

## Shipbuilding

Shipbuilding, the industry which came to define Sunderland, was well-established before 1700. Ships were built all around the port: at the Panns, on the sands of Monkwearmouth Shore, and at Pallion, though evidently no longer on the shore of Hendon. Ships were built at Hendon at least as early as 1346, and shipbuilding continued in Bishopwearmouth through the late-medieval period.<sup>1</sup>

The 17<sup>th</sup>-century shipyards were of modest size, located around the harbourside of Sunderland and Monkwearmouth. Some businesses from that time endured for many generations. One such was that of Robert Nicholson, who in 1647 had inherited a thriving Panns shipyard from his master, William Huntley. Probate inventories reveal 17<sup>th</sup>-century shipbuilders and boatwrights to have been a prosperous group, owners of good quality houses, usually alongside their yards, valuable stocks of timber, and shares in shipping.<sup>2</sup>

Sunderland port books offer a snapshot of the Wear coal fleet in 1720. Most locally-built ships then noted were of over 30 chaldrons' (80 tons) capacity, while a substantial minority carried over 60 chaldrons. About 61 ships are identified, and 103 loadings recorded: 68 loads of 31 to 59 chaldrons, and 15 of 60 or more. Only two ships were loaded with more than 80 chaldrons (212 tons). The average loading was 42.45 (112 tons), slightly higher than that of 15 Stockton-built ships surveyed (39.3 chaldrons or 104 tons).<sup>3</sup>

Other evidence of the trade before 1786, when the registration of ships became compulsory, is fragmentary.<sup>4</sup> Thomas Raughton's ship the *Ouston*, 'about nine months old, burden 200 ton or thereabouts, well found; now lying in Sunderland Harbour' was offered for sale by his widow Elizabeth, of Monkwearmouth, in 1711.<sup>5</sup> Other Sunderland-built vessels featuring in the regional press included the 180-ton *Malton Galley*, in 1741, 'fit for the coal trade, free from worm', which carried six guns; and a brigantine of 100 tons offered for sale by Robert Nicholson in 1744, 'only two years old'.<sup>6</sup> Improvements to the Wear, this 'hitherto so much despised small river', made possible the launch of a medium-sized ship, of 140 tons, in 1761 at Hylton, built by William Booth of Monkwearmouth.<sup>7</sup> Lloyd's Register of 1776 listed 63 Sunderland-built vessels, totaling more than 12,000 tons. Yet this was a sixth the size of shipping built in Whitby, one of 10 centres which exceeded Wearside in output. There was no hint then that Sunderland would rise to such prominence in the industry.<sup>8</sup>

The register produced by customs officials in 1786 lists 162 Sunderland-built ships still active in the port. Half (79 ships) were less than seven years old, though eight had been built before 1750. The average tonnage was 161: for those built before 1760, it was 129; after 1780, 170 tons. Many shipbuilders kept a long-term interest in their vessels, usually through shared ownership.<sup>9</sup> The largest vessel built in Sunderland in the 18<sup>th</sup> century was the *Lord Duncan*, in length, 163 ft 8 in., breadth 39 feet, and of 925 tons. She was launched from Southwick quay in 1798, after excavations to deepen the river there. Many of the thousands of spectators on the

south side were 'ingulphed to the middle by the rising of the water on receiving this ponderous body'.<sup>10</sup>

The foundations of Sunderland's extraordinary success were laid during the Napoleonic Wars. By 1804-5, Wearside output was second only to that of the Tyne. In 1816 Surtees had no doubt that 'in ship-building the port of Sunderland stands at present the highest of any in the United Kingdom', with 20 shipyards, four dry docks and four floating docks, and also five boat-builders' houses and yards, three on the south side of the harbour, and two on the north. Garbutt in 1819 noted on average 'from 30 to 40 vessels of various dimensions' constantly in progress. The annual output was higher, having peaked in 1815 at 87 vessels, their aggregate gross tonnage over 15,000.<sup>11</sup> Long-term growth through the 19<sup>th</sup> century was spectacular, but year on year the industry's fortunes fluctuated wildly, in volume and value of production. In wartime, 1814, a new collier cost £14 4s a ton; this had fallen to about £13 in 1825, and £9 in 1833, carpenters bearing some of the brunt as their wages dropped from 4s 6d a day in 1814, to 4s in 1833. Competition was keen, as nine shipyards at work in 1798 became 15 in 1815, and 34 in 1833. Entry into business was relatively easy for a shipwright, even without much capital, for timber could be had on nine months' credit. During a boom in 1835-6, the Ecclesiastical Commissioners and others made riverside properties available, so that by 1840 there were said to be 65 yards on the Wear, as far upstream as Hylton, Fatfield and Coxgreen. After years of exceptional profit, many of these stood idle during the ensuing slump in the early 1840s. The number of shipyards appears to have peaked in the mid 1850s, at 74, and declined steeply thereafter, into the high teens by the 1870s.<sup>12</sup>

The falling number of companies reflected not only a precarious trade, but significant technical innovations which changed the nature of the industry. In 1852, the first iron-clad collier was launched on the Wear. Increasingly, steam-power, which was not new but had not been much used to propel ships, was introduced. Boiler-makers, rather than ships' carpenters, built iron ships; and a new industry, marine engineering, grew alongside the shipyards.<sup>13</sup> There was a long overlap between wooden and iron ships, and in fact James Laing in 1857 launched the largest wooden ship ever built on the Wear, the Duncan Dunbar, 1,378 tons. There were then still 71 builders of wooden ships on the Wear. But 1856 was the last year in which wooden ship-building exceeded 60,000 tons, and by 1868 it was effectively finished. During these decades, the 1840s and 1850s, many long-established businesses folded, and names such as Nicholson and Reay disappeared, fallen victim to economic circumstances, or unable to meet new technical demands.<sup>14</sup>

Laing's was the oldest established business to survive into the modern era, having started in 1793 at Monkwearmouth, moving later to Deptford. James Laing (1823-1901), who succeeded his father as head of the firm in 1843, was a man of great vision and ability. He was among the first on the Wear to make the transition to iron ships, specialising in passenger clippers and steamers. Laings began to make oil tankers in the 1890s, and later passenger liners.<sup>15</sup>

But many of the iconic 20<sup>th</sup>-century companies traced their origins to later phases, in the late 1830s and around 1850, while it was still possible for energetic young men to succeed with a modest capital. George Bartram, an orphan, had been apprenticed as a ship carpenter at the age of 11, in 1812, to William and John Gales, shipbuilders, of Hylton Ferry. After managing Dryden's yard at Biddick, Bartram in partnership with John Lister established a yard at Hylton, launching their first vessel in 1838. In 18 years, Bartram and Lister completed about 40 ships, only one of which exceeded 400 tons. Under George Bartram's son, Robert Appleby, the business escaped the restrictions of the Hylton site and relocated to the South Dock in 1871, as Bartram, Haswell & Co. Their first iron steamer was launched from the new yard in 1872.<sup>16</sup>

William Doxford, after bankruptcy in 1841, returned in 1845 in partnership with Crown, building small sailing ships at Coxgreen. Doxford moved to Pallion Yard in 1857 and earned renown as a shipbuilder and, from 1878, marine engineer. By 1911, the site covered 33 acres, with a third of a mile of river frontage. Doxford twice (in 1905 and 1907) produced the largest annual tonnage of British shipbuilders.<sup>17</sup>

William Pickersgill (1823-80), an apprentice of Laing, founded a yard at Southwick in about 1851 which produced 46 wooden ships, including the last built on the Wear, *Coppername*, in 1880. That same year, while converting the yard to make iron ships, Pickersgill was killed in an accident. He was succeeded by his eldest son William (1847-1936), who was able to sustain the business through the depression of 1885-7, by the end of the 1880s following the Clyde shipyards into steel construction. Pickersgill's iron clippers and steel barques were among the fastest in the world. The *Andhorina* (3400 tons) was the largest sailing ship ever built on the Wear, and the company also launched the last tall ship built on the Wear, the *Marguerita*, in 1893. Later they specialised in cargo steamers.<sup>18</sup>

Short Bros. Ltd., shipbuilders and repairers specialising in cargo vessels, was established in 1849 or 1850 by George Short at Mowbray Quay, moving after Short's death in 1863 to Pallion.<sup>19</sup> Short, like J.L. Thompson, was a late entrant to iron shipbuilding, in 1871.<sup>20</sup> Joseph L. Thompson had been apprentice of John Storey, a prosperous Monkwearmouth shipowner, rope- and & sail-maker, and shipbuilder at Sand Point. While Storey fell on hard times, his former trainee started out in business in 1846, making wooden vessels near the river mouth. In 1871 he made his first iron ship; by 1890, when Thompson's three sons had inherited the business, J.L. Thompson and Sons occupied the entire North Sands, and 15 times between 1885 and 1902 headed the annual output of tonnage on the Wear.<sup>21</sup> In 1875 the whole of Monkwearmouth Shore had been demolished to accommodate iron shipyards, those of Thompson, and Crown at Strand slipway. Peter Austin moved from North Sands and Southwick in c. 1846, to Panns slipway.<sup>22</sup>

William Pile also worked on the North Sands, a noted wooden shipbuilder and among the first to build in iron, but evidently a poor businessman. He died insolvent in 1873. His cousin George Burton Hunter trained under him, and later managed the yard until its failure. Hunter then formed an advantageous partnership with S.P.

Austin, before moving to Tyneside in 1879, where he became managing partner in a new shipyard at Wallsend, C. S. Swan and Hunter.<sup>23</sup>

John Candlish, later M.P. for Sunderland, was a wooden shipbuilder who did not succeed in converting to iron ships. His Southwick premises were bought by Robert Thompson & Sons, c. 1855.<sup>24</sup>

John Priestman, Pickersgill's former draughtsman, was a late entrant to Wearside shipbuilding in 1882, his company at Southwick later trading as Sir John Priestman & Co.<sup>25</sup> The industry was undergoing a severe slump in the 1880s, though the Wearside shipbuilders were at that time making a very rapid transition into steel ships, the changeover virtually complete by 1888.<sup>26</sup>

When Thomas Linton in 1863 walked from the North Dock to Hylton, and back to the South Dock, he listed 63 ship-builders, including 15 at Pallion and Deptford, 10 at Southwick, and 16 around Hylton. By the turn of the century, 13 yards survived, launching between 60 and 90 ships of an average 3,000 tons. In the peak year of 1906, 366,000 tons were launched, and the industry, including its suppliers, accounted for perhaps 30 to 40% of the male labour force, about 12,500 in the yards themselves, and up to 20,000 men in total.<sup>27</sup> The shipbuilders clustered around the docks and lower reaches of the river, with four major engine works – North East Marine Engine Works on the dock, George Clark at Southwick, Dickinson next to the Manor fitting-out quay of J.L. Thompson, Scotia Engine Works on Low Street – on the riverside, and numerous forges and foundries around the town. At Hylton, the best-known of the yards, Osbourne, Graham & Co., built iron ships from 1871, though their size was limited by the width of the river. Osbourne's four-berth yard supplied the Admiralty before and during the First World War. Their last ship, in 1925, and the last launched at Hylton, was a collier.<sup>28</sup>

The 20<sup>th</sup>-century industry experienced extreme highs and lows. Only two years after the peak, in 1908 tonnage fell to 92,000. In three years leading up to war, a million tons launched into the Wear. Output during the war fell, with skilled workers drafted into the army and navy. Their female replacements were highly effective, and production reached 268,000 tons in 1918. During the years of war there were built 87 merchant vessels, 32 wartime merchant ships, 35 cargo steamers, 20 colliers and 14 tankers. The women lost their jobs as soon as the war was won.<sup>29</sup>

After war came depression. The surviving shipbuilders – some, like the Sunderland Shipbuilding Co. Ltd of South Dock, in 1926, had already gone out of business, and others including Priestman would follow<sup>30</sup> – were hardest hit in the 1930s. The nadir, 1932, saw just two small colliers launched on the river, by S.P. Austin. The turnaround came again with a run-up to war, the industry reviving from 1936. During the Second World War, Sunderland built 27% of U.K. merchant ships, and reached its highest ever level of production in 1942, 375,000 tons, a figure which excluded naval vessels built on the Wear. Of the 1.5 million tons launched during the war, Doxford was responsible for half a million, 75 ships in total. J.L. Thompson had

meanwhile developed a significant new design, the prototype of the American Liberty Ship standard cargo vessel.<sup>31</sup>

The peak postwar year on Wearside was 1958, when the tonnage was 268,000, still far from the 1906 figure. The period brought a series of mergers, driven by the need to modernise to accommodate larger construction, under the threat of overseas competition. Austin and Pickersgill joined forces in 1954. J.L. Thompson, already the owner of Crown, combined with Laing and the Sunderland Shipbuilding and Engineering Co. that same year, and then amalgamated with Doxford in 1961. The new group, Doxford and Sunderland Shipbuilding and Engineering Co., was taken over by the Court Line in 1972, to become Sunderland Shipbuilders Ltd. Short's yard at Pallion closed in 1964 as it lacked the resources to expand into larger general cargo vessels.<sup>32</sup>

A government report by Geddes recommended in 1966 that the Wear yards merge into one concern with reduced capacity. The proposal was rejected by Austin and Pickersgill, which had invested £3.5 million in modernising Pickersgill's yard in the mid-60s to produce the SD14, a 14,000-ton standard design cargo ship replacing the Liberty. The SD14 proved exceptionally successful, the first launching in 1967. The Southwick yard turned out one every 52 days, and the company produced in all 211 vessels, most on the Wear. Austin and Pickersgill collaborated closely with Bartram on several fronts, including ship engine installation, and the companies combined formally in 1968. Austin's also made standardised bulk carriers, and won Queen's Awards for exports in 1970 and 1974, and for industry in 1986.<sup>33</sup>

The two remaining shipbuilders upgraded further in the 1970s, Sunderland Shipbuilders developing a covered yard at Pallion from 1973, and Austin and Pickersgill receiving £30m. of investment in 1977, making them one of the most modern yards in Europe. Wearside produced SD14s, bulk carriers and passenger ferries in the 1970s and early 1980s. But Court Line, a shipping line and travel business, went into liquidation, resulting in nationalisation of the whole of Sunderland shipbuilding as British Shipbuilders. With modern facilities, reasonably healthy order books and much-improved industrial relations, there was optimism for the industry. But the government in 1987 embarked on a policy of privatisation, and in selling Govan yards ahead of those on Wearside, entered a secret agreement that meant Sunderland shipbuilding must cease. Austin and Pickersgill was the last shipyard to close, in 1989, marking the end of more than 600 years of making ships on the Wear.<sup>34</sup>

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<sup>1</sup> Durham VCH, ii, 302-8; *Origins*, 161-3; *BAC*, 12; **ref to Corder** 2 vols on shipbuilders; Clay etc on Rain, 18-19; C.M. Fraser, ed., *Durham Quarter Session Rolls, 1471-1625* (Surtees Society, 199) (1991), 194; additional research for this section by Peter Rushton.

<sup>2</sup> Summers, 41, 276, 78; DPRI//1647/H10/1, 2; TNA, Prob/11/285; DPRI/1/1661/K1/2-6; DPRI/1/1662/G12/1; DPRI/1/173/B19/1-2; DPRI/1/1678/H5/1; DPRI/1/1678/C13/1; DPRI/1/1689/G4/1; *Origins*, 161-2; *BAC*, 41.

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<sup>3</sup> TNA, E 190/224/6, supplemented by 224/8; additional research on 18<sup>th</sup>-century shipbuilding was contributed by Peter Rushton.

<sup>4</sup> 26 Geo. III c.60.

<sup>5</sup> *Newc. Courant*, 24 Dec. 1711.

<sup>6</sup> *Newc. Courant*, 31 Oct. 1741; 15 Dec. 1744.

<sup>7</sup> *Newc. Courant*, 31 Jan. 1761.

<sup>8</sup> J.F. Clarke, 'Ship-building, 1780-1914', in *RTP*, 33.

<sup>9</sup> TWAS, EX/SU/1/1

<sup>10</sup> Garbutt 405-6; Surtees 17-18

<sup>11</sup> Clarke, 'Ship-building', 33; Surtees Sund 15-17; Garbutt 405; C.A. Lewis, 'The Shipbuilders of Southwick' (unpub. ms., 1998, in Sund. Antiq. Soc. collection), 134; BAC; Northumbs RO, ZMI/B8/VII/8; Rain; TWAS, EX/SU/1/1; 202/614/15; Durham Chapter Lib., Sharp 2, 262, 264.

<sup>12</sup> T. Potts, 100-11; Lewis, 'Ship-builders of Southwick', 135-7; T. McLean, 'Contract accounting and costing in the Sunderland shipbuilding industry, 1818-1917', *Accounting, Business & Financial Hist.*, 5:1 (1995), 109-46; Simon Ville, 'Rise to Pre-Eminence: The Development and Growth of the Sunderland Shipbuilding Industry, 1800-50', *International Jnl of Maritime Hist.*, 1 (1) (1989), 65-86.

<sup>13</sup> T. Potts, 116-17; Clark, 36-7, 40-1.

<sup>14</sup> T. Potts, 118, 125; Clark, 34-5

<sup>15</sup> 'Sir James Laing', DNB; Clark, 37, 42; T&WA, DS.LG; Proc. IME, 637-8 (Visit to the Works - 1902); VCH, 304; J.W. Smith and T.S. Holden, *Where Ships are Born: Sunderland 1346-1946* (T. Read & Co., Sund., 1946), 20-30; SAS, shipbuilding box, plans of yards

<sup>16</sup> Apprenticeship indenture, 1812, in possession of Kit Bartram; T&WA, DS.BM; 'County Borough of Sund., histories of famous firms', *British Bull. of Commerce* (1954), (Sunderland Lib.); Smith and Holden, 45-9; SAS, shipbuilding box, Bartram; A History of Development: Shipbuilders since 1837 (1966) (Newc Lib); The Shipyard (1966) (Newc Lib); Over a Century of Shipbuilding Achievements (1956) (Sund. Lib); Bartram & Sons Ltd. (1962) (sund Lib.)

<sup>17</sup> T&WA, DS.DOX; DS.WS/143; DX1134/1; RTP, 36, 41; VCH, ii, 305; SAS, shipbuilding box, Doxford; Doxford's newsbooks; *North East Coast Commercially Considered* (1901), pp. 68-71; NEIMME, 'Wm. Doxford & Son Ltd. and Wearmouth Coal Co.' (1909); *Newc & Gates Ch of Com Year Book* (1914), 120-31; Smith & Holden, 62-71, 154-7.

<sup>18</sup> 'William Pickersgill (1847-1936)', DNB; T&WA DS.AP; DX1397; SAS, shipbuilding box, Austin and Pickersgill; 'A Short History of Development, and Present Layout of the Southwick Yard' (1974) (copy in Newc. Lib); *Newc. Jnl*, 11 May 1960, supp.; 28 Aug. 1964; Sund. Lib., A & P News.

<sup>19</sup> T&WA, DS.SH; L3392; VCH ii, 305; *Mowbray Quay to Pallion Yard, 1850-1950* (1950) (Sunderland Lib); Smith & Holden, 83-5; British Bull. of Commerce, 'County Borough of Sund., 1954: histories of famous firms', 9 (Sunderland Lib)

<sup>20</sup> Clark, 37

<sup>21</sup> T&WA, DS.JLT; VCH, ii, 305; John Thompson, *Recollections of Old MWM... Men of Mark in Olden Times* (Sund., c. 1890), 8-10; SAS, shipbuilding box, J.L.

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Thompson; *North East Coast Commercially Considered* (1901), 72-81; Proc IME, 639-41 (Visit to works, 1905); 'One Hundred Years of Shipbuilding, 1846-1946' (1946) (Sunderland Lib); Smith & Holden, 72-81; J. Gordon Holmes, *Ton Up: the story of a shipyard* (1970) (Sunderland Lib. Copy)

<sup>22</sup> Durham Chapter Lib., Longstaffe 41, newspaper cutting, 29 Mar. 1875; John Thompson, *Recollections of Old MWM*, 17-19; SAS, shipbuilding boxes, Crown and Austin and Pickersgill.

<sup>23</sup> T. Potts, 124; Smith & Holden, 31-5; RTP, 35-8; Hunter, Sir George Burton (1845-1937), DNB.

<sup>24</sup> T&WA, DS.RT; DX1134/1; *Sea Chest* 51 (Mar. 1973), 12-16 (Sunderland Lib); T. Potts 122-3.

<sup>25</sup> VCH ii, 305; Smith & Holden, 57-8; *Sea Chest*, 39 (Mar. 1970), 7-10. (Sunderland Lib).

<sup>26</sup> Clark, 39

<sup>27</sup> Lewis, 'Ship-builders of Southwick', 6-7, 138-9; Clark, 42; J. Curtis, *Sunderland: a River of Life* (Seaham, 2003), 54.

<sup>28</sup> Curtis, *River of Life*, 54-5; A. Brett, *Around Hylton Castle* (Seaham, 1997), 47; N.L. Middlemiss, *British Shipbuilding Yards 1. North-East Coast* (1993), 145.

<sup>29</sup> Clark, 42; Lewis, 136

<sup>30</sup> Smith & Holden, 90-1; T&WA, DX22/1.

<sup>31</sup> Lewis, 6; Sinclair, 12-13.

<sup>32</sup> Lewis, 6; Sinclair, 51-3.

<sup>33</sup> Lewis, 6; Sinclair, 51-4, 65-9; John Lingwood, *SD 14* (1976) (Sunderland Lib); T. Pickard, *We Make Ships* (1989), 2-3; BAC 163-4.

<sup>34</sup> Pickard, *We Make Ships*, 2-3; Sinclair, 65-9; A. Clark, *Sunderland Shipyards* (1998); R. Nichols, *Changing Tide: the Final Years of Wear Shipbuilding* (1990); J. Clarke, P. Hall, P. Hepplewhite & M. Rose, *Sunderland Builds the Ships* (1989).