



# SHARPNESS NEW DOCKS AND GLOUCESTER AND BIRMINGHAM NAVIGATION COMPANY.



## A BRIEF HISTORY OF THE DEVELOPMENT OF GLOUCESTER'S COMMERCIAL IMPORTANCE

THROUGH the courtesy of the Sharpness New Docks and Gloucester and Birmingham Navigation Company we are enabled to include in this publication a brief history of the origin and construction of the Gloucester and Berkeley Canal, owned and operated by the Company. As this canal has been by far the most important factor in the commercial and industrial development of the county, the inadequacy of the following article demands an apology. In the limited space allowed us here we can but refer to a few of the more interesting features connected with the inception, progress and completion of this great waterway.

From time immemorial the value of the Severn for trade purposes has been recognised, and as early as the reign of Elizabeth a wharf was constructed on the bank of the river at Gloucester, Customs being granted by letters patent in 1580. The real commercial importance of Gloucester, however, dates from a later period, when nature was supplemented by art, and a ship canal, affording facilities for much larger craft, was projected.

The Gloucester and Berkeley Ship Canal was constructed under six Acts of Parliament, the first of which received Royal assent March 28th, 1793, and the last June 10th, 1825. Work of actual construction was begun at Gloucester in 1794, though upon the completion of five miles of canal the project was suspended. Ten years later it was taken up with renewed vigour, and with plans more in keeping with the great importance of the undertaking. However, it was not until 1827 (thirty-three years after the work was begun) that the canal was opened for traffic. It is interesting to know that the receipts for the first year's traffic aggregated but £2,836.

Up to 1836 the undertaking consisted of what is now known as the Old Entrance at Sharpness,

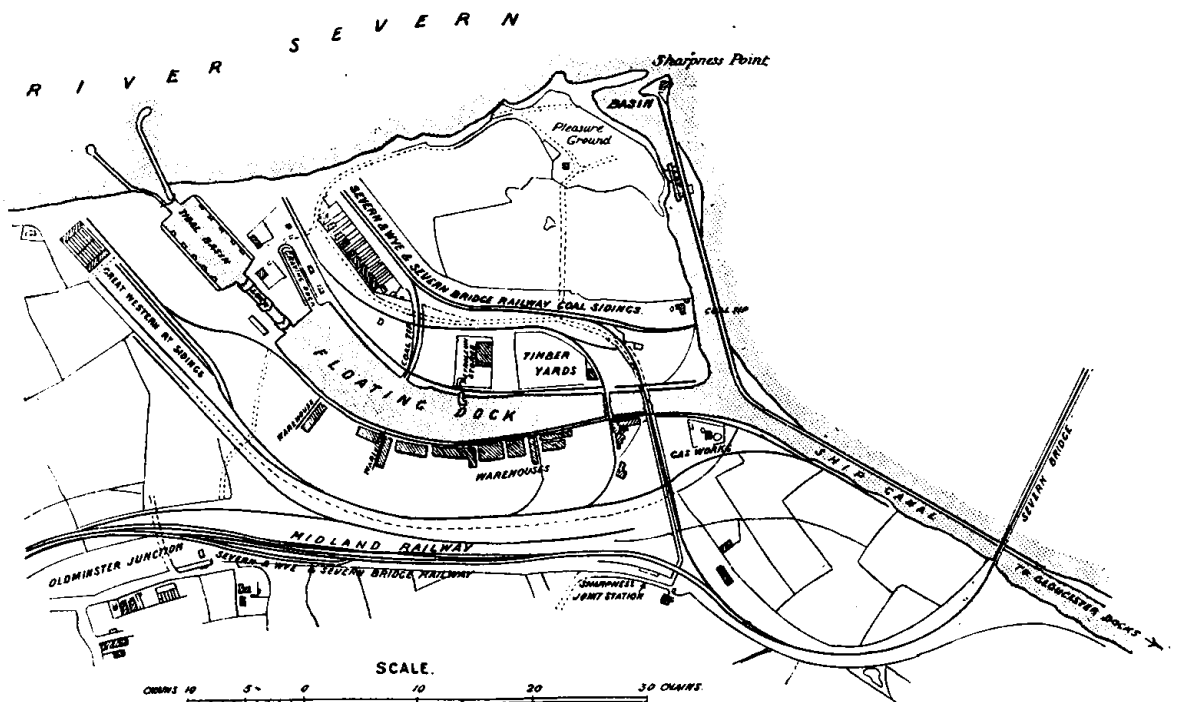
with a tidal basin about 500 feet in length, a ship lock 163½ feet by 38½ feet, a barge lock 70 feet by 18 feet, and a connecting canal of 16 miles to the Old Basin at Gloucester. Midway between Sharpness and Gloucester it crossed the Stroudwater canal (which was projected as early as 1730, and finished under an Act of Parliament passed in 1775), connecting it with the Thames and Severn Canal, and thus completing the inland route to London.

The great commercial importance of the canal is forcibly illustrated by the large sums expended upon it in carrying out the frequent improvements made necessary by increasing traffic, adding very materially to the shipping facilities of the city. In 1847 the Southgate Dock was constructed. In 1842 the Severn Commissioners began a long series of improvements, carried out intermittently until 1890, in the course of which the river between Gloucester and Worcester was dredged to a navigable depth of 10 feet, and locks and weirs were constructed, thus giving the canal a better

outlet to Worcester and beyond. In 1851 the Gloucester and Dean Forest Railway Company (which was subsequently absorbed by the Great Western Railway) widened the canal opposite High Orchard, putting in a new quay wall. Each of these improvements, which were but a few of those carried out in the early years of the canal, resulted in a marked increase of traffic.

A concomitant of the increase of Gloucester's shipping was the use of larger vessels, and, notwithstanding the many improvements that had been made to the canal, it became apparent that the existing accommodation was wholly insufficient for the demands made upon it. Accordingly the Company, in 1869, applied to Parliament for power to construct a new entrance and docks at Sharpness. The Act was passed in the following year, and active work was immediately begun, being brought to a successful completion in 1874.

The absolute necessity for increasing the



Plan of Sharpness Docks.



# - Ship Canal. -



facilities of the canal were set forth by Mr. W. B. Clegam (the Company's engineer) in a report submitted in 1869. From this report it appears that so great was the crowding of vessels in the tidal basin at Sharpness, through being too large to be passed through the lock into the canal, or requiring to be lightened before this could be accomplished, that in a single month 136 vessels bound to Gloucester sustained an aggregate detention of 700 days, and single vessels from 12 to 23 days each, waiting their turn to be admitted. The detention of the outward bound vessels was nearly as great. In view of the fact that Swansea, Bristol, Cardiff, and Newport had already greatly improved their shipping facilities, a failure to adopt an equally progressive policy would have irretrievably ruined Gloucester's commerce. It is, therefore, even more a matter for congratulation to-day than it was thirty years ago that the Canal Company's plans were commensurate with the importance of the undertaking.

Although it would be out of keeping with this brief article to describe in detail the new

estuary of the Severn to Staffordshire and the centre of England. In the same year its name was changed from the Gloucester and Berkeley Canal Company to the Sharpness New Docks and Gloucester and Birmingham Navigation Company.

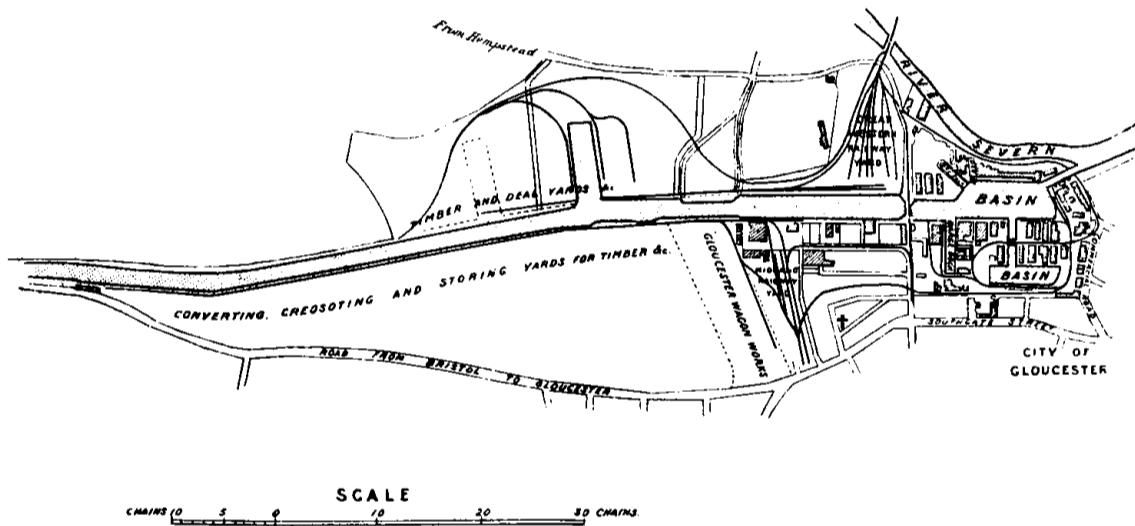
Reference to the map of England will at once explain why the Gloucester and Berkeley Ship Canal has made of Gloucester one of the foremost ports in the kingdom. This city (the most inland port in England) is also the natural distributing centre for the richest of our counties. For centuries it has been the water-gate to which the sea-borne traffic of the Midlands found its way, and the mineral fields and manufactories of Shropshire and Staffordshire, and the agricultural lands of Worcestershire and Warwickshire, were all immeasurably benefited by the construction of the canal.

The completion of the New Sharpness Docks, the construction of which had been attended with the inevitable difficulties, was regarded as a triumph of engineering and as an event of the greatest public moment. Events have more

prominent part in the industrial life of the county. Not only have thousands of men been employed in the construction and frequent improvements to the canal, but its maintenance and operation to-day require the services of approximately 160 employees. The Company have also been distinguished, fortunately, by their public spirit, and have readily co-operated with every enterprise which could in any way advance the interests of the county. They were largely interested in the erection of the railway bridge across the Severn at Sharpness, now operated by the Great Western and Midland Railways. They have also constructed some of the finest timber wharves in the West of England, and have directly assisted in the construction of private docks, wharves, warehouses, etc. To fully appreciate the extent to which some of our largest industries depend upon the canal one need but to visit Gloucester and Sharpness Docks, and see the flour mills, timber mills, and furniture and other factories which owe their importance almost wholly to the excellent shipping facilities afforded by this water-way.

A word should be added, in passing, as to the warehousing facilities, every effort having been made to promote despatch and economy in the loading, unloading and storage of all kinds of cargoes. At Sharpness the Severn Ports Warehousing Company, Limited, maintain twelve large warehouses of modern construction, with a combined capacity of over 1,200,000 bushels. This Company also own and operate a floating pneumatic grain elevator and conveyor, the only one in the Channel. This elevator, which carries 500 tons, is made self-propelling by means of twin screws; it is, indeed, a twin-screw steamer, and may be employed at sea or at the docks with equal advantage. When unloading grain from a ship, barge or warehouse a partial vacuum is produced in the elevator tank, whence flexible pipes are led to the grain wherever it may be. The grain is thereby drawn up into the tank, and then discharges itself through an automatic air lock into the weighing hopper, or other receptacle. The grain is also discharged by air pressure through pipes to any part of the receiving vessel or premises.

As would naturally be inferred, an undertaking of this magnitude required the co-operation of men of much more than ordinary ability. Until the making of the Manchester Ship Canal the Gloucester and Berkeley Canal was the largest work of the kind in the United Kingdom, and it excited much public interest at the time of its construction. Among its promoters were the Duke of Gloucester and the father of the late W. E. Gladstone. The present Chairman of the Company is Sir W. H. Marling, Bart.; Mr. Hubert Waddy is the General Manager and Secretary; Mr. W. W. Keeling is the Consulting Engineer; and Mr. F. A. Jones, Engineer.



Plan of Gloucester Docks.

works at Sharpness, it may be proper to submit a few figures illustrating their size and character. The works consist of a floating dock, 2,200 feet in length, with a width varying from 200 feet to 450 feet, and with a depth of water of 24 feet, and having an area of nearly thirteen acres. The lock from this floating dock is 320 feet long and 60 feet wide, with a depth of water on its upper cill of 24 feet. This lock communicates with the tidal basin, which is 546 feet long and 300 feet wide, and into which, as the name implies, the tide flows. The two accompanying engravings give an idea as to the arrangement of both the Gloucester and Sharpness Docks. There is also a graving dock of the following dimensions: Length, 350 feet; width of entrance, 50 feet; depth of water on cill, 15 feet.

Apart from witnessing the completion of the New Sharpness Docks, the year 1874 was a memorable one in the history of the Company as well as for the county through which the canal extends. In that year the purchase of the Worcester and Birmingham Canal by the Company secured the navigation from the

than justified the most sanguine expectations of the promoters. The following figures, supplied by the Company and extending over a period of fifty years, afford a concise illustration of the growth of Gloucester's commerce in that period, a growth which would not have been possible without the facilities afforded by the Company.

### FOREIGN IMPORTS.

Years.	Tons.
1854-1863 inclusive	.. 1,399,582
1864-1873	.. 2,477,418
1874-1883	.. 3,532,365
1884-1893	.. 3,676,127
1894-1903	.. 4,790,223

It should be added that in 1902 and 1903 the imports were considerably larger than at any previous period.

In addition to promoting the development of Gloucestershire's commerce, the Gloucester and Berkeley Ship Canal has taken a scarcely less