

W3-W14. Royal Arsenal: Beresford Square, SE18

TQ 438790

The origins of the Arsenal are somewhat obscure. The area known as the Warren was used as ordnance storehouses, apparently as early as 1585, and over the following hundred years other departments were established. The beginnings of the present Arsenal can be dated from 1716 when the Crown decided to build its own Gun Foundry, having become dissatisfied with the quality of munitions supplied by the private foundries. The decision was contemporary with an explosion at Moorfields Foundry, one of the principal builders. At the beginning of the nineteenth century the Arsenal covered 139 acres, growing to 253 acres by 1855. Britain's imperial ambitions combined with the new armaments technology of the latter part of the nineteenth century led to massive expansion, culminating in a 1,200-acre site at the time of World War I, with a labour force of 50,000. Since the Second World War the requirement for a Royal Arsenal has declined. The large eastern section, originally the testing ranges, is being transformed into the Thamesmead housing complex and the western section is the subject of development proposals.

NB Because access to much of the site is still restricted, many items of industrial archaeological interest remain a mystery.

W3. Main Entrance, Beresford Square, SE18

TQ 438790

Beresford Gate, a yellow stock-brick building with three stone carriage arches, was built in 1829. The superstructure, featuring decorative mortars, was added in 1891.

W4. Cadets' Quarters

Backing onto the Plumstead Road perimeter wall, this long range of two-storey, stock-brick, eighteenth century housing, is sadly dilapidated.

W5. Main Guard Room

A multi-coloured, three-bayed, two-storey, brick building fronted by a central Doric portico dating from 1788

W6. Royal Brass Foundry

Now superbly restored as a repository for the National Maritime Museum, the foundry was built in 1717, possibly to the design of Sir John Vanbrugh.

W7. Verbruggen's House

The Verbruggens, father and son, were master founders at the Arsenal during the late eighteenth century. Their house, dated 1772, remains although much altered.

W8. Dial Square

The remaining side of the 1717 square, probably by Vanbrugh, consists of a long single-storey brick building with central pedimented archway.

W9. Royal Laboratory

These two extremely dilapidated structures are the remaining part of the earliest establishment on the site, originally built in 1696 but reconstructed following a fire.

W10. Model Room

At the Arsenal the standard form of each piece of armament, against which all subsequent production items were controlled, was referred to as the 'model'. These models were housed in this large, two-storey brick building designed by Vanbrugh in 1719. The central bay carries a large clock in the recess above the doorway. The model room is now the Officers' Mess and some of the original models are preserved there.

W11. Carriage Store

This long, two-storey building, c1728 but fire-damaged in 1802, originally housed the gun carriages.

W12. Guard Huts

One surviving octagonal riverside guard house built in 1814.

W13. Grand Store

Built 1806-13, this E-shape complex of buildings was capable of holding sufficient equipment and stores to supply 10,000 troops at any moment. It is now the British Library's Woolwich Book Store.

W14. Canal

Built between 1812 and 1816 to the design of Lt. Col. Pilkington, the Arsenal Chief Engineer, this half mile long canal was originally intended for transporting timber to the carriage department. The canal had an average depth of 11 ft. and a width of 45 ft., with one lock (still in situ) from the Thames. After 1851 considerable quantities of gunpowder were moved via the canal. The upper reaches of the canal were filled-in between 1926 and 1936 but the remaining section is still 'in water' and is to be incorporated into the Thamesmead development.

W15-W24. Royal Dockyard: Woolwich Church St., SE18

TQ 428973

The dockyard was founded to build the 'Henri Grace à Dieu' for Henry VIII in 1513. It remained in existence thereafter despite many difficult times and one actual closure. In the nineteenth century Woolwich Dockyard was the scene of really significant changes in the methods of shipbuilding. It was the pioneering work of Peter Ewart and Oliver Lang that ensured Woolwich had the first steam factory in a naval dockyard. Most of what remains at Woolwich dates from this period of expansion from 1835. Despite modernisation the yard was soon outdated due to its concentration on wooden vessels and closed in 1869 after the launch of the 'Thalia'. The larger iron boats which were increasingly taking over from wooden vessels in the Navy were difficult to launch from this site despite Brunel's questionable success with the 'Great Eastern' on the north bank.

The site is now divided into three major parts with the smallest remaining at the eastern end.

W15. Boat Building Slips

The eastern end of the old site, next to the ferry, is at present occupied by Cubow's boatbuilding yard. The only tangible evidence of naval occupation are the slips which are still in use.

The middle section is owned by the local authority and has been developed by them as housing. Most signs that this was once a bustling dockyard have been swept away but one or two of the architecturally pleasing buildings have been retained.

W16. Superintendent's Offices

These date from the eighteenth century and now look somewhat dwarfed by new flats.

W17. Entrance Lodge

This colonnaded entrance lodge was also built in the eighteenth century and is one of the few entrances to the yard through the rather forbidding perimeter wall.

W18. Dry Docks

Two docks have been retained for recreational purposes. They were built in 1843.

W19. Anchor Forge and Smithery

The anchor forge and smithery, built by Rennie and Holl c. 1815, has been demolished but the cast-iron columns and trusses have been taken away for eventual re-erection on the Blists Hill Site of the Ironbridge Gorge Museum Trust. There it will house the working puddling furnace and rolling mill from Walmsley's Atlas Forge at Bolton.

After the yard closed the western end was bought by the Royal Arsenal Co-operative Society. They had hoped to run a co-operative dockyard but this idea fell through. A large part of this site is still owned by the R.A.C.S. although some of it has been sub-let. Most of the steam factory is retained as warehousing although there are plans for redevelopment of the whole site.

W20. Apprentices' School

Few people could guess that the Co-op Chapel of Rest was in fact built as the first school for the apprentices employed in the dockyard. Before this school was built the apprentices were taught in hulks moored close to the yard.

W21. Steam Factory

Building dates for this part of the yard vary from 1838 to 1844. Most of the original buildings still remain including the Smithery, Fitting and Erecting Shop, Iron Foundry, Boiler Makers' Shop, Pattern and Punching Shop and the Engine House and Lathe Shop.

W22. Inner and Outer Basins and Dry Dock

The site of all three can still be traced although these are now filled in. All three were designed by Sir John Rennie. These basins facilitated the fitting-out of ships with engines and masts.

W23. Mould Loft

One of the earliest buildings on this part of the site is the Mould Loft of 1815 where parts of wooden ships could be laid. Adjacent were two Plank Sheds, one of which remains although substantially modified.

W24. Rigging House, Sail Loft and Engine Store.

Demolished 1982

This building is perhaps the most important one remaining on the site and is currently used as a glucose refinery. Originally built between 1842 and 1846, it consists of two four-storey brick wings with semi-circular windows and a linking section. This linking section appears to have been rebuilt in 1856-7. The riverside slipway was covered over in 1857 and presents a brick facade to the river, thus matching the wings. The rear building, visible only on the south side, is of a remarkably modern appearance even though dating from the mid-nineteenth century. It is a four-storey structure of cast-iron load-bearing sections. The design would appear to predate the better known Boat Store at Sheerness. The ironwork is by H. & M.D. Grissell of the Regent's Canal Ironworks, London,

W25. Former Rope Yard: Beresford Street, SE18

TQ 437788

The straight alignment of this road is due to it having formerly been the dockyard's rope walk which was sold off in 1833.

W26. Windmill: Old Mill Road, SE18

TQ 449779

The Old Mill public house incorporates remains of a brick tower windmill which was used until 1848. It became a beer shop in 1880.

TRANSPORT

W27. Roman Road: Shooters Hill Road, SE18

TQ 401773 to TQ 523745

The present 'Old Dover Road' follows the line of the Roman Watling Street over Shooters Hill to the ford at Crayford.

W28. Mounting Block: Shooters Hill, SE18

TQ 436764

Restored in 1929, on the original site of the Bull Inn, this three-step stone block is a reminder of the days of horse transport.

W29. Stables: Cullis Yard, Brunton Street, SE18 **TQ 434792**

Ground- and first-floor stabling was provided here for the Cleansing Department's horses. A ramp gave access to the first-floor stables and adjacent workers' housing.

W30. Tramway Remains: Beresford Square, SE18 **TQ 437790**

Woolwich was associated with one of the last horse-tram routes (1913) and the last electric tram (1952) in London. The remains of a complicated tram track layout are visible in the road surface. The recently removed steel shelter in the square dated from 1914, when the local electric tram system (started 1903) was connected to the L.C.C. tramways for the first time. The bustling street market commenced in 1888.

W31. 'The Tram Shed': Woolwich New Road, SE18 **TQ 437788**

This former electrical substation of 1908, designed by E. Vincent Harris for the L.C.C. Tramways, has been converted into a theatre, misleadingly called the Tram Shed.

W32. Tram Depot: Abbey Wood, SE2 **TQ 472789**

Built in 1910 for the L.C.C., for electric trams, this depot was enlarged in 1913 to hold 86 trams and closed in 1952, when it was converted to a bus garage.

W33. Bus Garage: Wickham Lane, SE2 **TQ 462777** **Demolished**

Plumstead Garage was built in 1913 by the London General Omnibus Company for their growing fleet of motor buses.

W34. Foot Tunnel: Tunnel Approach, SE18 **TQ 433795**

A private tunnelling scheme was abandoned in 1876 but communications with North Woolwich were improved by the opening of the Woolwich Free Ferry. The ferry service was agreed by the M.B.W. in 1887 and opened to the public in 1889. It was the first free ferry on the Thames. The pedestrian tunnel was constructed using a Greathead-type compressed air shield, with cast-iron segments. The tunnel, designed by Sir Maurice Fitzmaurice, was opened in 1912 and is similar in style to the Greenwich Foot Tunnel.

W35. Railway Tunnel: between Dockyard and Arsenal stations, SE18 **TQ 432790**

This series of tunnels was built in 1849 for the South Eastern Railway.

W36. Railway Station: Walmer Terrace, SE18 **TQ 447788**

Plumstead station is a substantially original South Eastern Railway structure dating from 1859.

TRADE AND COMMERCE

W37. Coffee Tavern: Woolwich New Road, SE18 **TQ 437788** **demolished**

The Chinese restaurant and bingo hall, at the corner of Vincent Road, bears a foundation stone inscribed 'Woolwich and Plumstead Coffee Taverns Co. Ltd. 30/10/1880'. It was opened as the Royal Connaught Assembly Rooms and Coffee Tavern but by 1906 had become Smith's Empire Variety Theatre. Shortly

afterwards it became the first picture palace in Woolwich and remained in use as a cinema until the 1930s.

W38. Department Store: Powis Street, SE18

TQ 433791

The headquarters complex of the pioneering Royal Arsenal Co-operative Society, founded in 1868, is a florid, terra cotta structure with commemorative lettering and a statue of Robert McLeod, a noted co-operator. The North Block, of 1903, was designed by M. Bethell and has older warehouses behind it; the more modern South Block was built in 1935.

W39. Store: Plumstead Common Road, SE18

TQ 447778

This is an impressive R.A.C.S. store in 'Rhine-Castle' style with a clock tower, built in 1910.

PUBLIC SERVICES

W40. Water Tower: Shooters Hill Road, SE18

TQ 438764

This prominent local landmark, erected in 1910 by the Metropolitan Water Board, is a red-brick and stone octagonal tower with a high pitched roof over a steel tank.

W41. Crossness Pumping Station: Belvedere Road, Erith

TQ 484811

Situated at the end of the 154 miles long Southern Outfall Sewer, Crossness Pumping Station was designed by Joseph William Bazalgette for the Metropolitan Board of Works, to discharge the flow received from Deptford Pumping Station (qv) into the Thames on the ebb tide. The original contracts were signed in 1862 and the new station was opened by HRH the Prince of Wales on 4th April 1865 although the whole was not completed until 1875. The four storage reservoirs, covering 62 acres, were completed in 1869.

The main engine house, a two-storey brick building with an elaborate cast-iron interior, was completed in February 1866. The four single-cylinder beam engines were supplied by James Watt and Sons to lift the sewage through 22ft. In 1891 the engines were converted to triple expansion working by Benjamin Goodfellow of Hyde. These engines named Victoria, Prince Consort, Alexandra and Albert Edward, stopped work in 1945-52 and now slowly rust away in their cathedral of cast iron.

The remoteness of the site on the Erith marshes meant the M.B.W. had to provide housing for the station's staff and a school. At some time the engine house's mansard roof was removed and the tall chimney, designed as a Gothic tower, was demolished. In 1887-92 the storage reservoirs were converted to sedimentation tanks; two new tanks were also constructed and steam-powered sludge pumps installed. In 1906 two new outfall sewers were constructed by the L.C.C. and a new pumping house containing additional steam engines was opened. These engines were replaced by electric pumps in 1952. A modern treatment works was opened on 21st May 1964.

W42. Destructor Station: White Hart Road, SE18

TQ 455790

The Plumstead Generating Station was opened in 1903 as a combined municipal refuse destructor and generating station, for providing electricity for street lighting and domestic sale. The original steam plant was designed by Mitchell and the buildings by Sumner. The power station closed when Woolwich Power Station was completed in 1923. This building still has an external horse ramp and 6 bays inside but the chimney has been removed. It is now a council depot.

W43. Electricity Power Station: Market Hill, SE18

TQ 435793

In 1895 a small generating station of the Woolwich Generating Company opened on this site. The undertaking was acquired by Woolwich Town Council a few years later and the large new power station with its once-distinctive red-brick fluted chimneys was built in 1919-23.

W44. Fire Station: Sunbury Street, SE18

TQ 430791

A neat, Metropolitan Board of Works, red-brick, tile-hung station, complete with circular exercise tower. It was built in 1887.

W45. Fire Station: Plumstead High St./Lakeland Rd. SE18

TQ 453785

This building, dated 1907, featuring attractive lettering above the main doors 'L.C.C. Fire Brigade Station, Plumstead', is similar in style to the 1904 Eltham Fire Station.

W46. Fire Station: Eaglesfield Road, SE18

TQ 438770

This very impressive fire station, with flats over, consists of a four-storey block with five distinctive gabled bays. It was designed in 1912 by the L.C.C. and is considered to have been the first London fire station to be built for motorised rather than horse-drawn fire engines.

OTHER SERVICES

W47. Cinemas: John Wilson Street. SE18

TQ 432790

Two excellent examples of the 1930s 'Giant Cinema' style are to be found here; the Granada Cinema (1937) by Masey, Uren and Komisarjevsky and the Odeon (1937) by George Coles.

W48. Bandstand: by Blendon Tce., Plumstead Common. SE18

TQ 441779

This is a typical off-the-peg bandstand, c1890, manufactured in large numbers by ironfounders in the late nineteenth century.

W49. Primary School: Plum Lane, SE18

TQ 442775

Two attractive blocks in 'Flemish Chateau' style, with finial louvres, built in 1903 by the School Board of London.

W50. Workers' Housing: Atlas and Derrick Gardens, SE7

TQ 410790

In a rather unexpected location, off Anchor and Hope Lane, are two groups of artisans' dwellings whose names have an unexpected derivation. William Cory, whose family was in the coal trade during most of the nineteenth century, realised that by unloading the colliers on the Thames itself, and not at his berths in the new Royal Victoria Dock, he could avoid paying dock dues. In 1860 he purchased a disused salvage vessel, the 'Atlas', and moored it near the foot of Anchor and Hope Lane. This became a floating coal berth, 250ft. long by 90ft. beam, and with its deck tramways and six hydraulic cranes it could unload 60 tons of coal an hour. It became known locally as 'The Derrick'. A second 'Derrick' was built in 1865, and they were still in use in the first years of this century when the two groups of houses were built and perpetuated the memory.

W51. Royal Artillery Museum, Academy Road, SE18

TQ 431772

From 1741 until 1945 this was the Royal Military Academy, a centre of British engineering knowledge. The present buildings are by J. Wyatt, of 1808, but restored in 1873 following a fire.