

# Neglected history of the Greenwich riverside

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There are endless published walks and trails along the Greenwich riverside as well as guides conducting walks for visitors – they look at the Royal Hospital, the Trafalgar Tavern and various monuments – sometimes they look at Greenwich Power Station. Tourists aren't expected to know very much and these trails are often superficial. Industry – and this was a heavily industrialised riverside – is marginalised, there is no thought to why various riverside sites were used by some industries, and not others, and there is little thought as to how activities on land related to the river. Perhaps also, with reference to Royal Greenwich, it is important to see that a palace is a workplace for many people and that might also include the grand houses for senior courtiers who lived there because of their work for the Crown.

Although Greenwich was in the County of Kent until 1889, industrial north Kent has always been closely related to London in terms of its industry and this is particularly true of the upriver section of the Greenwich riverside. The boundary has changed over the centuries – what was once the Kent/Surrey boundary moved down river to become the Greenwich/Lewisham boundary and moved down river again less than thirty years ago.

The ancient boundary line between Kent and Surrey was the Earl Sluice – a waterway which ran from the Denmark Hill area down to the Thames near Rotherhithe. It became a sewer in the 1820s and there is an Earl Sluice pump house in Chilton Grove, Rotherhithe.<sup>1</sup> The point at which the sluice enters the Thames is between the South Dock entrance and Plough Way, Rotherhithe, and the boundary stones are preserved with a plaque and some information.<sup>2</sup>

The current Greenwich/Lewisham boundary is considerably downriver of Earl Sluice at Watergate Street but this dates only from 1993 – before then from 1828 much of Deptford's Royal Naval Dockyard was in Greenwich. This is clearly a massively important site for naval history and the history of technology (see for example *LIA* 13). Deptford, and the three other Kentish Royal dockyards, were very large organised workplaces long before what has become known as the 'industrial revolution'. Over 450 great ships were built here including the first successful naval steamship. As the nearest of the four to central London it had a major role in research and development. Its Tudor buildings were demolished in the 1950s and its foundation stone is in the Computer Department of University College, London.<sup>3</sup> The site is now generally called 'Convoys', from the firm which purchased it in 1984, and used it for the import of newsprint.<sup>4</sup> What remains is 'Olympia', part of an iron-framed shed of 1848, which originally covered two slipways.<sup>5</sup> From the river many walls, slipways, and entrances can be traced in the stonework.<sup>6</sup> The clock tower is now on the shopping centre at Thamesmead. A jetty was built for the War Department in 1934 by Ove Arup with Christian & Nielsen and a 'Ro Ro' terminal built in 1976, projects into the river.<sup>7</sup> The site is now inaccessible and awaiting development – as it has for many years. In 2014 it was added to an international watch list for major historical areas under threat. In 2020 there has been a return to community concerns on the future of the wharf which has included an application for a judicial review.<sup>8</sup>

The current Greenwich/Lewisham boundary runs down Watergate Street, SE8, alongside a long dockyard wall. Behind the wall on the Lewisham side is the Master Shipwright's House which is sometimes open to the public, and renamed the Shipwright's Palace.<sup>9</sup> Watergate Street leads down to the river and to Upper Watergate Stairs, built in 1846. Such stairs are a right of way by individual Acts of Parliament and allowed licensed watermen to ply for hire and pick up passengers. It was from here that the Deptford Ferry ran to the Isle of Dogs and a double line of wooden posts on the foreshore is said to survive from the ferry causeway.

Borthwick Street runs parallel with the river from Upper Watergate. Until recently it was the site of substantial wharves and had been of importance to riverside industry since the 16th century. Until the late 19th century back lanes ran between the street and the riverside, and the street was lined with houses and

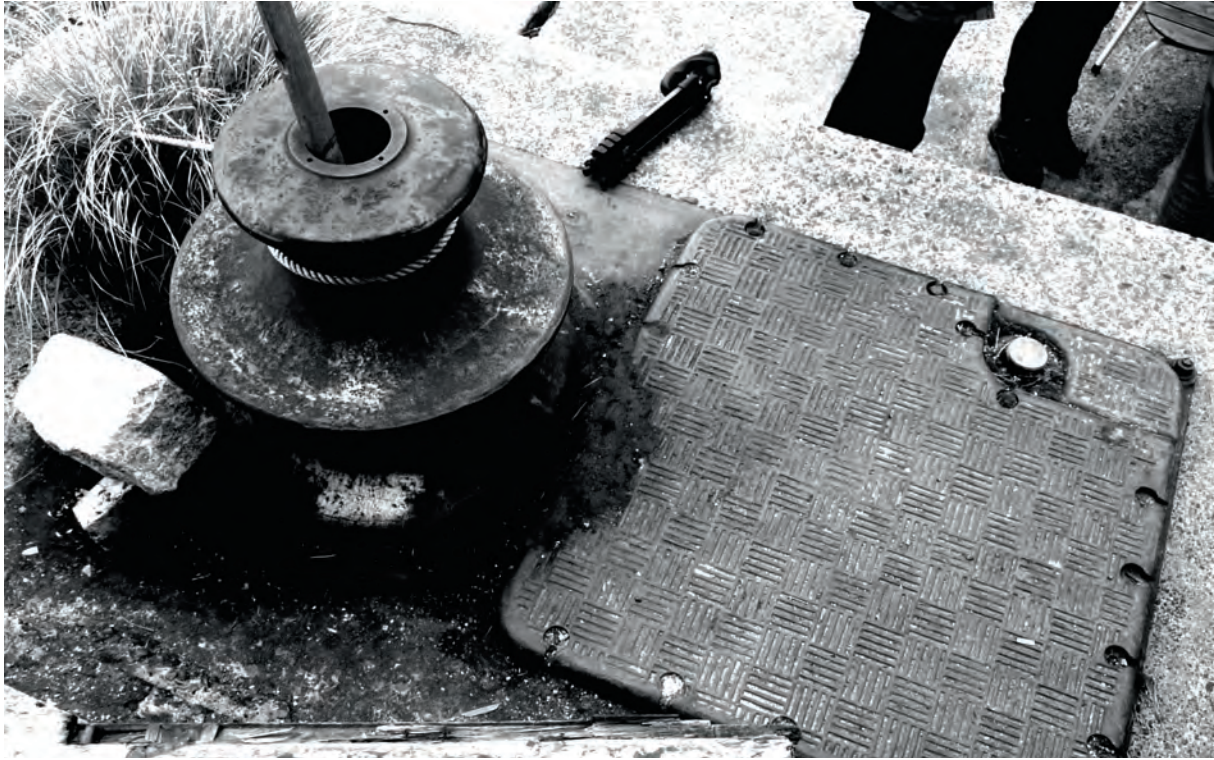


Figure 1. Remains of a hydraulic capstan in the grounds of the Shipwrights House. This small capstan was quite close to the riverside and may have been used to assist craft berthing at the quay at the North end of the garden. The capstan could have been used to work a crane. September 2013. *Robert Carr*

pubs. It has been described as a 'lost village centre'.<sup>10</sup> In the past the street name was Butchers Row.<sup>11</sup>

On the corner of Watergate Street and Borthwick Street is a block of flats and offices called 'Payne's Wharf'. Archaeologists found the chalk foundations of two medieval buildings here, one of which was a dovecote and a possible well.<sup>12</sup> It was then called Stone Wharf and in 1604 was leased to the newly established East India Company, which alone should make this wharf remarkable. In December 1609 the King launched the Company's first two ships from Deptford - *Trades Increase*<sup>13</sup> and *Peppercorn*. The Company soon began to use a larger site slightly downriver but continued to use Stone Wharf for some years. After they left it was probably used for wharfage of timber and stone. Archaeologists found remains of 'considerable activity' here which may have included shipbuilding. In 1819 a 256-ton barque called *Annesley* was built there by the Patent Ship Building Yard<sup>14</sup> and there may have been others.

In 1836 the Deptford Pier Junction Railway took over the wharf by compulsory purchase. The London and Greenwich Railway, the first suburban rail service in the world, was nearing completion and were looking to expand. A river boat pier seemed the logical next step so that passengers could change from the railway to ship. Work may have included the, now listed, arcading along the riverfront designed either by George Landmann, engineer to the Greenwich Railway or by Lewis Cubitt. Plans were also made for a steam ferry service but the scheme appears to have collapsed by the early 1840s.<sup>15</sup>

In the late 1840s the site became the Boilermakers' Shop for marine engineers, John Penn and Sons. Their main works site was on Blackheath Hill and this was their Lower Shop where boilers were made and engines and boilers installed into ships. This site was usefully next door to the Royal Dockyard and their primary customer, the Royal Navy. John Penn had built up a business and a reputation for innovative engine design combined with reliability – and was the premier marine engine builder here and worldwide. Their importance in marine engineering and as a local employer cannot be overstated. A preserved bollard which references Penn stands in the doorway of the new residential building.<sup>16</sup> The building in Deptford was used by Payne Brothers as a paper store and thus became known as Payne's Wharf.



Figure 2. Payne's Wharf in September 1979, photograph taken from a small boat. *Robert Carr*

Further along Borthwick Street is 'Middle Watergate' and new flats called 'Cornmill House'. There may have been a medieval tide mill on the riverside here— that is a corn mill worked by the power of the tides.<sup>17</sup> It was however the site of large riverside flour mill in the 19th century. This was associated with Henry Beaumont Leeson, a doctor at St.Thomas' Hospital, who also worked as a chemical consultant to local industries. He used part of the mill as his laboratory.

Between Middle and Lower Watergates was the factory of Humphrys, Tennant and Dykes, marine engine builders. It dated from 1852 set up by Edward Humphrys, chief engineer at Woolwich Dockyard. John Penn & Sons, with their subsidiary works at Payne's Wharf were famous for their marine steam engines. Humphrys, Tennant and Dykes were their main competitor building large marine steam engines and boilers for the Navy and international customers, including for the Peninsula and Orient Line (P&O) shipping line. They had begun in the early days of screw-propellers and contributed new ideas in design and construction as their engines became increasingly more powerful.<sup>18</sup> The British Empire was enabled by the technical expertise of the shipping industry – with much of the expertise on Lower Thameside. In the early 20th century Lloyds, tin box manufacturers, moved here employing young women to cut up metal sheets and make them into boxes and cans. This was an entirely different workforce to the skilled men working for marine engine builders and in 1914 industrial action by the women led to a Trade Board for the industry being set up.<sup>19</sup> It was however a workforce which signalled a change in the type of industries on the Deptford riverside.

In the mid-1930s Borthwick's elegant red-brick cold store replaced Lloyds on the site with a building designed by Sir Edwin Cooper. Borthwick's were in the frozen meat trade with links to New Zealand and a national presence in Britain as a wholesale meat supplier. The store, which had 22 miles of internal pipework, could take 300,000 carcasses at a temperature of 16°F. The frontage was 185 feet long with no building supports so that 14 lorries could be dealt with simultaneously. A huge canopy jutted out over the river so that four insulated barges could berth alongside – thus eight barges could come and go on each tide.<sup>20</sup>

Nearby is an electrical transformer station originally built in the 1920s, as part of Deptford Power Station. It is now, effectively, one of the last reminders of the Ferranti power station, although not part of it. A cable tunnel runs from here to the other side of the river.<sup>21</sup>

Lower Watergate: There are remains of the Watergate in granite setts in the pavement and a draw dock into the river. The site is not accessible and is used by the Ahoy Centre (Adventure Help and Opportunities for Youth) which dates from 2002 and promotes sailing and power boating courses for people with a physical disability.<sup>22</sup>

The Watergate stood at the north end of Deptford Green, described as the centre of the original medieval fishing village of Deptford Strand. It leads to St. Nicholas's church and the earliest Trinity House buildings. Near here was Skinners Place,<sup>23</sup> a house which burnt down in 1619. It was latterly a home of Sir Thomas Smythe, first governor of the East India Company and a member of the Skinners Company. A house here was also a residence for Elizabeth I's High Admiral, Lord Howard of Effingham, which had 'two wharves, gardens enclosed with a brick wall a barn and a stable and several houses'. It later became the Gun Tavern and was eventually owned by Messrs Gordon and then by the General Steam Navigation Company.<sup>24</sup>

Messrs Gordon were here from at least 1784 on a site marked as 'foundry' on maps. They had been in partnership with the Harrison family whose adjoining property was an 'old established anchor smith'. Gordon and Stanley had an anchor smith's business here which expanded into general iron working and engineering. Gordon's eventually owned a much larger shipyard up river at Dudman's Dock where they built a series of important ships. However they continued to operate the Deptford Green ironworks where, by 1842, there were warehouses, sheds, and an engine house plus extensive wharfage. It is thought they built some marine steam engines for the London and Westminster Steam Boat Company and steam railway locomotives for the London and Greenwich railway. They certainly cast the beams for Brunel's Bishop's Bridge canal bridge and for the Wolf Rock Beacon and other lighthouses. They sold their works in 1843 and it passed eventually to the General Steam Navigation Co.<sup>25</sup>

This section of the Deptford Riverside, Borthwick Street, now runs between new built 'developed' sites and offices with a pleasant park and a school across the road. It clearly has an early history which seems to be totally unresearched relating to Tudor and 17th century marine activity and, probably, the nearby Royal Dockyard. What we do know is that it included the earliest site of a company which ended up ruling a sizeable portion of the world's population and dominating international finance. We also know there were two internationally important marine engine builders, and an outlier of the first power stations in the world – as well some other interesting industrial sites. You will not find reference to any of this in Borthwick Street itself, and its 'development' sites, or in popular histories of Deptford. I am aware however of a recent PhD on Deptford Shipbuilding awarded to Chris Ellmers whose studies in this area and role in curating the Museum in Docklands have been influential.<sup>26</sup>

The next section of the riverside between Borthwick Street and the Creek is now covered with modern housing. This has totally obliterated the historical land use of the area and has little connection or context with the area's past – road names, for instance, relate to Greenwich's Royal Observatory, rather than to the ship builders who worked here. There is a tiny patch of grass named for Ferranti – but that is all.

Up the 17th century the land on the west bank of Deptford Creek was called Church Marsh and owned by the City of London's Bridge House Estates. In 1614 they leased it to the East India Company, already on Stone Wharf. They were on the western edge of Church Marsh and thus a long way from the Creek where they built 'a dry dock and slipways, an iron foundry to make anchors and chains; a spinning house to make cordage; a slaughterhouse for the killing, salting and pickling of pork and beef; storehouses for timber and canvas; and an isolated powder house to store gunpowder.' However little was built here after 1626.

Later in the 17th century the dockyard and dry dock were leased out to ship builders fulfilling government contracts for warships and for private merchantmen. They included in the Commonwealth period Peter Pett – the leading shipwright of his day and a Commissioner at Chatham Dockyard. In the 1690s, it was leased to members of the Castle family, well known shipbuilders mentioned in Pepys's Diaries.<sup>27</sup>

In 1788 the site was taken over by members of the Barnard family, a dynasty of shipbuilders from Ipswich and Harwich. They extended the site and it became known as Deptford Dry Dock. In 1851 the death of an absentee Barnard left a mountain of debt and mortgages which ensured closure.<sup>28</sup> A later shipbuilder here

was Charles Lungley who built ships with iron hulls and was an enthusiast for the system of screw-steamers. He patented unsinkable ships and designed steam engines. In 1864 he became managing director at Millwall Ironworks and oversaw the construction Great Eastern. At Deptford he had one of the largest dry docks on the Thames – which could be divided as necessary with a system of gates. This later became the Metropolitan Dry Dock.<sup>29</sup>

Other works here include a Kamptulicon works – a rubber and oil mix advertised for use in ‘floors, knife boards, lunatic’s cells and horse boxes.’<sup>30</sup> In the mid 19th century the Patent Fuel Company used ‘Warlich’s method’ – a combination of coal dust and oil as a fuel – and, in 1869, demonstrated a ship powered by creosote.<sup>31</sup>

On the most easterly section of the wharf was General Steam Navigation. Their founder, Thomas Brocklebank,<sup>32</sup> is said to have built their first paddle steamer on Deptford Creek, along with others the site was eventually taken over by General Steam and used on the Margate Service, followed by many others. General Steam dated from 1824 and had been set by a group of business men including the construction contractors Joliffe and Banks. By 1825 they were had a fleet of 15 Deptford-built steamers at Stowage. They used the paddle steamers for passenger transport and screw drive steamers for their flourishing cargo trade. They carried mails and in fact pioneered the ‘coastal steamship services on which England depended’. They specialised in links with ports in Britain but they also ran pleasure cruises to resorts down river from Deptford and across the Channel. By 1837 they had 351 vessels. The yard was taken over by the Government during the Great War and the Company lost 25 vessels on war service. By the 1940s they had about 45 ships and in the Second World War evacuated London schoolchildren. Their vessels undertook a distinguished role at Dunkirk where their eight ships are thought to have evacuated 31,000 troops and also evacuated troops from other small ports. Deptford Yard was badly bombed on several occasions including a V2 in the Creek itself. Before D-day 303 smaller vessels were converted in various ways here including landing craft and anti-aircraft ships. After the war, vessels continued to be built at Deptford and there was the *Daffodil* taking jolly crowds on day trips to France. This ended in the mid-1960s. Men were laid off from 1967 and the site became a lorry depot. General Steam was swallowed up into P&O in 1972, when the last remains of the Deptford Yard closed.<sup>33</sup>

General Steam should, I think, be better known. They lasted nearly a hundred and fifty years and provided a long lasting and efficient service – and surely we all remember the *Royal Daffodil*! Walking round the housing estate you will learn nothing of any of this; all forgotten with no memorial. One memorial within the housing estate stands in a sort of enclosure and comprises a series of rather strange statues given by the Russian government to commemorate the visit of Tsar Peter the Great to Deptford – although he visited the Royal Dockyard half mile to the west. One of the few remains of past industry here is out in the river – an enormous and apparently derelict jetty. With some difficulty you can also discover that this open space near the statues is called Ferranti Green. In the late 19th century, electricity was used for many applications that were localised and small scale. There were a number of ideas about how electricity could be made centrally and sold to the public and in London the Charlton based German company Siemens was one of the leaders in research on this. Sebastian de Ferranti was a child prodigy who, on leaving school, was employed in the Experimental Department of the Siemens works. He then moved on to set up a small manufacturing works for his own ideas and became Chief Engineer at the Grosvenor Gallery Company (later to become the London Electrical Supply Company, LESCO). In 1887 he was asked to design the proposed power station at Deptford. When it was finished in 1891, it was the first truly modern power station, supplying high-voltage AC power that was then ‘stepped down’ for consumer use on each street. This basic system remains in use today around the world. Ferranti was just 23 years old.

What was planned at Deptford was something much bigger than anything seen before; capable of supplying power to two million lamps. Ferranti also designed cable transmission systems, working with railway companies to provide routes and avoid digging up the streets. Some of his cables survived in use until the 1930s. In the 1890s a number of issues led to Ferranti leaving the Company and returning to his manufacturing career. By 1912 Deptford station was providing DC power for industrial customers and AC for domestic and commercial customers, as well as for trams and railways. Deptford Generating Station had an



Figure 3. Looking north down Deptford Creek towards the Thames in November 1971. The power station is Deptford East HP which opened in 1953 and closed in 1983. *Robert Carr*

important role in the spread of electrified traction on South London railways.

This first power station at Deptford was known as Deptford East. It survived the Great War and in 1925 LESCO merged with nine others to become the London Power Company. A second power station to be called Deptford West was built in the mid-1920s on the site of the 17th Century dry-docks. Together they were the largest power station in London. Electricity was nationalised after the Second World War and later Deptford East High Pressure plant was added adjacent to the Ferranti Station.<sup>34</sup>

Ferranti's original Deptford East closed in the late 1960s, Deptford West in the early 1970s and the High Pressure Plant in 1983. Then the regenerators moved in and built the housing we see today. The site is now called Millennium Quay.

Sadly there is no mention of the power station to be seen here other than the unexplained reference to Ferranti in the name of the bit of grass and the vast coaling jetty, derelict and the worse for wear. Some distance away in Greenwich High Road there is a small substation building standing just south of the turning into Norman Road. Over the lintel is carved 'LESC'.<sup>35</sup> It is estimated to date from the early 1920s and was locally listed by Greenwich in 2020. There is also a block of flats in Deptford Green built for power station workers.

This stretch of riverside between the Greenwich boundary and Deptford Creek is much more about London industry than Kent. Sited down river of the Royal Dockyard and slightly up river of the Greenwich Royal complex it has a very strong relationship to national institutions and to those concerned with the administration of naval and related matters. At the same time it has private shipyards which are in some ways downriver stragglers of the massive shipbuilding industry in Bermondsey and Rotherhithe between the 16th and 19th centuries. Penn, Humphrys and Lungley are part of the modernisation of ship builders whose vessels were made of iron and who used steam power. There is a strong strand of innovation from the 17th century onward – how else can you describe the early East India Company as it sets out to conquer the world, just as much as Sebastien de Ferranti three centuries later set out to change how it was lit and powered.

## Notes and References

- 1 There are numerous accounts, walks and histories of Earl Sluice on the net. There is a technical assessment of the pumping station, undertaken for Thames Tideway Tunnel at <https://www.scribd.com/document/71290681/PEIR-Main-Report-Vol24-Earl-Pumping-Station>
- 2 Most accounts and walks of the sluice take the reader to the confluence with the Thames. For instance, an account from a local writer <http://russiadock.blogspot.com/2013/09/dividing-rotherhithe-from-deptford.html>
- 3 <https://www.ucl.ac.uk/news/2014/feb/royal-tudor-foundation-stone-rediscovered-ucl>
- 4 'Five Hundred Years of Deptford and Woolwich Royal Dockyards'. *Trans. Naval Dockyards Society* Vol 11. Jan. 2019 (seven papers – Coats, Five Hundred Years of Deptford and Woolwich, MacDougall, Naval Multiplex of Kentish London; Ellmers, Deptford Private Shipyards, Cross-Rudkin, John Rennie and the Naval Dockyards, Stevenson, Block and Tackle – English Heritage, Hawkins, Archaeology of Convoys Wharf, Mazeika, Mapping the Built Environment .. Deptford).
- 5 Sutherland, R.J.M. 'Shipbuilding and the Long-Span Roof'. *Journal of the Newcomen Society*, London, 1989.
- 6 <https://historicengland.org.uk/listing/the-list/list-entry/1416575>
- 7 There are numerous publications about the Dockyard. The Naval Dockyards Society brings out regular newsletters and information <https://navaldockyards.org/>. See also: *The Deptford Royal Dockyard and Manor of Sayes Court, London*. Anthony Francis, MOLA, 2017 (a detailed report of archaeological work on the site); <http://www.buildthelenox.org/> (information on a local project hoping to set up a visitors centre) <https://www.mola.org.uk/blog/discovering-deptford-royal-dockyard-pictures> (archaeology)
- 8 See <https://www.facebook.com/Voice4Deptford/> and <http://shipwrightspalace.blogspot.com/> Local information and research by the owners.
- 10 <http://www.olddeptfordhistory.com/2012/05/lost-village-center-of-deptford.html>
- 11 Hartree, R. 'John Penn & Sons, Marine Engineers of Greenwich'. *Shipbuilding and Ships on the Thames. Proceedings of 3rd Symposium 18th Feb 2006*. Hartree, R. John Penn & Sons, Greenwich. 2008.
- 12 <https://archaeologydataservice.ac.uk/library/browse/issue.xhtml?recordId=1114099&recordType=GreyLitSeries>
- 13 <https://www.wrecksite.eu/wreck.aspx?139272>
- 14 *The Imperial Magazine*. Vol. 1 p.101
- 15 <http://shipwrightspalace.blogspot.com/> Includes a detailed article on this scheme
- 16 <https://britishlistedbuildings.co.uk/101288719-cast-iron-bollard-at-junction-with-watergate-street-greenwich-west-ward#.XsFOxahKhPY>
- 17 Philpott, Christopher. MS of study. Copyright Creekside Centre. With thanks

- 18 There are short pieces and references in: MacDougall, *Shipbuilders of the Thames and Medway*. 1971, Arnold, *Iron Shipbuilding on the Thames, 1832–1915*, Ashgate, 2000. I know of no other source for this company other than general online resources – ie. [https://www.gracesguide.co.uk/Humphrys,\\_Tennant\\_and\\_Dykes](https://www.gracesguide.co.uk/Humphrys,_Tennant_and_Dykes)
- 19 [https://warwick.ac.uk/services/library/mrc/archives\\_online/digital/tradeboard/tinbox/](https://warwick.ac.uk/services/library/mrc/archives_online/digital/tradeboard/tinbox/)
- 20 Harrison, *Borthwick's. A Century in the Meat Trade*. London, 1963.
- 21 Cochrane. R. *Cradle of Power*. CEGB.
- 22 Spurgeon, Darrell. *Discover Deptford*. 1997
- 23 <https://www.british-history.ac.uk/survey-kent/vol1/pp340-371>. This is all very confusing – mention of a dovecote here might point to a site at Stone Wharf on the corner of Watergate Street. There are a number of equally conflicting reports of ‘big houses’ away from the riverside with many identical names and unclear sites. I am not aware of a modern history of Deptford which has taken on these dwellings which clearly relate to early maritime and other industries in this area – these are official residences for various officials and grandees, not their homes. A discussion by local historians is at <http://www.olddeptfordhistory.com/2012/05/lost-village-center-of-deptford.html>
- 24 <http://www.dover-kent.com/2017-project/Gun-Tavern-Deptford.html>
- 25 Ellmers, C. ‘Gordon & Company, Deptford’. *Proc. 5th Symposium on Shipbuilding on the Thames*. Feb 2012
- 26 Christopher John Ellmers, ‘Littoral, River and Sea– Exploring the Maritime History of Deptford, 1700–1850’, thesis submitted towards a PhD at the University of Portsmouth, 2020.
- 27 Macdougall. *Shipbuilders of the Thames and Medway*
- 28 Barnard, John E, *Building Britain's Wooden Walls: Barnard Dynasty c.1697–1851*. Nelson. 1997
- 29 Newall, ‘Charles Lungley’s ships’. *Proc. Symposium on Shipbuilding and Ships on the Thames*. September 2000. This article is illustrations only; the paper given at the Symposium – from which my notes are taken – has never been published. Lungley is also covered by Arnold, *Iron Shipbuilding on the Thames*, and Macdougall op.cit
- 30 *The International Exhibition of 1862*, Vol. 1 Cambridge University Press
- 31 *Lyttleton Times*. 29th Jan 1869
- 32 This Mr Brocklebank was a Deptford timber merchant and is not to be confused with the Liverpool shipbuilder of the same name who lived nearby in Westcombe Park.
- 33 Gurnett, P. *General Steam Navigation*. Lewisham Local History Society. The company is also covered by Arnold, op.cit, and Macdougall, op.cit. There are also a scattering of reminiscences in local history newsletters like those of the Woolwich Antiquarians, Greenwich Industrial History Society and the Lewisham Local History Society.
- 34 Cochrane. *Cradle of Power*. There is also a lively and assertive local historical group who are trying to talk up the power station and its past. I am also aware of an archaeological report which I have been unable to access. There are also a scattering of Electrical Industry publications with memories, etc.
- 35 Cheffins. ‘The LESC Building’. *Greenwich Industrial History Newsletter* December 2007 Vol.9 No.6.