

# Southampton Docks at the Dawn of the Twentieth Century

Jeff Pain

The starter for this article was the location of a wonderful collection of post cards, mostly dated, recording work on the 'New Dock' and alterations to 'No.6 Dry Dock'. Most are anonymous but three names are mentioned, - *G. D. Courtney*, *The Ideal Studios* and *S. Cribb* - to whom I and all of those interested in Industrial Archaeology are greatly indebted.

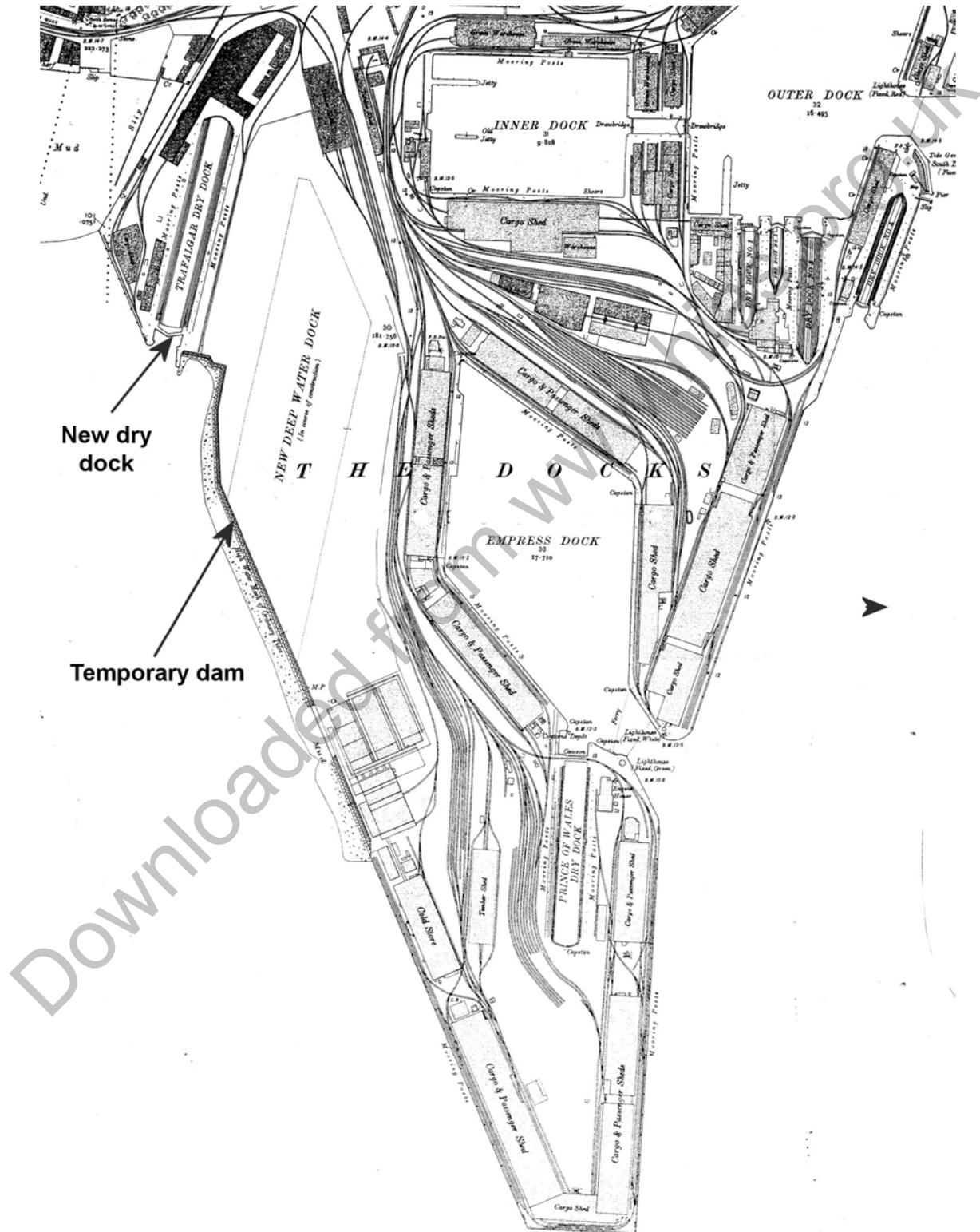


Figure 22. Southampton docks (Ordnance Survey revision of 1907)

To set the scene, Southampton Docks as we know them had their beginnings in the 1830s with various proposals for docks and, also, a railway to London. There was even a joint project at one stage which foreshadowed later events. However separate companies were formed and the Southampton Dock Company was established by Act of Parliament in May 1836. There was interest from the P & O and Royal Mail shipping companies in using the facilities.

The town council sold a triangular plot of mud land from where Test and Itchen rivers joined as the point, with a base on the shoreline from just east of Gods House Tower to the floating bridge. A foundation stone was laid at the western end with much ceremony on the 12<sup>th</sup> October 1838, although all development for many years was based on the Itchen side of the site.

Work commenced on the "Outer Dock" (tidal), which received its first vessels in August 1842 being fully open by July 1843. It was followed by the "Inner Dock" (gated and not tidal) in 1851, though owing to the increasing size of vessels this entrance was widened in 1859. In the meanwhile the railway connection to London had been opened in 1840 and the docks were connected to the railway across Canute Road by the Dock Station (later the Terminus Station) from the start. An additional facility was the provision, between 1846-54, of three dry docks on the south side of the Outer Dock. The largest of these at 400 ft (122 m) long and 21 ft (6.5 m) deep could accommodate the largest vessels of that time.

The Crimean War led to an increase in traffic and in 1860 further commercial trade led to additional quays being provided on the Itchen, south from the entrance to the Outer Dock, between 1873-6 and a fourth dry dock, also on the Itchen in 1879.

When, in the mid 1880s, expansion became essential the dock company required additional capital. With Parliamentary approval they obtained a loan of £250 000 from the London & South Western Railway (LSWR). This enabled work to commence and the 'Empress Dock' was opened by Queen Victoria on the 26<sup>th</sup> July 1890. The works also included a further dry dock, 'No.5', which at that time was the largest in the world. It was opened by the Prince of Wales on the 3<sup>rd</sup> August 1895 and was known as the 'Prince of Wales Dry Dock'.

However, all this work was putting a considerable strain on the dock company's finances, so a solution was required. It was agreed that the LSWR Company should purchase the dock company for £1 360 000. The take-over was effective from the 1<sup>st</sup> November 1892. The LSWR continued providing additional quays by going around the outside of the Empress Dock, firstly down the Itchen and then turning around the corner in a north westerly direction along the river Test, concluding with a large cold store.



19 SOUTHAMPTON. — New Dry Dock. — LL.

**Figure 23. The completed Trafalgar dry dock, probably before use because of the temporary rail track on the left. In the right background is the South Western Hotel.**

And so we come to the twentieth century. The size of vessels was increasing and with the prospect of the White Star Line transferring its premium North Atlantic service from Liverpool further expansion was essential. Plans were considered and the decision was made to construct a new deep water dock together with a further dry dock. Leaving a space for the new deep water dock, the new dry dock was positioned at the western end of the original site obtained some 65 years previously. Once completed, Southampton would again be able to lay claim to having the largest Dry Dock in the world.

In August 1901 the contractors John Aird & Co. commenced work to the designs of Mr. Galbraith, with Mr. F.E. Wentworth-Shields as resident engineer. Mechanical engineering was by Mr. D. Drummond with Mr. Key supervising on-site work. Construction involved the excavation of 266 000 cubic yards of material, and some 133 000 cubic yards of concrete were used to give a 16 ft (5 m) thick floor and stepped walls with seven altars, 22.5 ft (7 m) thick at the base tapering to 3 ft (1 m) at the top. The swing type steel gates, having greenheart on the bearing faces, were operated by hydraulic machinery.

The main dimensions of the dock were:

Length 860 ft (262 m)  
 Width 90 ft (27.5 m)  
 Depth 37 ft (11 m)

(over sill at High Water)

The Marquis of Winchester opened the 'No.6 Dry Dock' on the 21<sup>st</sup> October 1905. It became known as the 'Trafalgar Dry Dock'. (This was the 100<sup>th</sup> anniversary of the battle.)

However, almost immediately after completion it was apparent that the next generation of vessels would be too large, so after the Ocean Dock was completed in 1911 the contractors, Topham, Jones and Railton, being already on site, were engaged for the work of enlarging the dock which required lengthening it by 22 ft (7 m) and increasing its width by 10 ft (3 m).

The lengthening operation was comparatively easy as the existing profile with seven altars was used to match a short unaltered length beyond the widened stretch. Otherwise, The inside of the walls was cut



**Figure 24.** The *Deutschland* (16 502 grt) of the Hamburg Amerika Line, not very long after the opening as the area in the foreground has not been reclaimed for the Harland & Wolff works,



**Figure 25.** The White Star Line *Teutonic* (9 984 grt) in the dock c1910 as the Harland & Wolff buildings are now in place. 50 ton crane on right.



**Figure 26.** April 1911. Enlargement works in progress with shoring to support cut back of sidewalls.

back by 5 ft (1.5 m) either side, which removed two of the altar steps. To maintain strength, excavation was carried out behind the walls to allow mass concrete strengthening some 6.5 ft (2 m) thick, supported on timber piling with tie rods through to the original wall. The entrance was also rebuilt to be 100 ft (30.5 m) wide with the gates being replaced by a sliding steel caisson.

As extended, the dock provided useful facilities until June 1989, the last vessel to use it being the *MV Bismillah*. The dock was awarded listed building status; however, Associated British Ports (the current owners) have filled most of it with gravel, and under current work in progress (January 2009) the area will be used as parking and access for the new cruise terminal at 46/47 berths, though some indication of its previous existence should be retained.

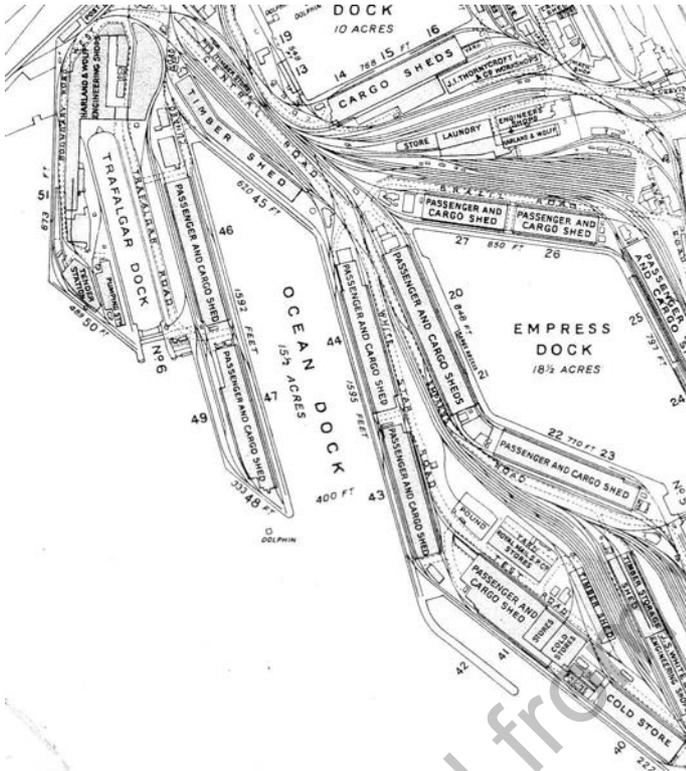


Figure 27. Map showing berth numbers and features referred to in the article



Figure 28. May 1908. Steam navy at work excavating the dock with steam grab crane at sea level. The Harland & Wolff works can be seen in the background.

Before moving on, mention must be made of the largest vessel to use the dock. This was the *Berengaria* on 29<sup>th</sup> April 1922, when even with a 'V' notch cut into the head of the dock for the bow over-hang at the front, at the rear, her counter stern over-hung the caisson. Also, at just over 98 ft (30 m) wide going into a 100 foot (30.5 m) gap, she had to be shoe-horned in.

Now we return to 1906 and work on the 'White Star Dock', so called because the White Star line had decided to leave Liverpool for Southampton for its premier service to New York. First, a water tight dam was built, from approx. 48 berth to 42 berth, using a bridge of chalk and material excavated whilst building the dry dock. Once formed, the main part of the work could commence. The contractors were Topham, Jones and Railton Ltd. Mr. F.E. Wentworth-Shields, shortly to become the dock engineer, was placed in charge.

The New Dock was to be tidal with an area of some 16 acres (6.4 ha), 3840 ft (1170 m) of quay with a depth of 40 ft (12 m) at low water. Berths 43/44 and 46/47 were to be for passenger / general cargo use and berth 45 for cargo, mainly timber with berths 48/49 round the corner for use as lay-up berths.

The main berths were built in the 'dry' with the walls having a total depth of 75 ft (23 m) using 42 000 tons of Portland cement. However, berths 48/9 used submarine construction with 8 ton concrete blocks placed in position by divers. The remaining wall at 41 berth was built in a dry trench excavated from the banks. Between 850 and 1200 men were employed at any one time using steam navvies and rail locomotives. Most of the material was exported via a jetty to barges for dumping off the Isle of Wight, though some was used in Southampton for reclaiming the land on which the Pirelli

General Cable works were built. This was transported via a railway line laid in the road past the Royal Pier entrance and along Western Esplanade to what is now West Quay shopping centre.

After the dock was flooded and while the sheds were still being erected, vessels used the berths for lay-up purposes and the first liner to actually use the dock was the White Star liner *Olympic*, sailing on her maiden voyage on the 14<sup>th</sup> June 1911 from 43/44 berth; the sheds at 46/47 berths not being completed until 1913.

The name was changed to 'Ocean Dock' in 1922 recognising that the Cunard line had been using Southampton since 1919 for their express service to New York. The dock continued to host the largest liners on the North Atlantic service until the 1970s when jet aircraft finally won the battle for the Atlantic crossing. Eventually the sheds were demolished including, in 1983, the magnificent 'Ocean Terminal' which had been opened at 43/44 berths by the prime minister the Rt. Hon. C.R. Atlee on 31<sup>st</sup> July 1950.

The berths at 43/44 remain an open area. However, 46/47 berths, after hosting grain silos for some years, now have a new passenger cruise terminal under construction, so once again the dock will be graced by some of the largest liners in the world.



**Figure 29. June 1908. A busy scene with excavation well under way. The South Western Hotel can be seen centre background.**



**Figure 30. July 1908. This, and figures 29 & 30, were taken from the high level gantry built for the transfer of spoil to barge. Looking north west, showing the low level pier and, beyond the works, a vessel in the dry dock, probably the White Star Line *Adriatic* (24 541 grt)**



**Figure 31. July 1908. Looking north, showing the rope-worked incline out of the excavations up to the spoil tips.**



**Figure 32. July 1908. Looking east, with 41 berth under construction and the Cold Store in the background.**



**Figure 33.**  
**May 1909.**  
**Block setting cranes**  
**working on 49 berth**  
**outside the coffer-dam.**



**Figure 34.**  
**May 1909.**  
**Shuttering in place ready**  
**for pouring concrete in 45**  
**berth.**  
**Harland & Wolff works in**  
**the left background.**



**Figure 35.**  
**February 1910.**  
**A general view looking**  
**north. The wall of 45**  
**berth appears to be**  
**complete. The shuttering**  
**is in place for 46 berth.**  
**Harland & Wolff (left) and**  
**the South Western Hotel**  
**(right) are on the skyline.**

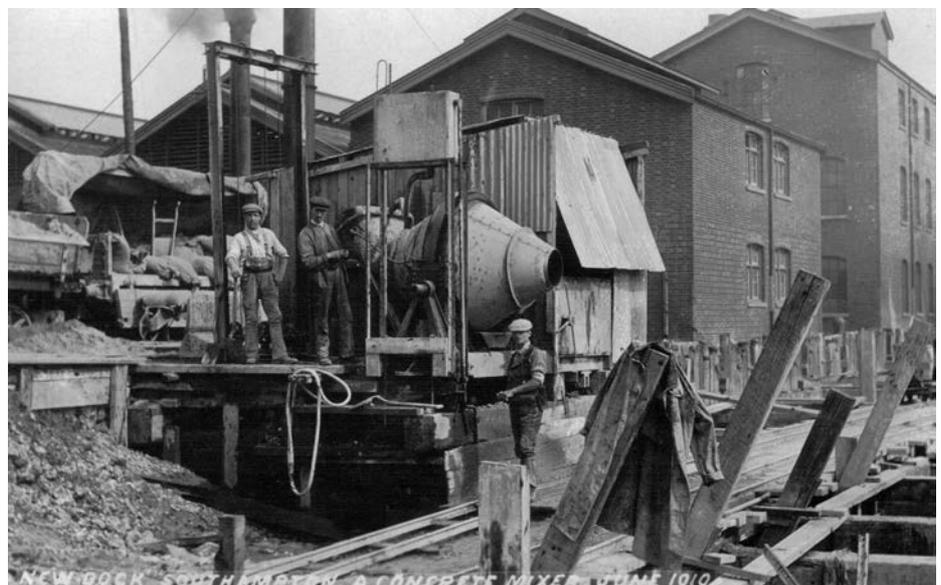
**Figure 36.**  
**April 1910.**  
 Concrete work is progressing on the quay wall at the south end of 43 berth.



**Figure 37.**  
**May 1910.**  
 A start is made on clearing the entrance to the new dock. A bucket dredger has its barge in attendance. The block setting crane is still on the end of 49 berth.



**Figure 38.**  
**June 1910.**  
 A concrete mixer and its crew based at 42 berth. Note the temporary wooden buildings behind.





**Figure 39.**  
**April 1911.**  
 The dock is now flooded and getting ready for operation. In the centre is the south end of the shed at 44 berth. The Union Castle vessel *Norman* is using the new dock as a lay-up berth.



**Figure 40.**  
**April 1911.**  
 The north end of 44 berth. The steel framework of the shed is virtually complete and awaiting cladding.

The table below gives a general indication of the increase in size of vessels during the life of Southampton Docks in the period covered by this article. Not all of these vessels were based in Southampton. A notable exception was the *Great Eastern* which operated a North Atlantic service from Southampton in the years 1860-63. The *Great Eastern*, 689 ft (210 m) long with a displacement of 22 000 tons, was uneconomic as a liner and came into her own for cable laying. She was not exceeded in length until the *Oceanic* and in displacement, until the *Baltic*.

Year	Name	Length	Gross tonnage	Owner
1842	<i>Hindustan</i> (paddles)	217 ft	2018	Peninsular & Oriental
1853	<i>Himalaya</i>	340 ft	3438	Peninsular & Oriental
1878	<i>Kaisar-I-Hind</i>	400 ft	4023	Peninsular & Oriental
1881	<i>Servia</i>	515 ft	7381	Cunard
1889	<i>Teutonic</i>	582 ft	9984	White Star
1893	<i>Campania</i>	600 ft	12 950	Cunard
1897	<i>Kaiser Wilhelm der Grosse</i>	655 ft	14 349	Norddeutscher Lloyd
1899	<i>Oceanic</i>	704 ft	17 274	White Star
1904	<i>Baltic</i>	726 ft	23 876	White Star
1907	<i>Lusitania</i>	787 ft	31 550	Cunard
1911	<i>Olympic</i>	882 ft	45 234	White star

**Thanks are due to:** Bert Moody for information on the Ocean Dock  
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