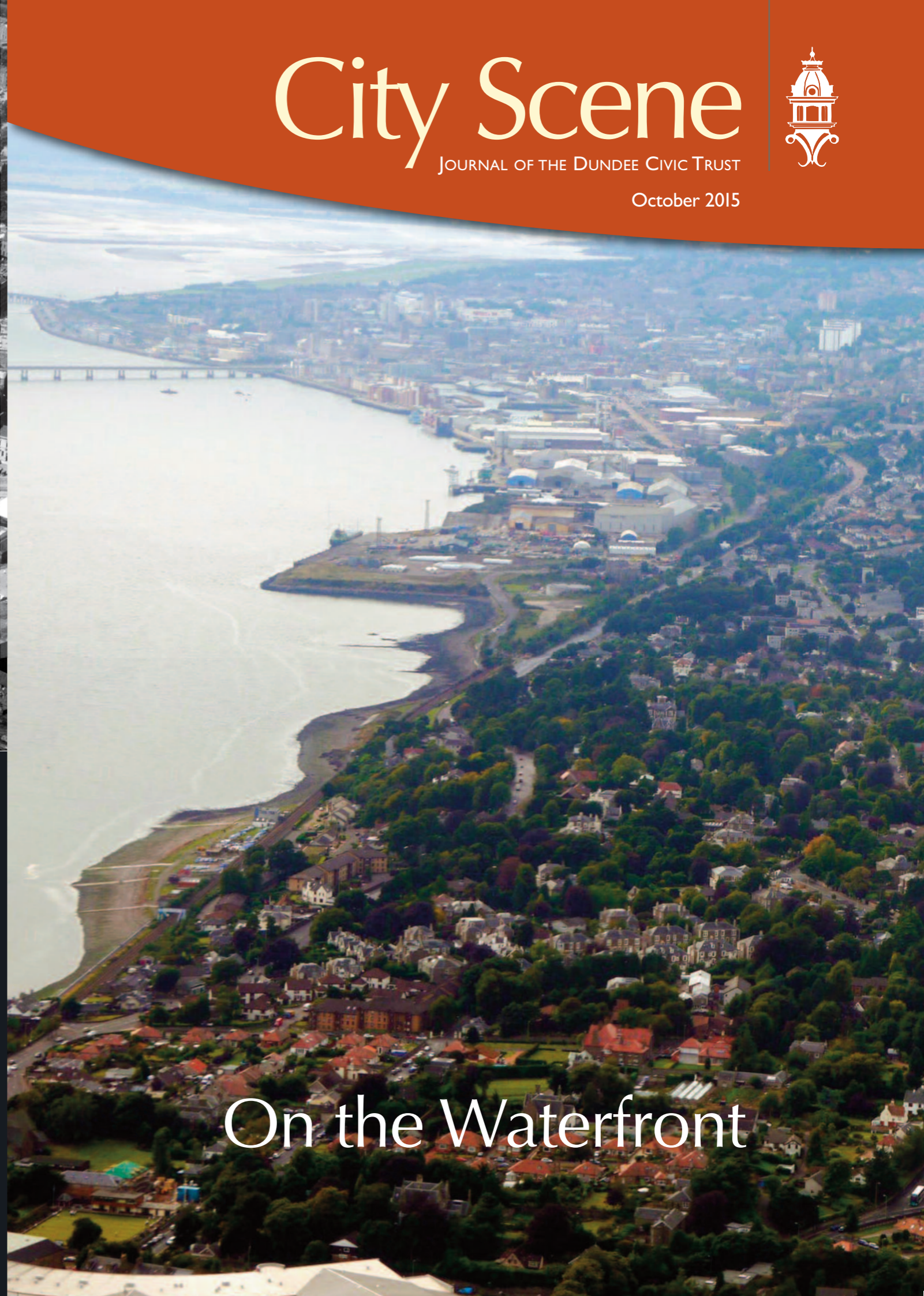


City Scene

JOURNAL OF THE DUNDEE CIVIC TRUST

October 2015



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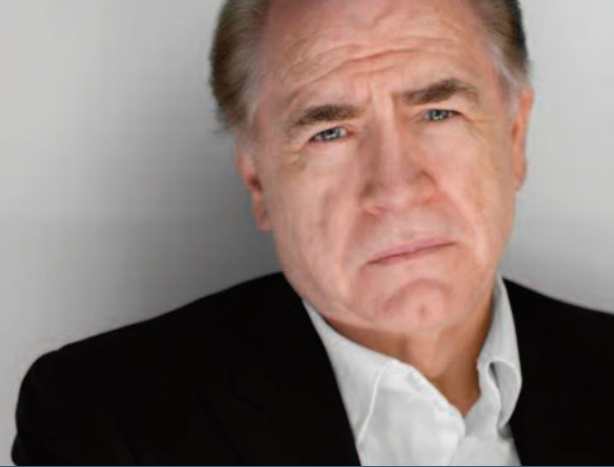
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On the Waterfront



Brian Cox CBE

Patron of Dundee Civic Trust

Brian Cox was born in Dundee in 1946. He joined the Dundee Repertory Theatre when he was 14 years old and from humble beginnings has become an internationally renowned actor with an impressive body of work. His local roots and love of his native city and Scotland are evident in his patronage of many local and national groups and charities. He was awarded a CBE in 2003 for his accomplishments in theatre, film and television and is currently Rector of the University of Dundee.

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Front Cover: Dundee's Waterfront - photograph by Andrew Dunsire
Back Cover: Central Waterfront, Dundee - photograph taken in the late 1960s

Thanks are due to DC Thomson, Dundee City Archives and Dundee Leisure and Culture for photographs used in this issue.

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In the mid 1960s, shortly after I arrived in Dundee, I experienced an event that made clear to me the intimate connection between city and river.

On this occasion, I decided to go for a lunchtime swim at the Central Baths that were located in a part of the harbour. I went to the baths, bought a ticket and entered the swimming hall. To my surprise there was only about an inch or so of water in the shallow end of the pool although there was about three feet of water in the deep end. Clearly this would not do and I returned to the girl on the reception desk to ask what was going on.

"Well," she explained, "these are saltwater baths. We get our water from the river and it is regularly changed. However, we can only get it at the height of an incoming tide. Unfortunately Chic slept in last night, and we missed that tide. But if you wait for a bit it will get deeper."

I soon found out that, at that time the links between the city and the Tay were not

only operational, but also social. For example there was then an annual game of football, between sweeps and bakers I think, that was held on one of the sandbanks out in the Tay.

Since that time those Baths have been demolished, replaced by the Olympia that has in turn been demolished and replaced by the New Olympia and rowing boats can no longer be seen out on the Tay waiting to retrieve errant footballs from the water.

In the late 1960s G M Turner, a commentator of the time, observed that "here, in what was the old docks area, where ships from many parts of the world once met, motor traffic streams remorselessly, and the old casual intimacy between the (city) centre and the firth, which was one of the more pleasing aspects of Dundee, has gone forever."

Today, in the revamped City Square, one can still see the images of six vessels - an indication of the importance of Dundee's

links with the sea. You will not therefore be surprised that the Editorial Group have adopted the development of the city's waterfront as their theme for this edition of the City Scene.

As the current development of the Waterfront is still a 'work in progress' and has yet to contribute to the economy and social life of Dundee, a conscious decision was made that it would not be included. Instead, it was decided to include a number of articles showing some aspects of the way in which the development of the harbour and the waterfront has impinged upon the city.

Jack Searle is a Board Member and past Chairman of the Dundee Civic Trust and a major contributor to the Newsflash and the City Scene. Fortunately for the Trust his interest in and enthusiasm for his adopted city never wanes.

Dundee Civic Trust is extremely grateful to a new sponsor - **Limehouse Design.**

This graphic design company is helping to take our magazine to new heights.

Their help, advice assistance and patience has been invaluable.

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The Growth of Dundee Harbour

by Jack Searle

Haven to Harbour

Dundee originated as a fishing settlement on the raised beach adjacent to Castle Rock and close to the mouths of the Scouring and Dens Burns. Here small fishing boats could come ashore or be moored in the shallows of the Tay.

As the town developed westwards on to higher ground the haven moved to the peninsula leading to the rocky outcrop in the River Tay known as St Nicholas's Craig.

It is not known exactly when, but a pier was later established which provided both berthing places and some shelter from the swells of the estuary. It is also unknown when the two wooden breakwaters or bulwarks filled with ballast were established across the mouth of the harbour.

By the early middle ages, external factors conspired to encourage the growth of the town and its harbour. The ending of Viking attacks and better climatic conditions had encouraged the growth of a northern European trading area around the North Sea that extended from the Baltic to the British Isles. As roads were primitive, even where they actually existed, rivers became natural highways that were important for the development of mediaeval towns. Dundee as a small fishing settlement located on the estuary of the

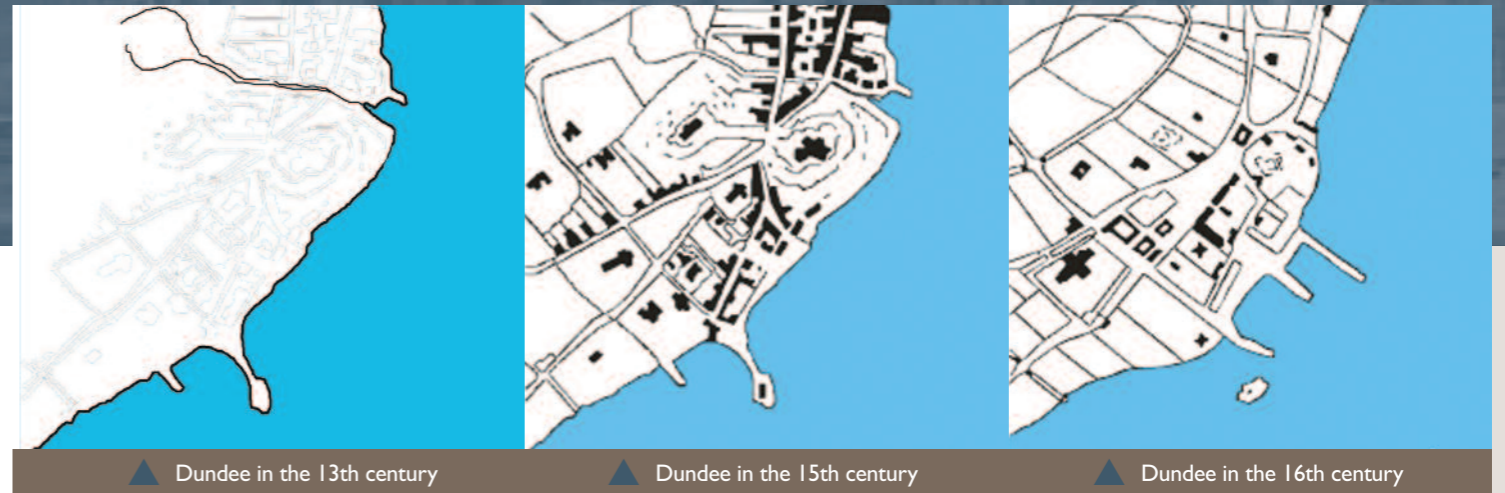
River Tay had easy access to the North Sea and was therefore well positioned to thrive at the local, national, and European level by importing and exporting goods.

The town and the harbour grew and by the 1190s David, Earl of Huntingdon and brother of King William the Lion, was successfully requesting trading privileges for 'my burgh'. These privileges allowed exemption from local customs and excise dues for Dundee traders dealing with English ports with the sole exception of London. It was a sign of the range of Dundee traders that the privileges also included trading concessions with those parts of France under English rule.

Thus by the time that Dundee was created a Royal Burgh in 1199 it was already a prosperous settlement. With its enhanced status and favourable location on the estuary it began to attract trade that had previously gone to Montrose, St Andrews, and Perth. By the 13th century trade was being attracted from Europe and particularly the Baltic ports such as Lubeck. When, in around 1250, Mathew of Paris drew his map of Britain the town of Dundee had become sufficiently important to be named on the map.

By the fourteenth century significant amounts of salmon, wool and hides were passing through the port, such that in 1381 Dundee employed a 'teller of skins' to check the quality and quantity of hides being imported and exported. However, the port was not only a source of income to the town but also required expenditure for its maintenance. The first written record of this is in 1447 when King James II gave permission for the Town Council to levy dues on goods being landed in the port.

From 1541 Dundee merchants were able to trade some goods free of charge with Veere, a port in the Netherlands.



▲ Dundee in the 13th century

▲ Dundee in the 15th century

▲ Dundee in the 16th century

Dundee merchants took full advantage of this and a strong trade link was built up between the two towns.

The occupation of Veere by the French and then the English was a setback to trade and even more so was the burning of the town in 1548 by the English.

Nevertheless, by 1560 the level of trading was much increased and the Town Council decided to build a new quayside - the New Shore (later Dock Street) - and to appoint one of the Council members as Pier Master. Congestion had also become an issue. This led to the burgh requiring ships' masters to moor their vessels alongside the bulwarks when waiting their turn to unload or load goods. This would avoid obstruction to other traffic and damage to the wooden pier work. The fine of £10 Scots, for those who disobeyed or who moored carelessly, was quite a significant amount at the time.

During the later 16th century the town's income was predominately earned from trade with Europe. A clear instance of this can be found in an entry made in 1595 in the Compt Buik of David Wedderburne. This listed that sixty planks of sawn timber were to be sold in Bordeaux and the profit to be used to purchase wine or cloth for import to Dundee. The timber would have had to be imported from Norway previously.

Although 1600 saw the harbour once again suffering severe storm damage and despite an outbreak of plague in 1606 and crop failures in the early 1620s, the early years of the seventeenth century saw a steady increase in trade. Ferries to Fife became more regular and by 1620 land reclamation had allowed the extension of the harbour. In 1644, responding to the increase in harbour traffic, the Council built packhouses (warehouses) that generated significant revenues for the town.

This was just as well, for the sackings of Dundee, first by Montrose in 1644 and then by Cromwell's General Monck in 1651 combined with an outbreak of plague in 1648, were considerable set backs to harbour trade and it was some time before a slow recovery took place.

This was not helped by the severe storms of 1658 and 1667 that 'destroyed Dundee's entire sea front and harbour.' The damage caused by the latter was such that the town was given the power to hold special collections in churches to raise funds. Harbour trade diminished sharply and it was not until the 1680s that the level of trade in the harbour had recovered to that of the 1630s.



▶ In a view of Dundee from the east by the Dutch engineer Sleser in 1692 the two breakwaters or bulwarks that shielded the ships unloading alongside the pier can be seen.





▲ Engraving from Methven's original painting of Dundee harbour completed about 1780 clearly showing the packhouses on the left



▲ Plan of the Town and Harbour 1777

In 1716 the main import was wool but by the 1740s Dundee had developed as an important manufacturer of coarse linens made from flax imported from the Baltic. As a consequence the Town Council in 1758 commissioned William Robertson to design three new packhouses to be built at the harbour.

Tsunami setback

On 3 November 1755 the eastern bulwark wall, which had been built to shield Dundee Harbour from the waves and swells of the North Sea, was destroyed by a tidal wave. The harbour was repaired in the following months and in 1756 the packhouses or warehouses were rebuilt. However the regular flooding of the lower parts of the city had become a major problem and the decision was made to raise the levels of the docks and quayside. In consequence the streets in the neighbourhood were raised in level by five to twelve feet. This meant that in some cases ground floors became basements while others required steps to gain access to their premises.

The harbour had now become very busy as by this time Dundee had established trading links with Charleston in America, Spain, Italy and was also trading with the West Indies.



▲ Craig Pier showing some of John Smeaton's scouring tunnels

Maybe because of the latter in 1766 the town appointed a Sugarmaster to establish a Sugar Works just off the Seagate.

In 1768 the Town Council, realising the inadequacy of the harbour resulting from the repairs made in the aftermath of the 1755 floods, appointed John Adam to bring forward recommendations for improving the harbour. This Adam did, including a proposal for infilling the small bay upstream of the harbour. The land thus created was subsequently used as a wood yard, which at that time was a prerequisite for shipbuilding and servicing.

In 1769 the Town Council appointed John Smeaton, an English civil engineer, to bring forward proposals for the extension of the harbour. He reported that the harbour was quite inadequate and recommended it be redesigned to incorporate tunnels in the western bulwark, which was also to be extended, to encourage the river currents to scour away the accumulations of silt which were a constant problem.

It was not only the silting of the harbour that was restricting its growth. Movement of goods to and from the harbour could only be undertaken through the narrow mediaeval wynds that connected it to the town.

Connection to the hinterland had been improved in 1773 by the forming of St Andrew's Street that connected the road from Forfar to the Seagate. However for all other movement of goods the problem remained. This became even more obvious with the completion of the Trades Hall in 1776 at which time it was suggested that a new street should be constructed between the High Street and Dock Street.

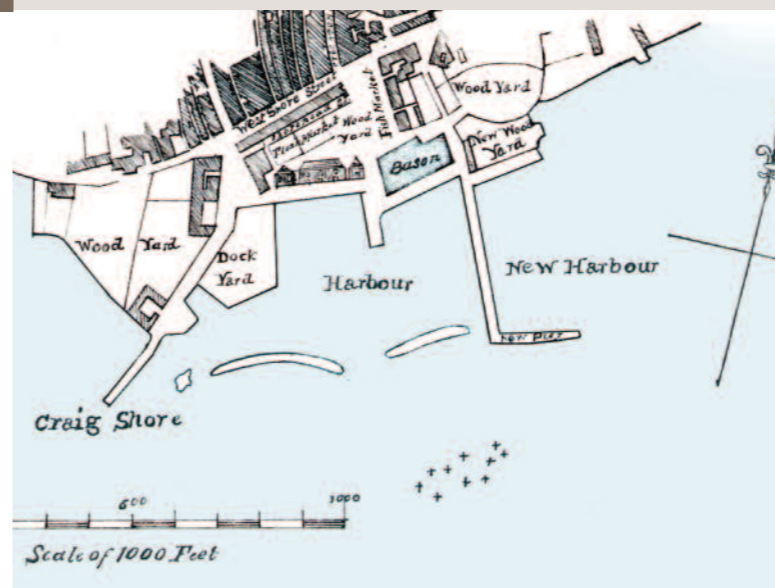
When in 1777 Alexander Riddoch became Provost of the Town Council he took up this

suggestion and work commenced to construct Crichton Street. His economy meant that the street was narrower than first suggested and was curved along the line of an existing wynd to avoid cost.

The question of the amount spent on the harbour by the Council became a major issue in Dundee because the trade through the port underpinned the town's whole economy. In 1788 a glass factory employing around 180 people was established in Dundee. It chose to locate its premises on

a site outwith the harbour and to create its own harbour at what became known as Carolina Port. One year later it was paying £3046 in harbour dues although it used its own harbour. This burden was removed by the council in 1790 but other factors led to closure in 1798. After 10 years of production glass working in Dundee came to an end.

The Council continued on a regular basis to carry out works to improve the harbour. By 1793 the two breakwaters that ran across the river side of the harbour had been repaired and strengthened. The eastern pier had been extended at right angles to form the western end of a new tidal harbour. A new dockyard flanked by the Slaughter House on the west and a boatbuilding yard on the east was now in operation alongside Craig Shore. To the east of the main harbour there was now established a small whaling quarter.



▲ Dundee Harbour in 1793



▲ Dundee's Glassworks at Carolina Port

Over the period from 1780 to 1840 harbour trade had begun to be dominated by the import of raw materials and the export of finished linen goods. The overall tonnage handled by the harbour doubled between 1790 and 1819, doubled again by the late 1820s and doubled yet again by the late 1830s

By 1800 the increasing level of harbour trade was running up against the limits imposed by the shallow tidal harbour. The Town Council's reluctance to undertake the upgrading of the harbour, and more particularly its habit of spending money raised from harbour dues on street improvements, had led to the increasing frustration of the shipping and trading fraternity in Dundee. In 1803 an unsuccessful petition was put to Parliament to have Dundee declared a free port. However the lack of success did not stop the pressure for change, rather it increased it.

In 1811 the Council proposed to go to parliament with a bill to widen the narrows of the Nethergate. To placate the merchants concerned with the inadequate state of the harbour, the Council added some clauses to the end of the bill proposing some harbour improvements. The resulting bill was seen by the merchants as a wholly inadequate approach to the improvement of the harbour. They therefore objected to the bill and the harbour clauses were withdrawn.

In 1813 the merchants group, in order to support their efforts to establish an independent port authority, commissioned Thomas Telford - the most famous civil engineer of the time - to prepare a plan for the comprehensive improvement of the harbour.

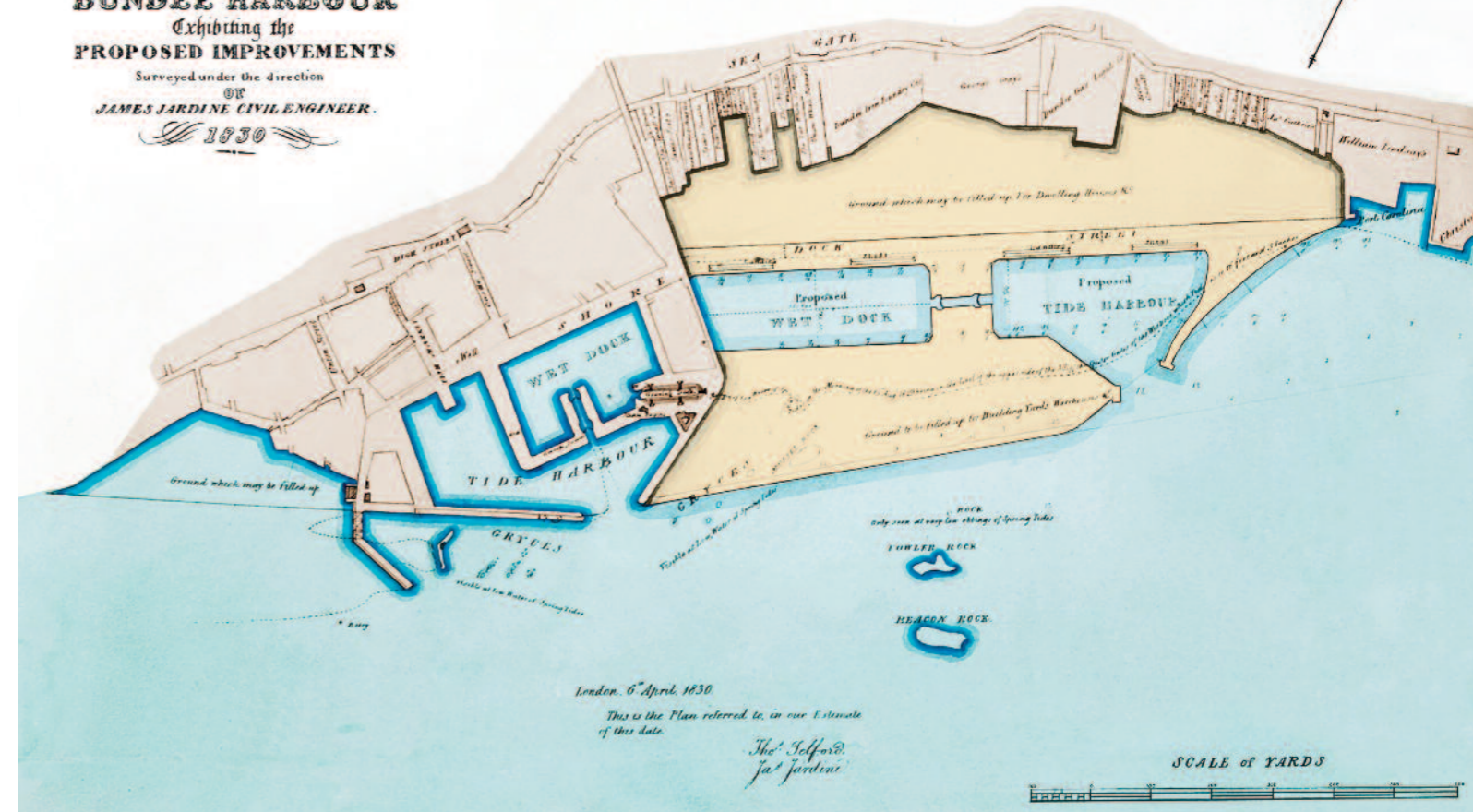
Telford proposed the formation of a completely new quayside to be called The Shore. This was to form the landward side of a new rectangular wet dock some 750 feet in length and extending some 400 feet

out into the Tay. The new wet dock would incorporate a graving dock at its south-east corner. Land was to be reclaimed at its eastern end to a line where the existing Trades Lane could be extended on to the new quayside to service both the wet dock and a newly created dockyard area. The old pier in the tidal harbour was to be upgraded to accommodate the increasing trade in coal.

The 1820s also saw the expansion of the whaling industry in the city and by the latter part of the decade a flourishing ship building and whaling quarter had been established on made up ground lying to the east of the harbour.

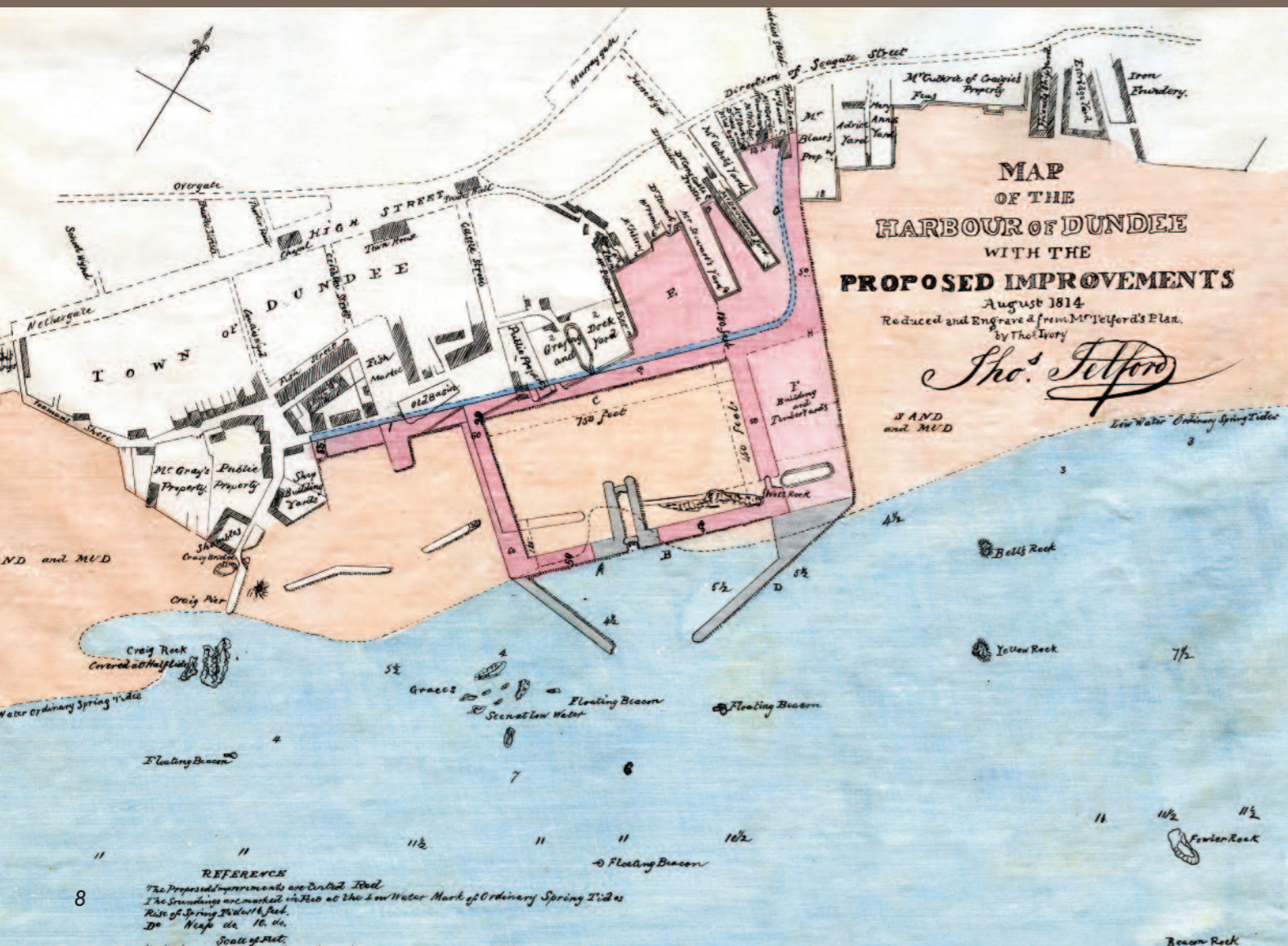
In 1829 James Jardine was commissioned by the Harbour Trustees to produce plans that were on a scale way beyond anything seen in Dundee. His plans envisaged extending the Harbour even further out into the Tay on a line running north-east from the eastern breakwater.

PLAN
Of
DUNDEE HARBOUR
Exhibiting the
PROPOSED IMPROVEMENTS
Surveyed under the direction
OF
JAMES JARDINE CIVIL ENGINEER.
1830



Jardine's Plan of 1830

Telford's plan of 1814



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He intended to create two new wet docks on the in-filled land, access to which was to be gained by a new tidal harbour at the eastern end of the reclaimed area. The land created between the new docks and the shore was to be used for housing whilst that on the river side of the docks was to be used for warehousing.

An Act was passed in 1830 and the management of the harbour was then passed in perpetuity to Dundee Harbour Trust. The year of the takeover by the Harbour Trust coincided with the ascendance to the throne of William IV after whom the eastern wet dock was named.

The Act gave the Trustees the power to extend the harbour to Carolina Port and to convert the tidal harbour into what became Earl Grey Dock. It also gave authority for the Trustees to construct the Eastern Dock and the patent slip, to install harbour railways and to extend Dock Street.

Now that they were in charge, the scale of Jardine's 1829 plan gave the Trustees some concern as to its financial viability. In 1830

Jardine prepared an amended plan that omitted the second wet dock but still comprised a massive area of reclaimed and infilled land. On this basis the construction of the walls required for the wet dock, later to be called Victoria Dock, were put in hand.

But the increasing size of ships using the Harbour meant that the old tidal harbour was of little utility and so in 1836 yet another plan was prepared. This proposed to completely enclose and extend the former tidal harbour, which was to be turned into another wet dock. This was later named the Earl Grey Dock. The works entailed also allowed for a creation of a new harbour specifically to accommodate the increasing number and size of the new steam ferries travelling between Dundee and north Fife. To the east of the wet dock envisaged in the 1830 plan two new wet docks were proposed, the first being later constructed as Camperdown Dock, the second never to be. A new road running alongside the extended land area was to be the Marine Parade that we know today, and from this it was suggested a new pier be built extending some 800 feet out into the river to reach Beacon Rock.

Perhaps the most significant thing about all these plans was the cavalier way in which they effectively cut off the whaling and fishing companies from access to the Tay. But if the owners of the eastern littoral zones of Dundee felt that the developers of the harbour had little regard for their rights, they had yet to experience the approach of the proponents of a new idea - the railway companies.

At the time of arrival of the railways, with a few prominent exceptions such as Reform Street and South Tay Street, Dundee was a city in which most of its major city centre streets had gradually evolved through time from tracks to commercial thoroughfares. But nearly all its planned streets such as St Andrew's Street, Castle Street, Crichton Street, Union Street, Commercial Street, Whitehall Street, Whitehall Crescent and Trades Lane were conceived to improve access to the port or, as in the case of Dock Street, to be an integral part of the harbour. Even the street levels over significant parts of the city centre have been determined by the need to protect the harbour from storm damage.

9



1793 ▲

▲ 1821

▲ 1836

Conclusions

The influence of the growth of Dundee Harbour upon the development of the city, and the form of its built environment, was truly significant and can still be seen throughout the town centre of today.

The port also had an important role to play in the improvement of the town centre, for it was to the harbour that the unattractive, but essential, buildings such as the slaughter houses and the leather processing works were removed. And as the town became built up and traffic increased it was to the quayside that the street markets and fairs were relocated.

The harbour not only facilitated the growth of the city's economy but was, with its associated industries, an integral part of that economy. Quite apart from the large numbers who sailed in its ships, thousands were employed in industries whose growth was linked with that of the harbour, such as timber yards, rope works, warehousing and shipbuilding. Many more found work in the processing of sugar, and of the whale oil brought by whalers sailing from Dundee. Connections with the wider world were almost wholly by water and that remained the case up to, and until, the arrival of the first railways in the town.



The Royal Arch 1960s



The Royal Arch c.1880



Unique Event in Dundee Harbour

On Monday 14th May 1945, more than a fortnight after VE Day, the Commander of the German U boat U-2326 together with his First Lieutenant formally surrendered his vessel to the Naval Officer in Charge at Dundee on board HMS Unicorn (at that time named HMS Cressy). This is the only known incident of a submarine surrendering to a sailing ship. The ceremony ended badly for the first Lieutenant as he managed to hit his head on the low beam over the door when leaving HMS Unicorn.

The submarine left Dundee the very next day and was subsequently handed over to the French Navy. It later went down in



The Town on the Wrong side of the Tracks

by Neale Elder

The railways on Dundee's waterfront

Dundee was one of the earliest places to witness the appearance of railways, long before most people could even have imagined the concept of a national system. The history of the early companies in and around the burgh has been well documented.

Less often discussed is the impact of these railways upon the local environment. The topography of Dundee meant the lines did not come to penetrate the industrial, commercial and residential areas to the extent found in other cities; but they made their mark in other ways. Nowhere was this effect more noticeable than along the northern shore of the Tay. Hand in hand with the expansion of the harbour, the railways transformed the waterfront - and not, in an aesthetic sense, for the better.

At the beginning of the nineteenth century, Dundee was still a compact seaport looking out across more than a mile of unbridged estuary. Its harbour lay immediately downstream of a headland known as St Nicholas' Craig; while to east and west the waters of the Tay swept in, forming broad bays at the foot of low cliffs or 'sea braes' (lending their name to today's west end district). By the end of the century all of the old shoreline had gone.

The first railway in town, the Dundee and Newtyle line, opened its harbour branch in 1837. Modest in scale, the single line ran from Ward Road station and down the middle of Lindsay Street, before dodging almost apologetically between the buildings of the Nethergate. Finally, it turned east along Yeaman Shore to reach its destination

at Earl Grey Dock. These unobtrusive qualities were not, however, shared by subsequent arrivals on the scene. In three distinct phases over thirty years, railway developments contributed to enormous change on the waterfront.

Phase I - the Dundee and Arbroath Railway

Arbroath is, in some ways, like Dundee in miniature. The town saw early industrialisation, particularly in textiles and engineering, contemporary with its larger neighbour. Unlike Dundee though, the inadequacy of Arbroath harbour could not be easily addressed. The benefit of a rail link to the expanding port of Dundee was just one of the reasons why the first Lord Panmure was so keen to promote it in 1835.



▲ The Opening of the Dundee and Arbroath Railway, 1838 by George M MacGillivray
Dundee City Council (Dundee's Art Galleries and Museums)

This enthusiasm was contagious in the local community, aided by the press of the day. The investors raised a capital sum of £100,000 with little difficulty. An Act of Parliament was passed on 19 May 1836, to allow construction of the Dundee and Arbroath Railway to start.

It is generally accepted that the Liverpool and Manchester Railway, which opened in 1825, was the principal enterprise that helped make the modern railway viable as a staple form of transport. That such enthusiasm was being demonstrated for this novel technology in our own district, just five years later, says a great deal about the entrepreneurship and foresight of the people involved.

But money - and the influence of the privileged few - were what talked. These were the days long before universal suffrage, before the existence of a planning system and consultations and all the other mechanisms we see as necessary evils in today's democracy. The route chosen for the Dundee and Arbroath Railway was to spell the beginning of the end for the amenity of Dundee's eastern waterfront. Any 'ordinary people' unhappy about this would

have been powerless. (One wonders what a Dundee Civic Trust of the day might have said!)

This route was, however, the obvious and economically sensible one. It kept construction costs down to some £6,000 per mile. Much of the line was to be built along the level coastal lands of Angus, which offered few engineering challenges. It required no tunnels, nor any sizeable viaducts and hardly any bridges.

Only in the three and a half miles between Broughty Ferry and Dundee were the engineers faced with significant obstacles. Hugging the foreshore from below Hare Craig, past the Stannergate and into Dundee, the new railway began to run out of land. This required a series of causeways and sea walls to be built across the shingle, sand and mud beaches of the Tay.

Construction of these formations slowed building work down considerably. When the line opened on 6 October 1838 its western terminus was not in Dundee, but on the lands of Craigie near today's 'Stannergate Circle'. By the following June the railway had reached a second temporary terminus at

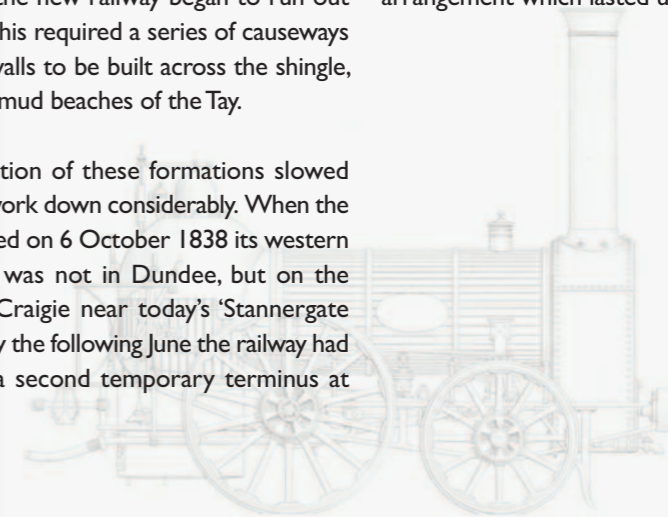
Roodyards; it was not until 1 April 1840 that it arrived in Dundee. The extremely basic Trades Lane station contrasted with the grandeur of the fine new custom house being built next door.

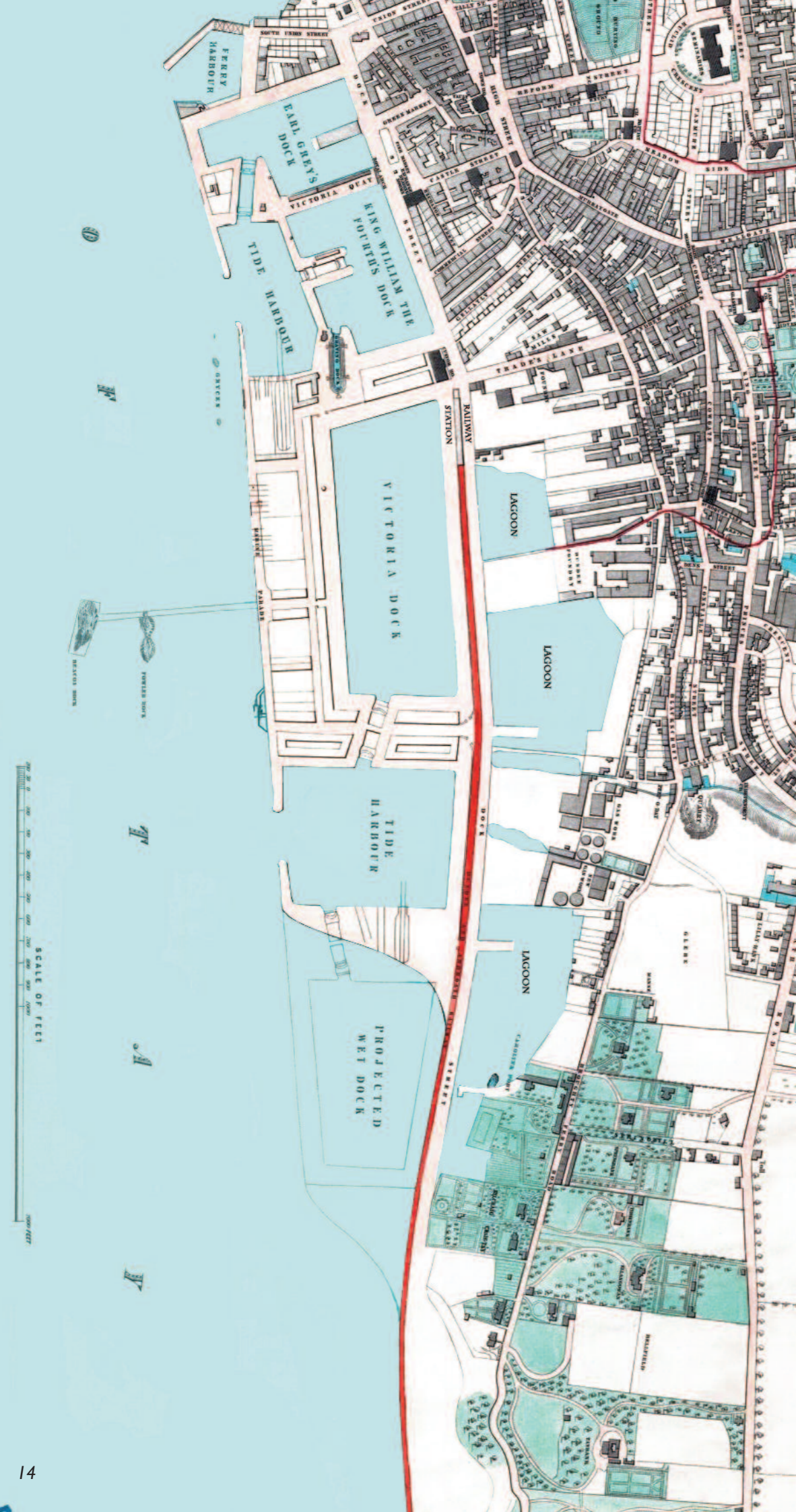
The last mile and a quarter was largely accommodated on the longest of the causeways. Its construction had been contested at an early stage by the Dundee Harbour Trustees, concerned about possible obstruction to expansion of the port. This opposition was short-lived; and, indeed, the 1836 Act was to provide that this portion of railway should fall under the harbour trust's ownership. Known as the Trades Lane and Carolina Port Railway, it was leased back to the Dundee and Arbroath company in an arrangement which lasted until 1907.



▲ This contemporary illustration is the only known picture of the Dundee and Arbroath Railway's Trades Lane terminus. It shows the station as it looked when opened in 1840, with a departing train heading out towards Broughty Ferry. In the background is the new Custom House and in the foreground is the old shoreline of the Tay, cut off by the railway causeway.

Fiercely criticised for its inadequate facilities, Trades Lane was replaced in December 1857 by a new terminus, immediately to the north. This became known as the East station and served for just over 101 years, closing in January 1959.





Charles Edward's harbour map of 1845 shows (in red) the course taken by the Dundee and Arbroath Railway along the eastern waterfront.

Note the position of Trades Lane station and the series of stagnant lagoons - soon infilled - which were trapped behind the railway causeway.



▲ Magdalen Green before the Dundee to Perth Railway attributed to George M MacGillivray. Dundee City Council (Dundee's Art Galleries and Museums)

Part of the causeway appears on late nineteenth century Ordnance Survey maps. It was protected on the river side by sloping masonry which presumably still exists, buried under subsequently reclaimed ground. This was largely submerged at high tide: on a stormy day the waves must have broken across the railway lines, much as they still do today at Craigmadoran on the Clyde.

In the vicinity of East Dock Street, today's eyes see a main line railway landlocked by the industrial landscape of the port. It takes considerable mental effort to imagine the pioneering Dundee and Arbroath line at the same location, threading the Tay mudflats as it approached the town.

The hopes of its investors were borne out by the immediate economic success of the Dundee and Arbroath Railway; but a great environmental price had been paid. The beaches below the Ferry Road, where the eastern sea braes dipped down to the river, were now trapped behind the rails on their low embankment. Robbed of the cleansing effects of the tides, once pleasant coves became stagnant and increasingly insanitary lagoons.

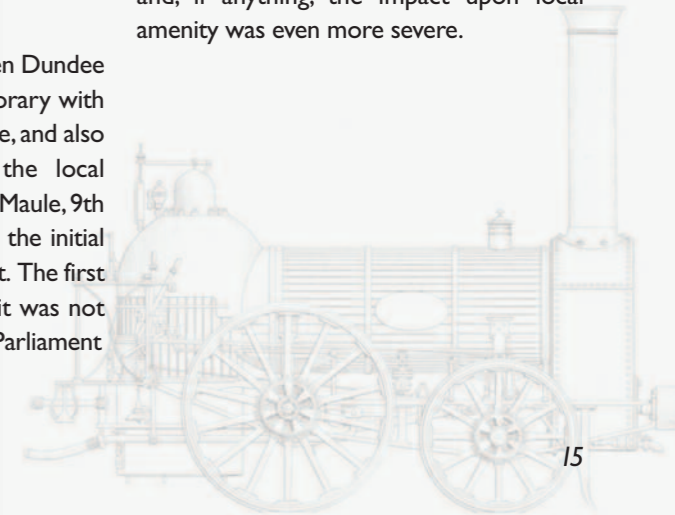
Maritime businesses along the old shoreline were also hit by the new railway, the severing of river access forcing some to relocate. One affected location was the small harbour of Carolina Port, which was in the vicinity of today's Market Street (today we think of the same place name as lying somewhat further east). In due course the growth of the industrial town completed the transformation of the eastern waterfront. The stagnant lagoons were infilled to make way for mineral yards, gas works and the cattle market, while the eastward expansion of the port eventually pushed the shore of the Tay far away from the old railway causeway.

Phase 2 - the Dundee and Perth Railway

Although talk of a railway between Dundee and Perth was roughly contemporary with the Dundee and Arbroath scheme, and also advocated by a member of the local aristocracy (George William Fox Maule, 9th Baron Kinnaird), it did not enjoy the initial success of its eastern counterpart. The first proposal failed to gain support; it was not until 31 July 1845 that an Act of Parliament

was passed for a railway linking Dundee with its rival burgh some 20 miles upstream.

Those promoting the new line had to negotiate a few obstacles before its eventual opening on 22 May 1847. As with the Dundee and Arbroath Railway, the chosen entry route was along the shore of the Tay. The alternative would have involved deviating northwards through the lands of Blackness, addressing significant gradients and other engineering obstacles. The terminus at South Union Street was therefore to lie at the end of yet another causeway. Just as access to the river had been severed by the Arbroath line to the east, the Perth railway likewise came to cut off the river frontages of many properties; and, if anything, the impact upon local amenity was even more severe.



Plan
 OF PART OF THE
TOWN OF DUNDEE
 Shewing the beach ground inside of
DOCK STREET
 and the
RAILWAY EMBANKMENTS
 1846.
 WILLIAM SCOTT ARCHITECT

This 1846 plan shows clearly how the railway cut off the river frontages creating lagoons which soon became stagnant.



▲ The first Tay Bridge

This is because the 'West End' of Dundee had already begun to develop. All the way from the town centre to Magdalen Yard, the north shore of the Tay had been colonised by exclusive residences. Owners' boats were moored beside their lower garden walls. In what might be described as 'proto-Nimbyism', this time opposition to the desecration of Dundee's waterfront was met. Magdalen Green, where the 'Radical Laird' George Kinloch is reputed to have addressed 10,000 people in 1832, had become established as a popular recreational and bathing area. The new railway would cut the Green off from the river.

As a concession to bathing interests, the railway company agreed to move the alignment of the line out into the Tay and install culverts to admit the incoming tide. This arrangement was not to stand the test of time. Construction of the railway causeway changed the tidal characteristics of the Tay at this location and rapidly destroyed the appeal of Magdalen Green as a bathing site. By the end of the century the tidal lagoon had been infilled and the Green found itself as a landlocked park.

Change elsewhere was rapid. The riverside dwellings of the new west end were left high and dry. Miln's Buildings, a handsome terrace of bow-fronted town houses in the Nethergate, found itself overlooking a muddy tidal pond which was soon infilled and replaced by a coal depot. The Georgian villas on what is now Roseangle were to become hemmed in behind engine sheds and mineral yards.

The Dundee and Perth Railway's first locomotive works were established at the Seabraes; while another former riverside location nearby, known as 'Rollo's Pier', later became the temporary site of a football ground on the reclaimed land. The waters of the Tay would lap against the causeway for only a few years before further reclamation intervened, preparing the ground for the last great phase of railway expansion.

Phase 3 - the Tay Bridge

Railways had arrived on the north coast of Fife in 1848, but remained separated from Dundee and Angus by the expanse of the Firth of Tay. Large harbours were constructed at Tayport (Ferry-Port-on-Craig) and Broughty Ferry, to accommodate

the train ferries which shuttled goods wagons across the river. The consequent industrialisation of the Tayport waterfront was, proportionately, almost as significant as what was happening in Dundee.

With construction starting in 1871 the first Tay Bridge was built, on behalf of the North British Railway, via a locally funded body known as the Tay Bridge Undertaking. There had been a great deal of debate regarding the location and landfall of the new bridge. Finally, the decision was made to cross the Tay between Wormit and a headland called Buckingham Point, east of Magdalen Green. As with the road bridge ninety years later, Dundee wanted a river crossing to claim for itself.

The works of the new bridge were contemporary with construction of a substantial stone sea wall, running west from Craig Pier and ultimately two miles long, which pushed this part of the waterfront still further out into the river. Behind this frontage, a broad tree-lined Esplanade (now Riverside Drive) was laid out; and this, in turn, enclosed the extensive new yards of the North British Railway.

The extent of reclamation was vast, much of the material coming from cutting excavation elsewhere on the railway system.

Near the point where the headland of St Nicholas' Craig had once jutted into the river, the low-level Tay Bridge station was squeezed into the available space before the lines dived into Dock Street tunnel. Emerging from the tunnel at its eastern end, the new railway rose steeply through a brick-walled cutting to connect with the Dundee and Arbroath line at Camperdown Junction. The north quay of the new Victoria Dock had to be moved southwards to accommodate this layout.

The opening of the Tay Bridge in 1878 represented an end to the major changes wrought by the development of the railway system. The appearance of the waterfront then remained fundamentally unaltered for over eighty years, although there was one last element of railway growth. The harbour had been rail-connected ever since the time of the Dundee and Newtyle Railway in 1837 and, as it expanded eastwards, an internal network grew. By the mid twentieth century the Dundee harbour rails had reached a total extent of some 14 miles.

Today's scene

Perhaps the Victorians felt some residual guilt over their destruction of the old recreational waterfront, and there is evidence they sought to create a new one. If John Prebble's work of creative nonfiction, *The High Girders*, is to be believed, there were once bathing huts along the Esplanade, smashed to matchwood on the night of the storm that destroyed the bridge. The Tay, in the event, had other ideas. Whatever bathing beach ever existed at this location was soon replaced by the shingle, mud and seaweed that today makes up the foreshore along Riverside Drive.

The new Seabraes bridge, built at a point that was once some 200 yards out into the Tay from the high water mark, provides an ideal vantage point from which the changes over two centuries may be surveyed. Like the tides of the river itself, the expanding railway industry rose to cover the reclaimed land with a mass of running lines, passenger and goods stations, mineral depots, locomotive sheds and signal boxes.

That tide has now receded; the view from the bridge takes in the much simplified track layout on the approaches to Dundee station, with the remains of the once extensive siding accommodation to the north. Dundee Science Centre and the

Greenmarket car park now stand where once the Dundee and Perth Railway ran on a causeway across the mud flats.

The job of re-beautifying this once industrialised part of the waterfront is now underway. (Judgment as to whether the Riverside Apartments make a useful contribution in this respect may perhaps be reserved for the day the development is complete!) As with the expansion of the harbour, the development of the railways was a vital element in the growing prosperity of Dundee during the nineteenth century. It is difficult, however, not to look wistfully across at the marooned Georgian villas of Roseangle and the landlocked Seabraes; and lament the price that had to be paid.

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Keeping It

And God said let there be light and there was light and God saw the light that it was good and divided the light from the darkness with the greater light of the sun to rule the day and the lesser light of the moon to rule the night (abridged)

The first book of Genesis includes this revelation of God's creation of natural light and darkness and spectacular sunrises and sunsets over the Tay provide regular reminders of this wonder which is reinforced by the meteorological claim that Dundee is the sunniest (and driest) place in Scotland. Peep O' Day Lane, which runs from Blackcroft/Broughty Ferry Road down to East Dock Street (coincidentally the west boundary of the future Gasworks), puts into simple local language the joy of daylight rendered in the local vernacular. The name derives from a mansion house, which once stood on this site and presumably was located to catch the first rays of sunrise over the mouth of the Tay. Surprisingly a recent trawl through the Trust publication - 'What's in a Name' - found that a second Peep O' Day exists on the west side of Bath Street, Broughty Ferry - this time a later Victorian house.

So while daylight is valued, what about the rest of the time when both sun and moon fail to provide adequate illumination? Around one million years ago, a primitive ancestor apparently found that fire provided heat and warmth as well as flame to provide some light in the dark caves. Indeed, following a viewing of the 1966 fantasy Hammer Film production *One Million Years BC*, experts agreed that the film provided reasonable representations of prehistoric fires, but no-one would confirm the authenticity of the fetching animal skin bikini worn by Raquel Welch.



Fast forward to around 200,000BC and the evolutionary triumph of Homo sapiens proved that those who adapted best survived and thrived. An inevitable population increase led to groups of our ancestors moving out of East Africa into Asia to the east and Europe to the north. During the Mesolithic period, after the retreat of the last ice sheets, the first of these migrating tribes began to arrive in Scotland, possibly reaching the mouth of the Tay around 4,000 BC. It is believed that Broughty Ferry or the Stannergate are the most likely early sites, with actual evidence of a kitchen midden discovered in the harbour area about 150 years ago. In view of Scotland's prevailing climatic conditions and the extreme seasonal variations of natural light in this latitude, it is just as well then that the newcomers brought their fire skills, as well as rudimentary torches and oil lamps.

Primitive oil lamps may have been produced as early as 70,000 BC, initially using animal fat soaked moss or similar material. Over the ensuing millennia a variety of organic vegetable, animal and eventually mineral oils and secretions were used - albeit still using a basic naked flame contained in myriad types of oil lamps, torches and candles, often in well-designed holders, although inevitably producing a poor standard of light by modern standards. Indeed viewers of the TV play 'Wolf Hall' have criticised the authentically dim interiors. This is despite the evident distribution of large numbers of candles - a reported BBC budget of £20,000 - in what were presumably affluent Tudor households. Curiously Dundee never established a designated candle maker craft,

Esplanade span of the second Tay Bridge, since altered. Courtesy of Network Rail





4500-3300 BC: The first manufactured red pottery oil lamps were created in the Chalcolithic Age and were of the round bowl type

although the affiliated manufacturing processes of soap and candles are confirmed by Soap-Work Lane and Candle Lane, located between the Seagate and Dock Street. Two lucrative workshops were

1850s it was America's 5th largest industry, with 753 ships out of 900 in the world. To put things into perspective, Dundee at its peak probably had about 20 whalers. By 1861 whaling was in rapid decline, mainly

capacity until 1910 and petered out in the 1950s, leaving the legacy of the strangely beautiful pink-red shale bings called the Three Sisters.

This enterprise is just another development from the Industrial Revolution, which itself is considered to be the material consequence of the Age of the Enlightenment. Innovative engineers like James Watt applied, in an efficient way, the discoveries of the ongoing Scientific Revolution, as exemplified in the earlier work of Isaac Newton. Dundee itself was proving to be an active and successful participant in such initiatives with its profitable factories and 'dark satanic mills'. Throughout Western Europe, experimentation and scientific research led to developments in the use of minerals such as coal for the production of steam power, coke, gas and eventually electricity. Scottish engineers such as gas pioneer William Murdoch (1754-1839) and local inventor and electrical/ telegraphic genius, John Bowman Lindsay (1799-1862), were significant figures in this period.

Coal gas lighting, a technology which was perfected during the Victorian period and subsequently used for about 150 years, was still basically the final refinement of the use of a controlled flame. In Dundee gas lighting

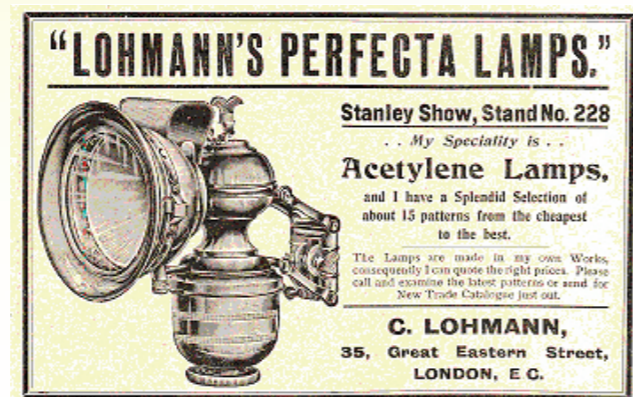


established there in the early 1800s by Joseph Sanderson of Dundee. The business disappeared in 1844, probably the result of the introduction of gas lighting and the widespread use of oil lamps.

due to the depletion of easily accessible whale stocks - shockingly 8,000 were killed in 1853 alone. Just as well then that in the 1860s the availability of large supplies of mineral oils was exploited.

Apparently Dundee's first recorded street lighting was provided by some 24 whale oil lamps "fixed at strategic points" in the town. Baltic Street, Baffin Street and East Whale Lane underline the importance of whaling and shipbuilding to Dundee, particularly in the 19th century when whale oil, in addition to its essential usages in Dundee's industrial processes, was for a time used as a fuel for domestic, industrial, commercial and of course street lighting. It may be a surprise to learn that Dundee's renowned whaling traditions and status, although significant, was dwarfed by that of the USA. In the

So in mid Victorian times the less pungent paraffin oils became widely used for lighting, replacing reliance on these diminishing stocks of whale oil. The world's first oil refinery was set up in West Lothian in 1851 by James Young, a Scottish chemist, whose company ended up selling oil and lamps all over the world. The resulting oil shale industry (an early form of fracking?) continued in full



A. Dunsire

made its entry as early as 1817, when a resourceful tinsmith used it to light his High Street shop. Gas lamps also appear to have been installed in the Seagate and in public roads around 1830. Gas was first supplied to the town in 1826 by the Dundee Gas Company, who had purchased ground at the aforementioned Peep o' Day Lane for the building of the new gasworks.

In 1846 another company emerged as a competitor and unfortunately this resulted in two sets of gas mains with dual supplies to some customers. Consequently supplies and payments became chaotic, with inevitable problems for the shareholders. Comparisons with any present day confusion and issues over charging and payments to the many energy suppliers may be appropriate. To resolve this, the two companies were ultimately consolidated into one by the Gas Commissioners who, in 1899, in order to meet increasing demands for gas supplies, approved the reconstruction and enlargement of the Dock Street development where the proximity to the

Dundee and Arbroath Railway allowed good access for the necessary supply of coal and other essentials.

Inevitably gas lighting was installed in Dundee's public buildings and basically provided only a supplement to natural light often provided by massive windows and glazed rooflights. According to the publication 'The Jubilee' of the Albert Institute 1867-1917, gas lighting was introduced there in 1867 and remained so until the Victoria Art Galleries were added in 1887, when 'electricity was coming into use as a substitute(sic) for gas'. Clearly suspicion of the novel system of illumination was still prevalent, although how effective gas lighting actually proved for illuminating the display cases of exhibits in the museum and the wall hung paintings in the galleries, as well as lighting the reference and lending book sections of the library, can only be a matter of conjecture.



Desperate Dan in the unlikely town of Cactusville. The service continued until the 1970s when North Sea gas replaced the redundant coal gas system and the last evidence of Dundee's coal-gas industry, the fine late Victorian metal gasometer, located on the north side of Dock Street, only disappeared around 1980.

Robert Louis Stevenson's poem 'The Lamplighter', although really about Victorian Edinburgh, gives a vivid picture of his memories of gas lighting. He also wrote a plea for gas lamps, preferring their use to that of the emerging electric light, which he considered 'that ugly blinding glare' and 'a lamp for a nightmare'. When he died on Samoa in 1894, it may be assumed that his tropical home was lit by oil lamps. Just as well then he was unaware of the imminent rise and triumph of electricity.



The works became fully operational in 1904, and by 1912 the use of gas increased and extended from lighting the city's streets, common stairs and some private houses (for heating and cooking) to serving the needs of commerce as well as Dundee's mills, factories and other workplaces. Dudley Watkins' delightful drawings are a reminder of these typical Dundee gas streetlights in various editions of The Broons, Oor Wullie and of course

Today for most people artificial lighting by naked flame is provided in the form of candles, which may be encountered as modest tea lights, Xmas gift packs (scented and coloured), for use on birthday cakes, in churches (for devotional and ceremonial purposes), on restaurant tables and in the home for all those unwelcome emergencies and power cuts when we could say in some desperation:

"Let there be light..."

Glassworks

by Jack Searle

The beginnings

Dundee Glass Works was built in 1788 on the north bank of the River Tay on arable land which was part of the estate of Craigie. The shareholders were mostly Dundee merchants and included the infamous Provost Alexander Riddoch. Other partners from Dundee were Thomas and Walter Wemyss, William and Ebenezer Anderson, John and Robert Jobson, John and Robert Duff and Thomas Webster. They were joined by James Paton, from Perth

Their motive in building the works was clearly to make money and they would have been encouraged to think that the manufacture of glass bottles might well be profitable given the then level of imports of wine into Dundee, which, in one three month period in 1789, reached the sum of £1,752. The volume of building in the city in the 1790s may well have raised similar hopes in respect of the making of window glass. A third consideration might have been that at that time imports into the city greatly exceeded exports. This meant that cargoes for export in outgoing ships might well be given favourable shipping rates.

Having acquired the land for the works, the Company began construction but in 1789, due to ignoring a right of access across the site, they found themselves mired in legal proceedings brought by James Guthrie of Craigie. Nevertheless work proceeded and two glasshouses were constructed, one to make bottle glass and one for window glass. Both employed the traditional conical shape

to create a strong draught for the furnaces, this being supplemented by underground flues.

The newly constructed Glass Works are clearly marked on William Crawford's Plan of 1793 showing the Town, Harbour and suburbs of Dundee. They occupy a site south of Broughty Ferry Road at what later became known as Carolina Port. They were also portrayed on a Dundee halfpenny issued in 1797 by John Pilmer, a grocer. From the evidence available the cones appeared to have a masonry base with a tiled or slated roof. Around the cones were a number of single and two storey buildings.

The lack of skilled labour that might have been seen as a big problem was overcome by the simple stratagem of poaching workers from other Glass Works in Scotland and the north east of England.

The works in operation

The Dundee Glass Works Company was initially very successful and by 1792 100 people were employed by the business. Another measure of the company's success was the export trade that it established. For example the Company established exports of quart bottles that rose from 658 gross in 1790 to 3010 gross in 1796. Pint bottles and one-and-a-half pint bottles were also exported to locations ranging from Londonderry to Dublin and from Copenhagen to Petersburg. Crown window glass was also exported to Dublin, Cork, Riga, Rotterdam and Petersburg.

As the works were located some distance from Dundee Harbour as it then was, transportation by sea both of raw materials and product was the most sensible method of moving its goods, the company decided to build its own harbour at the considerable cost of £44 sterling.

Despite this being a private venture the Burgh Council which had rights over river traffic decided to charge harbour dues for materials passing through Carolina Port. The Company appealed against this on the grounds that they had built the harbour at their own expense and had thereby established a new industry in Dundee to the benefit of the city's economy. Moreover, they pointed out no other glass works in Britain paid shore dues on their raw materials. The Burgh Council met in December 1790 and agreed that no more shore dues would be due, but that those already imposed would still require to be paid.

In 1794 the Scottish Excise board called in an English customs officer to help them check all of the Glass Works under their jurisdiction throughout Scotland, as it was suspected that considerable cheating was going on. Their report in 1794 confirmed their view that fraud was widespread and commented on the obstruction by the Glass Works and their lack of cooperation during the investigation. Dundee was singled out as the one notable exception to this and thus avoided being taken to court and fined.

Decline

The Dundee Glass Works, which had established export markets and survived for ten years closed in 1798, due in part to the burden of local taxes. However it seems clear from contemporary accounts that the detailed design of the works was less than ideal and was likely to have resulted in costly breaks in production at times. This almost certainly resulted in the non-fulfilment of some export orders which would have scarcely helped in the highly competitive market in which the works had to exist.

Other negative factors include the disruptive effects on North Sea traffic resulting from the war with France and the need to pay high wages for glass blowers. With only two pots it must have also been difficult to programme fulfilment of orders given the nature of glass making which

was inherently inflexible with its large pots of glass that had to be used in a continuous process.

Trade token Halfpenny, of John Pilmer, Dundee, Angus

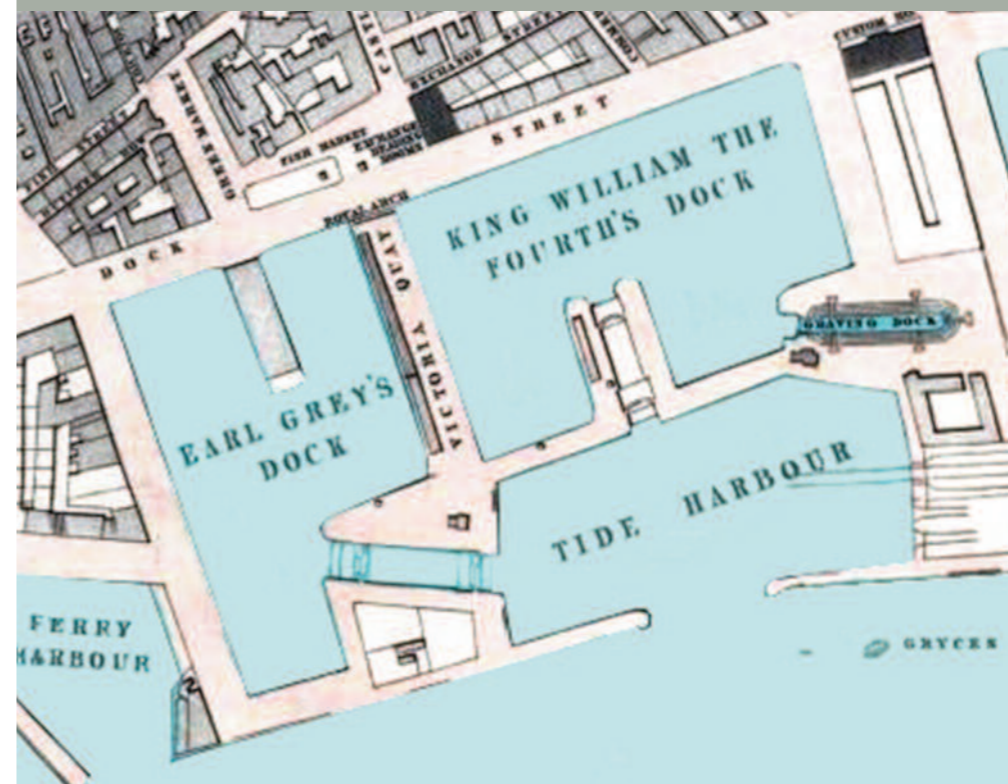
This is the reverse of a copper proof halfpenny trade token of John Pilmer of Dundee in Angus. Dated 1797, the token was designed by James Wright Junior and manufactured by Kempson.

The reverse depicts a view of Dundee's glassworks with the surrounding text, 'GLASSWORKS WEST CONE/FOUNDED 1788'.

John Pilmer, a grocer, issued ten hundredweight of tokens. Circulated locally, trade tokens could be used to buy goods or redeemed for regal coinage. They were also an ideal way for a company to advertise its wares.



You Know What Sailors Are



In 1830, after some years in operation, the first major dock built in Dundee harbour was dedicated to the newly crowned monarch, King William IV. In some ways this was entirely appropriate, for William had served in the Royal Navy in his youth and was popularly known as the Sailor King. But if the dedication was intended to give an air of respectability to the harbour then the choice of King William IV was less than ideal.

When he died in 1837 he had no surviving children from his wife Adelaide but he was survived by eight of the ten children he fathered by his mistress, the actress Dorothea Jordan, with whom he cohabited for 20 years. Thus it was that his niece Victoria succeeded him.

Dundonians Walk On Water

The plan below shows the current proposals for the Central Waterfront with the original shore line delineated on it.



Old Shoreline

R I V E R T A Y

Road Bridge

POWER to the People

by Jim Buist



▲ James Bowman Lindsay 1799 - 1862



▲ This map from the 1890s shows the Dundee Athletic Ground at Carolina Port

Houses and towns will, in a short time, be lighted by electricity instead of gas and heated by it instead of coal, and machinery will be wrought by it instead of steam.....James Bowman Lindsay

After nearly two centuries these challenging words from the 1830s are still rather surprising. What did Lindsay mean by “a short time” and was his subsequent transfer of interest from electricity to wireless/telegraphy an explanation for the apparent failure to meet his prediction - particularly in Dundee? Lindsay’s scientific contribution in Dundee included the demonstration in July 1835 of a ‘constant electric light’ at a public meeting. Although widely acknowledged, his claim was not patented and the failure to develop the device was to prove a personal loss to him

and also probably to Dundee, which otherwise might have enjoyed a future as a pioneering research/manufacturing centre in the up and coming Age of Electricity. Later Dundonians who showed some enterprise in the use of electricity included George Loudon, who in 1878 provided a working dynamo and lighting for part of the building works at the first Tay Bridge as well as to selected streets and some factories. In the following year, Balruddery House, near Liff, claimed to be lit by electricity. Unfortunately the house is now demolished.

The evident novelty of electricity in Dundee, even up to the eve of the First World War, is evident in two foundation stones on the south west corner of the Caird Hall, one of which is shown to the right.



Despite Lindsay’s bold claim some of you may recall examples of street and domestic lighting by coal gas persisting after the 2nd World War, and coal fires remained the sole source of space heating and hot water in many Dundee households in and beyond the 1950s. Dundee’s first electric street lamps were inaugurated in the city centre in 1893, although it was 1938 before any serious attempt was made to start phasing out gas street lighting - the last of these were turned off only about 35 years ago when they were finally replaced by electric lighting.

It was the 20th century before Lindsay’s prophesy really began in earnest for Dundee, as in the rest of Britain, and this was to be the Age of Electricity and the real Modern World. About this time the city was at its industrial and economic peak, seeking to demonstrate this with civic buildings and municipal services appropriate to such ambition. Even public transport within Dundee’s boundaries was seen as a pre-requisite of a major city, although initially from 1877 this was by horse and steam drawn trams which necessarily limited the available routes and distances to inner city areas only. The services were electrified and extended between 1899 and 1902, thus increasing demand

◀ Balruddery House near Liff



▲ The coal fired station at Carolina Port in its original form

for power. The tram service was maintained until October 1956, when the green and cream trams were finally withdrawn and replaced with diesel buses. The service was one of the smallest municipal systems in the UK, with only about 100 double decked trams in the 1930s reducing to only 55 in the post war period. Unexpected nostalgia for these trams was recently raised as a result of the somewhat compromised ‘success’ of the new Edinburgh tram system. This prompted the proposal for a Dundee initiative which inevitably has been received with minimal enthusiasm in the city.

Dundee Corporation, like other major British cities, had assumed responsibility for a public electricity supply in 1890, and in 1893 built the first power plant (now demolished and the site of the city

mortuary) at Dudhope Crescent, supplying power to the city centre. The increasing demands for electricity intensified the need to increase generating capacity and in 1904 the decision was taken to build a new coal fired station at Carolina Port. Carolina Port was at the east end of the main dock areas and appears to have been named in recognition of its thriving trade links with the USA. It is claimed that jute sacks were exported from there to the cotton plantations of the Southern States, so it was inevitable that the American Civil War of 1861-1865 adversely affected all such trading links.

From 1891 the site was a football ground which was ultimately occupied by Dundee FC until 1899, when the club moved to Dens Park. It seems that the location

presented problems for the football club, with a huge pile of shale nearby nicknamed the ‘burning mountain’ as well as the restrictions imposed by the adjacent working harbour. Perhaps surprisingly, one Home International fixture, between Scotland and Wales, was hosted there in 1896. However the presence of the adjacent railway system, with access to the necessary coal supplies, and to the Tay for cooling water must have made it a good choice for the site of the new power station.

The decision to proceed with the development was taken by Dundee Corporation in 1904, with the key role in the design of the innovative generating system awarded to Harry Richardson, the City Electrical and Tramway Engineer. Council minutes of the period show their complete confidence and trust in his ability to deliver such a challenging project. His initial duties and preliminary work comprised contacts with scientific consultants, technical experts, visits to existing working power stations as well as negotiations with manufacturers of specialist equipment and materials. In all he prepared six detailed design proposals, arranged six site investigations and provided cost studies. Although he was nominated the project leader, the necessary assistance of the City Architect’s team inevitably meant that a power struggle between departments developed which must have conditioned their working relationships.

Since there is no specific mention of any architectural involvement at the preliminary, yet critical, design stages one can speculate that any contacts would have been limited to a minor support role to the City Electrical Engineer. Harry Richardson conceived the development as a purely engineering facility whose function was to provide electricity economically and efficiently, and it can be presumed that he saw the building envelope only as a protective covering for the working components. However, despite his expressed preference for a cheap, lightweight, fast build, steel framed, corrugated iron clad building with a limited 15-20 year working life, the Council decided that a traditional masonry brick structure should be adopted. It is likely that James Thomson, City Architect, exercised his lobbying skills and no doubt he argued that such a novel building demanded an architectural image appropriate to the city's perceived prestige.

In fact three years after the work started on site in 1907 the Council minutes of 1910 gave remarkable comparative figures for both superstructure options, with the cost for the rejected lightweight superstructure

(approximate present day costs in brackets) reported as £15,000 (£750,000) compared to the £23,100 (£1,115,000) for Thomson's design. The final cost of the project was over £100,000 (£5,000,000), half of which was for electrical working plant, installations and equipment. Throughout the contract and the construction period there is evidence of professional friction between both parties, particularly in relation to programme delays and the relative disparity of responsibilities of both parties for the works in hand. It can be presumed therefore that the adoption of the Thomson design rather than the Richardson engineering proposal was always likely to be "the elephant in the room".

Following the building's opening on 24 February 1910 the ever increasing consumption of power in Dundee prompted Richardson to ask the Council in 1912 to extend the building, mentioning particularly the provision of lighting to schools and to common stairs. From 1914 until 1953 various extensions and improvements were successfully made to the building to meet continuing demands for electricity, and in this the building served Dundee very well. In 1948 the Hydro Board took over the coal burning Carolina Port

from Dundee Corporation and in 1960 decided to build a new oil-fired station on a site adjacent to the original building on what, fittingly, would be named Electric Street. This new facility would be named Carolina Port B and the original coal-fired plant Carolina Port A.

Carolina Port B, opened in 1965, basically adopted a lightweight metal clad superstructure akin to Richardson's original recommendation that was the model for most industrial buildings of this period. Although the original station, Carolina Port A, was converted to oil burning in 1971 the ongoing crude oil crisis required it to close down six years later and it was demolished in 1984. The same economic reasons required the new Carolina Port B Generating Station to be closed down in 1983 and it was subsequently demolished around 1986.

▼ Carolina Port A showing Carolina B under construction circa 1963



▲ Demolition of Carolina Port A



▲ Demolition of Carolina Port B

The Scottish Government is currently focussed on a total green energy plan as detailed in the paper titled 'Powering Ahead - Fast Track to an All Electric City' by the WSP international environmental group, who anticipate achieving this target by 2030. In fact this may be ambitious as official figures for 2014 indicate that all so named "green" technologies contributed only 7% of all electricity generated, so there evidently a bit to go.

Postscript

John Lindsay Bowman's prediction of an 'all-electric' house was in fact fulfilled, albeit controversially, by James Thomson the City Architect in 1922. It cost some £8,400 (£420,000) with £3,429 (£172,000) for equipment. Thomson's proposed tenancy of the house at an annual rent of only £100 (£5,000) proved unacceptable to the Council, and to avoid further scandal the house was sold as soon as the story broke for only £3,000 (£150,000). Despite this, James Thomson remained City Architect as well as Housing Director until his retirement in 1926.

The loss of local power generation only 30 years ago was ameliorated by the absorption of local grids into the national system, and its general availability is really taken for granted by consumers - just so long as it is available. Historically the negative aspects of power generation were ignored, although global warming considerations have made the means of power generation an issue which is still the subject of debate. Over time the fuels and systems used have ranged from dirty coal and crude oil (both as used in Dundee), to

nuclear fission and North Sea gas. Long established renewable energy systems such as hydro-electric systems, as well as the more recent wave, marine and wind generation systems, have been joined by the controversial bio-mass systems, although Forth Energy's proposal for the provision of such a process in Dundee Docks (in the area of the last oil burning station) now seems unlikely.

The Road And The Miles (1.4 actually) To Dundee

by Jim Buist

The transformation of the Waterfront is evidently progressing well and the widely approved removal of all the 70s and 80s buildings has opened up many of the vistas which were so comprehensively lost over the past 40 or so years. Citizens and visitors alike should experience and appreciate this improvement, although perhaps only after they have negotiated the still incomplete traffic arrangements. Inevitably such problems are still substantially determined by the significant traffic flow emanating from the Tay Road Bridge and the new traffic system should mitigate these issues.

thereby link the traffic flow to the Kingsway was rejected. Unsurprisingly if somewhat predictably then one could quote the 16th century proverb:

The road to hell is paved with good intentions

This decision required the infilling of the West Graving Dock, the Earl Grey Dock and King William Dock and apparently even more controversially the demolition of the historic stone Royal Arch better known in Dundee as the Victoria Arch. Originally this

was erected to commemorate the visit by Queen Victoria and Prince Albert in 1844. It was formed in timber and designed by James Leslie the harbour engineer, who also designed the Customs House building which was somewhat uncomfortably close to one of the original (now removed) bridge access ramps. This problem has been somewhat improved by the new approach ramps which will inevitably benefit the building when it is transformed into a new four star hotel.

This original monument was then replaced by the "permanent" sandstone edifice which was designed by John Rothead, the architect of the Wallace Monument, Stirling, at a cost of some £3,000. Fond memories of the doomed iconic arch still abound and are served by photographs and paintings as well as a cast bronze model which can be inspected at the east entrance to the Overgate. There is even a tenuous V&A connection since it was used symbolically by one of the unsuccessful entrants to this competition.



The Road Bridge was a key component of Dundee's modernisation programme of the 1950s. The decision on its siting was taken after a traffic census and the necessary civil engineering tests had been undertaken to identify the most appropriate place for the crossing. However it was widely believed that a key factor was the general political will to bring the new bridge straight into the heart of the city. An alternative proposal by the eminent engineer Ove Arup to locate the new road bridge at the Stannergate and



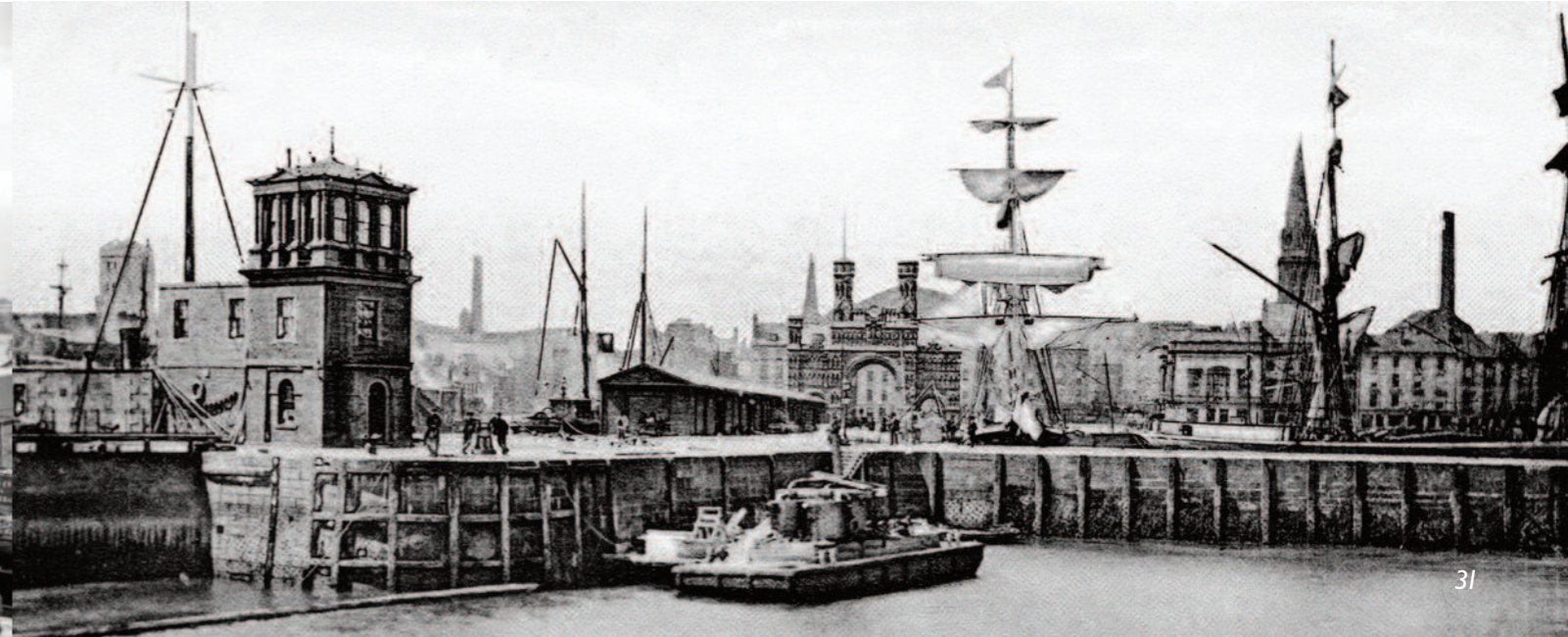
The plight of the arch has received renewed local interest, as evident from articles in late May when the Courier covered the destruction of the Royal Arch structure with various photographs, including one by Gordon Reid, then a Rockwell High pupil. This showed the scene of the destruction immediately after the explosion some 52 years ago and the apparent methods used would seem to confirm that virtually all of the finely carved material was rendered into rubble. As a result, nothing of significance could have been salvaged during recent civil engineering works in this area. What a sad sight, particularly when compared with an earlier photograph showing the monument in its full glory within a dock scene incorporating a fine fully rigged ship. It does seem a pity that

the dramatic and apparently dangerous dynamiting of this ill-fated monument was done to provide material for the foundations of the on-ramp to the new bridge, which of course has now been relocated.

Remarkably, according to *The Courier*, a proposal has been posted on the Dundee: City of Culture facebook showing the work of 13 year old Andrew Batchelor, who interestingly proposes a recreated Royal Arch daringly incorporated within the new traffic system. Surely further confirmation of the public interest and the potential for this piece of local lore?

The new road bridge took about 3.5 years to build at a cost of around £6 million (over

£150 million in present day money). Initially it was a toll bridge with motor cycles paying 5p (1 shilling), car owners 12.5p (2 shillings and 6d) and lorries 50p (10 shillings), rising eventually to 80p for cars, £1.40 for buses and £2 for lorries with motor cycles free. In February 2008 these tolls were scrapped. However, despite its evident merits, it has been acknowledged that bringing traffic directly into the heart of the city created considerable unforeseen problems. Clearly these are now being addressed in the ongoing Waterfront initiative and better road and pedestrian movements will be created with the added benefit of a cityscape more sensitive of Dundee's traditional maritime links and its undoubted civic ambitions.





Readers may recall that some years ago a Tay FM slogan competition for the Tay Road Bridge was abandoned after the majority of votes (hopefully these did not emanate from Perth) surprisingly were given to 'It's all downhill to Dundee'. Indeed this is factually correct as the bridge, which was opened by the late Queen Mother on 18 August 1966 and is one of the longest in Europe, does indeed slope gradually from the Fife side. While the efficient and functional box girder design does not raise it to the iconic stature of either of the existing Forth bridges, it has basically served the city of Dundee well for nearly 50 years. With the benefits of the Waterfront initiative it should continue to do this for the challenging years ahead.

You may be interested to learn that until recently it was possible to see a mark on an upper window sill above the Thai Restaurant in Dock Street and this apparently was the

engineer's setting out position for the new bridge. I also understood that the bridge's position was related to the war memorial on Dundee Law. For a traveller from Fife coming over the bridge, the view of the city and its backdrop determined by this alignment, is both impressive and memorable.

Guiseppe di Lampadusa's novel 'The Leopard', which is about revolution in 19th Century Sicily and the unification of Italy, had the old aristocrat Don Fabrizio declare that 'if we want things to stay as they are things will have to change'. In the case of Dundee I would suggest that in order to recapture its former cultural and commercial position - always fighting well above its weight - the city has had to accept that substantial change was necessary. The evidence of the work at the Waterfront to date gives grounds for such optimism and this was sustained by a

recent illustration showing the proposed revamp of the main central green space incorporating an attractive water feature adjacent to the V&A. All this is an exciting indication of what the new Waterfront could and should achieve and, we should not forget was primarily dependent on the drastic and costly tweaking of the vehicle links from the bridge to the city.

A final thought - as the former location of the Royal Arch seems to have been revealed, could the site be the subject of a design competition inviting ideas for a suitable contemporary expression of the spirit that inspired this original memorial and now perhaps the new Waterfront - for example, the provision of a gateway to the new open area and thence the V&A? The wonderful Water Kelpies project by Andy Scott at the entrance to the Forth & Clyde Canal Park shows how impressive public art can be and the £5 million cost for this imaginative and beautiful 30 metre high 300 tonne stainless steel construction has been justified by the ensuing worldwide interest. I am sure that such a challenge would be welcomed by both the artistic community and the public at large and after all surely the Lottery has been set up for projects like this? Indeed following the news in December 2014 that Dundee had been awarded the UK's first City of Design designation, it would seem appropriate that this should be permanently commemorated in some exciting and inspiring physical form and the competition would meet that challenge.



Political Secret Training

On 20 May 1942 the Russian General, Vyacheslav Molotov, landed at RAF Tealing in a TB7 four engined heavy bomber, on a secret military mission to see Churchill. He had breakfast in Dundee at the Royal Hotel in the High Street before boarding a special train at Taybridge Station that took him to London, where on 26 May he signed the Anglo Russian Friendship Treaty.

All this was meant to be done under a cloak of extreme secrecy but things did not go according to plan. Molotov's plane was delayed by weather conditions for some days. The shuttered train with Ivan Maisky, the Russian Ambassador, on board had to await his arrival in Taybridge Station.

Such things do not go unnoticed in Dundee and the cover of secrecy was well and truly blown. Lord Provost Garnet Wilson and the Town Clerk David Lane arrived at the train to welcome Maisky to Dundee. This brought about a change of plan and Maisky left for London, being later joined by Molotov who travelled there directly from Dundee after his breakfast in the Royal Hotel.

Petyakov Pe-8 (TB-7) Long-Range Strategic Heavy Bomber



Vyacheslav Molotov

Fifies On The Firth

by Neale Elder

Hark! What is that sound I hear? - It's the 'Fifie' duntin aff the pier!

The origins of this little couplet are unknown; but it has been recited many times in my family. No account of Dundee's waterfront could be considered complete without a reference to the Tay ferries: the 'Fifies' to Dundonians, although Fifers appear to have bestowed no equivalent sobriquet!

Like another great estuarial seaport, Liverpool, Dundee enjoyed a cross-river ferry service delivering travellers right into the heart of the city. The fondness of Liverpoolians and Wirral dwellers for the Mersey ferries has ensured the survival in service of the last three to be built: *Mountwood*, *Overchurch* and *Woodchurch*, albeit now renamed.

Sadly, Dundee cannot say the same for the last three Tay ferries - the *Scotsraig*, *Abercraig* and *B L Nairn* - so well recalled by those of a certain age, and which were withdrawn from the passage in 1966 with the opening of the Tay Road Bridge.

The Tay ferries had been owned by the Dundee Harbour Trustees since 1873, prior to which the service was in the hands of the Caledonian Railway and its predecessor, the Scottish Central. In fact, competition from the railway threatened the existence of the

ferry service until the growth of road traffic after World War I secured its survival. Paradoxically, this growth also created early calls for construction of a road bridge, which eventually was to spell the end for the 'Fifies'.

Over a span of 130 years from the arrival of the first steamer - the *PS Union* - in 1821, thirteen vessels were placed on passage between Dundee and Newport. Six of these were built in Dundee, three in Perth, one at Broughty Ferry and three on or about the Clyde. This last group included the first of two motor vessels, the *Abercraig*, which was launched in 1939 on the White Cart Water at the Paisley shipyard of Fleming and Ferguson.

MV *Abercraig* was equipped with the revolutionary German Voith-Schneider propulsion system, aiding manoeuvrability in comparison to the old paddle steamers. Unfortunately, she was placed in service immediately after the outbreak of World War II, which effectively cut off access to the manufacturer's technical support and spares. The propellers were to prove unreliable

during the war years, resulting in much 'down time' for *Abercraig*, while the venerable paddle steamers *Sir William High* and *B L Nairn* (dating back to 1924 and 1929 respectively) kept the service running.

Not that the paddle steamers were strangers to misfortune: in December 1948 *Sir William High*, which was yet to be fitted with radar, became lost in dense fog as she crossed from Newport on an evening sailing. The ferry approached the Dundee shore half a mile downstream of the landing place at Craig Pier and ran aground on the Fowler Rock. The Broughty Ferry lifeboat *Mona* was sent to the aid of seventy passengers, who were safely conveyed to the Camperdown sea lock (somewhat adrift of their intended destination!), but the vehicles on board had to wait until the ferry was refloated on the high tide in the early hours.



RNLB *Mona* (ON 775) 1935-1959 Photo: Courtesy of RNLI



Tay Road Bridge under construction and MV *Scotsraig*. Photo: Bob Kennedy

Sir William High was replaced, in 1951, by the Caledon-built MV *Scotsraig*. The last Tay ferry to be launched, she was of similar design to the *Abercraig*. Despite the wartime teething troubles with the Voith-Schneider propulsion, it was adopted again by the Trustees for the new vessel.

The scene was now set for the next fifteen years. The two 'Craigs' provided the regular service between Dundee and Newport-on-Tay; while *B L Nairn* was retained as the relief vessel, normally berthed in Earl Grey Dock.

Immediately before construction of the Tay Road Bridge, the ferries were operating to a well established timetable. Both regular vessels were usually berthed overnight at Craig Pier, with a half-hourly weekday

service frequency starting at 7am. In winter one of the boats was put to bed on its arrival from Newport on the 7pm sailing, leaving an hourly frequency for the rest of the evening; but in summer the half-hourly sailings were maintained up until the close of service. The last departure from Dundee to Newport was at 10pm, returning at 10.30.

While those who missed the last sailing might still have been able to catch a train to Newport as late as 11.20pm, the story is told of late-night revellers on occasions making their way back to Fife on foot across the rail bridge!

From the start of its construction in 1963, the Tay Road Bridge began to make its presence felt. At low water, the ferries had

to make a lengthy detour downriver to avoid the Middle Bank. As the temporary bridge advanced from the Dundee shore it progressively blocked the northern channel, the navigation spans being at the Fife end. For the last three years of operation, the ferry sailings were severely curtailed for some hours either side of low tide.

On 8 July 1964, in a freak summer gale, MV *Abercraig* lost power and was driven downstream to collide with the service gangway associated with construction of the road bridge, about 250 yards out from the Dundee side. In atrocious conditions, planks were laid by workmen to convey some thirty passengers - each equipped with a yellow life-jacket - on to the temporary bridge and safely to shore. It

was undoubtedly a memorable experience, although the *Courier* reported that one elderly lady thought she had arrived normally at Craig Pier and the whole episode was just part of the usual disembarkation routine!

◀ MV *Scotsraig*
December 1956

Photo: George Bett

PS *B L Nairn* (in service 1929-1966) ▼



145 years of powered ferry operation on the Firth of Tay came to an end, rather curiously and abruptly in midweek, on Thursday 18 August 1966. On this day HM Queen Elizabeth the Queen Mother formally opened the Tay Road Bridge. *Abercraig* and *Scotsraig* kept the scheduled ferry service going up until 6 pm, when the latter made three 'farewell' crossings of the Tay - Newport to Dundee and then a last return trip.

10,000 road vehicles flooded across the new bridge in the first six hours while the ferries, still bedecked with bunting after their final sailings, were laid up and later joined *B L Nairn* in Victoria Dock to await disposal.

It was some time before all three vessels were sold. First to go was the *B L Nairn*, in September 1967. Although there had been talk of preserving her, sadly the 38 year old paddle steamer was taken away to Blyth in Northumberland to be broken up. *Abercraig* and *Scotsraig* were sold for £15,000 to Pounds Shipowners and Shipbreakers Ltd in Portsmouth. They left the Tay for good in January 1968. By the seventies they had found their way to a new life as general purpose vessels in Malta.

▼ Tay Ferries Schedule Dundee Directory 1960

TAY FERRIES, Craig pier, South Union street—Capt. Woodhead, Supt.
 Summer sailings (from 1st May to 30th September).—Dundee to Newport, 7 a.m., thereafter half-hourly until 10 p.m. Newport to Dundee, 7.30 a.m., thereafter half-hourly until 10.30 p.m. Sundays.—Dundee to Newport, 10 a.m., thereafter hourly until 8 p.m., then 9.15 p.m. Newport to Dundee, 10.30 a.m., thereafter hourly until 8.30 p.m., then 9.45 p.m.
 Winter sailings (from 1st October to 30th April).—Dundee to Newport, 7 a.m., thereafter half hourly until 7 p.m., then 8 p.m., 9 p.m., 10 p.m. Newport to Dundee, 7.30 a.m., thereafter half-hourly until 7.30 p.m., then 8.30, 9.30, and 10.30 p.m. Sundays.—Dundee to Newport, 10 a.m., thereafter hourly until 7 p.m., then 8.15 p.m. Newport to Dundee, 10.30 a.m., thereafter hourly until 7.30 p.m., then 8.45 p.m.

Thirteen years after ceasing work on the Tay, *Scotsraig* was to be found at Anchor Bay on the Maltese north-west coast. Here her swansong was given on the set of Robert Altman's movie *Popeye*, starring Robin Williams and Shelley Duvall. Presented as a semi-sunken wreck which - as is later revealed - functions as a house of ill repute, her rusting superstructure displays a clearly recognisable outline in the film's opening scenes.

▼ PS *B L Nairn* undergoing maintenance on the patent slip at Dundee Harbour in March 1956.

Photo: George Bett



▲ *Popeye* (1980) Advertising material



▲ An amalgam of imagery from a current internet advert for Diving in Malta.

After filming was completed in mid-1980, she was stripped of her superstructure. Her hull was refloated to be towed out to sea where, some two kilometres offshore, it dropped to the bed of the Mediterranean. Accounts seem to vary as to whether this sinking was accidental or deliberate. Either way, the hull of MV *Scotsraig* is today known to rest upright on the sea bed at a depth of some 21 metres, where it has become a popular dive site and haven for marine wildlife.

Meanwhile, the *Abercraig* languished at her moorings on the other side of the island at Marsa harbour, attracting the attention of Dundonians on holiday. The ferry had been altered in appearance to provide greater deck space for the conveyance of freight, but was still recognisable. With her hull flooded and listing to starboard, she eventually presented a sorry sight. A campaign to save and return the vessel to Dundee was initiated in 1994, but it was too late.

Abercraig was broken up in situ the following year.

Twenty years have now passed since the last 'Fifie' was lost; and August 2016 will mark the fiftieth anniversary of their withdrawal from the Tay crossing. Inevitably, the memories will flicker and die with the eventual passing of the mid-20th century generation which still recalls them so fondly.

Postscript Bibliography

I have a particular interest in the old turntable ferries of the Western Highlands, of which only one survives in service - the MV *Glenachulish*, which operates summer sailings over Kyle Rhea between Glenelg and Skye.

In early 2012, this little vessel was used to provide an emergency service at Stromeferry on Loch Carron, a rock fall having blocked the bypass road. The sight of a turntable car ferry operating on the crossing - 42 years after the old service was withdrawn - was a most remarkable one, almost dreamlike!

Might we, one day, see ferries again shuttling across the Tay between Dundee and Newport?

...Never say 'never'!

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Whaling from Dundee

by Jack Searle

Although whaling has a history dating back to prehistoric times, the United Kingdom was not involved until some early attempts at whaling were made in the 1600s. However, whaling expeditions slowly grew in number and were mainly based on the

east coast, where whalers were to be found in the English harbours of London, Whitby, Hull, Grimsby, Newcastle, Yarmouth, Sunderland and South Shields. In Scotland, Dundee, along with Peterhead and Aberdeen were the ports mainly involved but other smaller ports, such as Montrose, Leith, Berwick and Kirkcaldy, also acted as bases for whaling.

By 1752 Dundee had its first whaler based in the city. This ship was appropriately named the *Dundee* and made trips to the Arctic in search of whales. This may have been related to the fact that in the mid 1700s the British government made available bounties for whaling which led to a great increase in the business. Nevertheless it

was well into the 1800s before Dundee became a major whaling port. The trade was initially conducted in sailing ships that were not able to cope with the ice, but Dundee came to specialise in stronger wooden hulled vessels that were better able to withstand the polar conditions.



A whalebone corset



The whalers sailed from Dundee for the Arctic in the spring of each year due to conditions in the arctic and the provisions of the bounty system. The early sailing ships had 6 whale boats in davits, each with a harpoon gun mounted on its bows. When leaving Dundee harbour the ships often had

to over-winter in the area, the native Greenlanders became guides and hunters. Eventually Eskimos visited Scotland aboard whaling ships and became familiar sights in Dundee.



Examples of Scrimshaw work

only a part crew of about 40 including a doctor. Additional crewmembers were picked up in the Shetlands. It was quite common for young men and boys to stow away in the hope of becoming whalers.

Although victuals were supplied by the ship's owners, all hands had to cook their own breakfast and supper, and to supply their own kettles and pans etc. The cook and his mate cooked the dinner and supplied hot water. Tinned meat, suet pudding and salt beef or salt pork were the crew's staple diet while on board.

Life on board whalers involved a lot of boring routine work interspersed by periods of intense activity and danger. Not surprisingly the sailors made their own amusements. The practice of carving whalebone and seals' teeth, known as scrimshaw, was a popular way of whiling away the time. When level ice or land was within reach football was another popular activity.

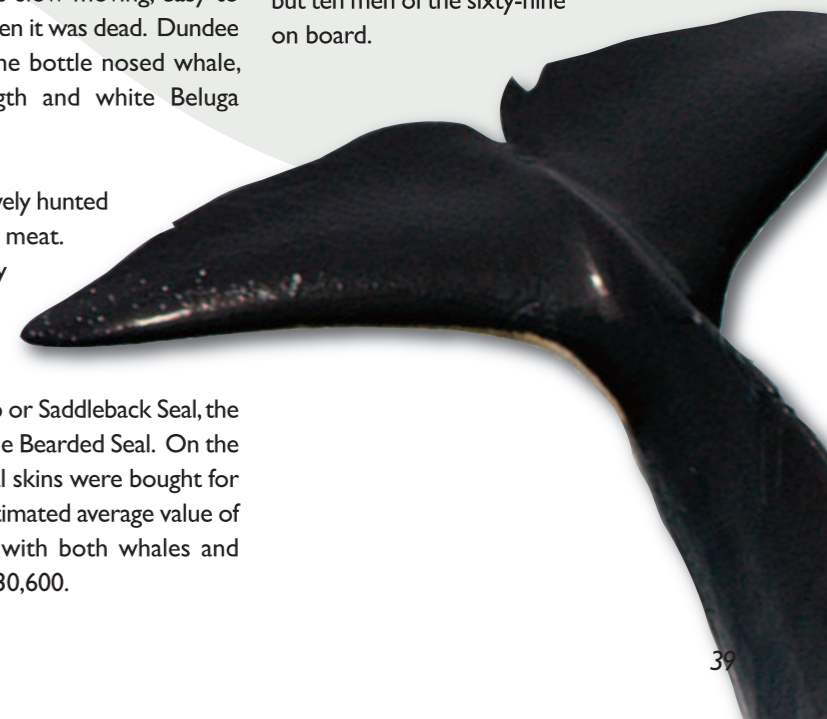
The Dundee whaling fleet met, befriended and bartered with communities of Inuit Eskimos. As time passed, and ships began

The Whales

The whaler's main target was the Right Whale (The Bowhead Whale) This was 65 feet long and weighed up to 100 tons. No other whale had such a mass of bone, making the Right Whale a prime target. Its heavy layer of fat, or blubber, was another valuable commodity when boiled to oil. Called the 'Right' whale to distinguish it from the wrong one to catch. It was also 'right' in that it was slow-moving, easy to hunt and floated when it was dead. Dundee ships also caught the bottle nosed whale, 13-16 feet in length and white Beluga whales.

Seals were also actively hunted for their fur and meat. The seals hunted by Dundee crews were known as hair seals, and comprised the Harp or Saddleback Seal, the Hooded Seal, and the Bearded Seal. On the Dundee market seal skins were bought for 4/6 each and the estimated average value of a catch for a ship with both whales and seals was around £30,600.

Most of the whaling took place in the waters of Baffin Bay. This was a dangerous area with giant icebergs and large areas of field ice. Ships could be stopped or trapped in the ice, sometimes having to use explosives to clear a channel. In 1819 fourteen British ships were lost and in 1830 nineteen vessels went down. In 1836 over 70 men were lost from two Dundee vessels. The following year a Dundee whaler, the *Advice*, was wrecked, losing all but ten men of the sixty-nine on board.



Losing fingers, toes, and limbs to frostbite was commonplace. The actual activity of catching the whales was even more dangerous, as men in small whaleboats, overturned by a harpooned whale, could drown in seconds in the freezing water. Even when the whale was caught danger was not absent, as the crew wielded axes and giant knives to flense, or remove the flesh of the whales. It was a bloody and oily business and to avoid slipping all involved wore spiked footwear.

Recession

The oil was initially used for lighting and when town gas became generally available it removed much of the market for whale oil. From a peak of over 160 UK vessels in 1815, barely 30 sailed in 1830. Yields dropped, companies failed, boiling yards closed and men were paid off. London abandoned whaling in 1835 and Leith in 1840. The once large Aberdeen fleet was cut to three vessels by 1839. Dundee was not immune from the recession, having three whaling companies put up for sale. Happily for the industry in Dundee, whale oil was also found to be essential for the softening of the fibres of the jute that had recently been introduced as a cheaper alternative to flax.



▲ Jute Warehouse at Dundee Docks

The men

Many of the whaling captains became celebrities in Dundee. One such was Captain Fairweather, a short, stout and vigorous man who was very superstitious. On Fridays he always ate red herring, whilst on the 13th of each month he always wore a blue ribbon. Captain William Fraser was altogether different, being only 5 feet in height. However he was a courageous man who had been both a harpooner and a boatswain. An arctic sailor of great experience, he was consulted by the polar explorer Amundsen and was later knighted by the King of Norway.

James MacIntosh, captain of the *Chieftain*, was another of these men. In 1892 he had to watch four comrades die one by one, he alone survived, but had both frostbitten legs removed on his return to Dundee. Nevertheless he went on to father ten children.

The arrival of steam

The Dundee Whaling fleet participated in arctic whale and seal hunting for longer than many others. A major factor was early introduction of steam power. This was first introduced to whalers in 1857 as a trial. Two years later the first custom-built steam whaler was in use by the Dundee fleet.

This was Captain James Fairweather's ship, the *Tay I* built by Alexander Stephen and Sons. She was the first of a series of whaling ships to be launched by the yard. The steam powered whalers with their sails & rigging looked very similar to the older sailing ships but for the addition of a conspicuous smokestack. It was found that the wooden vessels fared better in ice than the 'iron ships', and timber construction was used for whaling ships for many years..

Seals had been taken in increasing numbers since 1805 and the advent of steam driven ships enabled the Dundee owners to take advantage of the seal rich fishing grounds of the Newfoundland seas. Later in the 19th century, Dundee ships established a new pattern. This involved the western ocean passage being made earlier in the year and the sealing grounds taken in en-route to the whaling.

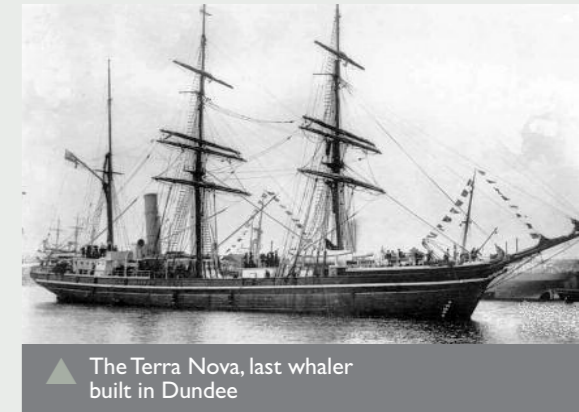
In 1861 Dundee had 8 steam ships, by 1867 there were 12 most of which undertook two voyages per year. The first trip was to the Greenland Sea near Jan Mayen Island, due north of the Orkneys, for the 'sealing'. The ships left Dundee in late February or early March, sailed via the Shetlands or the Orkneys and returned to Dundee in April/early May. After unloading the ship they again set sail on the second trip of the season - sailing to the Davis Straits for the whaling and returning to Dundee in late autumn.

Decline

As demand for the products of the industry diminished along with the number of whales, whaling went into decline and sealing became the more economically important activity. By 1857 Hull was the only English port still whaling and after the mid 1880's Dundee was the only remaining whaling port in the UK. Even in Dundee lost ships were not being replaced in the 1890s, the last whaler to be built being the *Terra Nova* in 1884.

The lack of whales in the north Atlantic was crucial and so on 6 September 1892, a Dundee whaling company decided to send four steam-powered whaling ships, the *Balaena*, *Active*, *Diana* and *Polar Star*, to the Weddell Sea in the Antarctic in search of Right Whales.

They found no whales they could harvest, as at the time, the Blue Whales of the Antarctic were too powerful to be captured. The expedition did however manage to make a profit by collecting a large number of seal pelts.



▲ The Terra Nova, last whaler built in Dundee

The final nail in the coffin of the Dundee whaling industry was that in 1913 the jute industry turned to mineral oil as it was considerably cheaper. With elimination of this market, Arctic whaling from Dundee came to a close in 1914, just before the outbreak of the Great War.



▼ Whalers in Dundee



The Eastward March of the Harbour

by Neale Elder

Jack Searle's article (page 4) leaves us at the point at which Dundee harbour had been modernised and transformed from a tidal haven to one which embraced the concept of the wet dock. Four such docks - Earl Grey, King William IV, Victoria and Camperdown - had been built by 1875. The harbour also boasted two graving docks and a patent slip with a lifting capacity of 400 tons.

The port progressively broke away from its compact form close to the old burgh and expanded downriver, responding to the rapid economic development of the Victorian years. There appears to have been no master plan: the proposals changed frequently; and even what was actually built sometimes ended up being swept away again in a short time.

The waterfront south of Victoria Dock was the site of shipbuilding yards; and it was here RRS *Discovery* was launched in 1901. Other yards were established east of the Camperdown dock gate. Economic pressures would, however, see the shipyards gradually forced to move downstream as the next phase of development took hold: the arrival of the riverside wharves.

The first of these, built towards the close of the nineteenth century, was Camperdown West - later abbreviated simply to Western - Wharf. The handling of ships' cargoes thus began to move from the quays of the impounded docks to the river frontage.

Further downstream, Eastern Wharf was started in 1890. It was subsequently extended using reinforced concrete: the first example of its kind in Scotland and the longest in the UK. King George V Wharf, similarly constructed, was built in stages between 1913 and 1930.

By the start of the twentieth century a vast amount of ground had been reclaimed from

the river. This created a new artificial waterfront all the way from the city centre to the headland, east of the Stannergate, where the old Ferry Road looped round by the shore before rising over Hare Craig.

In the name of Dundee's industrialisation, the environmental desecration of the once scenic north shore of the Tay was now, sadly, complete. The pretty Stannergate, with its fishermen's cottages set beside a shingle beach, became engulfed by a lunar landscape of spoil.

It took many years, however, before the use of this new land was settled. A cattle depot appeared at the Eastern Wharf, then disappeared almost as quickly. Downstream were some similarly short-lived coaling jetties. A fish dock was constructed nearby, to accommodate Dundee's small fleet of trawlers, and this lasted somewhat longer. The trawler fleet having disappeared in the 1950s, this dock survives today as the tidal basin where the Tay pilots are based.

Many of the early land uses were recreational. It is well known that Dundee FC played for several seasons at Carolina Port (this place name having, curiously, migrated about half a mile downriver from its original location). Other playing fields were established further east; but perhaps the most peculiar additions to the scene were the gents' and ladies' outdoor bathing ponds at the Stannergate.

The eastward march of the industrial city was to spell the end for this temporary recreational waterfront. The municipal

electricity generating station (as described in Jim Buist's article on page 26) was erected in 1910 near the site of Dundee FC's pitch. A new shipyard was built at the Stannergate for the Caledon Shipbuilding and Engineering Company, whose Craigie yard was eventually obliterated by the eastern extension of King George V Wharf.

The strategic significance of Dundee harbour was emphasised by the establishment of a seaplane base at the Stannergate, which served during both world wars. Part of the port was classified as HMS *Ambrose* during World War II, serving as a submarine base for the Poles and Free French, as well as the Royal Navy.

Just as the harbour's development had started near the centre of the old burgh and migrated downstream, so the progressive abandonment of the working port moved in a similar direction. By the inter-war years

few cargoes were being handled at Telford's western docks. The lock gates at King William IV Dock were abandoned and the dock was left to fill with silt, then its western side was infilled to become the site of the Empress Ballroom (remembered by a certain generation by its nickname, the 'Tonk').



Map overlay atop the current port aerial image highlighting the Victorian bathing ponds

The western docks were finally sacrificed for construction of the Tay Road Bridge landfall in the early 1960s. Their last remaining commercial activities - those of the Tay sand boats and the few remaining sprat fishers - were transferred to Camperdown Dock; but the most remarkable event from that time was undoubtedly the second and last sea voyage of HMS *Unicorn*, which had been berthed unobtrusively beside the south quay of Earl Grey Dock since 1873 and served as the quarters of Royal Naval Reserve, Tay Division.

Over two days in October 1962, some 20,000 spectators are estimated to have watched as the

old lady was prised away from the quay, turned through 180 degrees and towed downriver by two tugs to Camperdown Dock. Might it not have been possible to leave her where she was and infill the dock around her? Of course, such a settlement was inconceivable at the time (the Admiralty had actually wanted her broken up); but it

might have spared her preservationists a number of headaches in recent years!

The last of the wet docks, Victoria and Camperdown, continued to function as part of the working port but witnessed a decline in commercial activity. HMS *Unicorn*, of course, eventually came to rest in Victoria Dock, where she was joined in 1986 by RRS *Discovery*. The two ships shared the dock until 1992; and many voices argue this is the way it ought to have stayed!

The tradition of naming harbour installations after royalty continued with Queen Elizabeth Wharf in 1955, Princess Alexandra Wharf in 1974 and Prince Charles Wharf in 1979. While the last of these was new, the first two were redevelopments of existing facilities (parts of the Western and Eastern Wharves respectively).

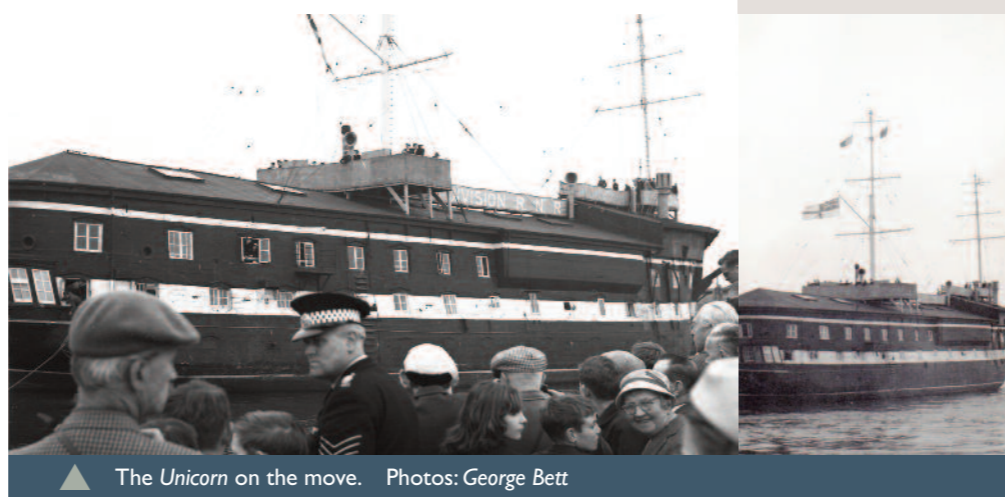
So it was that the riverside wharves had become the focus of activity at Dundee harbour by the seventies. The jute liners still docked with their cargoes of raw jute and semi-finished textile products. The Caledon yard continued to turn out ships which were completed at its two fitting-out wharves. During that decade, Dundee's contribution to the North Sea oil industry became evident as a small fleet of supply vessels was to be seen shuttling to and from the rigs

from the bases at Queen Elizabeth and Princess Alexandra Wharves.

All of this activity, along with the coastal tankers serving the Stannergate oil depot, has now gone. Now part of Forth Ports, Dundee harbour continues to evolve, however. Today much of the shipping is related to offshore renewable energy development; although it is also exciting to witness the arrival of a fine cruise liner to remind us that Dundee is, historically, one of Europe's great seaports.

What of the remaining parts of the old harbour today? Victoria Dock now forms the central water feature of the City Quay development. Camperdown Dock, part of which is still nominally part of the working port, has however been rendered inaccessible due to a defective dock gate. Meanwhile HMS *Unicorn* waits patiently to be rehoused, possibly in the enormous East Graving Dock.

And, beneath the rapidly changing surface of the central waterfront, the walls of the old western docks lie hidden. The evolution of the waterfront continues. In decades to come, they may yet see the light of day again.



▲ The *Unicorn* on the move. Photos: George Bett



Dundee's Front Line

right: PS Perth off Dundee 1834 ▶

far right: Board of Directors, 1881 ▶



▲ A horse drawn cart can be seen passing the original D P & L building in Shore Terrace. Photograph taken circa 1914.



▲ Model of the Dundee Wharf

▼ PS London in Earl Grey Dock 1839

The Dundee Perth & London Shipping Company, known to Dundonians as the DP&L, was founded in Dundee in 1826. It had a total of 23 sailing vessels voyaging to London, Glasgow and Liverpool and operated from offices in Shore Terrace, moving later to Dock Street.

In 1830 it acquired its first steam ship the wooden paddle tug, *Sir William Wallace*, and in 1834 began operating two wooden paddle steamers named *Dundee* and *Perth*.

In 1854 they took delivery of a propeller driven iron steamer, the *London*, its successor, a larger *London*, built in the Dundee yard of Gourlay Brothers proved to be one of the most successful vessels to fly the company flag, remaining with the fleet for 53 years and serving not only on the

London run but also to St. Petersburg. In 1857 she sailed there loaded mainly with machinery and cured fish, returning with a memorable cargo of flax, tallow, caviar, cranberries and hams!

In the late 19th century cabin ships with overnight accommodation were introduced and, as an example, the *Dundee* built in 1886 had berths for 65 first class and 60 second class passengers as well as 75 deck passengers. Such was the company's success that in 1901 it opened its own terminal at Dundee Wharf, Limehouse, London in 1901. During the war of 1914-18 many of the company's ships were requisitioned by the Royal Navy, primarily as armed boarding steamers and convoy escort vessels. Undoubtedly the most distinguished action was seen by the *Dundee* (the fifth of the name) in March 1917. As an armed boarding steamer attached to the 10th

Cruiser Squadron, she spotted a strange steamer off the Norwegian coast that turned out to be the armed German raider *Leopard*. Despite being heavily outgunned, the 'Dundee' kept the imposter at bay for nearly four hours before the latter was sunk by HMS *Achilles*.

In the interwar period company expansion saw routes opened to Lisbon, Seville, Antwerp and Barcelona. The majority of the cargoes carried south were locally manufactured goods of various sorts; jute products, popular magazines from D.C. Thomson, jams made by Keillers, printed stationery and postcards produced by Valentines, cases of whisky and sacks of seed potatoes brought down the river from Perth.

After the war the company became involved in the Great Lakes trade and this continued until 1962. The coastal home trade became increasingly difficult to operate profitably during the 1950's and 1960's. As a result, the company decided to terminate the liner service between Dundee and London and the last sailing took place in 1961. Gradually, as the remaining ships became older and inefficient, they were sold abroad.

In 1967 the *Kingennie* tied up in the Tyne after a voyage from Swansea and the company flag was run down for the last time. Dundee Wharf was sold in October, 1969. DP&L by this time had moved into other areas, such as business and leisure travel, in which it operates to the present day.

Dundee Wharf as it is today ▶



South African Connection

In October 1938 there was an unusual visitor to Dundee harbour - the *Maia Mercury* composite. Two seaplanes, one designed to be piggy-backed on the other.

The attempt on the long distance flight record began here in Dundee. The pair took off from the Tay on 6th October 1938. The *Maia* carried the smaller plane aloft in order to conserve fuel for the flight ahead. The *Mercury* was flown by Donald Bennett, who went on to set up the RAF's Pathfinder Unit in World War II.

After separating from the *Maia* he flew to Alexander Bay in South Africa, a distance of 6,045 miles, arriving on the 8th October. This remains the longest flight ever made by a seaplane.

In 1998 the 70th anniversary of the event was commemorated in Dundee by a ceremony attended by Donald Bennett's wife. It was also attended by a representative from Oranjemund, the town overlooking Alexander Bay. When asked what he liked best about Scotland he replied, 'The rain. It has not rained where I live for several years.'

Forthcoming Events

**Thursday
22 October 2015**
7.00pm
Dundee Art Society,
17 Roseangle

**Thursday
19 November
2015**
7.00pm
Dundee Arts Society,
17 Roseangle

**Thursday
21 January 2016**
7.00pm
Dundee Arts Society,
17 Roseangle

**Thursday
18 February 2016**
7.00pm
Dundee Arts Society,
17 Roseangle

**Thursday
17 March 2016**
7.00pm
Dundee Arts Society,
17 Roseangle

May 2016
Date to be finalised



Poor Relief in Dundee *Martin Allan*

Martin Allan is assistant archivist with Dundee City Archives. He takes us on a journey exploring the history of poor relief in Dundee from its origins in the 16th century, through the introduction of poorhouses in the nineteenth century to the final abolition of the old poor law system in 1948.

The Tay Wastewater Project: Building on a Victorian Legacy *Craig Carr*

Craig Carr, of Scottish Water and a member of the Trust, gives us an insight into the development of Dundee's Victorian sewers, how this infrastructure connects with the recent Tay Wastewater Project and how these 21st century assets will, in turn, support the development of the city and outlying areas.

Scotland's Year of Innovation, Architecture and Design *Willie Watt*

2016 is Scotland's Year of Innovation, Architecture and Design. As it begins Willie Watt, President of the Royal Incorporation of Architects in Scotland, gives us a preview of the programme - in which Dundee plays its part - highlighting the Festival of Architecture and other exciting elements.

The Demolition of the Past or the Removal of Decay? (The Loss of 'Iconic' Dundee Buildings c1850 to Present) *Kenneth Baxter*

(Joint meeting with Friends of Dundee Heritage Trust)

Kenneth Baxter works with Dundee University Archive Services and has a broad range of interests in matters of local history. His talk promises to be a thought provoking look at the fundamental changes in Dundee's built environment during the last two centuries, asking whether some of the lost buildings were really as 'iconic' as we assume.

Annual General Meeting, followed by: Coping with a Changing World: the Impacts of Climate Change *David Sigsworth*

David Sigsworth has had significant involvement in Scotland's environmental protection policy, until recently serving as Chairman of SEPA. His talk shall focus on the needs of communities in understanding the impacts of climate change, before taking a look at science learning and the work of Dundee Science Centre in this area.

Annual outing - A tour of the Caird Hall

The Caird Hall holds a special place in the hearts and memories of many Dundee people. The Civic Trust looks forward to a glimpse behind the scenes at one of the world's best orchestral concert halls, with its celebrated Harrison and Harrison organ.