



DOVER HARBOUR BOARD

HERITAGE RECORDING UNION STREET SWING BRIDGE AND WELLINGTON DOCK GATES

TO THE DOVER WESTERN DOCKS, DOVER, KENT

Desktop Study



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Contents

1. Project Background.....	9
2. Methodology	10
2.1 Aims and Objectives	10
2.2 Approach.....	10
2.3 Sources	10
3. Description of the Site.....	11
4. History of the Site.....	11
5. Current Photographs.....	38
6. Conclusions and Recommendations.....	53
7. References.....	53
8. Appendices	55
8.1 Appendix 001 – Figures	55

List of Plates

Plate 1: A sketch looking West over the swing bridge, drawn 1864. Dover Museum d00168.

Plate 2: View of the Inner Harbour c.1890, DHB.

Plate 3: A clearer image of the Tidal Basin, looking North towards the Wellington Dock. c.1890. Dover Museum Collection d002211.

Plate 4: A photo showing the original swing bridge. No Date. Dover Museum Collection d02411.

Plate 5: Locomotive testing for the new swing bridge. Budge Adams Collection, Dover Museum d26561.

Plate 6: A photo looking towards the Wellington Dock showing the swing bridge, 1932. Budge Adams Collection, Dover Museum d25128.



Plate 7: A photo looking West over Union Street, 1935. Budge Adams Collection, Dover Museum d25521.

Plate 8: Putting the Wellington Docks into place on Union Street, 1947. Bob Hollingsbee Collection, Dover Museum d39923.

Plate 9: Photo of the Wellington Dock Gates being fitted into place, c.1947. Bob Hollingsbee Collection, Dover Museum d42377.

Plate 10: View of the Granville Dock showing Union Street in the foreground, 1950, DHB.

Plate 11: View of the Western Docks looking towards the Prince of Wales Pier, Union Street is marked A-B, 1950, DHB.

Plate 12: Looking over the swing bridge towards the Shaft Barracks, c1951. Bob Hollingsbee Collection, Dover Museum d37827.

Plate 13: View looking towards the Admiralty Pier, south-east. Swing bridge can be seen in the foreground. 1955, DHB.

Plate 14: Aerial view of the Western Docks with Union Street being shown to the left of the image, 1956, DHB.

Plate 15: Aerial view overlooking the inner dockyard, August 1956, DHB.

Plate 16: Western Docks looking west, c.2010, DHB.

Plate 17: The Dock Gates at low tide exposing leak, 10/12/11, DHB.

Plate 18: The site of the Wellington Dock Gates with the gates removed, 21/12/11, DHB.

Plate 19: The gate being lifted from its position, 21/12/11, DHB.

Plate 20: The gates in a closed position, 10/10/12, DHB.

Plate 21: Image looking east over the swing bridge, 25/01/2016, DHB.

Plate 22: Union Street Swing Bridge looking north-east, 25/01/16, DHB.

Plate 23: View looking west over the swing bridge, 25/01/2016, DHB.

Plate 24: Detail of the south side of the Union Street Swing Bridge, showing the walkway, 25/01/16, DHB.



Plate 25: Image showing the swinging track for the Union Street Swing Bridge, looking west, 25/01/16, DHB.

Plate 26: Image showing the north side of the pedestrian walkway of the Union Street Swing Bridge, 25/01/16, DHB.

Plate 27: View of the Wellington Dock Gates whilst shut, 25/01/2016, DHB.

Plate 28: Open Wellington Dock Gates, looking East, 05/07/16, DHB.

Plate 29: View of the Wellington Dock Gates, looking south- east, 05/07/16, DHB.

Plate 30: The back view of the Wellington Dock Gates, looking north-east, 25/01/16, DHB.

Plate 31: Detail of the back view of the Wellington Dock Gates, 25/01/16, DHB.

Plate 32: Water leaking through the Wellington Dock Gates, looking north, 25/01/16, DHB.

Plate 33: An image looking West upon Union Street, previously where the shaft barracks would have been visible. 05/07/2016, *DHB*.

List of Figures (Appendix 001)

Figure 1: Location of the Union Street Swing Bridge and the Wellington Dock gates, 2016, DWDR.

Figure 2: Scope of Works for DWDR Stage Two, 2016, DWDR.

Figure 3: The Haven of Dover, c.1530, DHB.

Figure 4: State of Dover Haven by Thomas Digges, 1582, © The British Library Board, Cotton Augustus I.i, f.45.

Figure 5: State of Dover Haven by Thomas Digges, 1595, © The British Library Board, Cotton Augustus I.i, f.46.

Plate 5a: State of Dover Haven by Thomas Digges, 1595, © The British Library Board, Cotton Augustus I.i, f.46. (with annotations).

Figure 6: The Platt of Dover, W.Eldred, c.1641, DHB.

Figure 7: Detail from The Platt of Dover Collection by E. Eldred. C.1641, DHB.

Figure 8: Town Harbour and Fortifications, c.1737, DHB.



Figure 9: Dover Harbour Surveyed by Mr John Scott Tucker, 1833, DHB.

Figure 10: Detail of a map from 1844, Kent History and Library Centre.

Figure 11: The design for the new entrance to the Pent, 1860, Kent History and Library Centre
Ref: DHB/P12.

Figure 12: Wellington Dock Gates, 03/04/1897, DHB.

Figure 13: Wellington Dock Gates, Crab Gear, 03/04/1897, DHB.

Figure 14: Wellington Dock Gates Swing Bridge, 03/04/1897, DHB.

Figure 15: Wellington Dock Gates Swing Bridge, 03/04/1897, DHB.

Figure 16: Wellington Dock Gates Swing Bridge, 03/04/1897, DHB.

Figure 17: Wellington Dock Gates Swing Bridge, 03/04/1897, DHB

Figure 18: Detail taken from a map of the harbour, showing only the Wellington Swing Bridge present, 1875 r.1876, DHB Historical Drawing Archives Ref: 7215.

Figure 19: OS Map Surveyed 1858, Revised 1937-1938 and 1945, DHB

Figure 20: Detail Wellington Dock Gates Repair Programme, 08/03/1948, DHB.

Figure 21: Wellington Dock Gates Removal and Repair, 20/11/1968, DHB.

Figure 22: Wellington Dock Gates, 26/02/1970, DHB.

Figure 23: Wellington Dock Gates, 26/02/1970, DHB.

Figure 24: Replacement Swing Bridge Drawings with Foundation Plans and Details, 30/03/1977, DHB.

Figure 25: Replacement Swing Bridge Details of Deck Unites, 29/03/1977, DHB.

Figure 26: Replacement Swing Bridge, Tender Drawings, c.1977, DHB.

Figure 27: Detail from Replacement Swing Bridge Tender Drawings, c.1977, DHB.

Figure 28: Replacement Swing Bridge Tender Drawings, c.1977, DHB..

Figure 29: Detail from Replacement Swing Bridge Tender Drawings, c.1977, DHB.



Figure 30: Swing Bridge General Arrangement and Marking Plan, c. 1977, DHB.

Figure 31: Current Photograph Plate Locations, 2016, DWDR.



Summary

In 2012, Dover Harbour Board (DHB) gained consent for Terminal 2 (T2), a major proposal for a new second ferry terminal and marina development in the Western Docks, via the Dover Harbour Revision Order 2012 (the HRO). DHB are now carrying forward the construction of certain elements of the HRO. The scheme being progressed lies within the consented development for T2 and is referred to as the Dover Western Docks Revival (DWDR).

A collection of historic building surveys and desktop studies have been completed by the DWDR team on behalf of the Port of Dover. These have been undertaken in order to create a record of historical assets which can be found within the Port of Dover and that will be subject to impact from the construction of DWDR. Research for these reports commenced before any of the planned construction work began on the revival scheme.

This report comprises a desktop study and historic record of the Union Street Swing Bridge and the Wellington Dock Gates.



1. Project Background

In 2012, Dover Harbour Board (DHB) gained consent for Terminal 2 (T2), a major proposal for a new second ferry terminal and marina development in the Western Docks, via the Dover Harbour Revision Order 2012 (the HRO). DHB are now carrying forward the construction of certain elements of the HRO. The scheme being progressed lies within the consented development for T2 and is referred to as the Dover Western Docks Revival (DWDR).

There are 11 Listed Buildings and two Scheduled Monuments within the Port of Dover. Neither of the Scheduled Monuments and only two of the Listed Buildings fall within the footprint of the DWDR scheme that will be directly affected by the overall works. Listed Building Consent has been obtained for work affecting the listed structures

In addition to the listed buildings, however, there are a number of non-designated historic structures which will be subject to impact from the DWDR scheme. A Level 1 photographic heritage recording of the entirety of the DWDR footprint was carried out by DHB, between 2nd September 2015 and 9th February 2016. The purpose of this recording was to log the current physical properties of the Western Docks and highlight select structures of historic importance.

Subsequent to this Level 1 photographic recording, desktop studies have been undertaken for the following structures of historic importance:

- Granville Dock, Tidal Basin, Tug Haven and the Wick Channel;
- The Telford Sluices and Associated Sluice Mechanisms;
- The Union Street Swing Bridge and Wellington Dock Gates;
- Train Ferry Dock and the Dunkirk Jetty
- The Prince of Wales Pier
- The Promenade

This report presents the results of the desktop study for the Union Street Swing Bridge and the Wellington Dock Gates.



2. Methodology

2.1 Aims and Objectives

The aim of the desktop study is to provide a detailed record of the Union Street Swing Bridge and the Wellington Dock Gates prior to impact from the construction of DWDR.

The objectives of the desktop study are:

- To clarify the impact from the construction of DWDR;
- To provide a description of the history of the site based on archive material and secondary sources;
- To provide a historic record of the structure through historic plans, maps, charts and photographs;
- To provide a current record of the structure through recent photographs, laser scanning or measured drawings if available; and
- To identify any further recording requirements or mitigation measures that may be required prior to the commencement of works for DWDR.

2.2 Approach

Work for this desktop study was undertaken in accordance with the Written Scheme of Investigation for DWDR prepared by Royal Haskoning DHV (2015). The methodology for the desktop study was carried out with consideration of available standards and guidance, including:

- CIfA, 2014, Standard and Guidance for the archaeological investigation and recording of standing buildings or structures; and
- Historic England, 2016, Understanding Historic Buildings: A guide to good recording practice.

This study comprises an account of the structure's origins, development and use, and includes evidence on which this analysis has been made. The research for this desktop study was undertaken using readily available sources to help understand the construction, development and historical context of the Union Street Swing Bridge and the Wellington Dock Gates. This study incorporates the findings and interpretations of this research.

2.3 Sources

Key primary sources for this report include historic Ordnance Survey maps in the DHB archive and historic newspapers sourced from the British Newspaper Archive Online (<http://www.britishnewspaperarchive.co.uk/>). Further use has been made of published secondary sources, including books and online research. To illustrate the development of the



structure's appearance and form, use has been made of the DHB archive, including photographs, drawings and plans. For this study all photographs have been taken from the DHB Photographic Archive. Although some hard copies of these documents exist, in particular the historic Ordnance Survey maps, the majority of these are digital copies that can be found on the DHB archive database. The historic maps can be found in the archives in Harbour House, Waterloo Crescent.

3. Description of the Site

The Union Street Swing Bridge is located along Union Street, which is situated west of the Prince of Wales Pier (National Grid Reference: TR 31832 40806). The Wellington Dock Gates are located just south of the swing bridge allowing access for boats into the Wellington Dock when the bridge is open. **Figure 1** in **Appendix 001** shows the location of the swing bridge and the location of the Wellington Dock Gates.

Figure 2 in **Appendix 001** shows the scope of work that is currently being undertaken at the port of Dover by DWDR. As part of the DWDR scheme, the existing, 20th century swing bridge and dock gates will be decommissioned and removed (**C** on **Figure 2**). The entrance to Wellington Dock from the Tidal Basin will be closed off and infilled (**A** on **Figure 2**).

4. History of the Site

The current Union Street Swing Bridge is located on Union Street, which forms the connecting road between the Wellington Dock and the Tidal Basin; working as a bridge for both passengers and vehicles. It also accommodates boats passing through into the Wellington Dock by moving to one side with a swinging, rotating motion. Just to the side of this swing bridge are the Wellington Dock Gates which control the water levels of the Wellington Dock, allowing boats to efficiently dock without being beached. Union Street runs between the A20, the seafront and marinas of the Western Docks with the current swing bridge being installed around 1978. The early history of the port has also been included for background information and context relevant to that of the Union Street Swing Bridge, and its development throughout the years

It is thought that the initial success of the Port dates back to the 14th century, due to its sheltered position behind the Archcliff headland situated to the West of the Port (Leach, 2006). Other ports at the time were struggling with the build up of silt blocking entrances to the newly forming harbours, causing access issues as well as the beaching of ships. The headland protecting the Port of Dover blocked strong winds resulting in the formation of mud and shingle, creating an open pool with access to clear waters; this safely allowed ships to berth within the port. Dover was the 'gateway to England' and many passed through its town in



order to further travel to places like Canterbury for pilgrimage or the capital London. Further development was needed and in 1495 Sir John Clark installed a small pier on the East of the Archcliff headland, this worked well for some time, strengthened by shingle which had built up around the structure. However this shingle eventually grew too much and threatened to block the gate of the small dock, known as the Paradise Pent.

An impression of the port was drawn by Vincent, King Henry VIII's royal painter, around c.1520-1530, and called 'The Haven of Dover', as seen in **Figure 3** in **Appendix 001**. Although the perspective of this image is slightly misleading, it clearly shows the layout of the port, with a small and developing town in the background. The formation of Union Street has not yet begun here as the focus of the port is to the west of the developing harbour, at this time only consisting of a few jetties.

A coloured plan was drawn in 1582 (**Figure 4** in **Appendix 001**) by Thomas Digges, which shows the layout of the harbour. Thomas Digges was a local typographer at the time and was commissioned to do the piece by the contemporary Lord Warden William Brooke, the 10th Baron of Cobham. He would have been acting on behalf of Queen Elizabeth the 1st, who had always tried to improve the conditions within the harbour and make it run more efficiently. The plans included Lord Cobham's intentions of installing a second sluice on the 'snargate over the sluice' piece of land. This is the first evidence of the strip of land that would later become Union Street.. The 'snargate over the sluice' was thought to be a drawbridge covering the break in Union Street where the sluice that controlled the water levels in the Pent would have been housed, it would have also allowed entry into the dock for boats (Horns, 1817).

The 1595 plan of the harbour, also by Digges (**Figure 5** in **Appendix 001**), shows the port at a much further developed stage. The suggested extra sluice by Lord Cobham has not been installed; however there have been improvements to the most western of the then harbour. The map itself has also been drawn in a much more technical way which means it's easier to read as well as being a more accurate representation of the harbour in 1595. A faint blue line can be seen running through the Great Pent, and this depicts the level of the water within the dock at low tide. This shows it being incredibly low in some circumstances which would have affected the function of the gate and the access to the Great Pent. The 'snargate over the sluice' is again further established here allowing access to the seafront as well as a much more built up area. It was well known that the Pent had a 'beaching' issue where the tide would be so low that ships would end up beached on top of the silted dock bed rather than afloat. In both **Figure 5** and **Figure 6** the positioning of the sluice is visible, although with not much detail to the actual area itself. The sluice was most likely installed in order to help control these phases of extremely low tide.



These maps reflect a layout that can be seen underlying the structure of the port as it is today. The Port in 1595 was compiled of three different sections, all situated to the Western Side of the harbour today. The Pent (Wellington Dock), the Great Paradise (Granville Dock and the Tidal Basin) and the Little Paradise are all labelled on the map drawn by Digges (**Figure 5 in Appendix 001**), with the Little Paradise also noted to be 'decaying' at the time of record. The Little Paradise continued to silt up until it became completely filled in and built over in the 19th century.

Digges' map shows the start of the Port of Dover being at its most established size to date, with dockyards forming and structures being built where needed in order to make the port sustainably usable. At the time shingle was becoming an issue and effecting movement around the port. Clark's pier had been badly damaged by a storm and was no longer fulfilling its function. In 1606, James I declared a Royal Charter with the condition that '11 discreet men' would take over management of the port, known as the Guardians of the Harbour of Dover. The Lord Warden at the time was amongst the eleven along with the mayor of Dover and other courtiers; control of the ports affairs remained with the organisation until 1861 when the new Harbour Board was founded. The initially well intentioned scheme, however, brought little change to the port, at one point the townsmen took it upon themselves to come out with shovels and buckets in order to clear the shingle themselves (Leach, 2006).

Within the charter was also a condition that stipulated that any of the reclaimed land that had formed from shingle within the harbour, would automatically belong to the Harbour Board, and that this included land, forming at the time, on the seaward side of the Pent. This could be labelled today as the Esplanade and Waterloo Crescent, forming the promenade. As the land developed, housing was built on the reclaimed land, all paying rent accrued to the Harbour Board (Leach, 2006). With this increase in income for the Harbour Board, improvements to the port began to be devised, and with this proper surveys of the harbour had to be taken.

These surveys did not officially take place until 1641, after many poor attempts, eventually drawn by a local Freeman, William Eldred, who later went on to become a Master Gunner at Dover Castle. Multiple maps were drawn up by Eldred, giving an overview of the town in 1641, as well as detailed sections of maps taken throughout the harbour. Each one had the dwellings at the time included and, as well as this, on the reverse of the maps is lists of tenants and their sub tenants names.

Figure 6 in Appendix 001 is a map drawn by William Eldred, showing a much more developed port and properly surveyed buildings. It can also be seen here that the development on the eastern side of the Harbour is yet to be started; this is something that didn't happen until the 20th century as it would require a vast amount of reclamation works.



In **Figure 7** there is a detail of a map which has been taken from the same collection of drawings by Eldred in 1641. Not only do they record the layout of the areas surrounding the harbour they also record who was renting which buildings at the time and, on the back of each map, give details of each family. This smaller extract has been included to show in more detail the site of the other bridge on Union Street, before the larger swing bridge was installed in 1844. Sluice mechanisms were present here, presumably used until the reclamation of the bridged area in 1871. Sluices would have been used to control the water level within the dock as they typically used to control the gate systems, stopping and starting the flow of water.

There are multiple early and later Post Medieval buildings known to have stood in the Western side of the Port of Dover, including a chapel, now lost, called Chapel of Our Lady of Pity. The majority of these structures were lost in the 19th and 20th centuries although remains of these may still be present under the parking and haulage facilities in the Western Dockyard (Maritime Archaeology, 2008). Many were demolished to ground level with basements being filled in with rubble, typically from the demolition waste.

A more formal plan of the Port of Dover can be found dating back to 1737 (**Figure 8** in **Appendix 001**); this would have been commissioned by the Dover Harbour Board. The layout of the port has clearly evolved by this point, with the main sections of the harbour becoming much more developed and substantial. The map itself has also been drawn in a much more technical manner, removing the misleading perspectives that have been included on Eldred's. The area of reclaimed land at the base of the cliff appears to have developed further with more homes being constructed, whereas those previously seen on the promenade are no longer standing. This may be due to their inability to withstand the conditions of being in such proximity to the sea. What forms the basis of Union Street can be seen clearly here as the connecting road that runs between the reclaimed land and the forming marinas of the harbour.

In 1833 another map can be found of the harbour, again much clearer than previously created, drawn by Mr John Scott Tucker. It clearly shows a developed harbour with buildings now present on Union Street (**Figure 9** in **Appendix 001**).

In 1840 it was beginning to be discussed by those in charge of the port, as well as the current Lord Warden of the Cinque Ports, that the port of Dover needed to undergo general improvements and that these plans should be begun to be put into place. This included all of the quays in the Pent to be rebuilt in stone, and that the Pent should be expanded in order to make the Port of Dover a much larger port. However, there was talk at the time that the Government might be investing in their own scheme of improvements for the port and due to this nothing was put into motion for some time (Hasenson, 1980).



In May 1841, no official statement from the government had been released and it was decided that the harbour improvements should go ahead regardless. The Duke of Wellington, who was Lord Warden at the time, was involved in the project and suggested at one of the subsequent board meetings, in November 1842, that land should be reclaimed from around the Commercial Quay. Preparatory work took 18 months and finally, in May 1844, the consulting engineer for the project, James Walker, was ordered to start reclamation works. These first works consisted of a new entrance to the tidal harbour and into the Pent through the Southern end of Union Street; including the gates, bridge and machinery (Hasenson, 1980). The location of these works can be seen in **Figure 10** in **Appendix 001**, as well as the original bridge associated sluice, which would have allowed access into the Wellington Dock before the implementation of the new swing bridge in 1844. The original bridge was later removed around 1871 with the circumstances as to why, and by who, not known. Plans exist for this original bridge to be converted into a swing bridge dated 1860 (**Figure 11**). These drawings are signed by Walker Burges and Cooper, an engineering company from Westminster, London (Gracesguide.co.uk, 2016). It is unclear if they were ever implemented as the bridge was removed only 10 years later in 1871.

Tenders were accepted on May 8th in London from James Bray of Leeds for the earthworks and Hunter and English of Bow, for the ironwork. Hunter and English had previously worked for Ralph Walker and John Rennie, as well as also completing work on the lock gates of the East India Dock; making them well established engineers of their time (Gracesguide.co.uk, 2016). It was estimated that the amount of earth that needed to be excavated was around 200,000 cubic yards. This excavated soil was used to infill in tidal space so that foundations could be installed and reclamation works could be completed, resulting in over an extra 4 acres of land being reclaimed by the Harbour Board. James Bray was contracted for the entirety of the groundworks, at a cost of £40,103. This idea of expanding the land around Union Street was originally proposed by Lieut. B. Worthington, 10 years previously, however this scheme of works never came to fruition (Batcheller, 1845). Both of these contracts were due for completion by June 1846 and were finished shortly after the expected date (Hasenson, 1980).

The demolition work started with Bray removing many of the buildings which were present on Union Street and the the Amherst Battery, built c.1800 in the area of what is now the old hoverport car park, one of a series of batteries built to defend the port of Dover from the 16th onwards. According to newspaper sources, Walker was also keen to demolish the York Hotel in order to aid further expansion but was dissuaded to do so by the public and those who owned the hotel (Hasenson, 1980).

The majority of the excavation was completed by April 1846; the sea wall and connecting thoroughfare between the Esplanade and the north pier was also almost finished by this point. The new wall and gates were installed under the supervision of James Bray. The new entrance



into the Pent was cut through Union Street, with the lock gates provided for ships and a small bridge for use of the public to cross over. The iron work for this bridge was supplied by Hunter and English. The work was completed by November 13th 1846 and, on this day it was inaugurated as the Wellington Bridge (Hasenson, 1980). Drawings for this bridge can be seen in **Figures 12-17**, although they are dated 1897 it appears that they were amended at this date straight onto the original plans for the swing bridge. It is thought they are from the original bridge, however, as they match the designs visible in **Plates 1-4**.

A sketch of this bridge can be seen in **Plate 1**. It shows Union Street being a well built up area, with grand buildings consisting of churches, pubs and hotels. This is very different when compared to what can be seen in the older map of Thomas Digges in **Figure 5** in **Appendix 001**, where the port is at a much earlier stage of development; showing small and simple buildings. Evidence of this built up area of the port can be seen further in **Plates 2** and **3**. **Plate 4** shows works being carried out on the original bridge, later on in 1890. Figure 17 shows what is believed to be the only existing plans of the original swing bridge, however they also show adaptations which were added in 1857, making it unclear what section of works is from which era.

Figure 18 shows the detail of a map drawn in 1875 and revised shortly afterwards in 1876. The map shows Union Street for the first time with only one bridge present, the original bridge having now been demolished and the land at this location reclaimed. Comparing **Figure 18** with the previous **Figure 9** shows a vast amount of change between the two dates.



Plate 1: A sketch looking West over the swing bridge, drawn 1864, Dover Museum d00168.



Plate 2: *View of the Inner Harbour looking south-east towards the Admiralty Pier c.1890, DHB.*

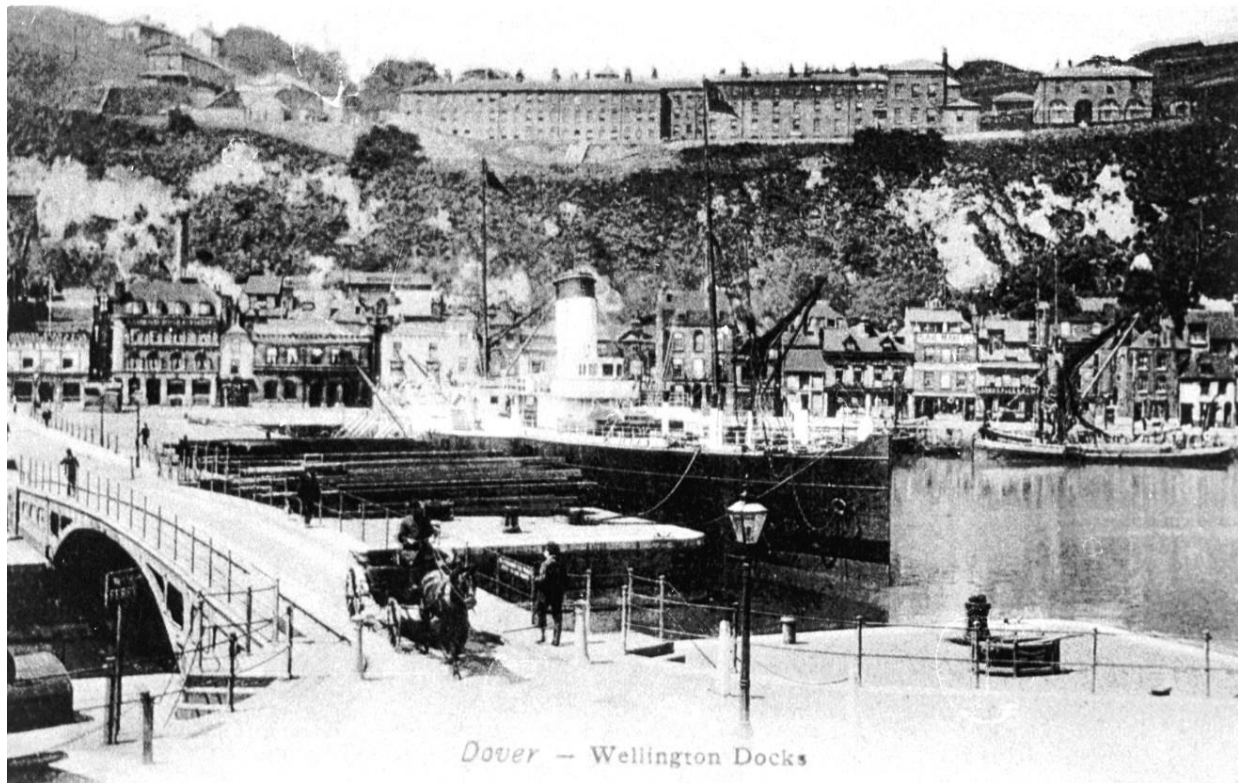


Plate 3: Original 1846 swing bridge, no date, Dover Museum d02411.

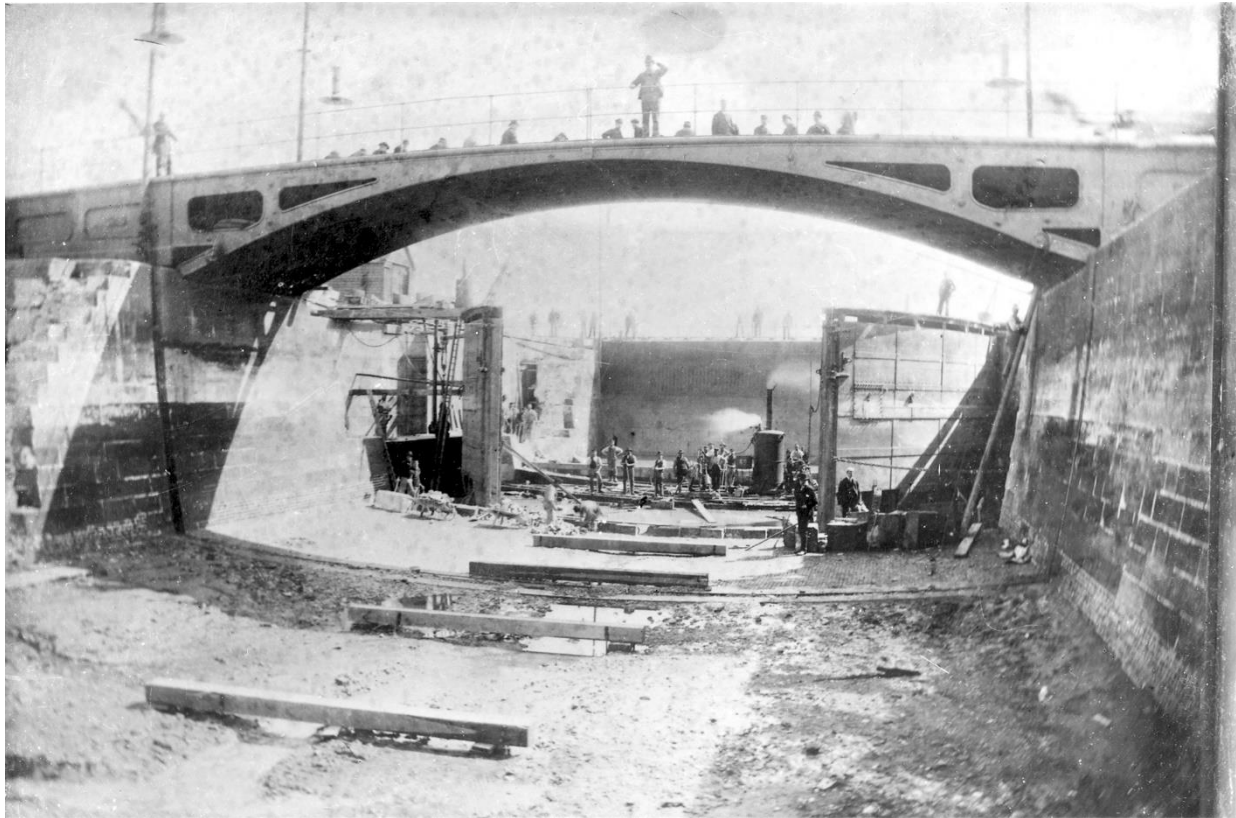


Plate 4: *The Union Street Swing Bridge. c.1890, Dover Museum 00221.*

The Duke of Wellington, whom the bridge and the dock was named after, was invited to the naming ceremony and to walk across the bridge itself. However, due to his age of 78 he politely declined and instead drove his carriage over it whilst a 19 gun salute fired (Hasenson, 1980).

In 1888, further land was reclaimed around the Union Bridge area, meaning that Union Street was widened on its southern side. This expanded version of Union Street can be seen in **Figure 19** which was drawn originally in 1858 and then revised in 1937-1938 and in 1945. It was also debated whether or not to deepen the Wellington dock at this point and to dredge the high levels of silt which had been deposited there, however this was decided against (Dover Express, 1888).

This dredging of the Wellington Dock would have made it much easier for larger boats and ships to dock there as previously, if the tide was out, boats would be beached in the mud. The existing gates at the time, built in 1843, underwent general maintenance to coincide with the reclamation works of 1888, in order to keep sufficient water present in the dock (Dover Express, 1888). These were installed by J. Aird and Co as described in a newspaper article from



Dover Express, in 1928; reflecting on the last time the gates were inspected whilst undergoing more maintenance. John Aird and Co were an engineering company who went on to build a dam and a barrage on the Nile in 1898, leading to a knighthood, changing the company name to Sir John Aird and Co.

It is reported in the Dover Express that by the 20th of July 1888 all machinery and associated health and safety barriers to stop public access had been removed from site and the maintenance on the Wellington Dock Gates had been completed (Dover Express, 1888).

Figures 12-17 show a variety of different drawings labelled variations of Swing Bridge and Wellington Dock Gate, revised in 1897. From further analysis of these drawings it appears that they are of the original swing bridge drawn in 1844, and then further revised in 1897, this is confirmed in the title of only one of the Figures (**Figure 13**) but it could be assumed that they form a group due to their contents and their drawings numbers.

In 1900 work had begun on the dock to complete maintenance on the Union Street Swing Bridge and Wellington Dock Gates. Work had already been underway for six weeks, in the Dover Express article from 1900 it states that the Wellington Dock was dry due to the dock being drained for maintenance, thus leading to exposed mud and complaints from the locals. This prolonging of repair work was supposedly due to Dover Harbour Board not ordering enough of the materials needed to do the job, no other details are present in the article but it can be assumed that the size of the task was underestimated. Within the article it also says that it can be foreseen that these docks will need constant repair work over whilst they are in place in the dock (Dover Express, 1900).

Around the 17th of January 1904 (Dover Express, 1904) work was being undertaken in order to widen a section of Union Street by a considerable amount- 'more than its width again' (Dover Express, 1904). This work was necessary as the train track which was being fitted onto the Prince of Wales Pier, which had only just finished construction, was also to be installed over the bridge and along Union Street. Due to this the bridge also had to change, and a cast iron bridge was installed instead, much stronger than its predecessor, in order for it to cope with the added train load.

To have a train line running over this new bridge was vital for the development of the port as it allowed easy movement of cargo from ships docking at the newly constructed Prince of Wales Pier, into the warehouses located around the Western side of the Port. This new bridge would be powered by a newly installed single pivot on a hydraulic ram, with the electricity supply for this also coming from the Prince of Wales Pier. No drawings have been found from this phase, but from analysing photographs it would appear that the external structure of the

bridge has been completely changed, fully replacing the its predecessor; this is clearly visible as the design of the bridge has changed considerably as well as looking much more robust.

This new bridge had to be specially balanced with weights in order for it to swing efficiently, this was installed by Pearson and Son and was designed to be run off the same electricity line as the train tracks on the Prince of Wales Pier. Pearson and Son were a well established company from Bradford who had also worked on the construction of the Admiralty Pier, as well as having an involvement in the land reclamation of the Eastern Docks. The bridge also had a back up power source in the form of a two man cranking system, this was in case the electriclty componant of the gate failed and this way it could still be operated if needed (Dover Express, 1904).

The train tracks that ran along the pier continued over onto the swing bridge, running through the gap of what used to be the Esplanade Hotel; this was demolished in order to create a pathway for the rail way tracks. There is evidence of the train lines being fitted in a newspaper article from 1904 as funding for the introduction of electricity lines was being investigated due to money arrears (Dover Express, 1904). Locomotive testing for the newly installed bridge can be seen taking place in **Plate 5**. The new design of the bridge can also be seen clearly here as it is much more engineered compared to the previous bridge which was arched and quite svelte.





Plate 5: *Locomotive testing on the new swing bridge recently installed, c.1904, Budge Adams Collection, Dover Museum d26561.*

In 1928 the Wellington Dock Gates were put back into place by the 'dapper' present at the time; this was a military ship with a specialised heavy duty crane attached to it. It would have been needed in order to lift the gates safely due to how heavy and awkward they were to manoeuvre. The gates were not present between July 18th and September 21st 1928 whilst repairs and maintenance were carried out on the slipway to the North, just inside the Wellington Dock. A large amount of plates present on the gates were replaced due to general wear but they were not changed totally. The gates which were updated in this maintenance work were those installed originally in 1846, already updated once previously in 1888; this was carried out by A. O. Hill Ltd (Dover Express, 1928), who were a local ship repair company. It would appear that repairs and maintenance have had to take place frequently over the years to the Wellington Dock Gates. In 1933 the Dover Express states how the repairs cause a great inconvenience and that there was also some maintenance undertaken in 1935 (Dover Express, 1933). The gates prior to repairs can be seen in use in **Plates 6** and **7**, due to this work only being maintenance it is unlikely that their actual appearance changed, if anything they have looked slightly patched.

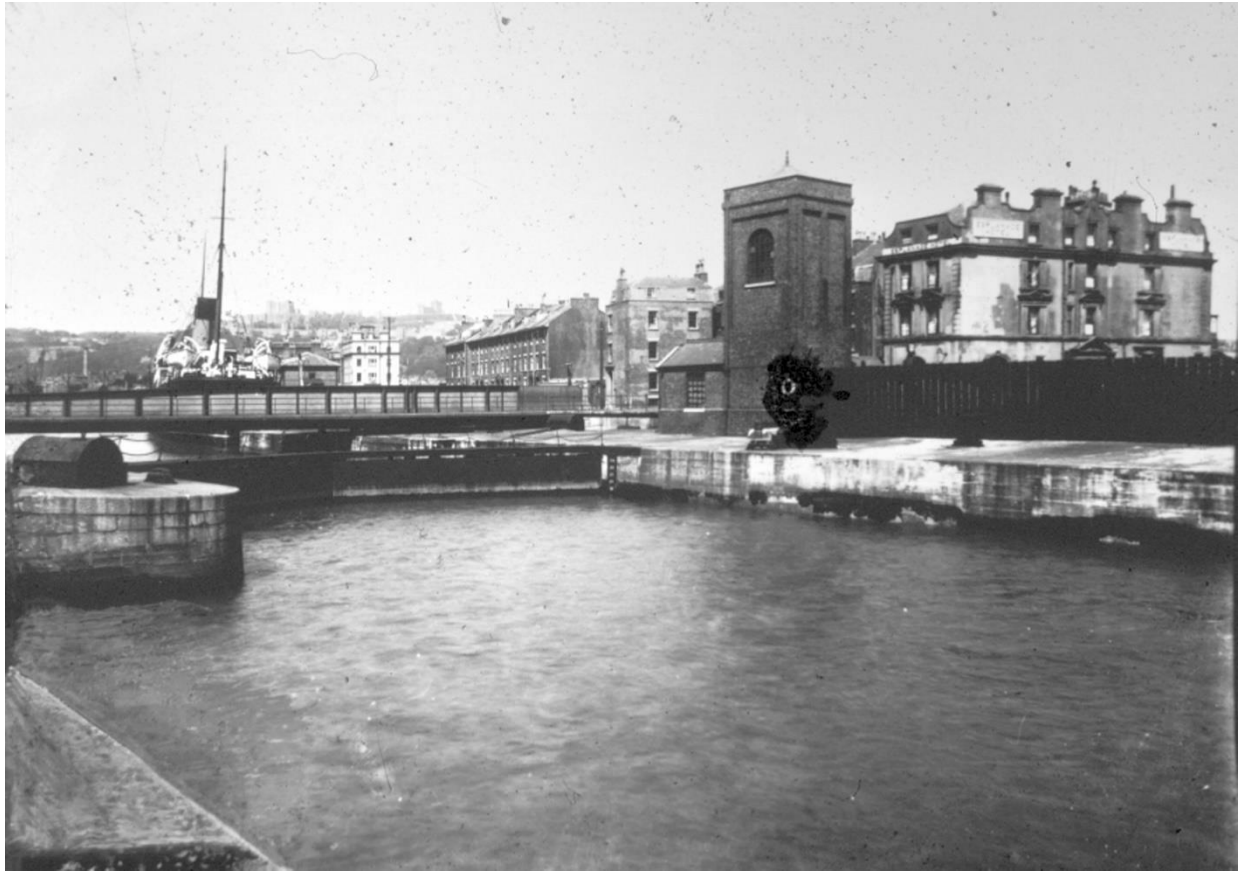


Plate 6: *Looking back onto the Wellington Dock gates and swing bridge, 1930,,Budge Adams Collection, Dover Museum d25636.*

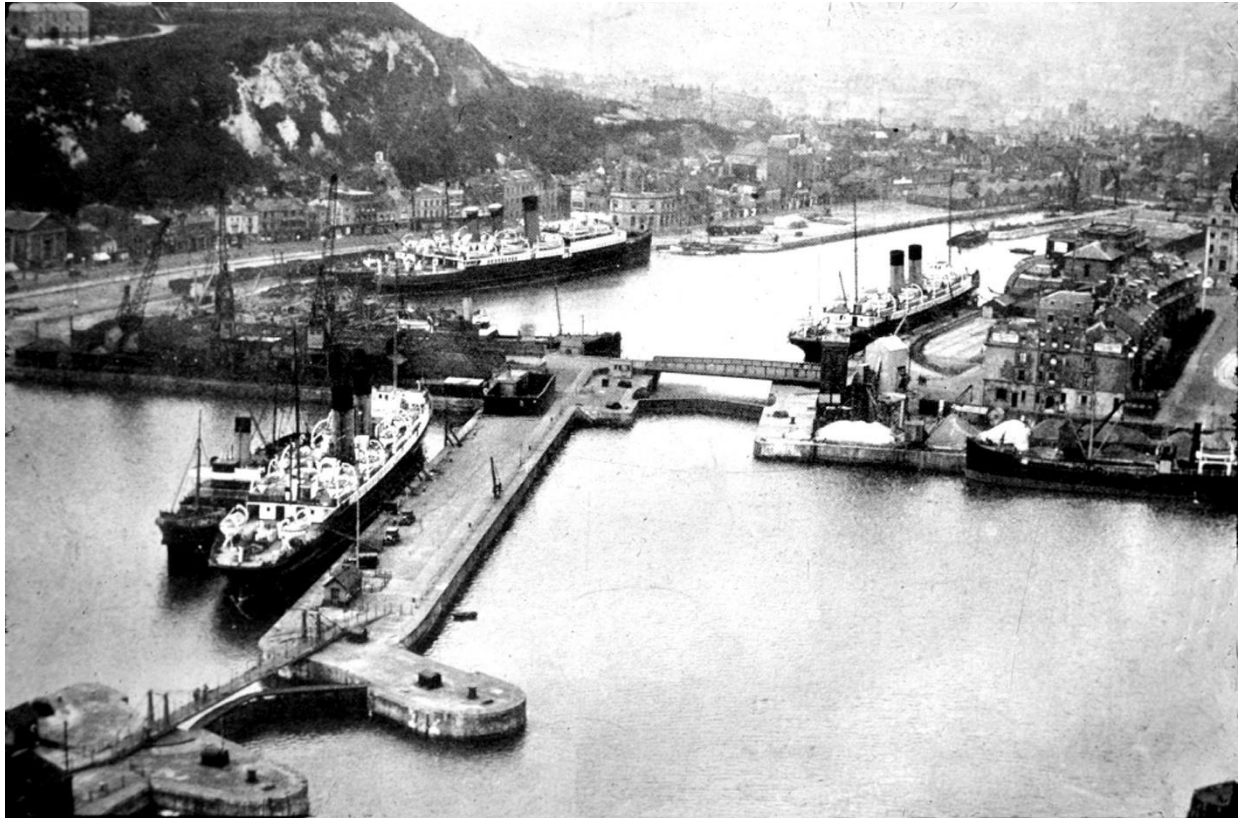


Plate 7: A photo looking north towards Wellington Dock showing the swing bridge, 1932, Budge Adams Collection, Dover Museum d00221.



Plate 8: A photo looking west over Union Street, 1935, Budge Adams Collection Dover Museum d25521.

It is clear that the gates were also updated and maintained in 1948 as seen in the programme of works in **Figure 20** although there is no surviving visual evidence for this. It could be assumed that any repairs being made were needed after possible damage during World War II. However, any existing media around this time is often limited as it was during the war itself and therefore secretive and sensitive, even more so due to its position within the Dover Port. **Plates 8** and **9** show the changes that have been recorded in the 'Removal and Repair Programme' from 1948 shown in **Figure 21** in **Appendix 001**. Looking at the programme, assuming nothing changed whilst the work was being carried out, showed that elements of the older gates were removed and replaced as well as general maintenance being needed, such as re-painting.

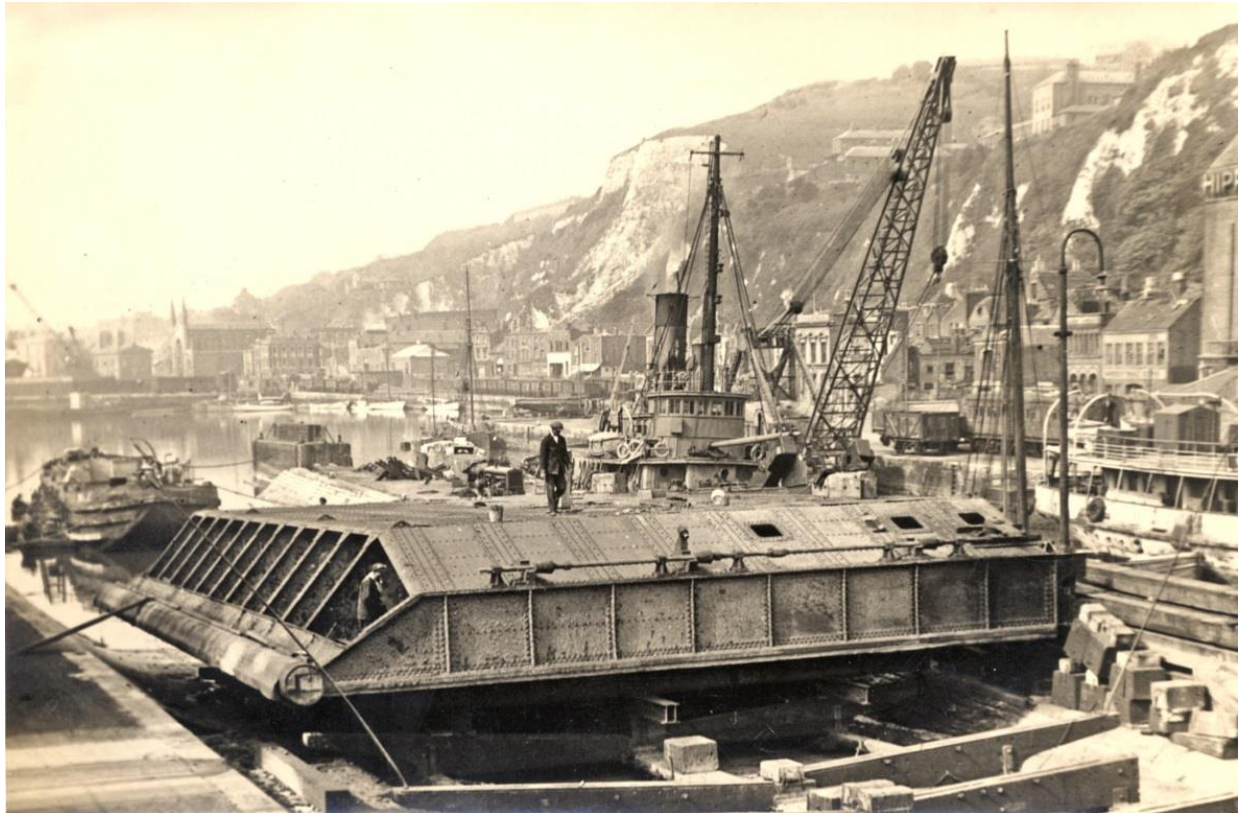


Plate 9: Putting the Wellington Dock Gates into place on Union Street, 1948, Bob Hollingsbee Collection, Dover Museum d39923.

Between the 1950's and 1975 not much construction or development work took place on the Western Side of Dover Harbour. Instead improvements were being made to the East side with the ferry terminals being developed as well as the Jubilee Way extension of the A2 into the dockyard. Due to this lack of works there is also a distinct lack of images, but those present from that time can be found under **Plates 10-15**.



Plate 10: *View of Granville Dock including Union Street and the swing bridge and the Wellington Dock Gates, Looking south. 1950, DHB.*



Plate 11: View of the Western Docks looking east towards the Prince of Wales Pier, Union Street has been highlighted in red, 1950, DHB.



Plate 12: Looking over the swing bridge towards the shaft barracks, c1951, Bob Hollingsbee Collection, Dover Museum d37827.



Plate 13: View looking towards the Admiralty Pier, south-east. Swing bridge can be seen in the foreground. 1955, DHB.



Plate 14: Aerial view overlooking the Western Dockyard, Union Street can be seen to the right of the image with the bridge and the gates visible. July 1956, DHB.



Plate 15: Aerial view overlooking the inner dockyard. August 1956, DHB.

Sections of Union street were widened further in 1978 and a new bridge was installed. Drawings associated with the newly installed bridge and gates are included as **Figures 21-30** in **Appendix 001**. The drawings from this work show that The Cleveland Bridge and Engineering Co. Ltd, from Darlington, completed the works. The hydraulic work and engineering was completed by Dolphin Hydraulics, a Scottish company, from Strathclyde. This work was carried out so that the road would be able to cope with the amount of traffic coming through to the new hoverport development being built.

Looking back across tender documents and speaking to those who have worked within the port for a long time, they have clarified that the Wellington Dock Gates were fully replaced around 1969 as part of the Hoverport scheme and development works. The company which replaced the gates were called Wrighton and Teasdale Ltd, with the subcontractors being Bowzell and Kealaine Electronics. Later on in 1974 they also adjusted the buoyancy of the gates in order to make it more suited for the changing tides and sea levels (Wellington Dock Gates, 1977). No survey was done before they were removed and the condition or form of the gates present

before their replacement in 1969 is unclear. This information was taken from tender documents relating to the project, sourced by Dave Bates, head of Mechanical and Technical Works within the Port of Dover.

The Hoverport was a large development scheme which took place in the Western side of the port in the 1970s and enabled Hovercrafts to land at Dover when travelling across the Channel- offering a passenger carrying service. To make this process as smooth as possible the surface of the Union Street Swing bridge was resurfaced to cope with the influx of traffic now travelling to the hoverport, this has been detailed in the associated drawings (Specifically **Figure 24**). The swing bridge that is present today is the bridge that was installed c.1978. A more modern photograph of the swing bridge taken in 2010 can be seen in **Plate 16**.



Plate 16: Western Docks looking west. (Union Street can be seen coming from the roundabout and being laid to the east.) Image taken c.2010, DHB.



Plate 17: *The dock gates at a low tide, exposing the leaking seal, looking north-east, 10/12/11, DHB.*



Plate 18: *The location of the Wellington Dock Gates, with them removed for repair and the dock drained, looking South, 21/12/11, DHB.*



Plate 19: *The dock gate being lifted from its position, looking North, 21/12/11, DHB.*



Plate 20: *The Wellington Dock Gates in an closed position, looking South, 10/10/11, DHB.*

5. Current Condition

Plates 17-29 demonstrate the current form of the swing bridge and the Wellington Dock Gates. Further photographic recording can be found in the Level 1 Heritage Recording of the Swing Bridge and Wellington Dock Gates (2016). A location plan for where these current condition images were taken has been included in **Figure 33** in **Appendix 001**. In 2012 Dover Harbour Board commissioned Atkins Limited to conduct an inspection and structural appraisal of the marina walls located in the Western Docks. The resulting Asset Management Structural Integrity Surveys (AMSIS) were completed in January 2014 and provide a further photographic survey and the most recent condition appraisal of all Western Dock marina walls.

However due to the Union Street Swing Bridge only dating back to 1978 it has a limited historical interest as it is fairly modern. The gates which are present appear to be older albeit still fairly modern, but they hold limited information about their maintenance history.



In 2012 repairs had to be made to the seal of the Wellington Dock Gates as they were leaking water when shut (Kent Online, 2011). Rather than fully draining Wellington Dock in order to inspect the gates it was instead slowly allowed to drain naturally, then returning to a tidal based dock system which allowed the water to flow through the Western Docks. This left the water at a very low level without being totally empty which lifted and dropped with the normal tide. Any boats moored in the dockyard were alerted in advance and lifted out of the dock so that this work could go ahead. Images of the Wellington Dock being drained in 2011 can be found in **Plates 17-20**.

The dock gates had to be removed, repaired and reinstalled which happened from November 2011 to December 2011, with the gates being out of position for less than three weeks (Programme of Works, 2011). Whilst the level of water in the dock was much lower than normal the opportunity was present to have a general inspection of the listed dock walls, as well as deal with any rubbish which may be in the base of the dock. Before these works on the Wellington Dock Gates took place in 2011, the last time the dock had been drained previously was 1996 for now unknown reasons.



Plate 21: View looking east over the swing bridge, 25/01/2016 , DHB.



Plate 22: *The South side of the swing bridge, looking north-east, 05/07/16, DHB.*



Plate 23: View looking west over the swing bridge, 25/01/2016, DHB.



Plate 24: Image of the south side of the bridge, showing the walkway, 25/01/2016, DHB.



Plate 25: The swinging track of the swing bridge, looking west, 25/01/2016, DHB.



Plate 26: Image of the north side of the pedestrian walkway of the bridge, 25/01/2016, DHB.

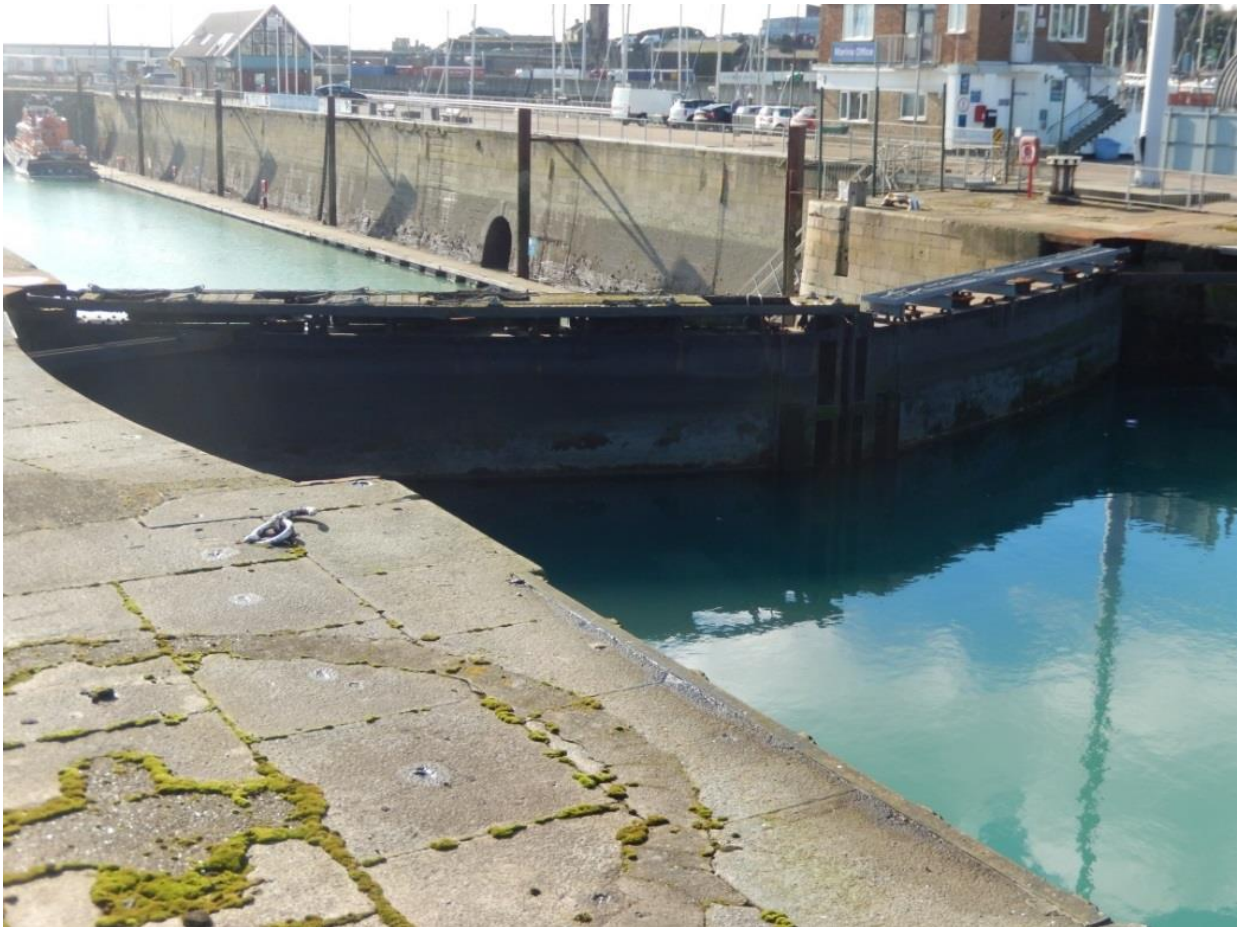


Plate 27: View of the Wellington Dock Gates, looking south, 25/01/2016, DHB.



Plate 28: View of the Wellington Dock Gates open, looking East 05/07/2016, DHB.

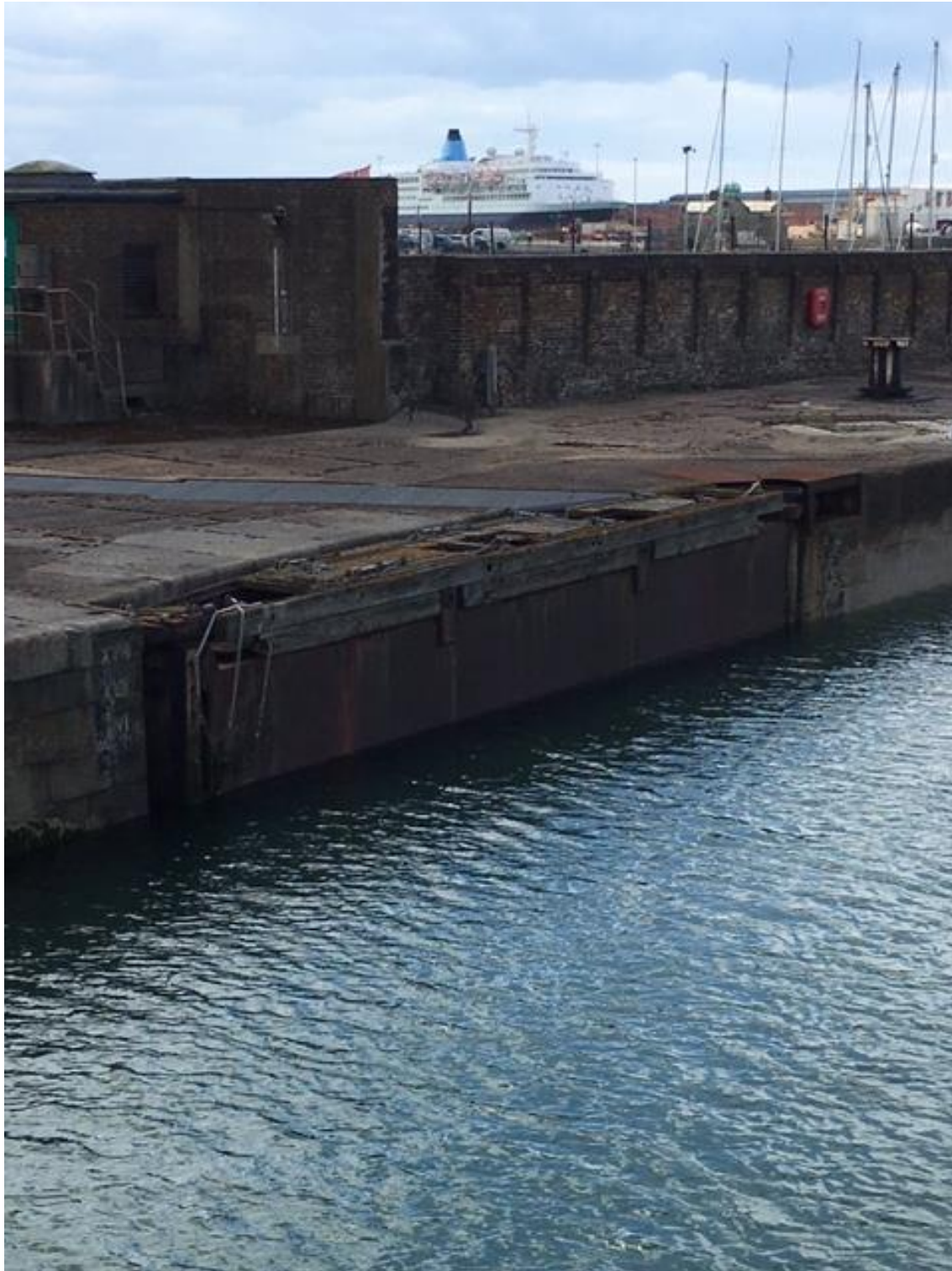


Plate 29: View of the Wellington Dock Gates open, looking south east, 05/07/16, DHB.



Plate 30: *View of the back of the Wellington Dock Gates, looking north east, 25/01/2016, DHB.*



Plate 31: Closer view of the back of the Wellington Dock Gates, 25/01/2016, DHB.



Plate 32: *Water coming through the back of the Wellington Dock Gates, looking north, 25/01/2016, DHB.*



Plate 33: An image looking West upon Union Street, previously where the shaft barracks would have been visible. 05/07/2016, DHB.



6. Conclusions and Recommendations

This desktop study details the development of the area of the Union Street Swing Bridge and the Wellington Dock Gates from the sixteenth century to the present day. This provides a detailed historic record ahead of planned reclamation and demolition works. Although these structures are of historic importance they are not under any statutory listing designation, and the works do not require Listed Buildings consent.

After researching into Tender Documents from 1969, it is clear that the Wellington Dock Gates were fully replaced alongside the replacement of the Union Street swingbridge as part of the development that coincided with the Hoverport construction of the 1970's. It is obvious that the gates have been replaced due to visual changes, seen through photographic evidence, and that **Figures 26-29** in **Appendix 001** read replacement swing bridge.

The gates have been removed for maintenance, multiple times over the years in order to check that they are working and also in good condition. In late 1974 the buoyancy levels were adjusted and for this they had to be removed and put back.

Although not specifically listed itself this section of the harbour is still very significant and has a strong history linking it to the original form of the surrounding area as well as its proximity to the listed Wellington Dock. Due to this, the level of existing information as presented through this desktop study is expected to be sufficient to provide a record of the impacted structures prior to the commencement of works. This will be confirmed through consultation with the Heritage Steering Group and details of this consultation will be included in the final draft of this study. Ultimately this Desktop Study will form part of the DWDR archive and will be made publically available.

Work for the DWDR regeneration scheme is taking place close by to the Union Street Swing Bridge and Wellington Dock gates, altering the structure of the Wellington Dock. The quay walls of this dock are listed and the appropriate planning permission has been granted in order to carry out the required construction works. Permissions were given by Dover District Council in 2016.

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The Dover Express and East Kent News, The Wellington Dock Gates Replaced, 21/09/1928, p.9

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The Dover Express and East Kent News, Draining of Wellington Dock, 27/10/2011, Online Article.

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Wellington Dock Gates Tender Folder, 1977, DHB.

8. Appendices

8.1 Appendix 001 – Figures

Appendix 001 – Figures

***This document is to be read in conjunction
with Union Street Swing Bridge and
Wellington Dock Gates Desktop Study***

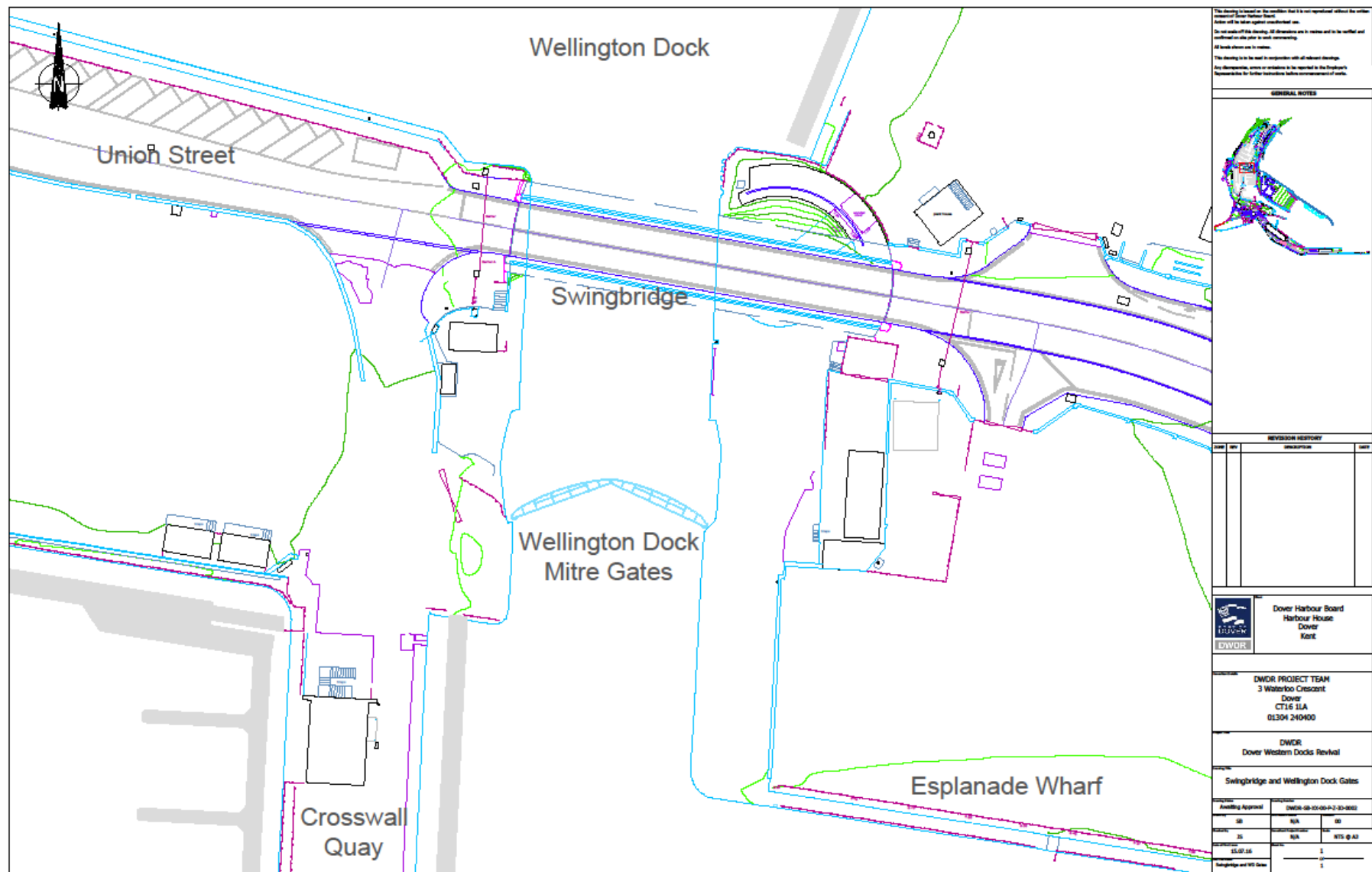


Figure 1: Location of the Union Street Swing Bridge and the Wellington Dock Gates, Both labelled, DWDR.

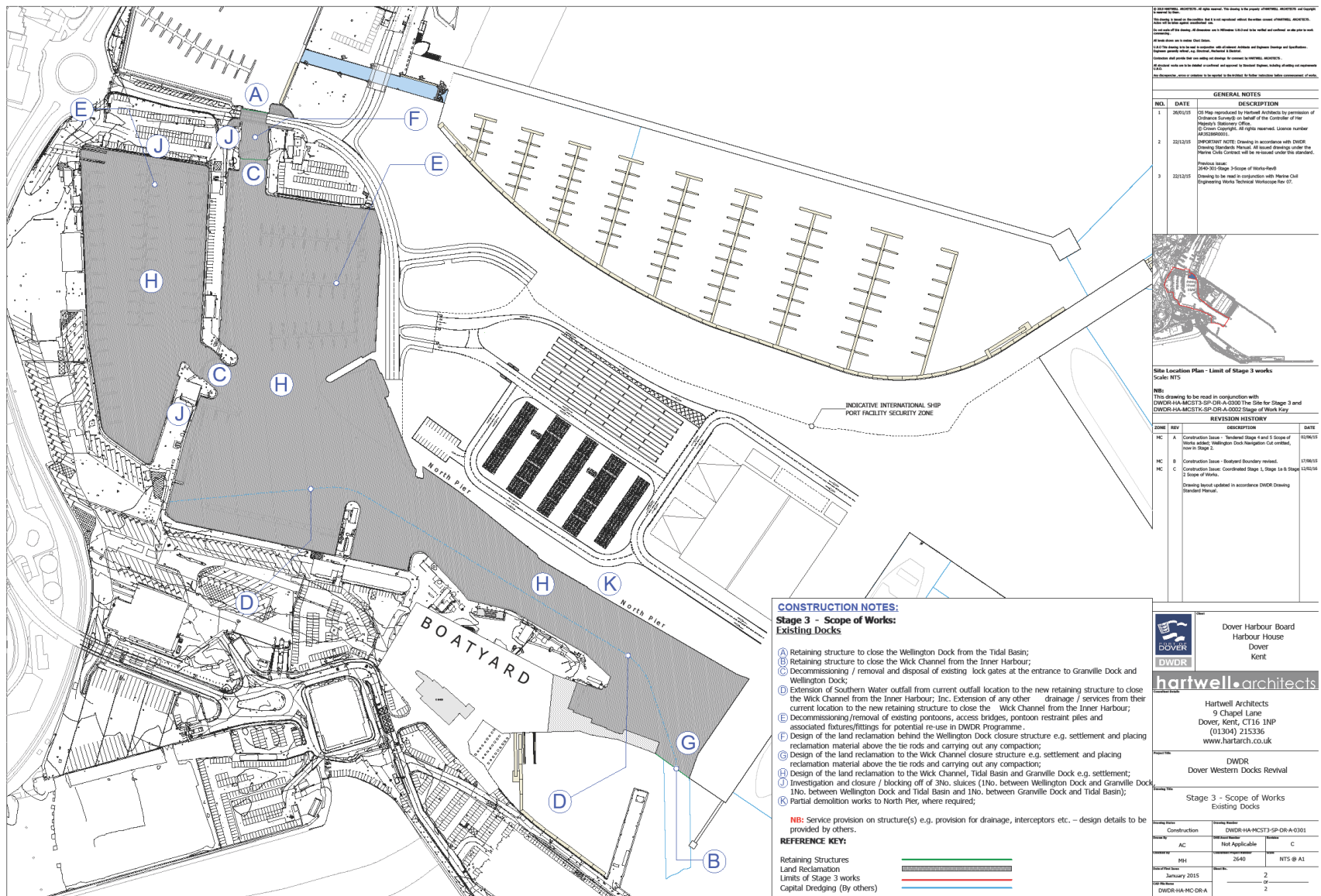


Figure 2: Scope of Works for DWDR Stage Three, 2015, DWDR.



Figure 3: *The Haven of Dover, c1530, Kent History and Library Centre Ref: DHB/P141/1.*



Figure 4: *State of Dover Haven* by Thomas Digges, 1582, © The British Library Board, Cotton Augustus I.i, f.46.



Figure 5: State of Dover Haven by Thomas Digges, 1595, © The British Library Board, Cotton Augustus I.i, f.46.



Figure 6: The Platt of Dover Castle Town W. Eldred, c.1641, DHB Historical Drawing Archive.



Figure 7: Detail from *The Platt of Dover Castle Town W. Eldred, c.1641*, DHB Historical Drawing Archive.

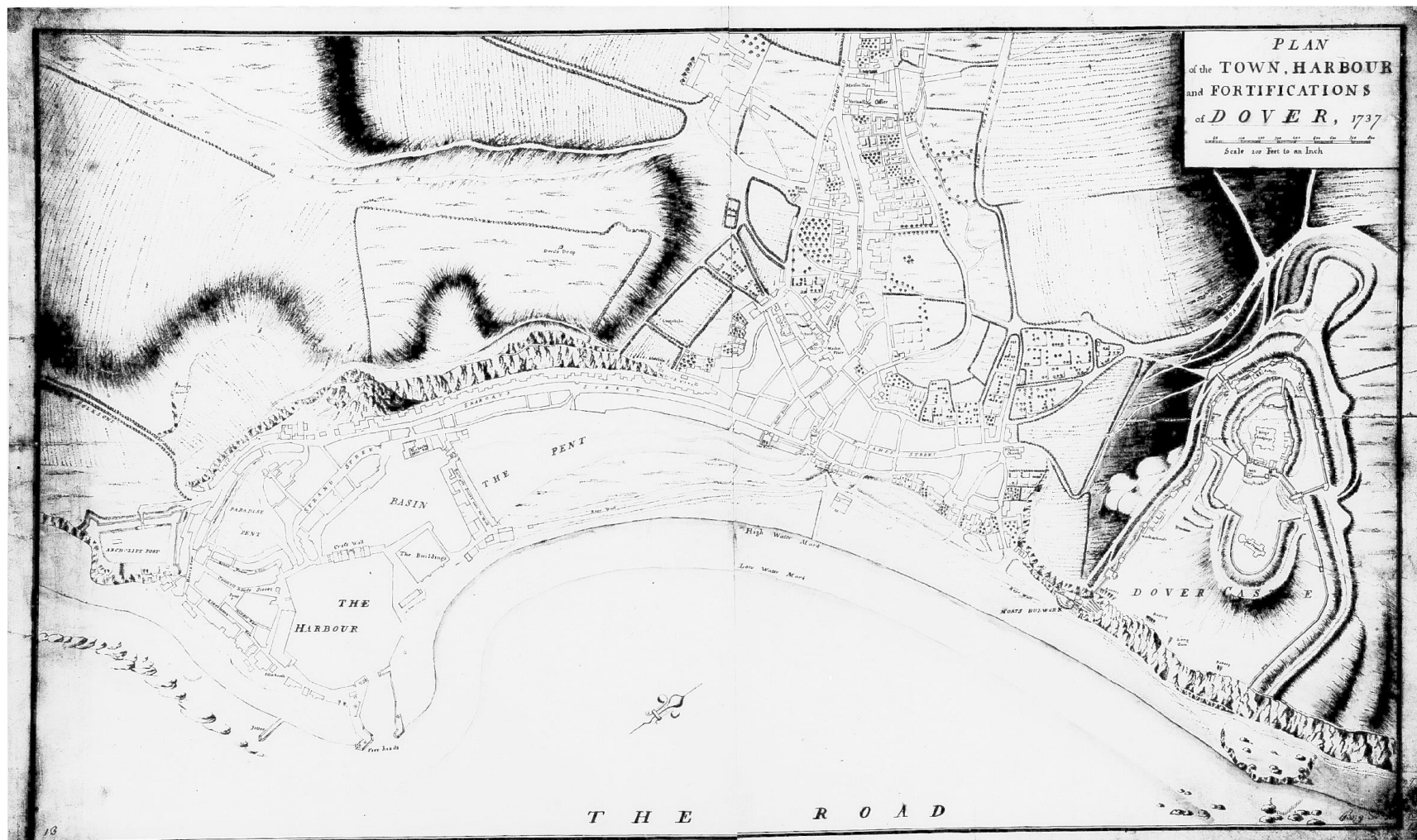


Figure 8: Town Harbour and Fortifications, c.1737, DHB Historical Drawing Archive.

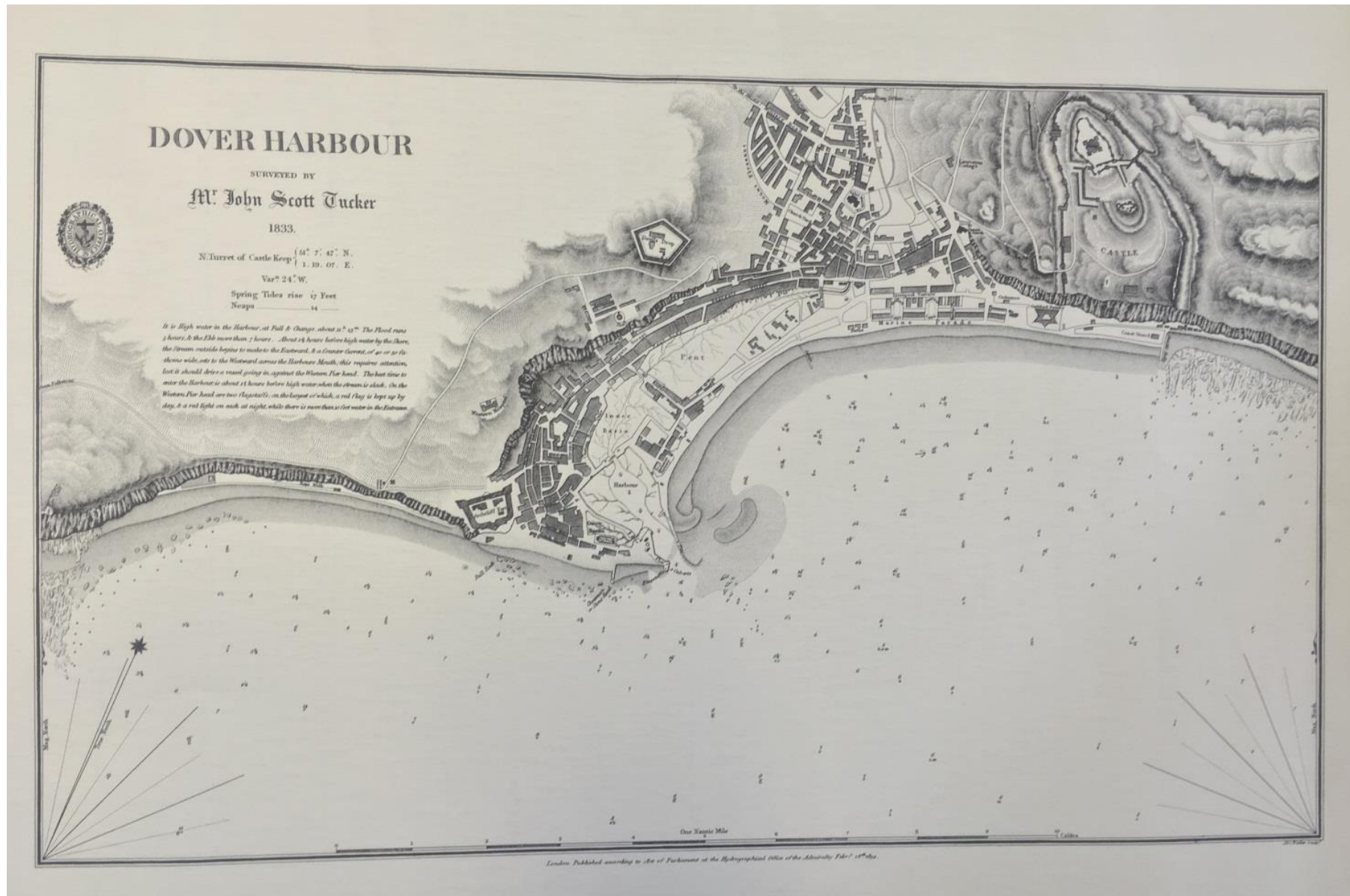


Figure 9: Dover Harbour Surveyed by Mr John Scott Tucker, 1833, DHB Historical Drawing Archive.



Figure 10: Detail of map showing that two bridges were in place in 1844, Kent History and Library Centre Ref: DHB/P12.

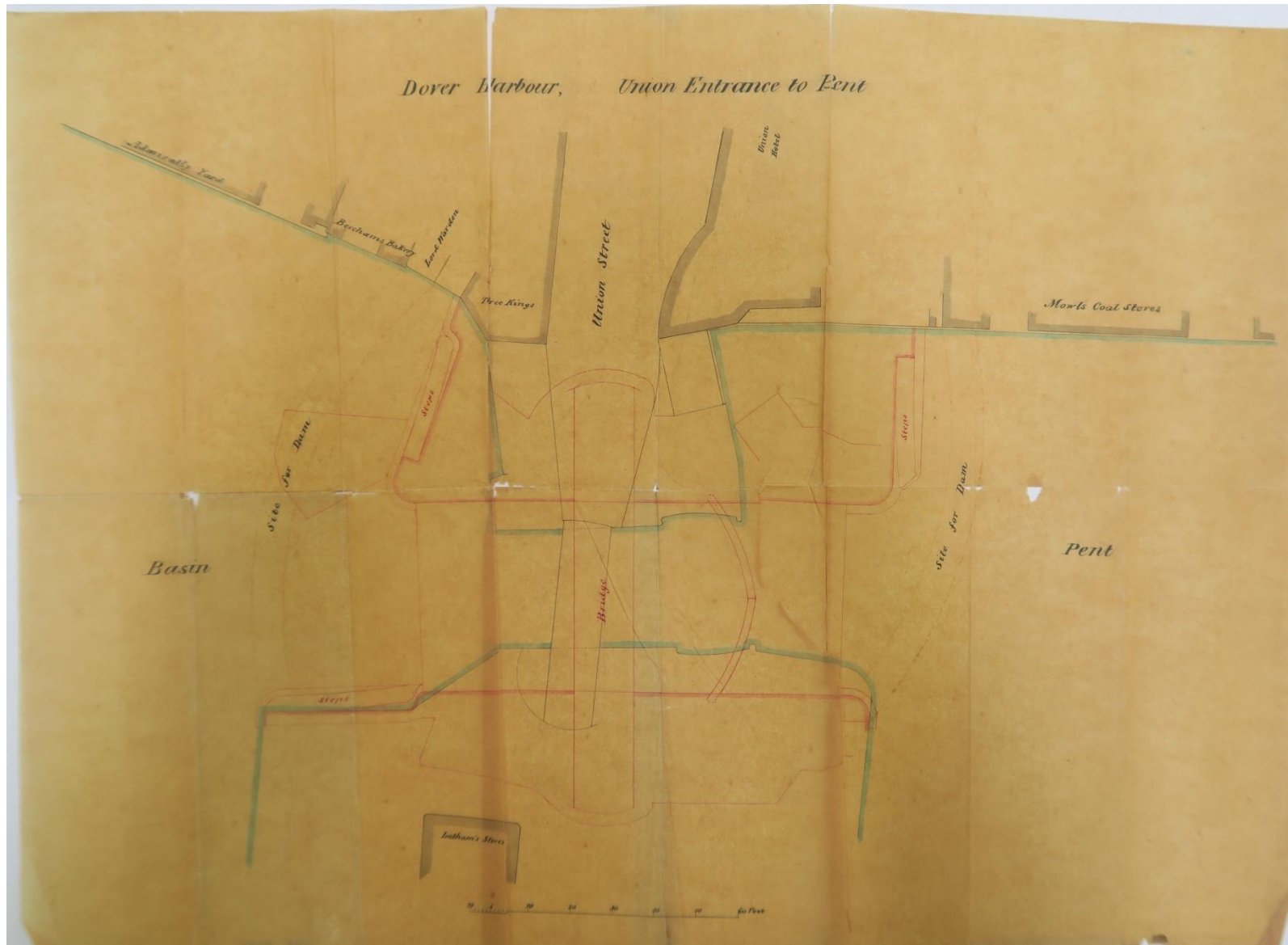


Figure 11: The design for the new entrance to the Pent, 1860, Kent History and Library Centre Ref: DHB/P12.

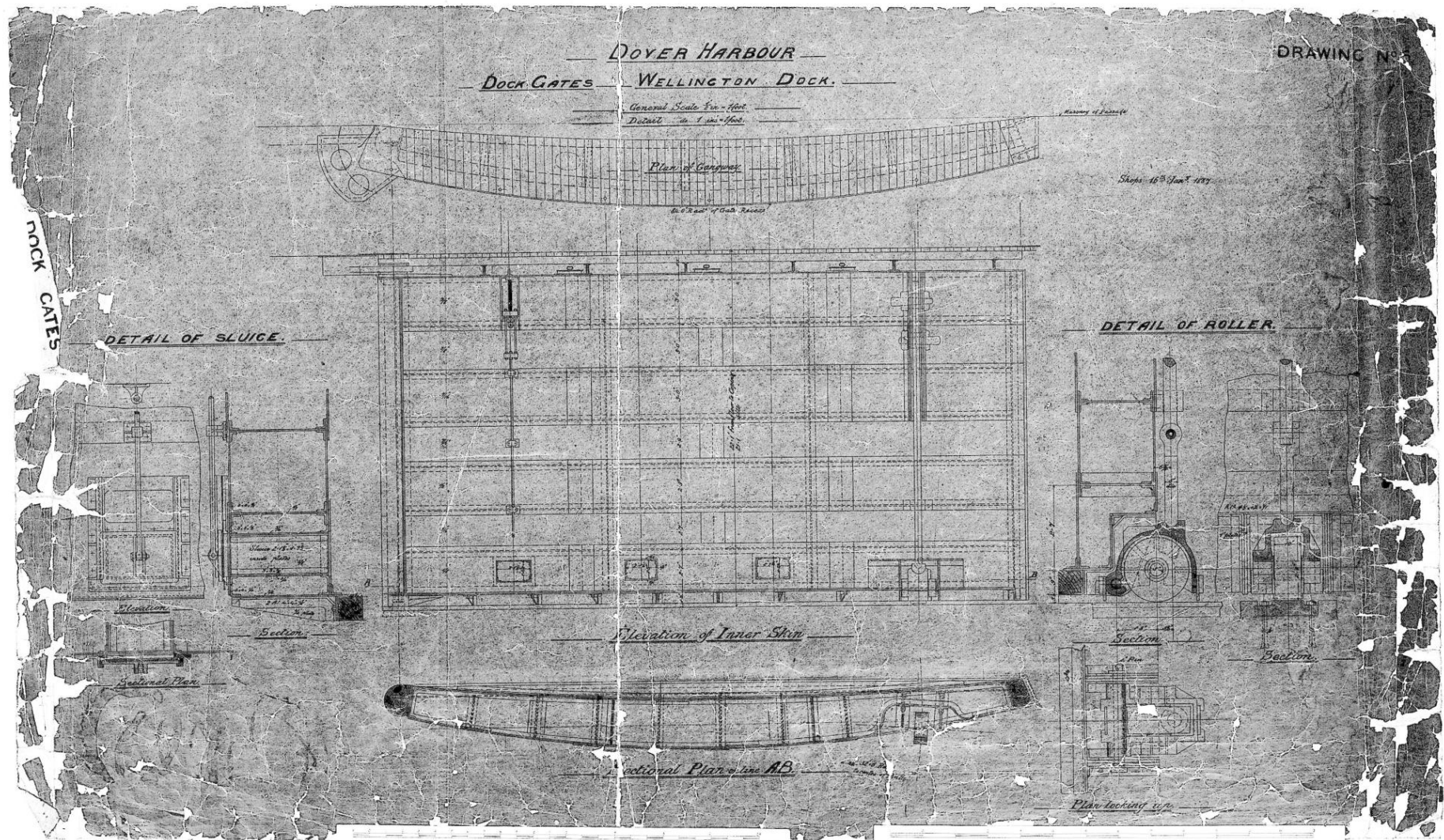


Figure 12: Wellington Dock Gates, Dated 03/04/1897, DHB Historical Drawings Archive Ref: 3991.

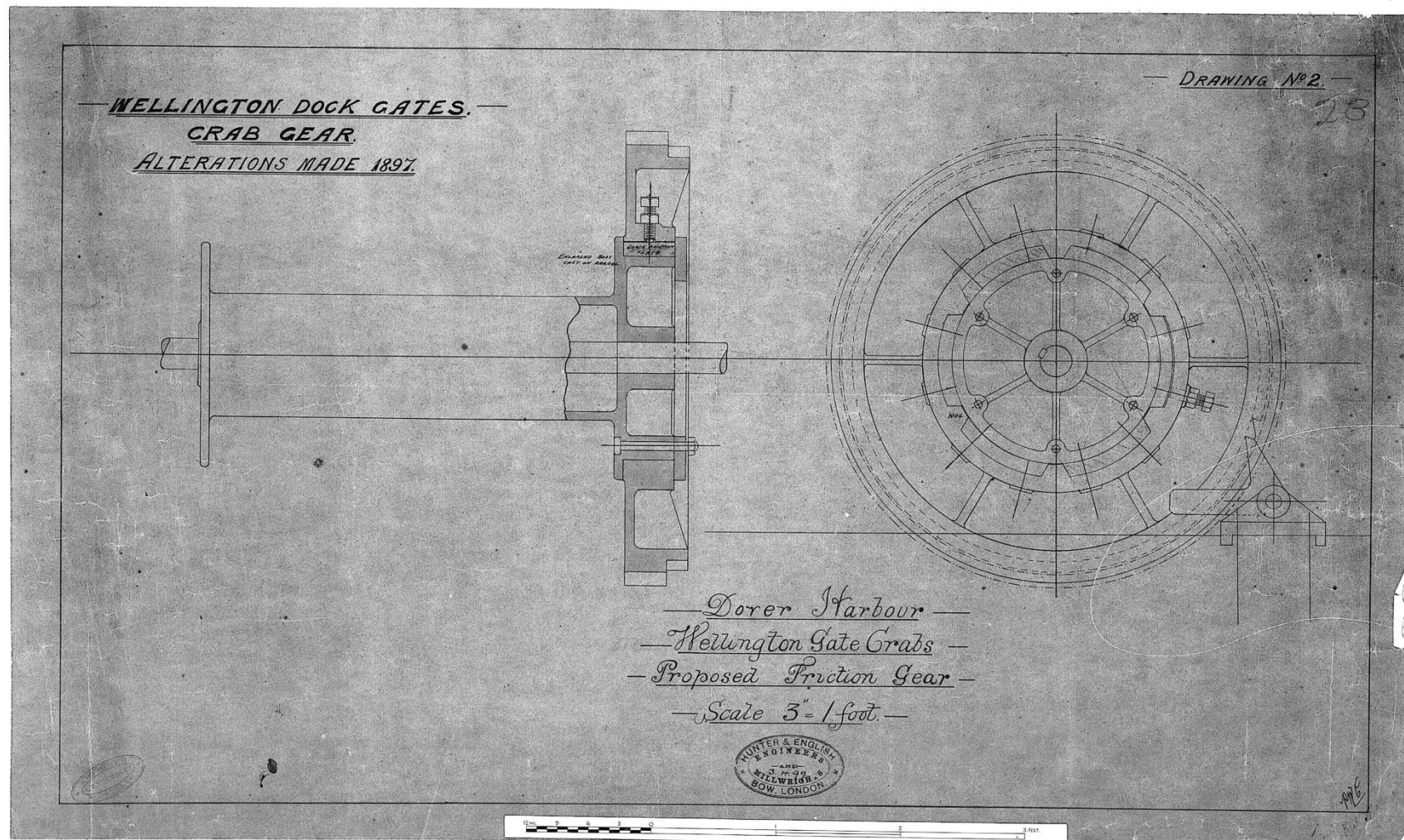


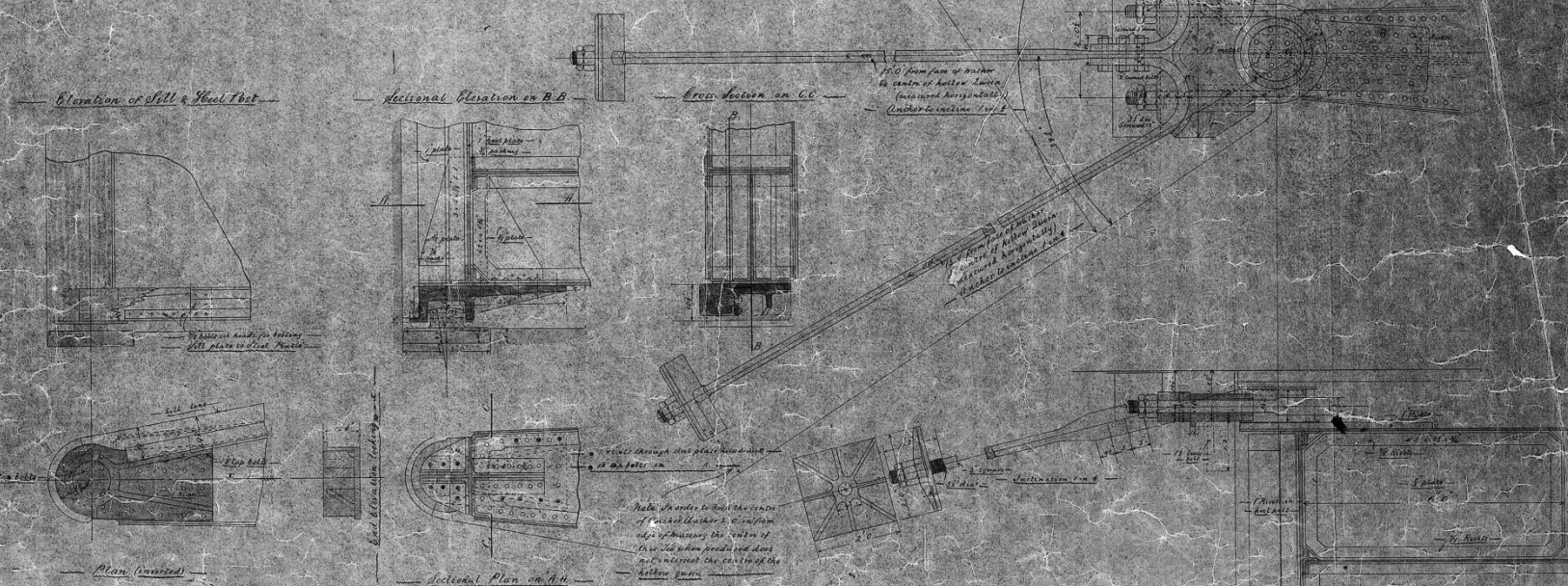
Figure 13: Wellington Dock Gates, Crab Gear, Alterations made 1897, 03/04/1897, DHB Historical Drawings Archive Ref: 3994.

Wellington Dock Gates

Scale 1" = 1.0'

Details of Bottom Pivot.

Details of Top Pintle



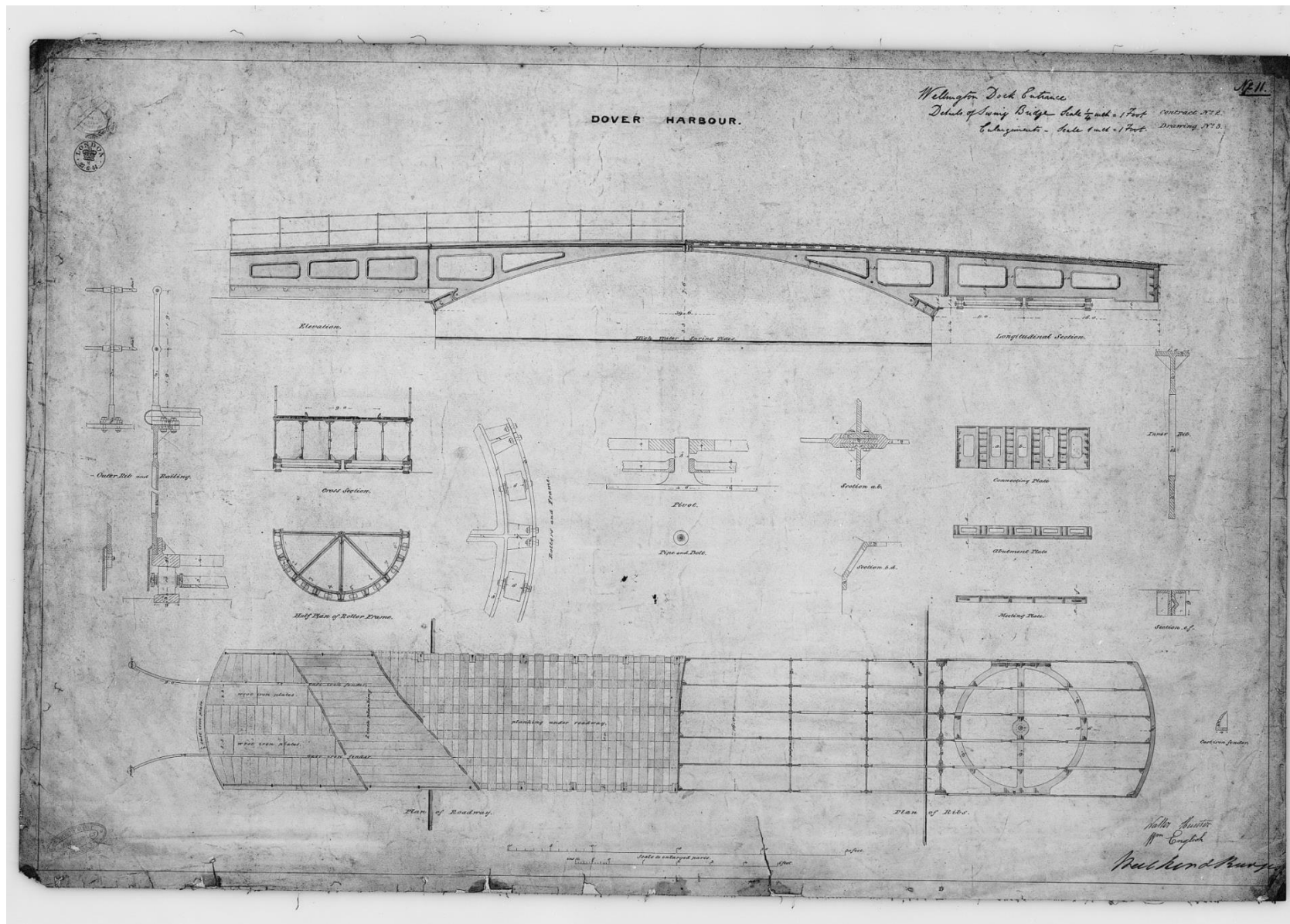


Figure 17: Wellington Dock Gates, Details of Swingbridge, Dated 03/04/1897, DHB Historical Drawings Archive Ref: 4003.

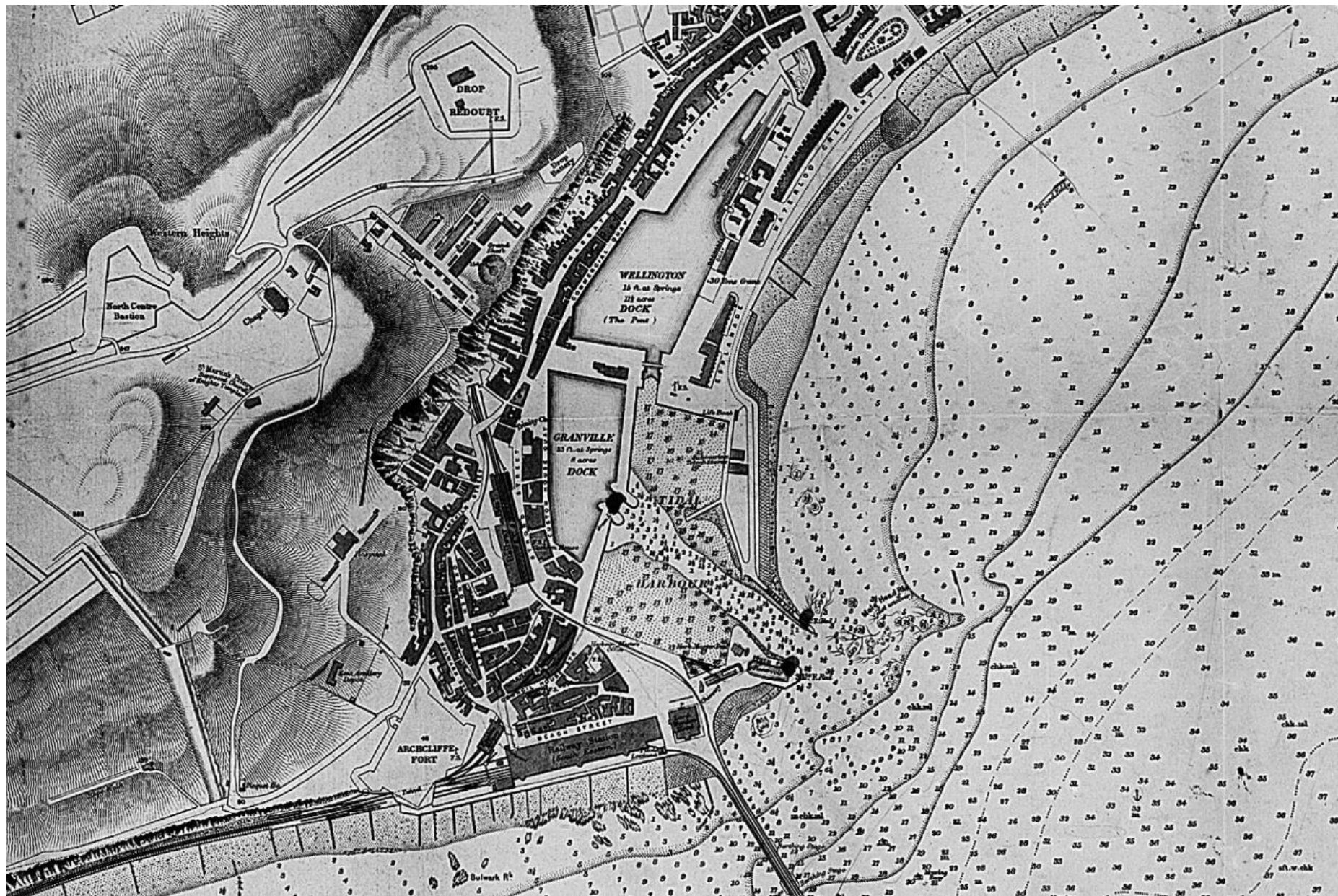


Figure 18: Detail taken from a map of the harbour, showing only the Wellington Swingbridge in place, 1875 Revised 1876, DHB Historical Drawing Archive Ref: 7215.

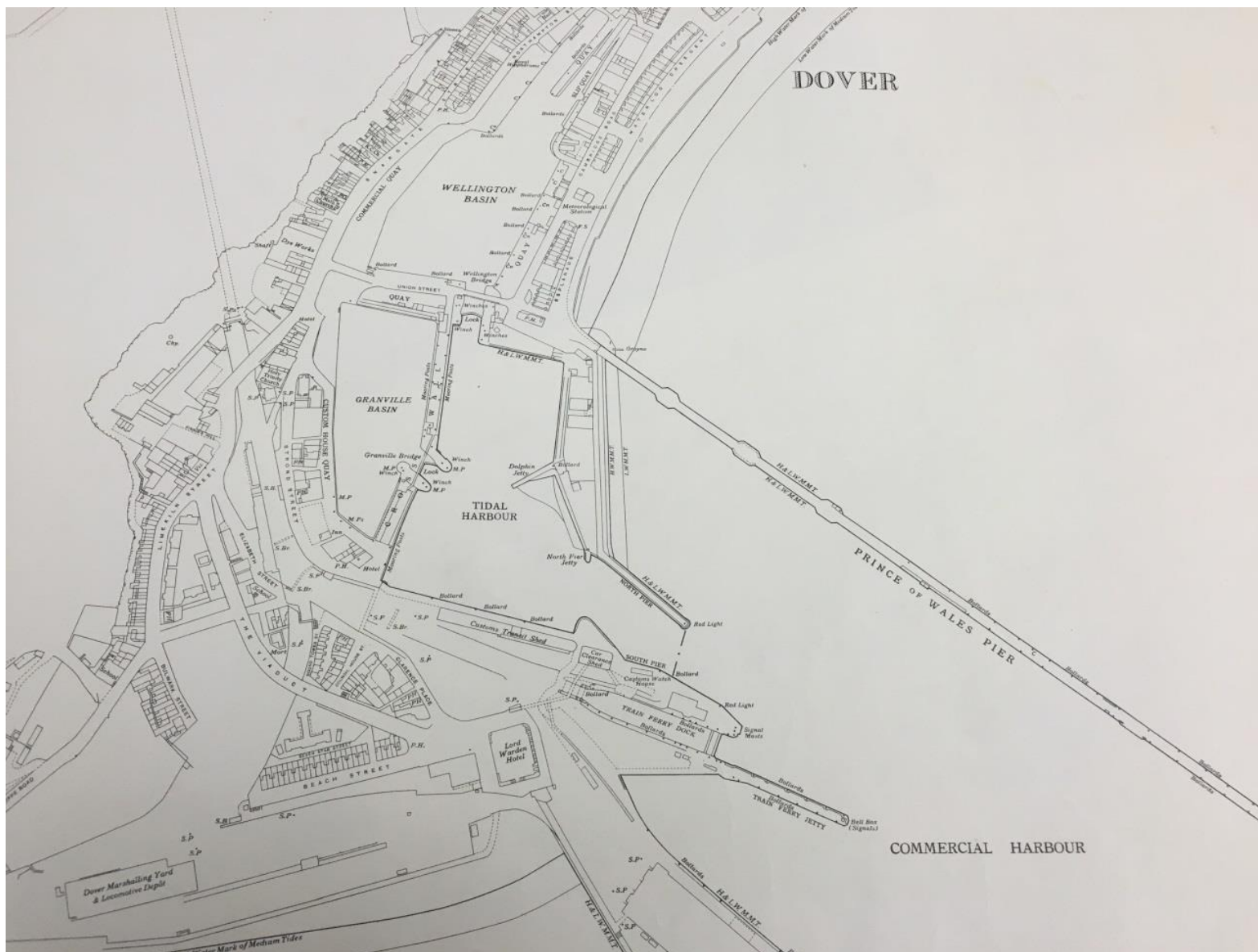


Figure 19: DHB Historical Drawing Archive, Dover Division Ordnance Survey Map Surveyed 1858, revised 1937-1938, 1945 (detail from).

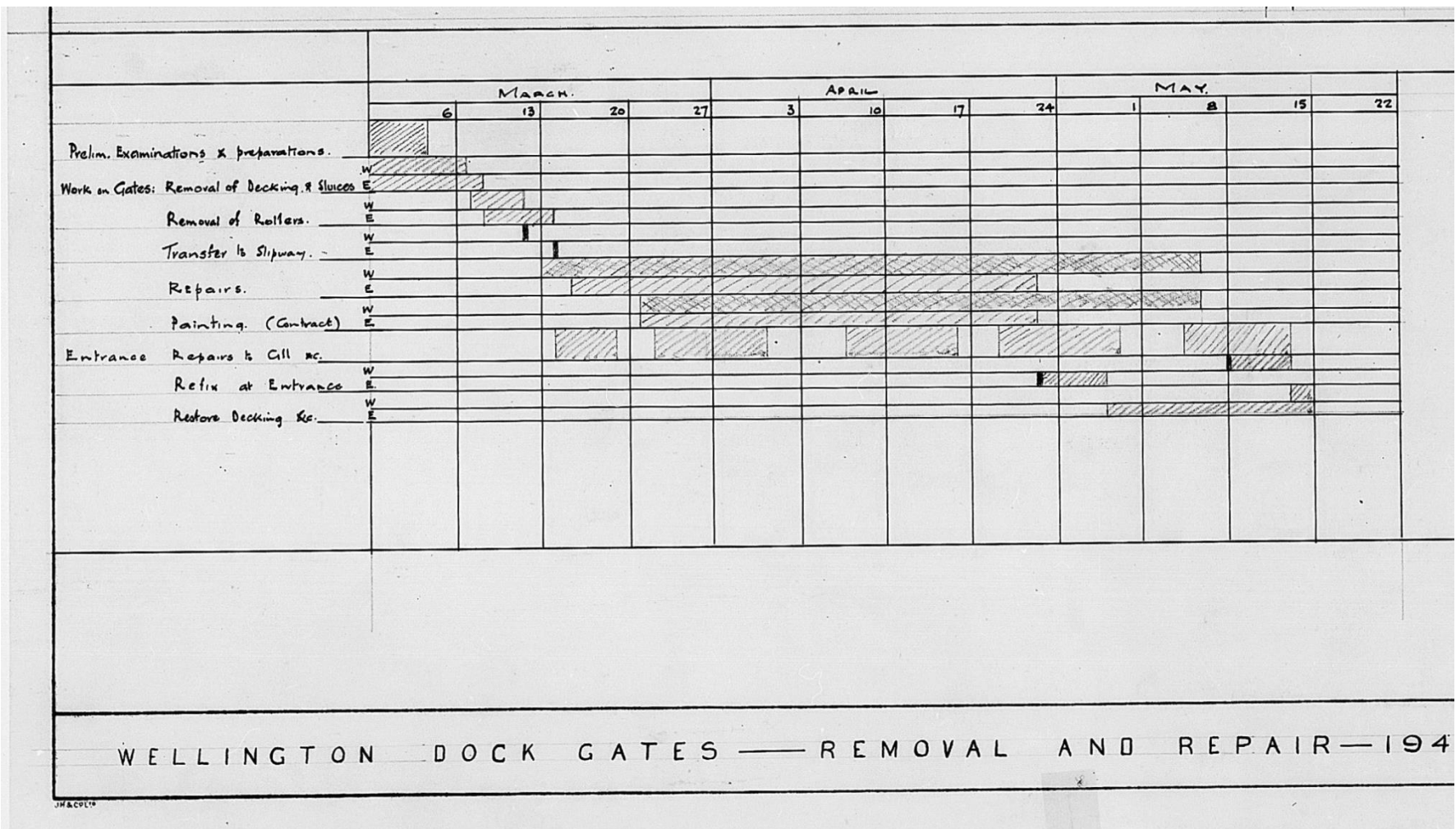


Figure 20: Wellington Dock Gates, Removal and Repair Programme, Dated 08/03/1948, DHB Historical Drawings Archive Ref: 2291, (detail from).

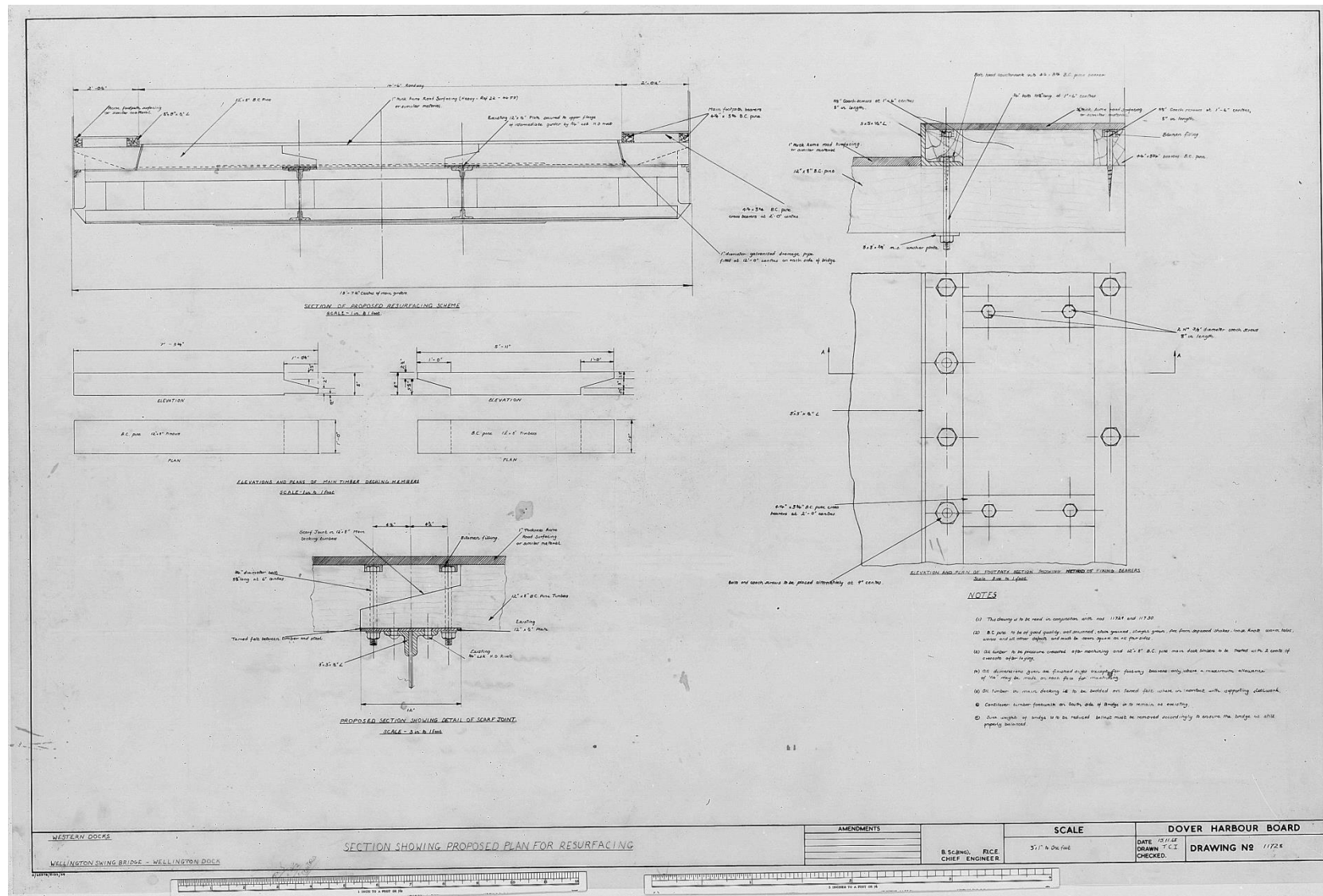


Figure 21: Wellington Dock Gates, Removal and Repair Programme, Dated 20/11/1968, DHB Historical Drawings Archive Ref: 11728.

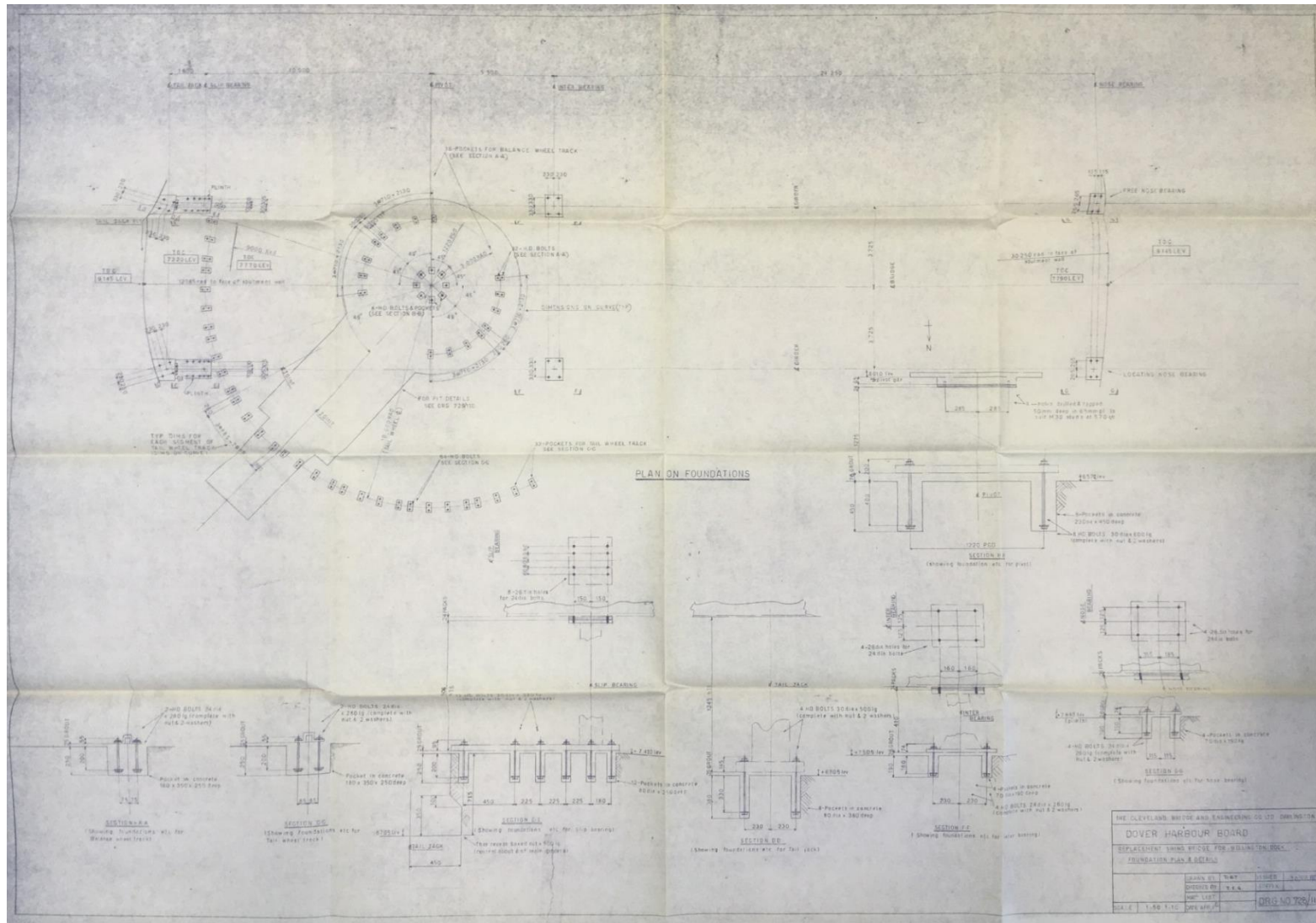


Figure 24: Replacement Swing Bridge for Wellington Dock, Foundation Plan and Details, Dated 30/03/1977, DHB Historical Drawing Archive Drawing Ref: 728/11.

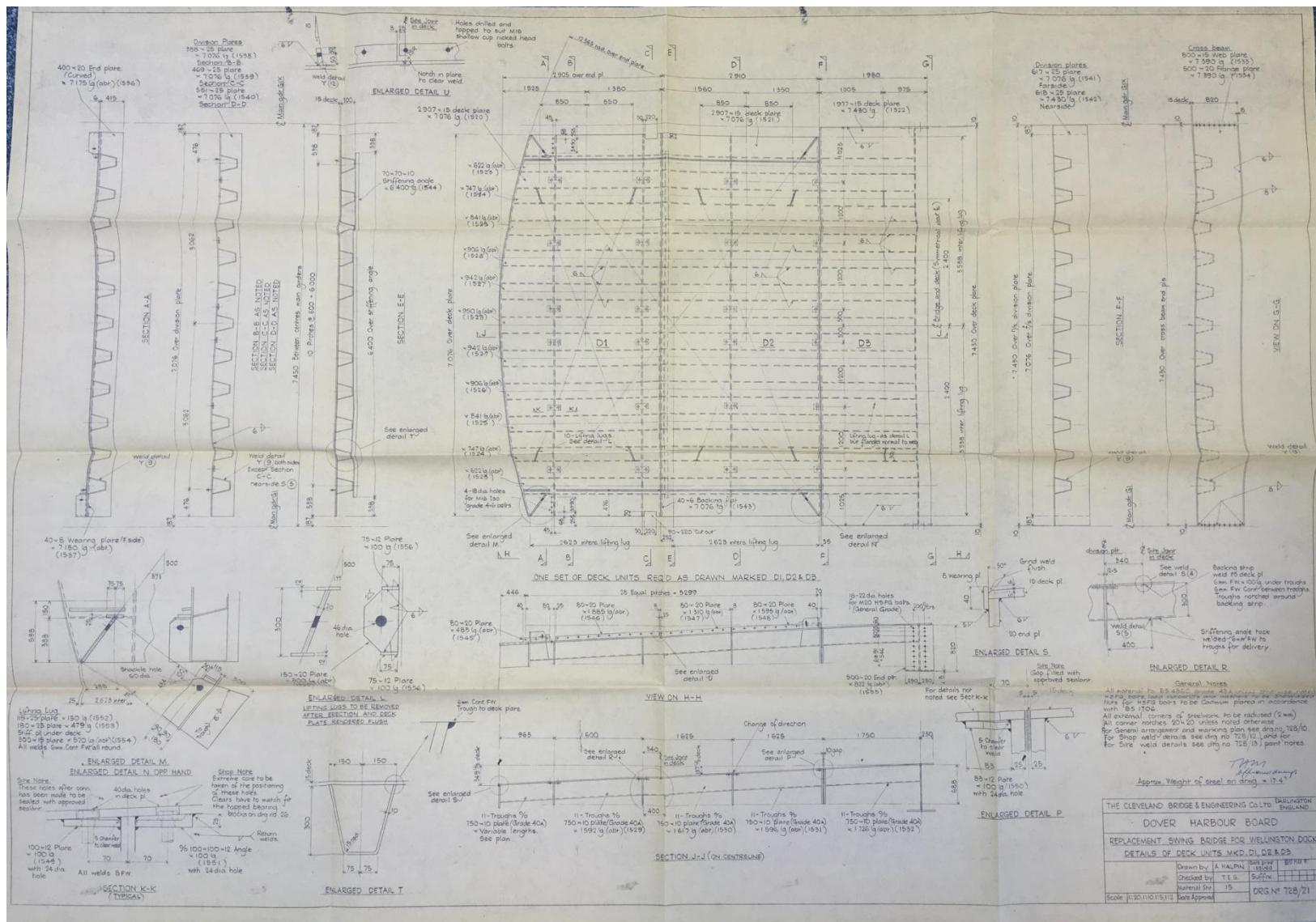


Figure 25: Replacement Swing Bridge for Wellington Dock, Details of Deck Units, Dated 29/03/1977, DHB Historical Drawing Archive, Drawing Ref: 728/21.

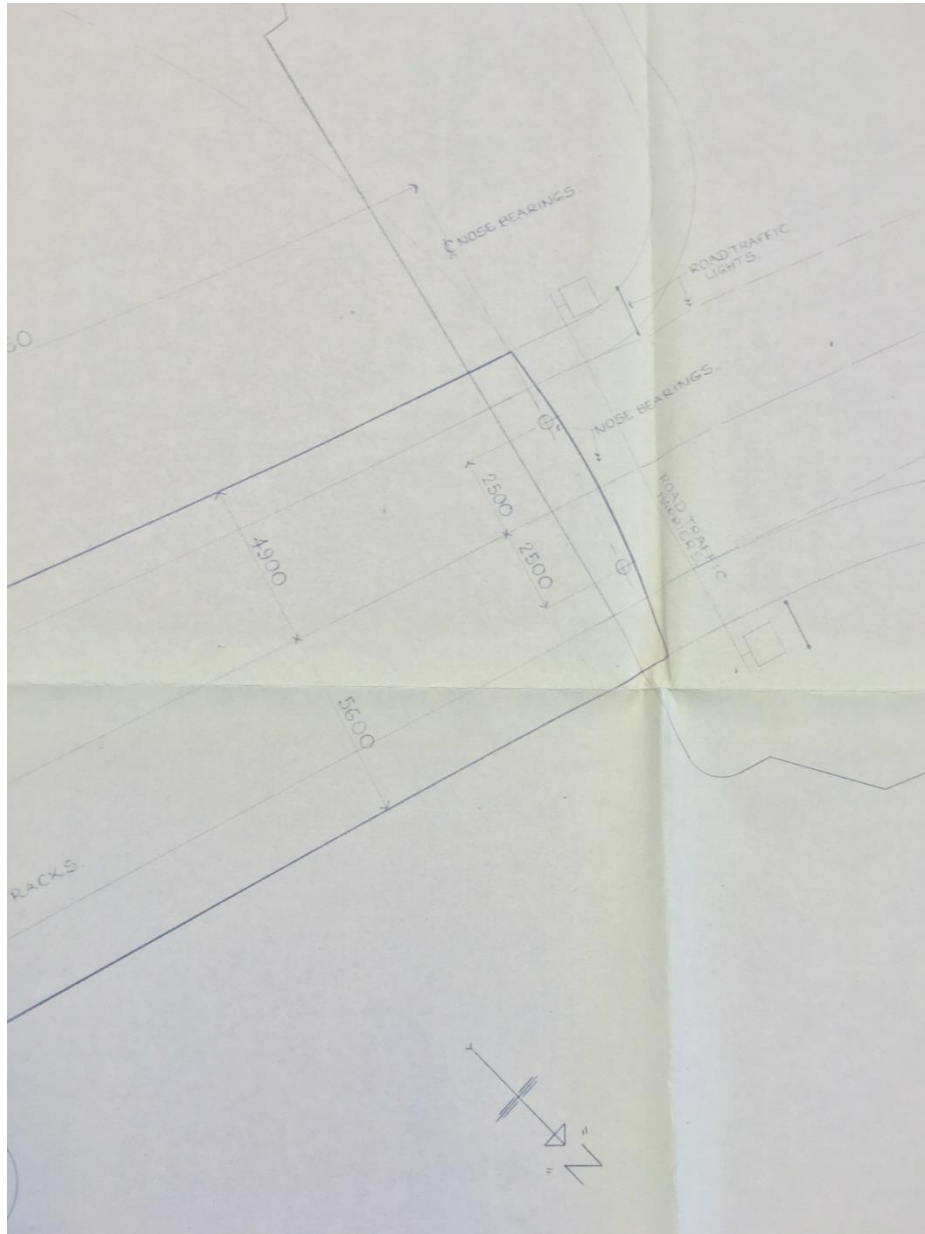


Figure 27: Replacement Swing Bridge for Wellington Dock, Tender Drawing, Dated, c.1978, DHB Historical Drawing Archive Ref:7563/2.

Figure 28: Replacement Swing Bridge for Wellington Dock, Tender Drawing, Dated circa 1977, DHB Historical Drawing Archive, Drawing Ref: 7563/1.

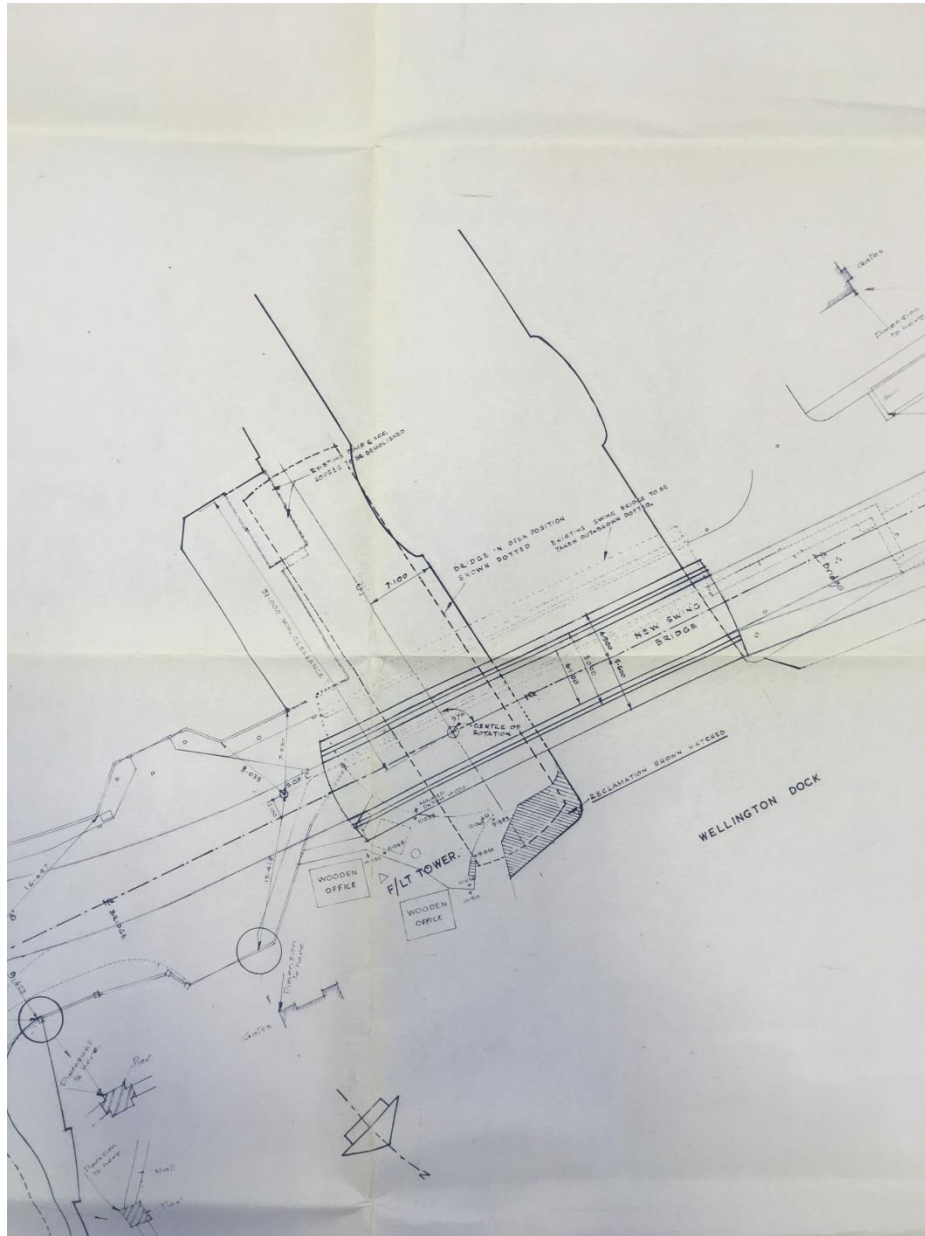


Figure 29: Detail, Replacement Swing Bridge for Wellington Dock, Tender Drawing, dated c.1977, DHB Historical Drawing Archive, Drawing Ref: 7563/2.

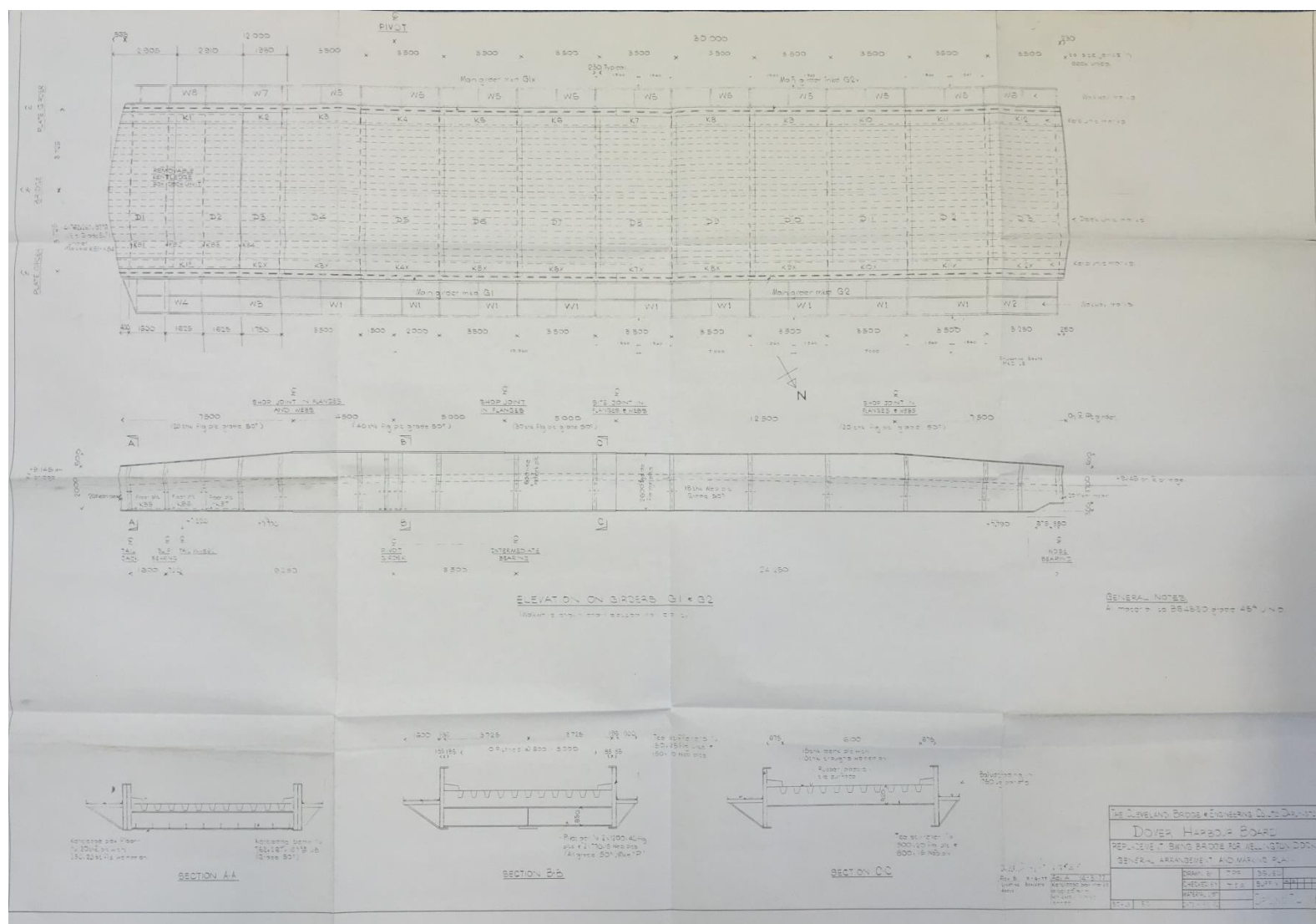


Figure 30: Replacement Swing Bridge for Wellington Dock, General Arrangement and Marking Plan, Dated circa. 1977, DHB Historical Drawing Archie

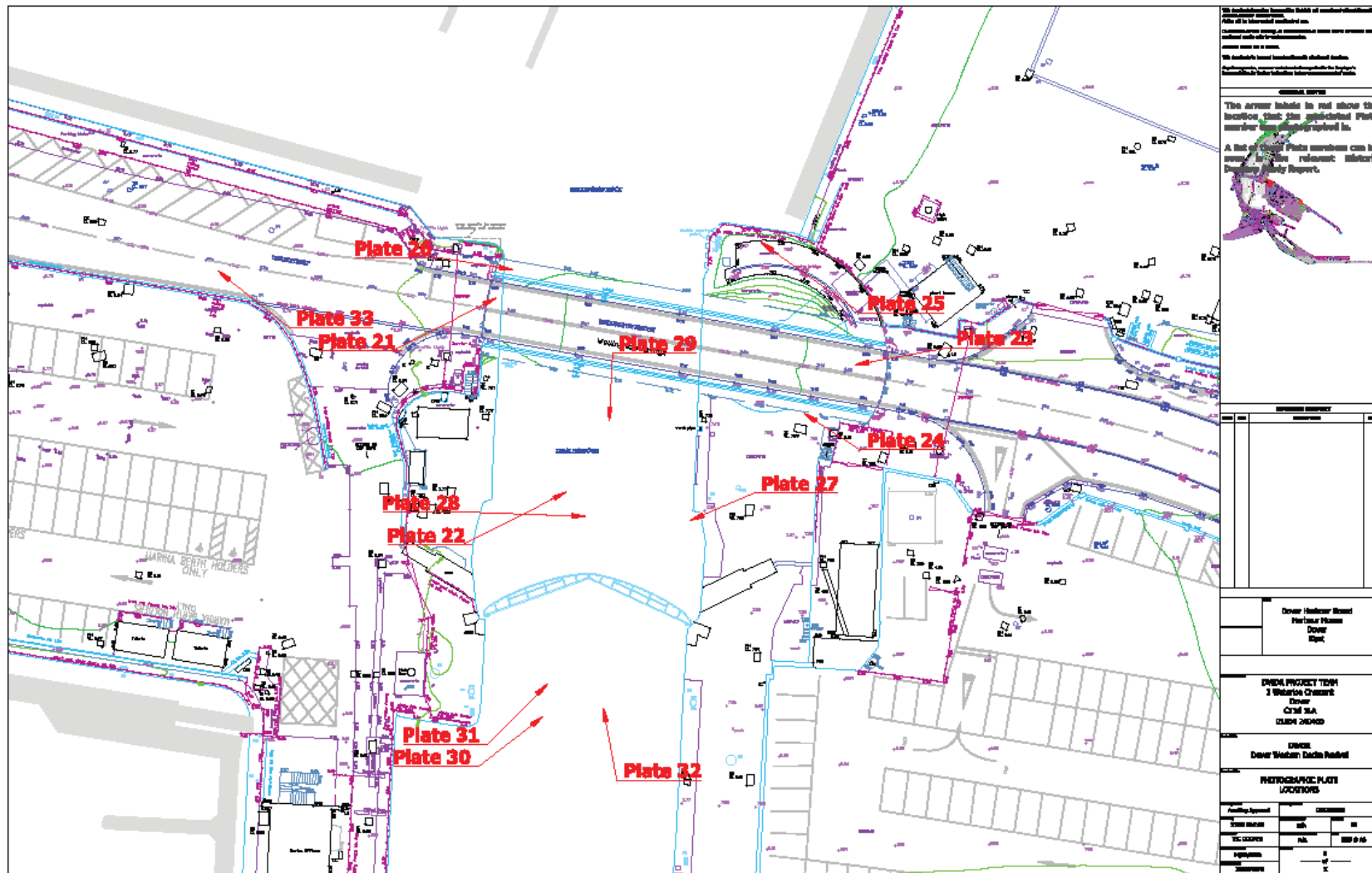


Figure 31: DWDR Project Office, Current Photographic Plate Locations, Drawing Number to be confirmed.