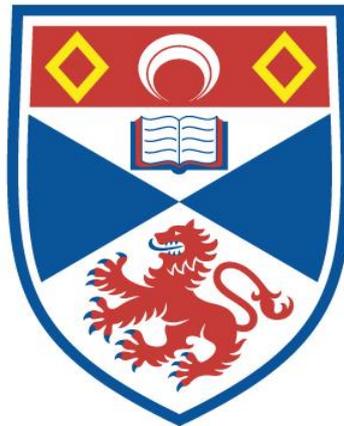


EMPLOYMENT OF THE STEAMSHIP IN THE SCOTTISH EAST COAST TRADES TO 1850

Joseph Colin Bain

**A Thesis Submitted for the Degree of PhD
at the
University of St Andrews**



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UNIVERSITY OF ST. ANDREWS

Scottish Institute of Maritime Studies.

THESIS

Title

Employment of the steamship in the Scottish east coast trades to 1850.

Candidate

Joseph Colin Bain, BA.

Degree

Doctor of Philosophy.

Date of submission

1996.



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ABSTRACT

The importance of the east of Scotland in the early use and development of the steamship appears to have been undervalued by most writers.

A general description of the development of steam navigation before about 1850 is given in order to set the scene for the specific study of Scotland's east coast. This is followed by a brief account of the state of transport in that area before the invention of the steamship.

A narrative is given of the introduction of steamers there, at first in the sheltered estuaries, but gradually out into the very exposed North Sea and waters surrounding the northern isles. This is followed by analysis of the patterns of building and ownership of the vessels engaged in that trade. That part of the work relies heavily on contemporary Parliamentary papers.

The influence of the early railways, as both competitors and customers is examined.

The effect of legislation, and other action by government, is considered.

The fate of wrecked ships, and the potential for the assistance of underwater archaeologists in assisting the historian to understand the early steamship is assessed. This includes specific recommendations for possible future archaeological research.

It is concluded that the east of Scotland did have an important role in the world of the early steamship. Many of the largest steam ships in the world, for their time, served these routes. A number of important technical developments were tried out in the area. East of Scotland shipbuilders had a more prominent role in constructing early steamships than has been suggested elsewhere.

Topological maps of steamship routes for three selected years are included in the text. Appendices give an outline chronology and a list of steam related publications by the candidate. The final appendix gives details of the 201 steamships identified as having traded on the east of Scotland during the period. Seventeen other ships, built in the area, but used elsewhere are listed in a supplement at the end of that appendix.

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INTRODUCTION

The importance of the east of Scotland in the early use and development of the steamship appears to have been undervalued by most writers. Many non specialists readers will have heard of Henry Bell and his *Comet*, and tend to think of the early British steamship as a creature purely of the Clyde.

That this view is false, deserves to be much more widely understood. The present work attempts to help redress the balance by highlighting eastern activities. The overall objective has been to narrate the introduction of the steamship to the area and set it in context.

With few exceptions it is a story of fast passenger transport. Very little cargo was carried in these trades in this period.

Even the most useful of those modern writers who have mentioned the east coast trades in the consideration of early steamers, have done so either in passing¹, or have concentrated on one company or limited area². In particular, very little has appeared with regard to the overall situation prevailing in the pre 1850 period which we are now to examine. Since in the present research some 201 steamships have been identified as having operated on the Scottish east coast at some point prior to 1850, the activity was far from negligible. In addition various vessels were built on this coast for use elsewhere. A full listing of these vessels is contained in Appendix C.

The initial strategy of this investigation was in fact to make the list of known east coast steamships as complete as possible. Thereafter the major thrust was to clarify the use to which the ships were put, by examining what could be learned of timetables and routing patterns. A proper understanding of

¹ Greenhill,B. et al. 1993 *The advent of steam*.

² Cormack,A. & A. 1971 *Days of Orkney steam*. Kirkwall.
Brodie,I. 1976 *Steamers of the Forth*. Newton Abbot.
Donaldson,G. 1978 *Northwards by sea*.

these aspects requires some effort to comprehend the technical constraints of the ships themselves. The development of early steamship routes is in large measure a reflection of what the vessels were capable of achieving.

For reasons largely connected with the non availability of suitable sources it has not been possible to form any overall view of the profitability of these enterprises. Certain factors may however be inferred from what can be discovered of the nature of the owning companies and the extent of competition. This study has in any case been more concerned with social than more strictly economic considerations.

Research of the present type is beset with certain difficulties. This is particularly true of the technological aspects. Only a handful of plans still exist for merchant steamships of the period. This is to some extent probably a product of the manner in which the technology was applied. Merchant shipyards do not appear to have generally made use of working drawings much before the introduction of the iron hull.

A number of technical innovations, which will be considered in due course, made their appearance on this coast. Perhaps the most interesting, if not the most successful in the longer term, were the catamarans of the Tay.

In the course of the present research a major find of six original steamship plans, was made in the McManus Galleries, Dundee. Five of these are reproduced in the present work (Plates 15 to 19 inclusive). While it appears that part of this material (Plate 17) had been photographed and used as part of a photo-montage within the museum in the 1970s, they themselves had not appreciated its significance, nor was it properly catalogued. Following the present writer's expression of interest the original material was accidentally re-located by the museum staff in a reserve storage, and is now scheduled for conservation. It is hoped that it may form the basis of a future monograph, but is outlined in the chapter *The steamship comes to Scotland's east coast*.

In addition to the narrative of the introduction and development of steamship services, an effort has been made to delineate the patterns of ownership and of building areas. In order to carry out this enquiry an ideal method would have been to examine every register of shipping for the period. This was not done because of the enormous magnitude of such a task. By its nature it would have involved looking at every register, since steamships are not filed separately, and ships owned in far off ports sometimes operated on the coast in question.

An additional problem is that, for reasons to be discussed, not every vessel was registered. An attempt to compile a listing of all British Registered ships was begun some years ago by the National Maritime Museum, Greenwich, with a team of volunteers, but seems to have defeated them³. Similarly the British Shipbuilding History Project is attempting to compile such a list for British built ships. They expect to have some 100,000 vessels listed in due course. A card index of some 30,000 names has been compiled, but is in process of being transcribed into a computerised version which has as yet has only reached the letter "E" (with some problems and gaps over the early period)⁴.

Instead, during the present study, certain registers were examined and other information was gleaned from published sources, the official statistics and some unpublished research by F.W. Hawks and local lists in the hands of the Aberdeen and Dundee museum services⁵.

Few sets of east of Scotland business papers survive from the early days of steamships. This was perhaps to some extent brought about by the short term nature of many of the organisations concerned. We are fortunate in that a

³ Tanner, M. 1993 Unpublished M.Phil. dissertation, University of St Andrews. *Registration and control of fishing boats in the nineteenth century*. 98.

⁴ Buxton, I.L. University of Newcastle upon Tyne 1996 Private letter to the present writer, regarding the extent and problems of compiling the database.

⁵ See Bibliography and also introductory page of Appendix C of the present work.

few examples⁶ have survived in record offices, giving an opportunity to examine day to day actions in a limited number of cases. Some, for example those of the London based General Steam Navigation Company, might have been examined in the present study but were not. This was partly for logistical reasons, since the G.S.N papers are located in the National Maritime Museum, Greenwich. A further reason was that certain of the more accessible collections have already been a focus for scholarly research⁷. Similarly the papers of the Dundee Perth & London Shipping Company although available in Dundee, have not been made use of for the reasons that they have been examined⁸ and that the company came somewhat late and reluctantly into the field of steamship operation.

Because of the lack of suitable contemporary documents, other sources consequently assume proportionately greater importance. Of particular use have been the newspapers of the period, which often provide snippets of interest, but regularly provide otherwise lost information on the timetabling arrangements of the various services. Similar information has been found in the trade directories of the period. In the virtual absence of primary sources for technical matters, much reliance has had to be placed on contemporary or near contemporary published sources by the engineers of the day.

A major source of interest has also been the series of Parliamentary Papers. In addition to the reports of various Select Committees, covering matters of safety in particular, there is also a highly useful series of Government statistical information on the ships and their builders and owners. The bulk of these statistics were culled from the Registers of Shipping, but some include

⁶ See Bibliography, but most usefully :- B59/22/32 Minute book of the Perth Steam Packet Company, held in the A.K. Bell Library, Perth.

B66/24/16 Papers of Stirling Steamboat Company, Central Region Archives, Stirling.
CS96/1419-23 Journal of fares of *Tug & Surprise*. Scottish Record Office.

⁷ Palmer, S. 1982 The most indefatigable activity - G.S.N.Co. 1824-50 *Journal of Transport History* **3rd series.3.2**:1-22.

⁸ Jackson, G & Kinnear, K. 1991 *The trade & shipping of Dundee 1780-1850*. Dundee.
Jackson, G. 1992 Operational problems of the transfer to steam, in T.C.Smout(ed) *Scotland and the sea*. Edinburgh.

data on un-registered vessels. Relatively little use appears to have been made by modern writers of this particular mine of information for studies of the present kind.

An initial chapter *The dawn of steam navigation*, sets out to outline the main difficulties and solutions which confronted the pioneers of the steamship in general. While a variety of writers have tackled this subject it was felt to be advantageous to summarise the general developments, the better to understand local activities. It is noticeable that a major problem of the early period seems to have been an excess rather than a dearth of new ideas. It was not always easy to see which was the best way ahead. Even with the benefit of hindsight the ideal choice is not always apparent.

In *Transport on the Scottish east coast before the steamship* a view of the historical background of the smacks and other sailing trades of this coast is presented. Reference is also made to the importance of the stagecoach. It was into these markets that the first steamers tried to break.

The steamship comes to Scotland's east coast is a narrative of the first estuary ferries and medium distance river traffic. The chapter closes with a description of the introduction of the Aberdeen - Leith and Leith - London services. The introduction, at an early date, of steamship services in the open waters of the North Sea required a degree of confidence and hard work. As we shall see, it also had its perils. To deal with such conditions the typical east of Scotland steamer of this period was larger than most others, and at times the largest steamers of the day served the east of Scotland.

In *Long distance coastal developments* the narrative is continued up to the middle of the century. Particular attention has been paid to a variety of accidents which befell steamships either on the east of Scotland or proceeding to or from those parts. Some of the attempts by sailing ship operators to resist the loss of their markets are also given prominence.

Inshore developments summarises the differences found in the more localised branches of the industry. The chief pattern is of an increasing density of service. It is apparent that not only did the steamship rapidly all but eliminate the passenger carrying sailing vessel in the great firths, but that additional journeys began to be made. In other words new markets had been created by the mere existence and reliability of steamer travel.

The chapter on *Builders* is an analysis, with statistics and charts, of the areas in which steamships employed on this coast were built. This indicates that the area was not self sufficient, yet managed to built a respectable number of vessels, approximately one quarter of those in the trade. Some of these were built in unexpected locations, away from main industrial towns.

In similar fashion, *Some questions of ownership* sets out the diversity of types and locations of owning company. It proved to be less easy to identify owners than building areas of ships, but sufficient (87%) were located to give a representative picture. In some respects this chapter raises more questions than it answers, for a number of unexpected results become apparent. This is particularly true in respect of the involvement of Irish owners.

Effect of early railways indicates the significance of their involvement in the region and highlights some differences with other parts of the country. The east of Scotland had a special relationship with its potential competitors. In the early stages the presence of the rail connection to Hull appears to have influenced the choice of southern destination. At the very end of the period under examination the great estuaries of the Forth and Tay saw the introduction of the world's first train ferries.

Ships measured by Riddle etc gives an outline of the effects of government on steam shipping. The gathering of official statistics is but a part of the Governmental activity involving steamships. The whole question of control and regulation was being debated throughout the period in consideration, not

just in relation to steamships but to many other forms of industrial activity. While this did not merely relate to the east coast it has been regarded as of sufficient interest to merit discussion in the present work. This is a huge field of enquiry and is the subject of ongoing study by others⁹. The title of the chapter alludes to one of the more bizarre indirect effects of legislative action. The government was also effectively a customer for steamer operation. The question of safety was probably the most “explosive” area of concern.

In *Steamship structures and the role of archaeology* the question of assistance to the historian by the archaeologist is raised. This is of particular importance because of the difficulties in obtaining reliable technical data about the ships of the early period. A number of as yet unsuccessful attempts to resolve questions affecting vessels concerned in the present study have been made by this means. A further set of proposals for future investigations is set out for the consideration of the archaeological community. That there is real potential in this field is indicated by success in locating contemporary steamships in other areas.

Overall the east of Scotland’s involvement had differences and these are worthy of our investigation. We may indeed now say that in a number of ways the trade has a greater interest than some of those which are better known.

Not only can this area be regarded as important, but we can now say that there is material for further research into some of the points of detail. When the present study began neither fact was perhaps generally appreciated.

⁹ Williams, D.M. & Armstrong, J. Pending. The steamboat, safety and the state: technological innovation in steam to 1852 in *Proceedings of the international conference on steam at sea, 9-12 September 1996, University of Hull*. Hull.

THE DAWN OF STEAM NAVIGATION.

The earliest proposals and experiments in the creation of a steamship have been described¹, but it may be useful to summarise here the nature of the difficulties, and outline the more successful solutions employed in the period up to the middle of the nineteenth century. This background material will help to explain the significance of the activities centred on the Scottish east coast which it is proposed to examine in more detail.

As with much else in the period which is generally known as the Industrial Revolution, not all the proffered solutions turned out to have lasting success, and many ideas were to be superseded almost before they had come into general use. Many of the early efforts seem extremely curious to modern eyes, yet it is also sometimes surprising to note how an idea was briefly tried, and rejected, only to be “re-invented” in some later period.

We may choose to divide the problems broadly into four categories;-

Steam generation, i.e. boilers, bunkering, feed water.

Steam utilisation, in the engine proper.

Transmission of the power of the engine into movement of the vessel through the water.

Entrepreneurial, finding a market and meeting demand at a profit.

Some of the solutions required were common to other aspects of new industrial technology², and indeed were at times met by persons skilled in meeting the demands of other forms of engineering. Some requirements were highly specialised and met in a variety of original ways.

¹ Most usefully by:- Woodcroft,B. 1848 *A sketch of the origin & progress of steam navigation.*

Smith,E.C. 1937 *Short history of naval & marine engineering.* Cambridge.

Guthrie,J. 1971 *A history of marine engineering.*

Brown,D.K. 1990 *Before the ironclad.*

² Kirby,R.S. et al. 1956 reprinted 1990 *Engineering in history.* New York.

The area of boiler technology is possibly that in which the earliest steamships seem most strange to modern eyes. In more recent times we have become accustomed to the idea of the marine boiler as an elaborate, high pressure, device. The early engineers may seem almost cavalier in the treatment of steam production, and built what appear as little more than glorified kettles. Before condemning them, however, we must first consider what their requirements actually were, and in order to do this must begin to consider the nature of the steam engines which were to be powered.

With certain exceptions, which we can consider in due course, the early machinery was essentially of what may be called the James Watt type. While an over simplification, it may be convenient to consider this type of engine as developing its power by means of sucking, rather than blowing. Thus we are concerned with the use of steam at very low pressure³ barely raised above that of atmosphere, whose role initially was to create a vacuum. This was achieved by the process of condensation back to water, in the confined space of Watt's separate condenser. The early condensers, intended only to produce vacuum, were of the jet type, and worked by spraying seawater in a chamber into which the exhaust steam had been admitted. The power stroke was the result of some small quantity of steam pressure, overcoming the vacuum created on the other side of the piston, within the cylinder. The expansive power of steam was not really considered at this stage of development. For this purpose a low steam pressure would suffice.

The net result of this was that the typical early marine (as indeed land) boiler did not require major strength in comparison to that needed for the high pressures common in later years. Some engines⁴ were built, even in the early days, to make fuller use of the expansive power of steam, somewhat in the fashion of the early locomotives, but this was uncommon. Watt himself was a

³ Guthrie, J. 1971 *A history of marine engineering*, 38.

⁴ House of Commons, Accounts & Papers 1817 *Report from Select Committee on steam boats*, 5. Evidence of Bryan Donkin, regarding explosion in Norwich.

great advocate of low pressure usage⁵. This would seem to have been partly because he recognised the potential danger of explosion, and the attendant difficulties of coping with higher pressures, but also because he was apparently satisfied with the success of the method with which he had begun.

Perhaps one of the most surprising features of this part of the early solution to the problem, was the use of sea water for feedwater purposes. While there may seem great advantages of simplicity in putting raw sea into a boiler, the disadvantages are formidable.

Not only was the problem of corrosion aggravated by the presence of salt, but the salt itself led to the risk of encrustation of the interior of the boiler and pipework. This was especially likely when the increased salinity caused the boiling point to rise above 102 degrees C.⁶

Because of this it was necessary to closely monitor the boiling point of the water in use, and to blow down the boiler perhaps as frequently as every two hours, and to drain it and remove the sludge at least weekly. The blow down hoped to remove the scum from the water surface, but also the lowest level of water, which would have the highest salinity. The routine⁷ in a typical ship with a three boiler installation and six stokers, aside from the engineers, might involve two men trimming the bunkers, while the others relieved in succession, two hours on, four hours off. Each watch would blow down one boiler, rake one fire and clean the bars of clinker. To conduct the "blow", the feed would be turned on and left on, while perhaps 6 or 8 inches of water was drawn off. This was a most time consuming operation, and not without risks, especially before the introduction, for the purpose, of the Kingston valve (Plate 1) after 1837. The valve enables steam to be blown directly from the boiler to sea, through the bottom of the ship. A special spanner is

⁵ Kirby, R.S. et al. 1956 *Engineering in history*, 172. New York.

⁶ Brown, D.K. 1990 *Before the ironclad*, 58.

⁷ Otway, R. 1837 *An elementary treatise on steam. More particularly applicable to the purposes of navigation*, 127-131. Plymouth.

incorporated, which cannot be taken off while the valve is open, to reduce the risk of subsequent flooding. While always a serious matter, the task of conducting a blow down of the boiler at such frequent intervals is not quite the undertaking that it would have been later in the century when much higher pressures had come into use. We must consider that at a period when 8 pounds per square inch was considered quite high by British marine engineers, it did not take very long to raise pressure again after the operation. Against this, the dangers of the pre Kingston valve system, which generally involved a series of what were effectively little more than common taps set in the boiler, should not be discounted. The routine blow down in these circumstances was intended only to get rid of the scum on the water surface.

All kinds of drastic sounding expedients were adopted by some engineers in hopes of reducing the problems of encrustation and corrosion. Legend has it that some advocated throwing the carcass of a pig into the boiler barrel before raising steam. A learned writer⁸ informs us that it was recommended in land boilers to insert about a bushel of malted barley every few days.

The use of sea water for steam raising continued well into the middle of the century. The problem was eventually overcome by charging the boiler with fresh water and keeping it filled by a technique related to distilling. This was achieved by means of a condenser, which also had the same function as the device of the same name which, in early engines, created the requisite vacuum. Some early ships had, in any case, made use of water collected from the vacuum creating type to add to the feedwater. This was of course contaminated by the sea water used to induce condensation. There was never any doubt that the use of fresh water free from impurities was to be desired. From these ideas it was a logical step to develop the device to produce a greater volume of distillate, and keep the seawater separate from this

⁸ Milne, J. 1830 *A practical view of the steam engine*, 96. Edinburgh.

condensate. Hall⁹ and others began this development in the late 1830s, but true success was slow in coming, and the equipment often gave trouble even up to the time of World War I. Hall's initial version¹⁰ consisted of a cast iron barrel with a brass tube plate at top and bottom. A large number of bronze tubes joined the two plates. The steam passed down the tubes, while cold seawater was pumped through the surrounding space. This had the effect of causing the steam to condense, and emerge at the bottom of the tubes as fresh water. This water then became the boiler feedwater. To make up any short fall, small quantities of additional fresh water were produced by an actual still.

The later versions (Plate 2) more usually have the steam admitted to the barrel, while cold water is pumped through a series of serpentine pipes. The cylinder exhaust is condensed on the surface of those pipes and thereafter drawn off¹¹.

The boilers themselves were at first mainly "wagon", or "beehive/haystack" types.

The "wagon" (Plate 3) was, in essence, a rectangular box with a curved top, which apparently took its name from its resemblance in shape to a covered wagon¹². While simple to construct, from rectangular plates requiring only simple bending, such a design had obvious weakness at the corners. A long grate, sometimes of brick, was positioned below the boiler, with a flue at one end leading to the funnel.

The original "haystack" was the style which had been favoured a hundred years earlier by Newcomen, and was really a brewers kettle with a sealed

⁹ Brown, D.K. 1990 *Before the ironclad*, 58.

¹⁰ Anon. 1841 *Conversations lexicon*, 397.

¹¹ Anon. undated *Ships and shipping* 1:154-155.

¹² Hills, R.L. 1989 *Power from steam*, 124-125. Cambridge.

lid¹³. Confusingly, the term “haystack” was also employed to describe a particular type of water tube boiler in the latter part of the century¹⁴. Neither the “wagon” nor the early “haystack” kind was efficient in producing steam and improved designs gradually came forward.

These were at first mostly advances on the “wagon” concept, incorporating a combustion chamber separate from the grate area, and a flue tube leading back through the barrel to the front of the boiler, to the flue proper, and thence to the funnel. The structure was given some additional strength by the tube itself, and this was improved by the addition of a system of stays, bracing the sides. After this came increased numbers of small fire tubes, which greatly increased the available heated surface.

Ironically, while the wagon type had adopted a shape which was partly cylindrical, many of the newer type were more truly rectangular or box shaped (Plate 4). Various asymmetrical designs appeared, intended to maximise the use of space within the hull. An example of this type was used in the triple boilered arrangement of the *Brilliant* (Plate 23) of 1821¹⁵.

It was gradually recognised that cylindrical boilers (Plate 5) were much stronger than rectangular types, and they became increasingly popular. These bore some superficial resemblance to that of a railway locomotive, but internally were radically different. In particular it was usual for the marine boiler grate to extend under the major part of the barrel. The combustion chamber would be at the end furthest from the fire door, and the combustion gases returned via the tubes to the fire door end before entering the flue.

A refined version of this pattern of cylindrical boiler had, by the latter part of the century, come to be known as the Scotch. Later developments of the

¹³ Kirby et al 1956 *Engineering in history*, 178. New York.

¹⁴ Sothorn, J.W.M. 1913 *“Verbal” Notes and sketches for marine engineers*, 169. Glasgow.

¹⁵ Hedderwick, P. 1830 *A treatise of marine architecture*, plate XXIV. Edinburgh.

type incorporated perhaps three assemblies of grate, combustion chamber and tubes enclosed within a single barrel. A further refinement involved a double-ended version, with in effect two boilers back to back, sharing one combustion chamber.

The two most significant remaining differences between early marine and railway practice were the absence at sea of any form of forced draught, and the different means of filling the boiler. Early seagoing installations relied on the tall funnel to provide sufficient draught for efficient combustion. To get water into an early marine boiler the engineer made use of simple gravity. The feedwater was pumped, from the sea, or later the condenser, into a header tank as high up in the ship as convenient. This gave a sufficient head to overcome the steam pressure in the boiler, which would be almost certainly less than 7lb per square inch, and might commonly be perhaps 3lb or 4lb. Only later did it become necessary to fit injectors to overcome the higher pressures by then in use. In some ships it became the practice to install the header tank in the form of an annular ring round the funnel on the weather deck. This provided a rudimentary form of feedwater heater. A reconstructed example of this may be seen in Brunel's *Great Britain*, now preserved at Bristol.

Some of the earliest attempts to provide some form of safety valve depended on the header arrangement. In the event of excess boiler pressure developing, the steam would simply blow away the column of water back to the header tank, and the steam would exhaust to atmosphere via the header¹⁶. The effects of the operation of such an arrangement to those on deck are best left to the imagination. A slightly more sophisticated device, which could also function as a form of pressure gauge, involved a mercury column, akin to a barometer¹⁷. No two engineers in the early days seem to have had the same

¹⁶ House of Commons, Accounts & Papers 1817 *Report from Select Committee on steam boats*, 56, evidence of William Lester.

¹⁷ House of Commons, Accounts & Papers 1817 *Report from Select Committee on steam boats*, 34, evidence of William Brunton.

opinion on safety valves, except that they never entirely trusted them to work. Henry Maudeslay¹⁸, who employed a weighted lever and plug device, went so far as to have “a sort of bell pull” for the duty engineer to free off the spindle now and again, in case it had stuck. This general type, which became one of the most common in this early period, has been called the “steelyard”¹⁹. This was a pivoted lever with a set of weights at one end, using the force of gravity to hold a plug valve in place in a pipe leading from the boiler (Plate 6). The principal objection to such a device is that the quantity of weight may be easily added to by un-authorized persons.

A variety of materials was also employed in early boiler construction. Many were made of cast iron, some of copper and some of wrought iron. When repairs were needed these were not infrequently carried out using a different material. In due course this gave rise to some spectacular failures, one of which, at Norwich, provoked the enquiry conducted by the 1817 Select Committee of the House of Commons.

The vessel concerned was the *Phoenix*, built in 1814, whose high pressure machinery had been supplied by Watts of Yarmouth²⁰.

It may be instructive to consider the evidence in relation to that accident. The boiler in question had been a cylindrical type, made of wrought iron. A cast iron section had been inserted at one end during a modification. The boiler was, unusually for Britain in this period, a high pressure type, with a working pressure of 60psi. The direct cause of the explosion was apparently over pressure, due to an inadequate safety valve. The underlying cause was, however, the defective design and use of unsuitable and incompatible

¹⁸ House of Commons, Accounts & Papers 1817 *Report from Select Committee on steam boats*, 23.

¹⁹ Otway, R. 1837 *An elementary treatise on steam. More particularly applicable to the purposes of navigation*. 72-73. Plymouth

²⁰ House of Commons, Accounts & Papers 1822 *Appendix to 5th Report of Select Committee on roads between Holyhead & London*.

materials. The boiler was then apparently weakened by corrosion and, from the descriptions, appears to have sustained a fatigue fracture²¹.

Cast iron was used in boilers because it was regarded as relatively easy to manufacture a steamtight vessel by this means. The disadvantage lay in the difficulty of ensuring quality control, and in the fact that cast iron withstands tension less well than compression. Wrought iron was harder to manufacture, both because of the lack of a ready supply of large plates from the iron makers, and the difficulty in satisfactorily joining plates. It has been stated that the use of cast iron for boilermaking had ceased by 1828²², but this is difficult to prove. Copper was seen as being possibly an ideal solution in many ways, as plates were more easily made and joined. The drawbacks were mechanical weakness and high initial cost, although high scrap value offset this to a significant extent²³.

In due time the improvement in the manufacture of large wrought iron plates, together with a rise in the world price of copper after 1840, led to the gradual adoption of wrought iron as the standard boiler material. It was also found that the problems of corrosion were, if anything, greater with copper than with iron.

The question of obtaining a suitable fuel for the boiler was by no means straight forward. Aside from the more obvious question of local availability of coal, little work was at first available on the relative merits of the alternative sources. By the 1830s it was suggested²⁴ that 3/4 cwt of Newcastle coal equated to 1 cwt of Glasgow, or 2 1/2 cwt of wood. The best was claimed to be Llanely or Swansea, 12 cwt of which was equivalent to 15 cwt of Newcastle.

²¹ House of Commons, Accounts & papers 1817 *Report from Select Committee on steam boats*, 8, evidence of Bryan Donkin, and 12-14, evidence of Timothy Bramah.

²² Ross, J. 1828 *Treatise on navigation by steam*, 104.

²³ Brown, D.K. 1990 *Before the ironclad*, 58.

²⁴ Otway, R. 1837 *An elementary treatise on steam. More particularly applicable to the purposes of navigation*, 139. Plymouth.

The question of bunker stowage was also a difficult one to resolve. Improperly stowed coal is prone to spontaneous combustion, and this took place in many vessels. At the design stage it was difficult to find a place in the ship close to the furnaces but away from heat, low down, yet accessible. Trimming was difficult, necessary not only for access but for ship stability, and potentially dangerous. The danger came from the risk of burial in an avalanche of coal, and conceivably from a dust explosion. The actual task of coaling the ship was filthy and always unpopular. It was suggested²⁵ in the 1830s that convict labour should be procured if available. A gang of twelve might have two men shovelling down into the bunkers, two filling bags, two holding bags open, three on a whip or other hoist, and three reliefs. Unfortunately the precise location in which these tasks were to be performed has not been explained. It seems reasonable to infer that the coal was to be bagged on the quayside or lighter, before being hoisted to the deck before tipping down a hatch for stowage in the bunkers. The possibility remains that the coal was to be stowed in bags. This seems rather surprising, in light of later practice, but might have been intended to increase the safety of stowage.

The development of the engine itself was a complex process. In assessing the output of different engines we have a considerable difficulty with the contemporary sources. There was no universally recognised standard for measuring horsepower. At the beginning of the development of steam power it frequently meant little more than some person's opinion of the quantity of work that might be got out of a horse. Smeaton considered one horsepower to equal that of five men, while French writers thought it should be six or seven men. Desaguliers adopted a figure which required a weight of 27,500 lb. to be raised one foot in one minute. This was modified to 22,916 lb. by Smeaton and then to the modern figure of 33,000 lb. by Watt²⁶.

²⁵ Otway, R. 1837 *An elementary treatise on steam. More particularly applicable to the purposes of navigation*, 182. Plymouth.

²⁶ Hills, R.L. 1989 *Power from steam*, 89. Cambridge.

Even when this was settled, it was far from easy, in the absence of a satisfactory dynamometer experiment, to establish the work being done by an engine not actually engaged in raising a weight. There was also a problem of further definition. Should we consider the output of the engine itself, or the power delivered to the shaft, or that actually devoted to driving the vessel through the water by the paddle or propeller shaft? Even in quite modern reports it is often not clear what is being described when “horsepower” figures are mentioned. In the present work, such figures will merely attempt to reflect the figure mentioned by the sources, almost none of which made any attempt to discuss the means of calculation at the time. It is apparent that differing figures are mentioned in different contexts for what appears to be the same installation, in the same ship. Early advertisements seem particularly keen to mention as high a figure as possible. This was no doubt for reasons of prestige.

It may be well to remind ourselves at the outset, that when examining contemporary sources, we must be aware that the term “engine” in this period related to a cylinder and the associated transmission, together with any other related equipment. In other words, a contemporary source will describe as “two engines” something which we might think of as a twin cylinder engine. The validity of this terminology has been debated in the pages of *Mariner's Mirror*²⁷ over recent years, but the fact remains that the early “two engines” were not capable of independent working.

Miller, Taylor and Symington's experimental craft²⁸ on Dalswinton Loch in 1788 had a pair of vertically mounted cylinders with large heavy crossheads running in guides above. The drive was transmitted via a system of gearing

²⁷ Bellamy, M. 1994 P.S.Caledonia: Denmark's first steamship. *Mariners Mirror* 80.1:54-65.

Dawson, C. 1995 Correspondence. *Mariners Mirror* 81.1: 100.

Bellamy, M. 1995 Two early steamships fitted with two engines. *Mariners Mirror* 81.4: 469-472. and Correspondence 483-484.

Dawson, C. 1996 Correspondence. *Mariners Mirror* 82.3: 355.

²⁸ SRO RH/207/18 Papers submitted by James Taylor to Patrick Miller, junior. SRO GD51/1/466 letter by Taylor to President of Board of Trade, claiming part in the invention.

and chains²⁹, which must have lost a good deal of power through friction. Fulton's experiments involved broadly similar devices³⁰. The second version of Symington's *Charlotte Dundas* had a different arrangement, with a horizontal cylinder acting directly through the piston rod, which ran in guides, to a connecting rod which drove the crank shaft³¹.

It is worth mentioning that at this period the whole concept of the use of a crank, in association with a shaft or axle, to produce rotative motion, was still very new. Such a device was made the subject of a patent by James Pickard in 1779, and this led to problems for James Watt and others for a number of years. Watt, reasonably contended that the mere crank itself could hardly be regarded as patentable³². Never the less, he and others employed a variety of sun and planet gear trains, largely, it seems, to avoid possible litigation. Symington is said³³ to have submitted a patent application in 1801 for the concept of directly connecting the piston rod to the crank pin by a connecting rod. Bell and Robertson's *Comet* had a further variation, with a vertical cylinder positioned over the crank shaft, but acting by means of a pair of side rods and levers. The shaft also carried a flywheel³⁴.

Many of the earliest attempts involved the more or less straight installation on board of an engine designed for land use. This meant in effect a beam engine (Plate 7B). The cylinder would be mounted vertically with a piston rod transmitting power to one end of the centrally pivoted beam. From the other end of the beam a connecting rod led to the crank axle. Such designs, the so called "walking beams", persisted in American practice into the eighteen nineties³⁵. These beams had to be massively constructed for strength, and this led to an undesirably high centre of gravity.

²⁹ Woodcroft, B. 1848 *A sketch of the origin & progress of steam navigation*.

³⁰ Flexner, J.T. 1944 reprinted 1978 *Steamboats come true*, 341. Boston.

³¹ Spratt, H.P. 1958 *The birth of the steamboat*, 61.

³² Dickinson, H.W. & Jenkins, R. 1927 reprinted 1981 *James Watt and the steam engine*. 149-162.

³³ Holmes, G.C.V. 1889 *Marine engines and boilers*, 20.

³⁴ Spratt, H.P. 1958 *The birth of the steamboat*, 87.

³⁵ Holly, D.C. 1991 *Tidewater by steamboat*, 212.

British engineers did not care for the use of such engines at sea, and came down in favour of a design in which the lever was positioned as low down as possible at the side of the engine, hence “side lever” (Plates 7A & 8). A variation, known as the grasshopper (Plate 7C), existed in which the lever was pivoted at one end instead of the centre. In this design the connecting rod led from a mid way point on the lever. This allows a longer piston stroke and also some mechanical advantage on the lever.

Because such a design was still very heavy, and took up a good deal of space, alternatives were sought. In 1827 Joseph Maudslay³⁶ patented a direct acting form, which relied on oscillating cylinders (Plates 7D & 9). Such a design employs pivoting cylinders in which the piston rod is also the connecting rod and is fixed directly to the crank axle. This greatly simplifies valve arrangements since simple ports, which are opened and closed by the turning of the cylinder, eliminate actual valve gear. The disadvantage lies in the need for accurate machining of the face in which those ports are situated, and in the means of keeping the face in close enough contact to be steam tight, while not causing excess friction. The typical “Mamod” model engine is a useful modern working illustration of this principle.

John Penn later developed part of the concept in his trunk engine³⁷ (Plates 7G & 10). Here the cylinder is of conventional form, but the connecting rod is pivoted on the upper surface of the piston, within a tube or “trunk” let into the cylinder. Penn is also remembered as the person who introduced the use of lignum-vitae wood in bearings at the stern tube of screw vessels.

Other direct acting forms of engine were also tried, in which the cylinder was typically situated directly below the crank shaft, the upper end of the piston rod had a crosshead which ran in guide rails, and the connecting rod was

³⁶ Foster, K.J. 1988 Marine steam engines 1807-1875 a typology. *Archaeology in solution. proceedings of 17th annual conference on underwater archaeology 1986*, 67. Salinas Ca.

³⁷ Anon. 1880 Memoir of Mr John Penn. *Proceedings of the Institution of Civil Engineers* LIX:303-304.

pivoted from it. The other end of that rod drove the crank shaft. The main disadvantage here was that there is a constraint on the maximum length of piston stroke which can be incorporated in such an arrangement. This in turn limits the maximum power output attainable.

One way round this was to incline the engine (Plate 7F), or even invert it so that the cylinder was over the crank shaft (Plate 7H). This idea seems fairly obvious to the modern eye, since it became the basis for much of later engine design both at sea and on land. At the time it was slow to be adopted. It appears that this was partly because it again raised the centre of gravity. Because of this, such designs are in fact of more use for driving the screw than the paddlewheel. The distinction is of course that while a paddle shaft must be well above the waterline, the converse applies for a propeller shaft. In addition the Admiralty disliked this configuration³⁸ for naval use, as having the vital parts above the water line and hence vulnerable to enemy fire.

The quest for a low centre of gravity but a long piston stroke led to some complex solutions. A large group of these can be classed as having return piston rods, although this actual term is limited by some writers to only a sub group. The design harks back in some respect to Symington. The initial version, by David Napier, incorporated a vertical cylinder with two piston rods which were connected to the same crosshead, above the crankshaft³⁹. The slide bars or guides for the cross head were at a considerable height above the crankshaft, typically above deck, and the assembly was often encased in a wooden structure, resembling a church steeple. From this resemblance came the common name of "Steeple Engine" (Plates 7E & 11). Maudslay and Field⁴⁰ produced a variation which could be either vertical, for paddle steamers, or horizontal for screw. Napier embellished this by having a

³⁸ Smith, E.C. 1937 *A short history of naval and marine engineering*, 147. Cambridge.

³⁹ Foster, K.J. 1988 Marine steam engines 1807-1875 a typology. *Archaeology in solution. Proceedings of 17th annual conference on underwater archaeology*, 67. Salinas Ca.

⁴⁰ Bruce, J.G. 1959 The contribution of cross-channel and coastal vessels to developments in marine practice. *Journal of Transport History*, IV.2:73.

single piston rod which divided into four at the top. Return rods then passed back down outside the cylinder where they became a pair, ending in crossheads. From the crossheads connecting rods led back up to the crankshaft. Despite its complexity this arrangement apparently worked quite well and became popular.

All these designs sought long slow piston strokes. Given that steam pressures remained low, this encouraged the development of ever larger cylinder diameter as a means of increasing power. This led to complexities in manufacture, as the larger the diameter the greater the difficulty in retaining tolerances.

The generation of power on board was not of course the only engineering problem to be overcome, and the area of power transmission was also fraught with difficulty. It has been suggested that the concept of the paddle wheel is very old⁴¹, perhaps even Roman⁴². More concrete evidence exists of proposals, and possibly model making or experiments, in the early part of the eighteenth century with pumped water jets as a propulsive force, and also of a form of clockwork driven wheel⁴³. John Allen's patent water jet of 1729 might well work, but there seem to be rather more difficulties with Jonathan Hull's 1736 wheels. It could be implied in any case that what Hull is actually proposing is a form of canal tug which would run on wagon wheels along the bottom⁴⁴.

The true father of the workable paddle wheel can, with some justice, be claimed to be Patrick Miller⁴⁵. He not only proposed a trimaran powered by man driven paddlewheels, but had it built and conducted trials in the Forth.

⁴¹ Woodcroft, B. 1848 *A sketch of the origin & progress of steam navigation*, preface.

⁴² Spratt, H.P. 1958 *The birth of the steamboat*, 17.

⁴³ Woodcroft, B. 1848 *A sketch of the origin & progress of steam navigation*, 10-11.

⁴⁴ Preble, G.H. 1883 *Chronological history of the origin & development of steam navigation*. Philadelphia.

⁴⁵ Miller, P. 1797 *Elevation, section, plan and views of a triple vessel and of wheels etc.*, reprinted in Woodcroft, B. 1848 *A sketch of the origin & progress of steam navigation*, 21-28.

The trials were apparently successful⁴⁶, and led on to the Dalswinton Loch experiment with a steam powered wheel in a catamaran. Miller's interest in multi-hull designs was also to influence other early builders including Fulton, and as we shall see, some of this type came to be employed commercially on the Scottish east coast.

The basic type of rigid wheel running on the crank axle, known as a radial or common wheel, was standard throughout the period under consideration. Typically they would have eight or ten floats, and the general design bears a striking similarity to that of a mill wheel. Other concepts such as Fitch's rowing device⁴⁷, or the insufficiently braced wheels employed at first in *Comet*, with their intermediate gearing⁴⁸, were shown to have fatal flaws. Certain refinements were attempted, of which the feathering type, usually known as the Morgan wheel⁴⁹ was perhaps the most important (Plate 12). The intention was to improve efficiency by ensuring that the blade, or float, actually in the water, was held nearly vertical, and so always directed its force horizontally. The floats moved in sequence automatically by means of a system of cranks and rods. While efficient, such designs were much more expensive to construct and maintain than the common wheel, and were vulnerable to damage in heavy seas. The overall efficiency gain was also less in heavy weather, when paddle efficiency inevitably dropped in any case due to varying depths of immersion. For these reasons feathering wheels in the first half of the century were more or less confined to vessels navigating in sheltered water. Their pre-eminence in later years may, perhaps, be explained in part by considering that this was the environment in which the paddle steamer competed best with the screw⁵⁰.

⁴⁶ SRO RH15/207/18

⁴⁷ Spratt, H.P. 1958 *The birth of the steamboat*, 40.

⁴⁸ Woodcroft, B. 1848 *A sketch of the origin & progress of steam navigation*, 87.

⁴⁹ Woodcroft, B. 1848 *A sketch of the origin & progress of steam navigation*, 105-107.

⁵⁰ Sennet, R. 1882 *The marine steam engine*, 420.

The other main refinement of the paddlewheel was that of Field,⁵¹ which subdivides the float in narrow strips, arranged on the framework in cycloidal curves, which give the type one of its names (Plate 13). Typically these wheels have in any case many more floats than a common wheel, and the whole intention is to try and ensure an almost constant application of power, coupled with easy freeing of the floats from the water as they emerge. Overall the effect is also to reduce vibration, which was a common problem in early paddle steamers. This type was also more expensive to construct than the common wheel, but has none of the difficulties associated with the extra moving parts of the feathering wheel. They were generally fitted in the larger type of ship, as the gain in efficiency is more noticeable the larger the wheel.

Associated with the development of paddlewheel design is that of the location of the wheels in the vessel, which also influenced hull shape. What we might call the Miller school of thought, favoured multihull designs with the wheel in the central well. This had advantages in terms of protection of the wheel from wave action. Against this were the difficulties associated with securing the hulls together as a unit, a contest of weight and possibly drag, versus strength. While a number of such designs were constructed in the early years, they were mostly confined to specialised ferries, and the idea did not catch on for general use. A number of vessels were also constructed with stern mounted wheels. While this came to be the dominant type in western American rivers, it was never popular at sea, and was very little employed by British builders. The typical sea-going paddle steamer, then, was a side wheeler, with the axle or drive shaft generally a little forward of amidships.

The problems of vibration to which all paddlers were vulnerable, were aggravated by the effects of the bow wave on the paddles. It came to be realised that the paddles had to be positioned in such a way that this wave

⁵¹ Woodcroft, B. 1848 *A sketch of the origin & progress of steam navigation*, 108-109.

could be expected to pass outboard of the outer edge of the paddles. This was part of the reason for the rise of the classic long thin paddle steamer. Many early ships had nothing supporting the outboard side of the wheels. This placed considerable strain on the structure, and engineers began a debate over the advisability of outer bearings. The protruding assembly to support such a bearing, known as a sponson, of course produced its own effects on the rest of the vessel's structure. It none the less had major advantages for the safety of the wheels, and gave a firmer foundation for the erection of paddle boxes, the chief purposes of which are to protect the wheels from wave action, and keep water off the deck.

An additional problem for British builders lay in an early determination of the Customs authorities to include sponsons as part of the ships structure for the purpose of measuring the beam for tonnage calculation⁵². This involved a serious financial penalty. In later years this was overcome by a combination of changed interpretation of the regulations and then legislative changes. The deck space gained by the overhanging sponsons was utilised by many designers to site crew accommodation and, in some ships, the heads. In later years it was quite common, for American ships in particular, to have extremely long sponsons which carried upper decks over the paddle boxes, and made the vessels look like screw steamers from a distance⁵³.

By the late eighteenth century⁵⁴ quite specific ideas on the most suitable form of hull were being propounded:

“stem and forefoot should be narrow, with about one inch in the foot more rake than in sailing vessels but keel equally deep.....should draw more water aft...rudder a half broader than in sailing vessel...parts of vessel should be increased in strength...”.

Hedderwick⁵⁵ gave the matter very close consideration -

⁵² Fincham, J. 1851 reprinted 1979 *A history of naval architecture*, 291.

⁵³ Holly, D.C. 1991 *Tidewater by steamboat*, especially illustration of Middlesex, 218-219.

⁵⁴ Ross, J. 1828 *Treatise on navigation by steam*, 67-68.

“In river boats the breadth of the hull...should not exceed 2-11ths of the length on the load waterline, nor be less than 1-6th of that length. the depth of hold...should not exceed 5-9ths or be less than one half the breadth.....In sea going vessels, the breadth...should not exceed 1-5th of their length...or be less than 2-11ths...and depth of hold...about 3-5ths of the breadth”.

The various difficulties associated with making paddle wheels efficient in the open sea concentrated attention on the development of alternatives. While Ericsson is usually credited with the invention of the screw propeller⁵⁶ in 1836, many others had attempted it before him, and his own attempt was far from perfect. Bourne⁵⁷ provides perhaps the most comprehensive early treatment of the development, while Guthrie⁵⁸ gives the most convenient comparative illustration of these early forms, in reproducing the work of James Powell on the subject (Plate 14).

Many engineers understood the general principle, deriving as it does, largely from the archimedes screw which had long been used as a form of water pump. The desirability of a power delivery which was constantly immersed and hence could do away with many of the problems of paddles was quickly seen. The difficulty lay in shaping the actual device for maximum efficiency. It may be said that even with the benefit of computer technology the design of propellers is still highly complex and at times controversial.

Francis Petit Smith probably has as good a claim as anyone to having made the system work⁵⁹ and his *Archimedes* can certainly claim to be one of the first properly successful screw steamers. Smith's propeller design was much simpler than Ericsson's original contra-rotating idea, and his second version can easily be identified with a modern two bladed propeller. Smith's other claim to fame lies in settling the appropriate position for the screw as being

⁵⁵ Hedderwick,P. 1830 *A treatise on marine architecture*, 383-384. Edinburgh.

⁵⁶ Woodcroft,B. 1848 *A sketch of the origin & progress of steam navigation*, 109.

⁵⁷ Bourne, J. 1852 *A treatise on the screw propeller*.

⁵⁸ Guthrie,J. 1971 *A history of marine engineering*, 21-22.

⁵⁹ Brown,D.K. 1990 *Before the ironclad*, 102.

between the sternpost and the rudder, whereas Ericsson's initial designs had the screw abaft the rudder. In this way the Smith design was much handier in steering, having the advantage of a flow over the rudder even with no way on the ship, enjoyed by Miller type paddle catamarans. It has been suggested⁶⁰ that concern over the ability to steer may have prejudiced the Admiralty against the Ericsson trials of 1837.

In considering this question of ease of steering it is important to consider that the paddle steamers of the period did not normally have the ability, incorporated in some of their successors, of applying differential power on one side or the other. For this reason many early paddle steamers apparently had rather large turning circles.

As has been indicated above the engines of the day were designed to turn at a relatively low number of revolutions per minute. This was fine for the driving of paddles, but less effective for the screw which needs a much higher rate for efficiency. As the design of the actual engines then in vogue did not lend itself to any dramatic speed up, it was found appropriate to introduce a gear train into the drive system. In a number of ships this took the form of something akin to a giant bicycle chain. Such devices, whether chains or plain gearing of whatever form, were inevitably noisy, but it is said that the noise was actually less than that of paddle wheels in a comparable ship⁶¹. Apart from the matter of passenger and crew comfort, the question of noise must be taken as an indicator of likely wear and vibration.

Associated with the development of screw propulsion is the problem of providing an adequate seal round the end of the shaft where it emerged into the water and held the propeller. Stern glands equipped with a variety of stuffing boxes gave all kinds of trouble for many years. One of the more successful ideas was the use of very hard wood suggested by Penn, as

⁶⁰ Brown, D.K. 1990 *Before the ironclad*, 100-101.

⁶¹ Brown, D.K. 1990 *Before the ironclad*, 106, quoting report on Admiralty trials of April-May 1840.

already mentioned above. Part of the problem lay not simply in the devising of adequate methods of producing a seal that did not produce excessive friction, but in the actual manufacture of the requisite parts. The production of good quality large forgings, for major components such as the propeller shaft, itself took some time to achieve. The whole area of the development of accurate machine tools, which could finish the parts with enough accuracy to do the job as intended by the designer, was a difficulty encountered in all branches of mechanical engineering⁶². The solutions were not peculiar to the marine sector, but they were greatly needed for the satisfactory development of steam at sea.

The importance of the rapid introduction of screw propulsion must not be underrated. However, we should not lose sight of the fact that in the period with which we are presently concerned, the paddle steamer remained the predominant form. Likewise the use of iron as a hull material took some time to become fully established. Since the use of iron hulls was not confined to steam ships, it has not been accorded separate treatment in the present study. The earliest recorded iron steamer is generally acknowledged to have been the *Aaron Manby* of 1822.

For comparative purposes we may consider the extent of iron and screw use in the steam vessels in British registry on 1 January, 1852⁶³. Of 1218 steamships then in the register only 58 were screw driven, all but 6 of which were iron. In total 248 were iron (including the 52 propelled by screw).

Of the 201 ships engaged on the east of Scotland, with which the present study is primarily concerned, 39 were iron and 7 of these screw propelled with one further wooden hulled screw steamer.

⁶² Kirby, R.S. et al. 1956 reprinted 1990 *Engineering in history*. New York.
Rolt, L.T.C. 1965 revised 1986 *Tools for the job*.

⁶³ House of Commons Accounts & Papers 1852 *Return of registered steam vessels*. XLIX. 35-53.

The inevitable inaccessibility of much of the equipment when installed in a ship did nothing to improve inspection, and the same might be said of matters of lubrication. The mechanical lubricator was yet to come, and the quality of lubricants in general use left a good deal to be desired, with tallow being the most common⁶⁴. It was quite usual for the earliest engines to have no actual lubrication points at all and for lumps of tallow to be pushed into valve ports, or other handy spaces, from time to time. Interestingly the use of roller bearings⁶⁵, for at least the main paddle shaft, was suggested as early as 1837, but does not seem to have been attempted in practice. Some parts got no pretence of lubrication whatever, and were left to luck, or seawater.

Meanwhile the whole engine structure was probably doing its best to shake itself, and the ship, to pieces. It was standard practice to have no engine bed or entablature at first. The cylinder would be bolted direct onto the keelson⁶⁶. In some ships these seatings were through bolted in such a way that they were impossible to tighten at sea. The crankshaft was supported on the deck beams, or on brackets from them. In any kind of seaway the stresses induced would be considerable as the ship worked in opposition to the motion of the engine parts.

During the period under consideration this fault was recognised, and efforts were made to separate the engine structure from that of the ship, and make it more integral within itself. A heavy cast iron entablature would be installed to support the crankshaft at deck level, and this rested typically on four cast iron pillars which extended from an iron engine bedplate⁶⁷. The whole assembly would be supported on longitudinal stringers, instead of directly on the keelson or frames.

⁶⁴ Smith, E.C. 1937 *A short history of naval and marine engineering*, 158. Cambridge.

⁶⁵ Otway, R. 1837 *An elementary treatise on steam. More particularly applicable to the purposes of navigation*, 82-83. Plymouth.

⁶⁶ Bramwell, F.J. 1872 On the progress effected in economy of fuel in steam navigation etc. *Proceedings of the Institution of Mechanical Engineers*, 129.

⁶⁷ Guthrie, J. 1971 *A history of marine engineering*, 57-58.

Such an assembly is obviously complex, and space constraints led to further complexities becoming standard. In most later side lever engines the jet condenser had the rocking shaft for the side lever passing through its middle⁶⁸ (see also Plate 8).

In considering the task of overcoming the technical problems, we should not ignore those of control, and of the transmission of the orders of the officer of the watch to the engineer on duty. Early reversing was accomplished by dint of having loose eccentrics fitted to the crankshaft⁶⁹. The position could be altered by knocking out a key, the eccentrics moved by hand and then re-keyed in the desired spot. If such an operation was fraught with difficulty in naval vessels⁷⁰ with large well drilled crews, the problems of a merchant ship in a hurry to reverse on a dark night may be imagined.

A slight advance in technique to operate the cylinder slide valve still involved a loose eccentric pulley. This was set on the shaft with a heavy counterweight to balance the valve gear. There were two stops on the sheave, one for ahead, one for astern. To stop, the eccentric was lifted off a pin and the valve stayed where it was. The engine was braked by compression. The slide valve was then moved and the engine turned over as before. Once in the new position the valve pin was re-engaged. This was done by an operating rod and a lever on the end of the valve spindle. With two cylinders, each had to be reversed separately. The operation was conducted using a large wheel, resembling a steering wheel. This required two or three men at the spokes, with cool heads and muscle. The engine was then flooded with steam until it blew through a non return valve on the condenser. Simultaneously the sea injection valve on the condenser would be opened and the slide valve worked with the eccentric disconnected. Once a vacuum had been established the engine ought to start. The valve would be

⁶⁸ Guthrie, J. 1978 Paddle engine in its heyday. *Marine Engineering Review* **July**:12.

⁶⁹ Sennett, R. 1882 *The marine steam engine*, 254.

⁷⁰ Smith, E. C. 1937 *A short history of naval and marine engineering*, 151-152.

worked by hand for several revolutions, then the eccentric would be dropped back onto its pin⁷¹. This kind of task would give many people nightmares.

Marine engines continued to require manhandling to start, stop and reverse, long after those on land came to have valve gears which could do the job with relatively little effort. To reverse a nineteenth century railway engine involved shutting off the steam regulator, braking to a stop by friction, pulling a lever, resembling in appearance the handbrake of a modern lorry, which disengaged and directly moved the eccentrics to the new position. The same lever enabled a variety of cut off percentages to be selected for the most economical expansive working, relative to the current load. The steam regulator valve was then re-opened. This needed muscle, but was otherwise simplicity itself to operate.

The problem of communicating with the engine room could also be considerable. We have been told that the normal method in the eighteen twenties was simply to bawl down the hatchway⁷². A form of remote control from the deck was tried, but not did not enter general use. Standard hand signals were advocated⁷³ as being presumably less easily confused than shouting.

It seems probable that no one had thought of so basic an idea as the voice pipe before 1831⁷⁴, when Holdsworth said:

“...I would therefore suggest a speaking pipe, leading from the man at the helm to the man in the engine house, and the thing is effected without difficulty. That is a thing which is used in houses. I therefore conceive that it may be applied to a steam boat...”. The telegraph, with which we are all familiar, belongs to a later period.

⁷¹ Guthrie, J. 1978 Paddle engine in its heyday. *Marine Engineering Review* **July**: 12-13.

⁷² Hall, B. 1825 reprinted 1973 *An account of the ferry across the Tay at Dundee*, appendix 2. Dundee. Letter from Messrs. James & Charles Carmichael to Capt. Basil Hall, R.N.

⁷³ Ross, J. 1828 *Treatise on navigation by steam*.

⁷⁴ House of Commons, Accounts & Papers 1831 *Report of Select Committee on steam navigation*, 70, evidence of Arthur H. Holdsworth.

Associated with the control problem was the debate over where to position the wheel and the officer of the watch. In a sailing ship there was little argument that the officer ought to be at or near the stern, where he could easily see the set of the sails, and it was logical, as well as technically convenient, to site the wheel near to hand. In a steam ship, however there was a case for giving the helmsman, or at least the officer of the watch, as clear a view ahead as possible. This particularly applied when manoeuvring in confined waterways. In 1854 it was reported that in some ships the lookout might give orders directly to the helmsman⁷⁵. For fairly obvious reasons, this was not considered a desirable situation.

Paddle steamers had particular problems with forward visibility because of the presence of the paddle boxes. This led to the development of the first rudimentary bridges, which were literally that, a bridge between the paddle boxes on which the officers could stand and see more clearly. American river steamers quite early adopted their "pilot house" far forward on the upper deck, with the wheel within, and connected by very long ropes to the tiller⁷⁶. Despite this example and various recommendations, the idea took a long time to find a regular place at sea.

It is perhaps a curiosity, that amongst all the development at the forefront of technology, there lingered some of the seaman's traditional conservatism. The new marine engineers were not immune from such sentiment, and it has been suggested that at times custom, and indeed fashion, had as much influence as sound scientific principle⁷⁷.

None of these developments would have meant very much if entrepreneurs had not come forward who were able to make the new invention pay for

⁷⁵ Ridley, J.H. 1854 *Losses at sea, their causes & means of prevention & embracing several other subjects of importance for the safe navigation of vessels*, 4. Edinburgh.

⁷⁶ House of Commons, Accounts & Papers 1831 *Report of Select Committee on steam navigation*, 28, evidence of Captain Hall.

⁷⁷ Bramwell, F.J. 1872 On the progress effected in economy of fuel in steam navigation. *Proceedings of the Institution of Mechanical Engineers*, 139.

itself. As we shall see when we come to examine matters of steamship ownership on the east coast of Scotland, this could mean a considerable diversity of approaches.

Internationally, many of the early experiments in commercial traffic were conducted on behalf of the engineers themselves. It is hard, at this distance in time, to know to what extent this reflected a lack of confidence by others in the likely financial returns. Certainly the early steamer was no certain way to fortune. We need look no further for an example of failure to make a great deal of money, than Henry Bell⁷⁸.

In addition to matters of finance, the early owners of steam vessels required to solve a series of operational or management problems. These included negotiations with builders of both ships and engines, who were as yet unused to co-operation. In an age where engineering drawings were still unusual, it was not certain that specifications would be understood, or that separately ordered components would be compatible.

To get the maximum utilisation out of a capital intensive asset like a steamer, it was necessary to devise timetables and harbour arrangements for quick turnrounds. These were practices not often seen in the world of the sailing vessel. Some of the methods adopted show signs of being derived from the techniques which had recently been learnt by the operators of stage coaches and fast canal boats. Some however, had to be devised to suit the peculiar conditions of the new trade.

The popular concept tends to be that the rise of the steamship is a feature of the latter part of the nineteenth century. It does, however, appear that, much earlier, the steamship did gain quite rapid acceptance by mainstream ship

⁷⁸ Osborne, B.D. 1995 *The ingenious Mr Bell. A life of Henry Bell (1767-1830) pioneer of steam navigation.* Glendaruel.

owners. Moreover steam ships quickly came to represent a significant proportion of the total tonnage, at least for those engaged in short sea trades.

This had been indicated in a study over 35 years ago⁷⁹, which is valuable as a pointer to the truth. Indeed the authors of that work appear to have actually understated their case for the rapid rise of the importance of steam at sea.

This was apparently due, in part, to a misunderstanding of the incompleteness of the data. The authors appear not to have recognised that they were examining only those early ships that still remained on the register of British shipping in 1861, as opposed to all those registered up to that date. They thus made no allowance for vessels which had been in service at an earlier date but been withdrawn prior to completion of the return⁸⁰ on which their findings were based. The reason for this would appear to lie in the somewhat unfortunate title chosen by the 19th century compilers of the return. This does not make clear, to anyone unfamiliar with the others in the series of similar reports, how the figures have been compiled.

Such then were the early years of steamship development in general. Having considered the general, largely technical background, it is now time to consider matters relating specifically to the east coast of Scotland.

⁷⁹ Hughes, J.R.T. & Reiter, S. 1958 The first 1,945 British steamships. *Journal of the American Statistical Association*, 53.360-381.

⁸⁰ House of Commons Accounts & Papers 1861 *Return of vessels registered in UK on or before 1st January 1861*, LVIII.275.

The joints between the mountings and the boiler should be perfectly tight, as any leakage would cause rapid decay of the shell of the boiler.

Kingston's valves.—Holes in the hull of a ship below the water-line are generally closed by means of Kingston's valves, sketches of which are shown in Figs. 49 and 50, with their methods of attachment to wood and iron ships respectively. They are simply conical valves, arranged so

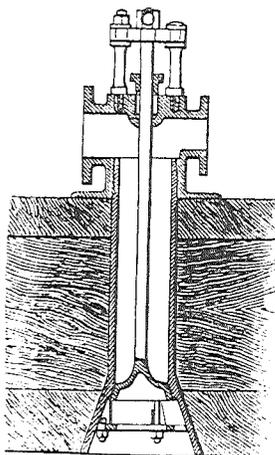


FIG. 49.

that the pressure of the water outside tends to keep them closed in their seatings. The valves are fitted with long spindles, which are brought inside the ship through tight stuffing boxes, to enable the valves to be worked from in-board.

The spindles of all Kingston valves should be solid with the valves, and in the Royal Navy all these spindles have to pass a tensile test, equal to half-a-ton per square inch of area of the valve; with this limit, however, that the maximum test load is not to exceed twelve tons whatever may be the diameter of the valve.

In the case of iron ships, care must be taken to prevent decay of the skin of the ship in the region of the Kingston valve orifices, especially those for the boiler blow-outs. A thick plate is riveted to the skin of the ship inside, and the Kingston valve tube is secured to this instead of to the iron plating of the hull. The tube has a spigot on the end, which fits tightly in the hole to cover the edge of the iron, and zinc ring protectors are also fitted. This is shown to an enlarged scale in Fig. 51.

In the case of the boiler blow-out Kingston valves,

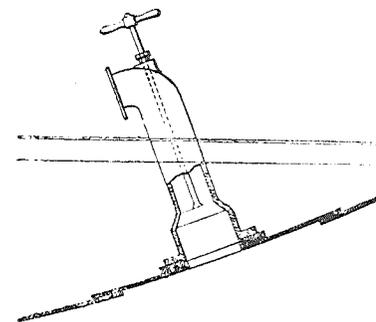
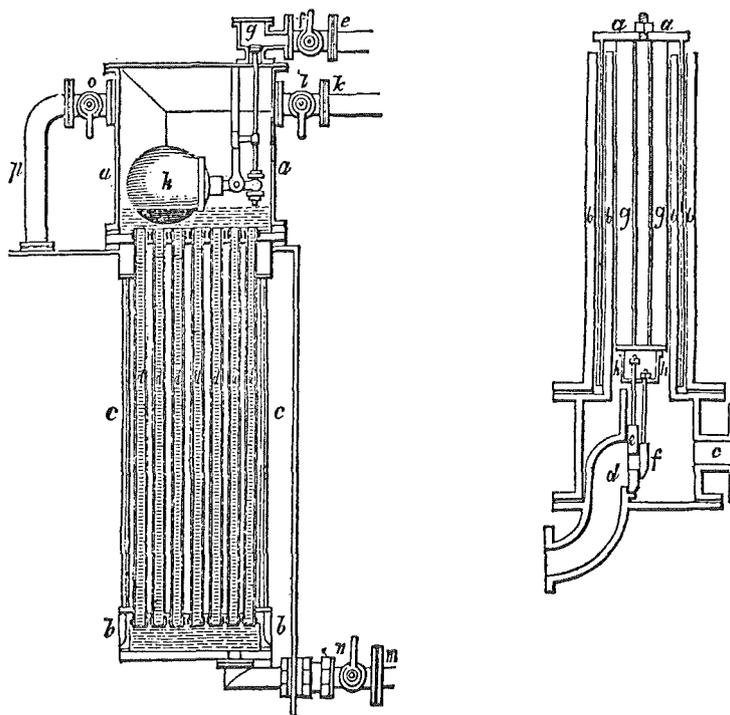
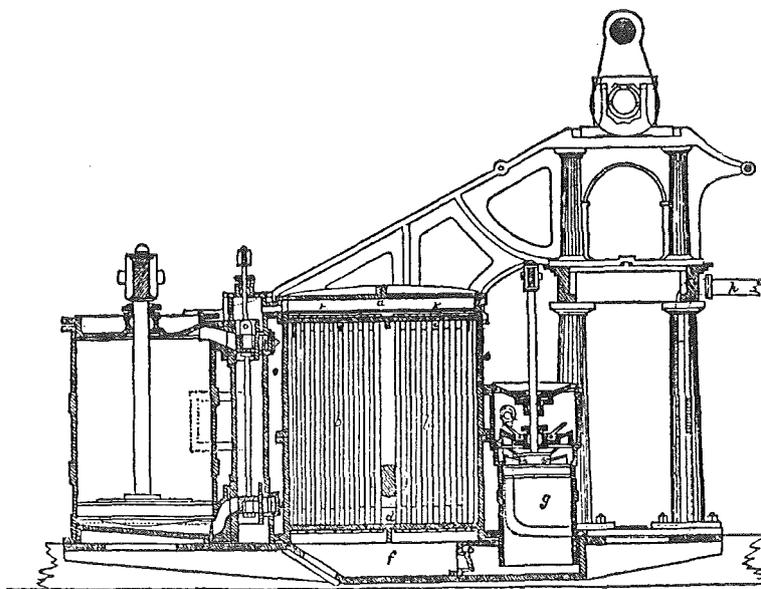


FIG. 50.

it also appears to be necessary to fit covering plates outside the ship to protect the hull plating in the neighbourhood of the orifices.

In ships that have double bottoms the Kingston valve tubes are sometimes attached to the outer bottom, and brought through stuffing boxes on the inner skin; or iron tubes are fitted between the two skins and the Kingston valves attached to the inner skin in the ordinary manner.

All Kingston valves are fitted with sea cocks inside the ship for additional security.



One of the most important inventions in marine engineering was that of Samuel Hall's surface condenser shown in the upper illustration. In his patent granted in February 1834, Hall also included an evaporator for maintaining a supply of fresh water (shown left) and a steam saver (right) by which steam escaping from the safety valves was led back into the boiler

PLATE 2

Hall's condenser.

Rowland, K.T. 1970 *Steam at sea*, 104.

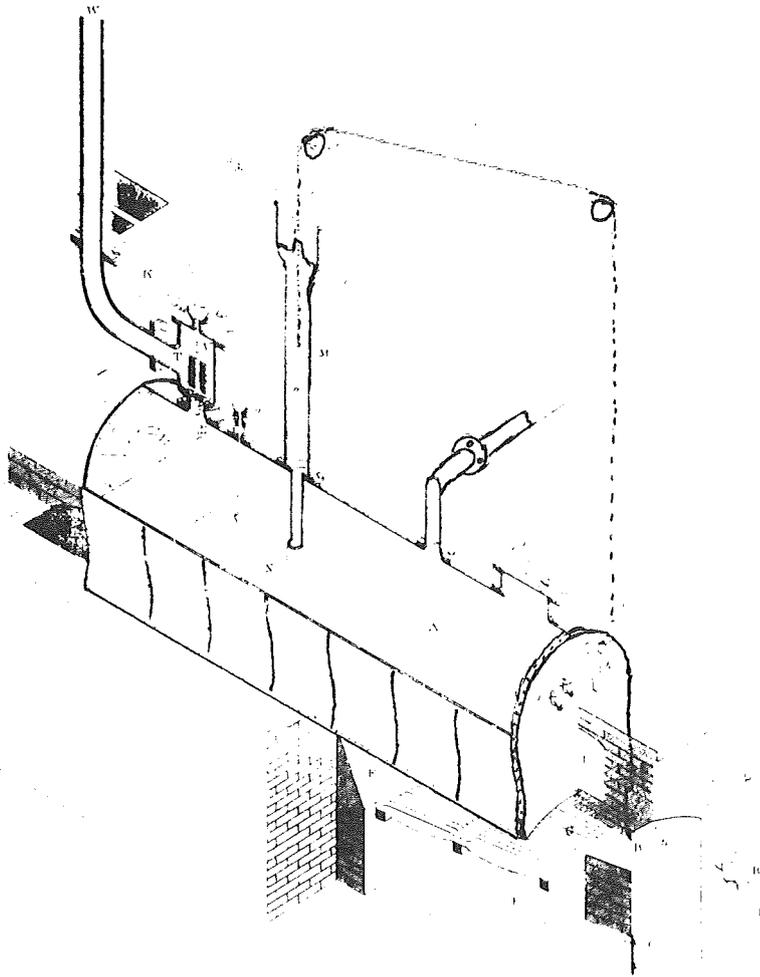


Figure 32 Wagon boiler with automatic controls for both feed water and the flue damper. (Tredgold, *Steam Engine*.)

PLATE 3

Wagon boiler.

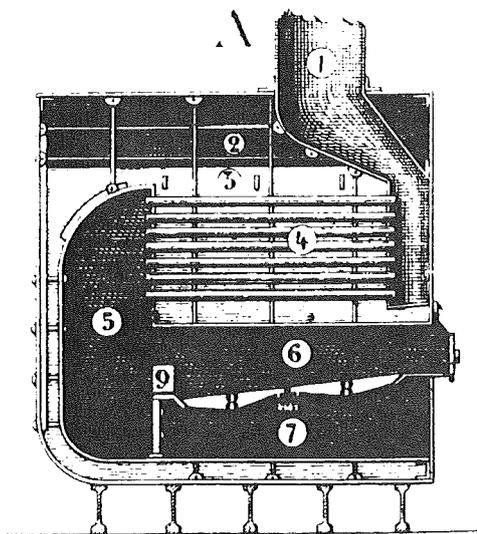
Hills, R.L. 1993 *Power from steam. A history of the stationary steam engine*, 125. Cambridge. (after Tredgold, T. 1838 *The steam engine*.)

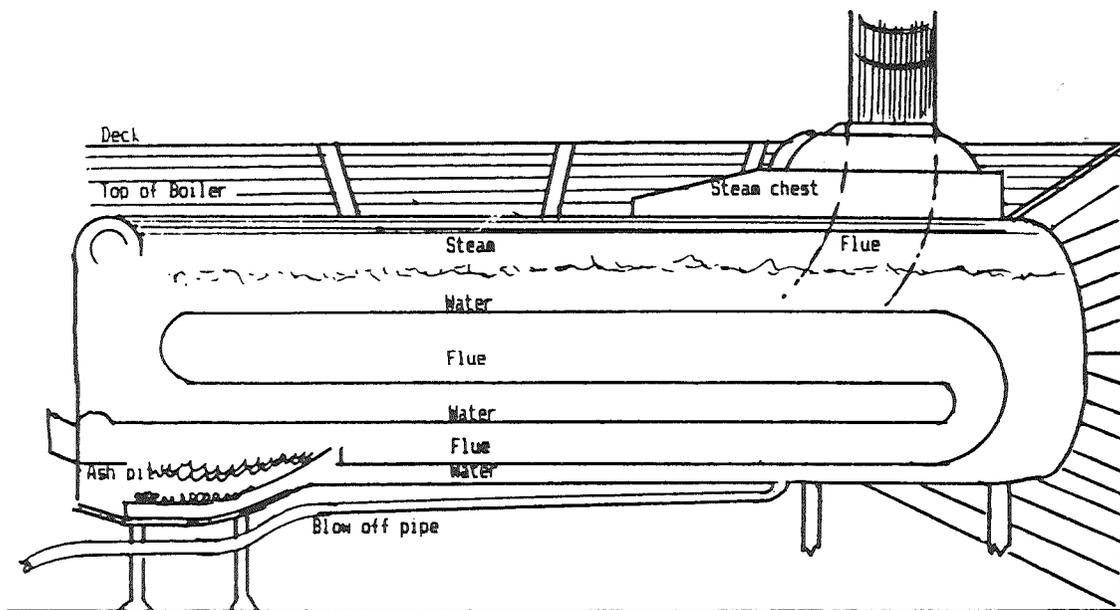
PLATE 4**Rectangular boiler.**

Paasch, H. 1890 reprinted 1977 *Illustrated marine encyclopedia*, Plate 41A.

Key

1. Uptake
2. Steam-space
3. Water level
4. Boiler tubes
5. Combustion chamber
6. Furnace
7. Ash pit
8. Fire bars
9. Fire bridge

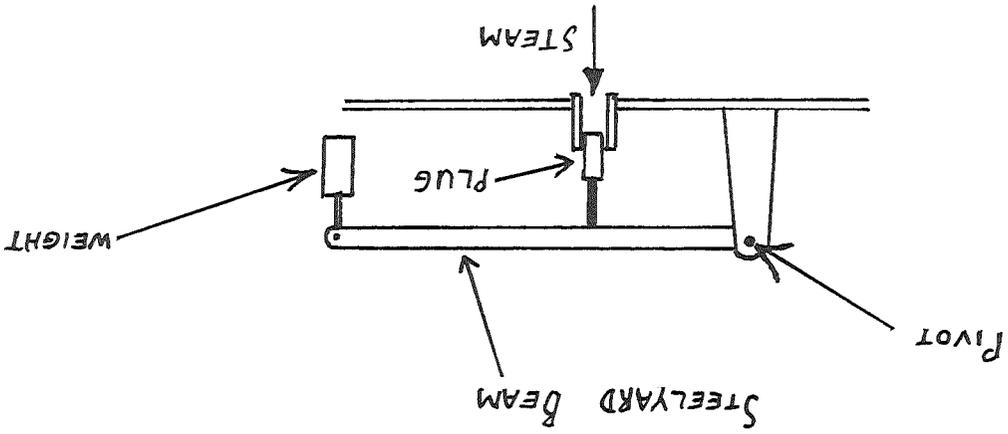




Interior view of a cylindrical boiler.

PLATE 5
Cylindrical boiler.
Brown, D.K. 1990 *Before the ironclad*, 59.

PLATE 6



"STEELYARD" SAFETY VALVE

PLATE 42

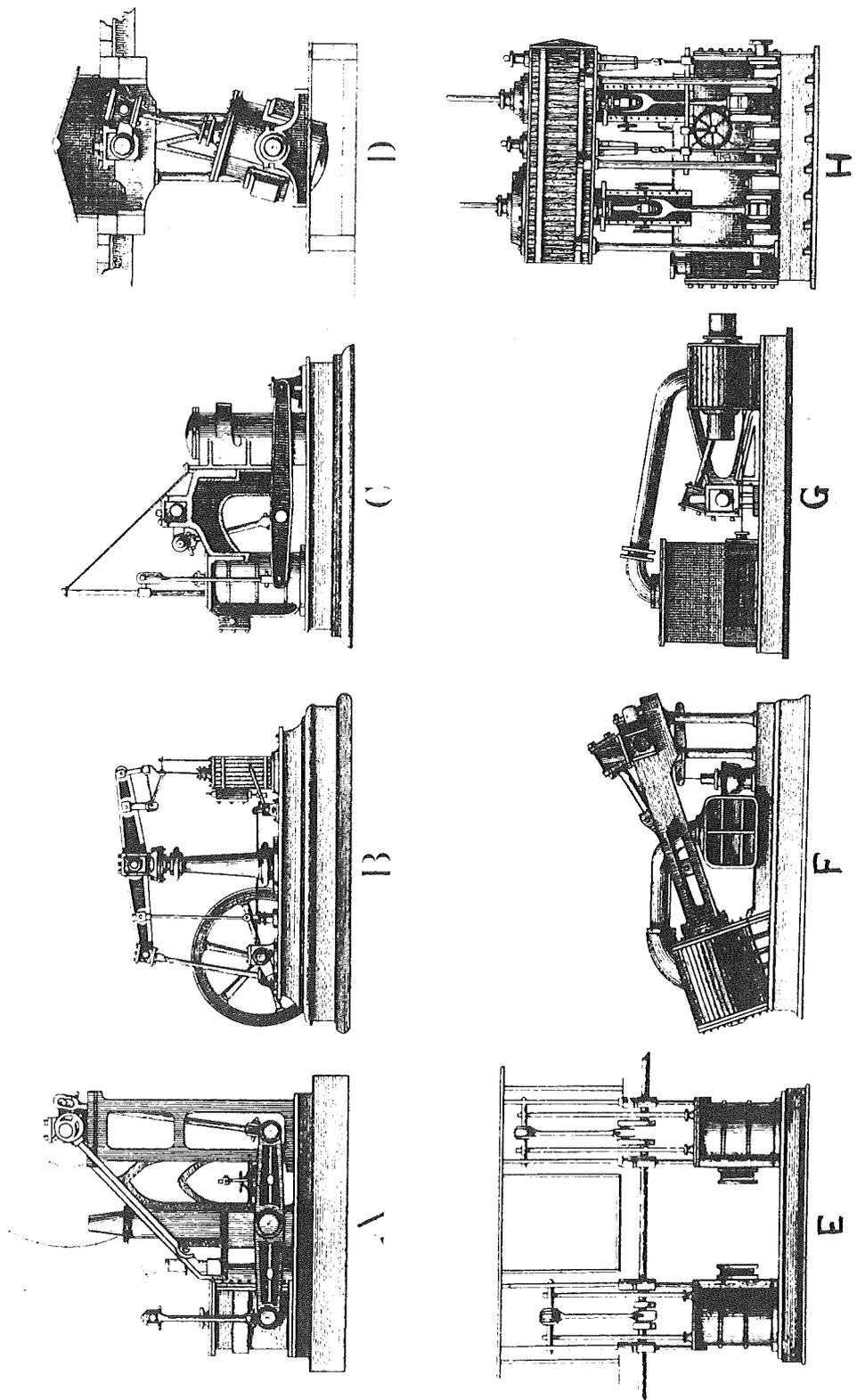


PLATE 7

Engine types

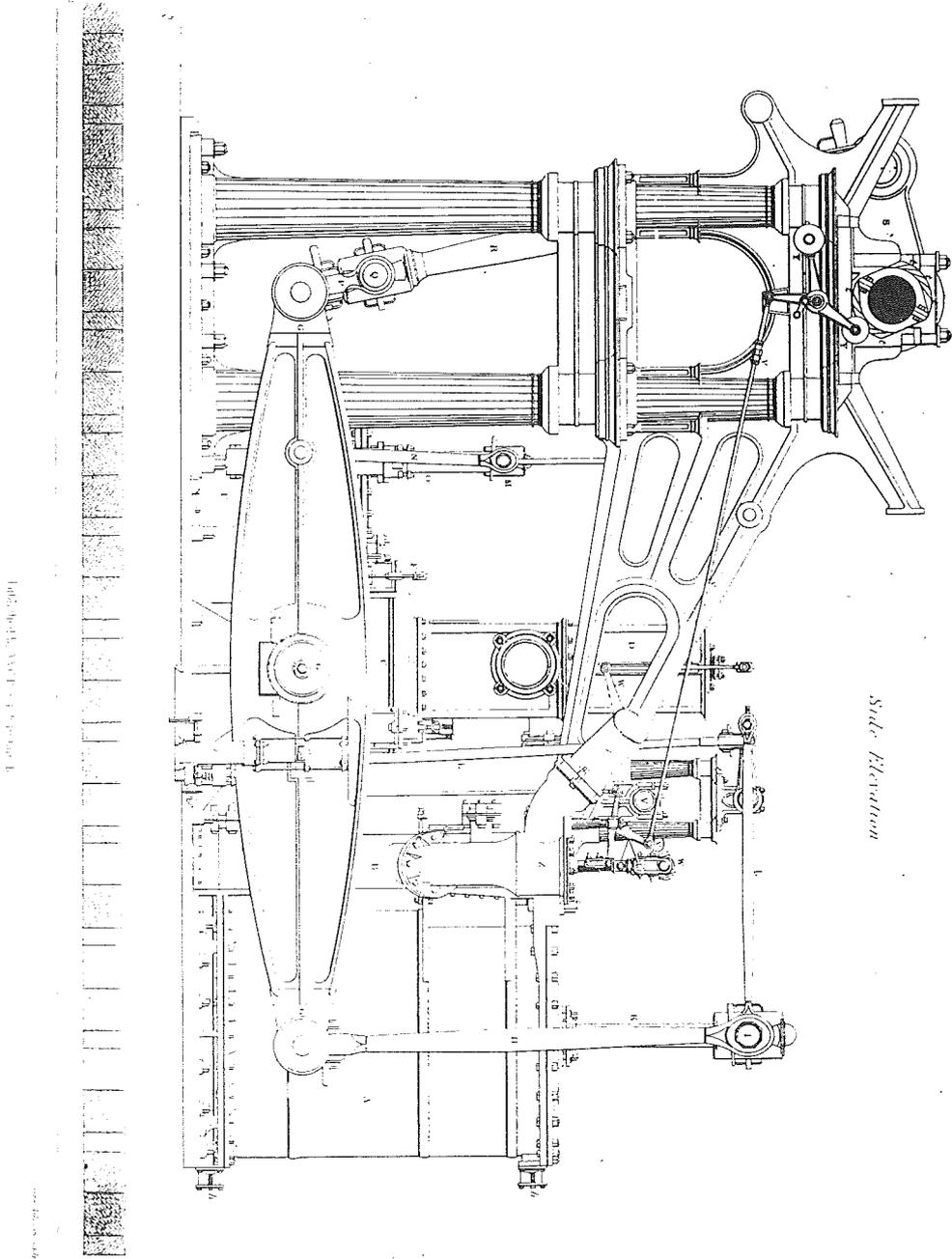
Paasch, H. 1890 reprinted 1977 *Illustrated marine encyclopedia*, Plate 42.

Key

A. Side lever B. Beam C. Grasshopper D. Oscillating E. Steeple
F. Diagonal G. Trunk H. Inverted vertical

PLATE 8**Side lever engine**

Murray, A. & R. 1863 Shipbuilding in iron & wood, and steamships, Plate XV
Edinburgh.



Oscillating engine.—The simplest and most compact type of engine for driving paddle-wheels was attained by the introduction of the oscillating engine, which was adopted and perfected by the late eminent marine engineer, Mr. John Penn, with whose name this type of engine is generally associated. Its general arrangement is shown in Fig. 3.

In these engines the connecting-rod is altogether dispensed with, the upper end of the piston-rod being fitted with brasses to work directly on the crankpin, and the cylinder itself is carried on trunnion bearings, to allow the necessary oscillation to suit the motion of the crank. The trunnions are hollow, and the steam is admitted to and exhausted from the cylinders through them. In this type of engine, space and weight have been economised as far as is possible for paddle-wheel engines, and the majority of engines now made for paddle-wheel vessels are on this plan.

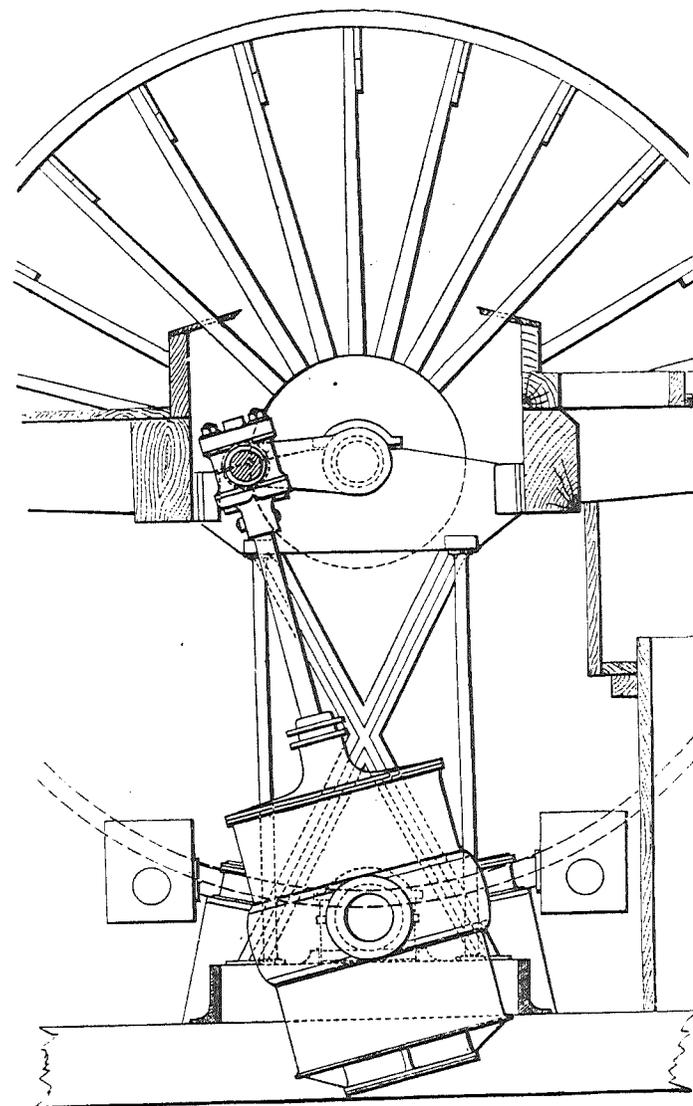


FIG. 3.

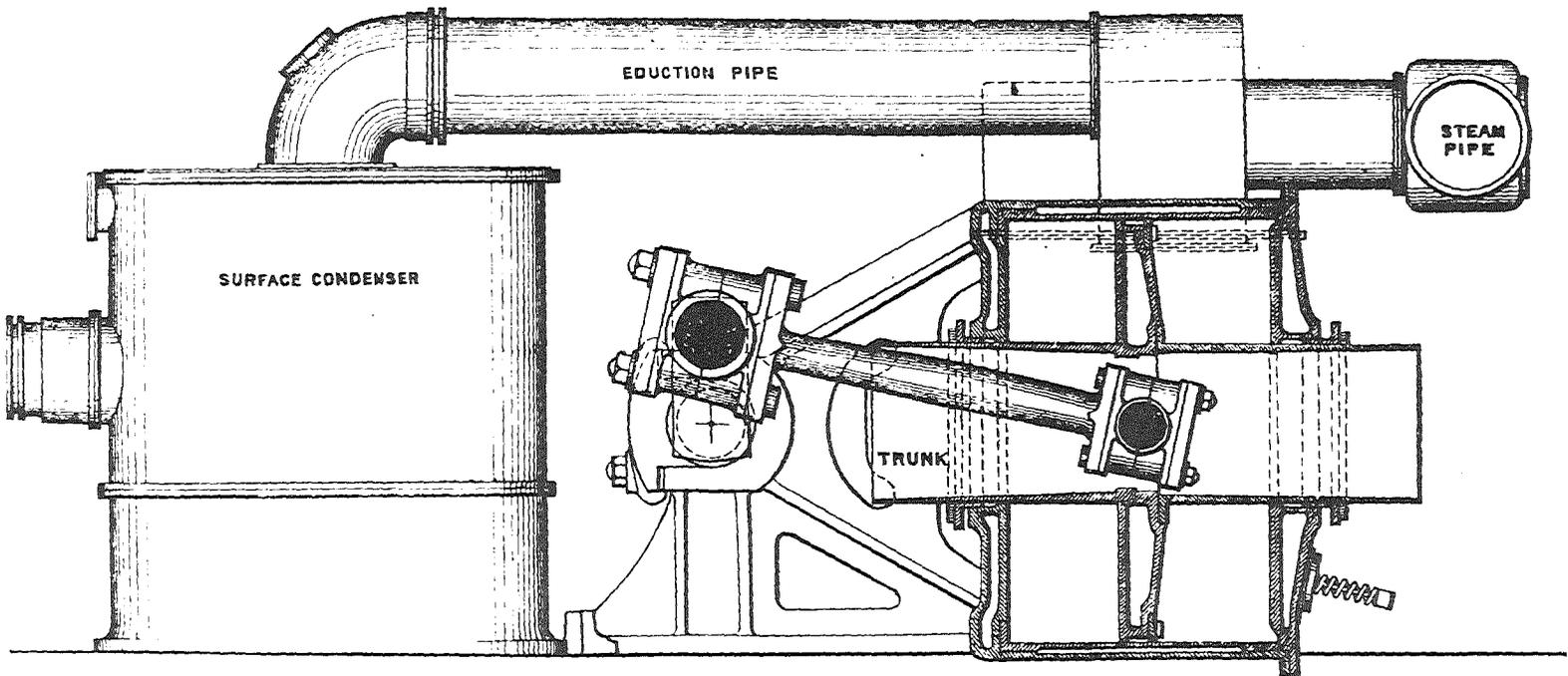
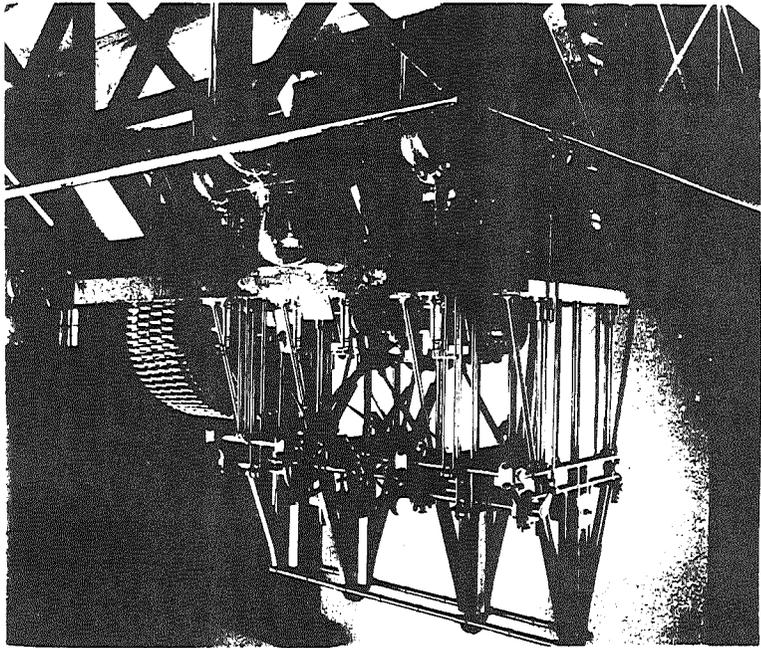


PLATE 10
Penn trunk engine
Sempell, R. 1882. *The marine steam engine*, 11.



SCOTTISH MARINE ENGINEERING

Fig. 8. Quarter scale model of the geared steuple engines of the screw steamer *Sinclair*. (Courtesy Glasgow Museum of Transport.)

The engines were essentially like those of the first forward vessels but smaller. *Sinclair* was of 280 N.H.P., with two cylinders 61 in bore x 72 in stroke, and *Vermins* slightly larger at 295 N.H.P. Engine speed was 19 rpm and boiler pressure 5 lb/in². Paddle wheels were 27 ft diameter. The contract price was £15,180 for *Sinclair* and £100 more for the other ship. The weight breakdown was engines 115 tons, boilers 5 tons, water 8 tons, coal boxes 20 tons, paddle wheels 20 tons, giving a total of 277 tons or about one ton per N.H.P.

After the vessels had been in service for a few years, Napier arranged for a question to be asked in Parliament, seeking a statement of the names of the engine builders with whom the Admiralty had placed orders from 1839 to 1843, with information on initial costs, cost of repairs and time out of service for repair.

For the *Vermins* and *Sinclair* at 17nd £1,200 and 17th of £7,200 the repair costs per day in comparison compared very favourably with vessels engineered by Beard and almost £1 and Maudslay at over £15,500. Clearly one would want to know rather more about how the figures were compiled before accepting them as accurate to the last farthing, but they do suggest that Napier's engines had something the others lacked.

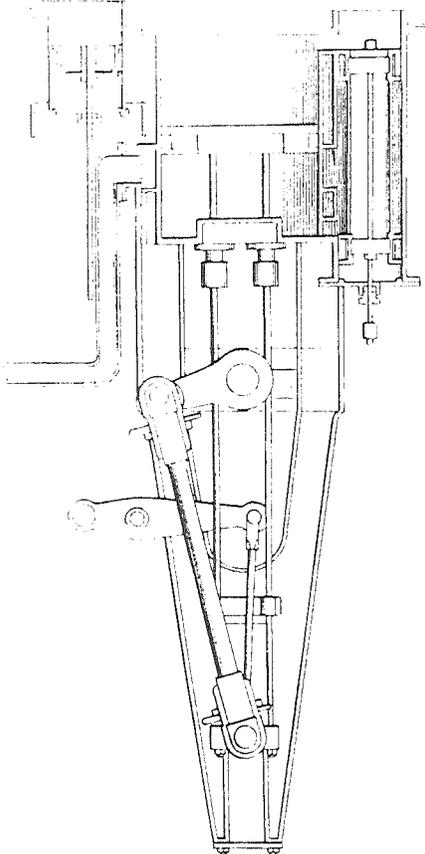


Fig. 9. Section of David Napier's steuple engines for the *Lion*, showing the gear mechanism. (Courtesy of the Glasgow Museum of Transport.)

SCOTTISH MARINE ENGINEERING
 FAWN 17, 32 1881 S. 318 1881

PLATE 12

Feathering (Morgan) paddlewheel

Sennett, R. 1882 *The marine steam engine*, 418-419.

paddle-wheel may be regarded as altogether a propeller of the past.

Paddle-boxes.—The form of the paddle-boxes should be arranged to allow the water to pass freely away from the propellers, and not to be boxed up and carried round with the wheel, by which the thrust would be reduced and the loss of work increased.

Feathering paddle-wheel.—In order to obviate the disadvantages resulting from the oblique action of the floats of radial paddle-wheels, especially in cases where the draught of the vessel varied considerably, feathering paddle-wheels have been introduced. The general form and arrangement of these propellers is shown in Figs. 151 and 152. The wheel consists of a wrought-iron framework, secured to a strong cast-iron centre or boss, keyed on the end of the paddle-shaft. The floats, instead of being fixed to the arms of the wheel, are carried on joints, and their motion is controlled by the action of an eccentric, through rods and levers, in such a manner as to keep the floats approximately normal to the effective surface during their passage through the water, so that the whole of the thrust will be in a sternward direction. Its efficiency is at least ten per cent. greater than that of the radial paddle-wheel when both work under suitable conditions, and the economy and efficiency resulting from its use far more than compensate for its increased first cost and expense of maintenance.

It will, however, be seen that its construction is somewhat complicated, and that it requires considerably more care and attention than the common radial wheel. It is very important that the working parts should be sufficiently strong to withstand the shocks to which they are exposed, without undue straining, for damage to any part of the feathering apparatus is liable to paralyse the action of the entire wheel. These wheels are consequently made

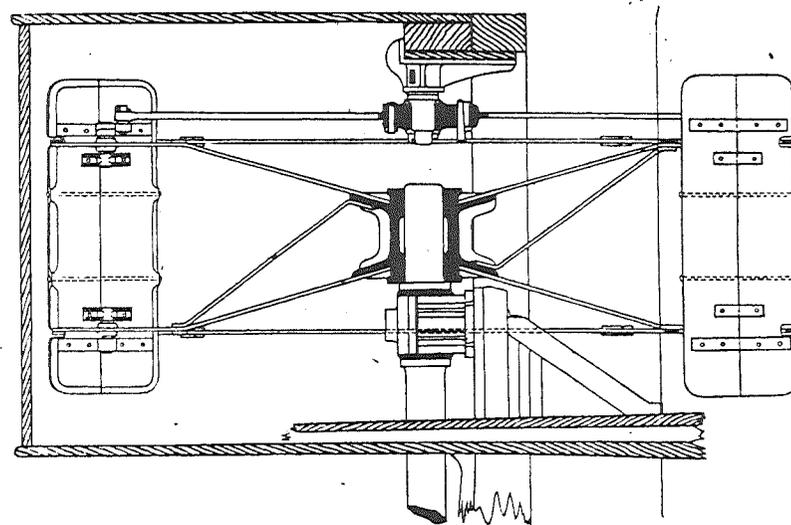


FIG. 152.

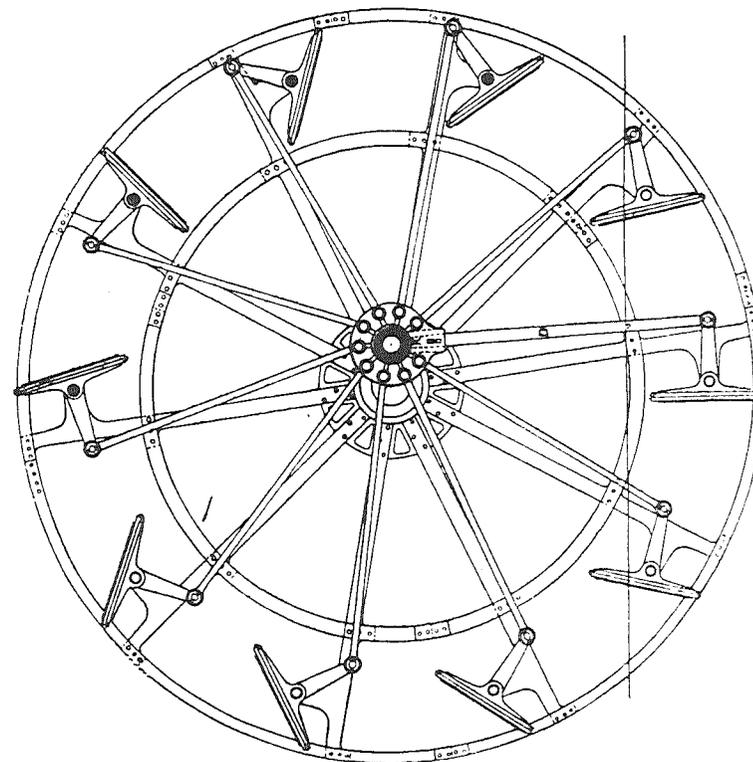
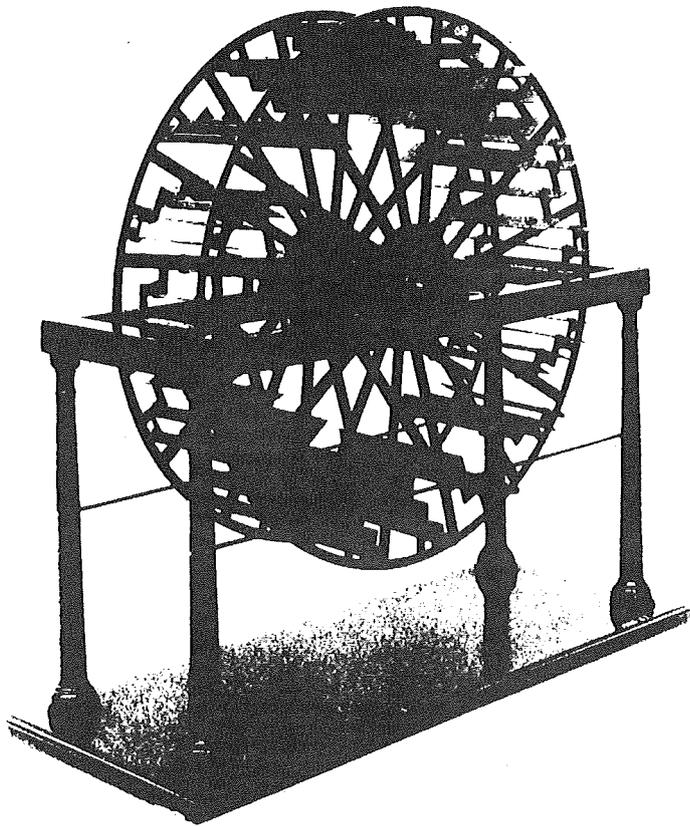


FIG. 151.

PLATE 13

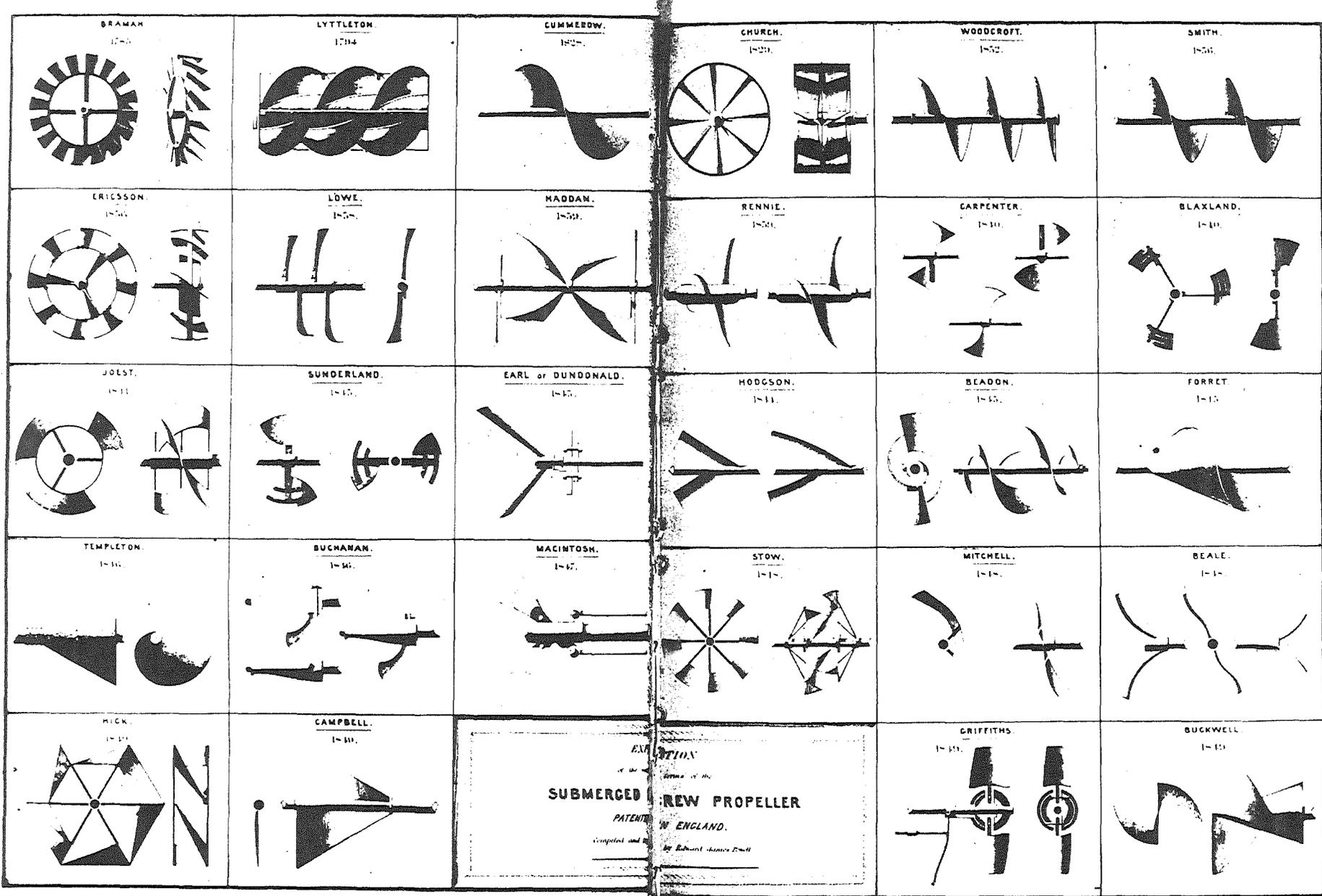
Cycloidal paddlewheel

Brown, D.K. 1990 *Before the ironclad*, 59.



A cycloidal paddle wheel, invented by Field in 1835 and reinvented by Galloway in 1837. This model is similar to that used by Maudslay for the SS Great Britain. (ScM)

PLATE 14
 Early propellers
 Guthrie, J. 1971 *A history of marine engineering*, 96-97.



21 Various types of early screw propellers

TRANSPORT ON THE SCOTTISH EAST COAST BEFORE THE STEAMSHIP.

The lamentable state of Scottish roads in years gone by was certainly an incentive, at least in summer, to travel by sea along the east coast. Until the latter part of the eighteenth century, however, there was little or nothing in the way of a systematic approach to the provision of any such transport by land or sea. For example when, in 1739, Tobias Smollett made the journey from Edinburgh to Tyneside, he found there was “no such convenience as a waggon”¹. Since he could not afford to hire a horse, he made a deal to ride on a pack horse over the bad roads.

By 1750 some form of semi regular service was being attempted by stage-coach between Edinburgh and London. The time taken was 10 days in summer, and 12 in winter², and roads were gradually having some improvement made to them. The picture at sea was little better, for the east coast trade was mainly carried out in brigs, which sailed when they had a cargo, carrying such passengers as had negotiated a passage. Once they sailed the voyage time was of most uncertain duration.

It has been reported³ that in 1743 some so-called packets on passage from Leith to London, had taken 20 days to reach Holy Island. In the latter part of the century the typical east of Scotland brig was between 160 and 200 tons with a small, rather unappealing, passenger cabin. Intermittently during the century vessels were advertised to depart on a given day, but this appears to have been the exception rather than the rule.

Some improvement was in sight, however, for a class of large smacks had developed in the Berwick area in connection with the salmon fishing. These vessels traded to London with the salmon catch, a voyage requiring speed,

¹ Bagwell, P.S. 1974 *The transport revolution from 1770*, 35.

² Bagwell, P.S. 1974 *The transport revolution from 1770*, 42.

³ Bagwell, P.S. 1974 *The transport revolution from 1770*, 63.

which their rig and form gave them. It became common practice for them to carry passengers, many of whom had arrived at Berwick from Edinburgh or elsewhere in Scotland. In 1791, seeing an opportunity for profit, some of these vessels began to uplift passengers, and some freight, at Leith and traded to London, calling at Berwick to uplift a salmon cargo. These belonged to the Leith & Berwick Shipping Company. The success of this venture prompted some Leith merchants to enter the trade themselves. In 1802 they formed the Edinburgh & Leith Shipping Company to operate their own smacks on the route, but not generally calling at Berwick. They began with six, armed, vessels⁴.

It must be remembered that this was done at the time of the peace of Amiens, when the prospects for peace and prosperity may have seemed good, but it proved to be merely a lull in the middle of a major war. The war re-started in 1803, and it quickly became apparent that the trade was not without risks. On 23rd October, 1804 the Leith smacks *Britannia*, Captain Brown and *Sprightly*, Captain Taylor were attacked off Cromer by a French privateer⁵ and a brisk fight ensued, after which the Frenchman broke off the engagement. On 9th January, 1805 the *Swallow*, Captain White, was similarly attacked off Flamborough Head. Once again the Leith vessel had the better of the duel, but such events were scarcely calculated to improve public confidence. Notwithstanding such apparent setbacks, the trade seems to have prospered. In 1809⁶ a second company, the London & Edinburgh Shipping Co., entered the trade with no less than 10 smacks. The Edinburgh & Leith's initial vessels had been built at Bridport, but many subsequent ones were Leith built. In 1812 the former Leith & Berwick company transformed itself into the London & Leith Old Shipping Co. with 6 smacks. Still in wartime, in 1814, a fourth company - the Edinburgh, Glasgow & Leith Shipping Co. was formed with a further 4 smacks. Some rationalisation followed in 1820, when the E.G. & L. amalgamated with the E.& L. to form

⁴ Reid(pub.) 1819 *Leith & London smack directory*, 5-6. Leith.

⁵ Grant,J. 1883 *Old & new Edinburgh*, 3:211. Edinburgh.

⁶ Reid,W. 1824 *London & Leith smack & steam yacht guide*, iv. Leith

the London, Leith, Edinburgh & Glasgow Shipping Co. to operate a total of 8 smacks.

Thus by 1819, four companies were operating 27 vessels on this one route. By 1824, in the face of steam competition, this had already dropped to three companies with 22 vessels.

Overall this represents a fairly major trade, for the average size of smack also increased during the period. At the turn of the century 100 tons was considered large for the class, while by 1824 the smallest was 130 tons and largest just under 200⁷. Competition had also improved the standard of accommodation, which was normally in two cabins, one (aft) for ladies and one gentlemen - the latter doubling as dining saloon. Bunks were arranged round the cabins, in some cases in small staterooms. Most vessels carried a supply of books for the passengers, and some even had a piano. Steerage passengers, however, were in fact carried on deck.

The record passage from London to Leith was undertaken in 42 hours, but three days was considered quick, and four good. It was sometimes stretched to 10 days in either calms or adverse winds. Prior to the acceleration of the stage coach service at the end of the Napoleonic war (to 45 hours 30 mins.) the smack could frequently beat the coach⁸. There was little doubt that, in all but the worst of weather, the sea passage was certainly more comfortable, and possibly less dangerous than the coach. The sea passenger was also allowed up to the volume of three barrels of luggage. A further advantage of sea travel was that fares were inclusive of food and non-alcoholic drink, with no extras if delayed, while the stage was not only more expensive in the first instance, but did not include food. The stage coach was now the most common form of land transport for passengers. Because of the expense (4d per mile inside, 2d outside), the poor either did not travel by land or made

⁷ Reid, W. 1824 *London & Leith smack & steam yacht guide*, v. Leith.

⁸ Reid, W. 1824 *London & Leith smack & steam yacht guide*, viii. Leith.

use of carriers wagons (0.5d per mile)⁹. The inside stage fare Edinburgh to London was thus some £6:3s, plus food and tips, while the smack cabin fare was £3:3s all in, steerage £1:5s. It may be seen that the cost of a long journey by wagon was theoretically cheaper than sea, but the additional expenses, and sheer fatigue of such a trip would rule it out for almost anyone.

While we have considered the provision of services between Edinburgh and London at some length, this is not to suggest that other routes did not have their own importance. On land a considerable network of carriers wagons grew up, as roads gradually improved, to supplant the previous pack horse journeys. For the wealthier passenger a network of stage coach routes also arose. These in fact were part of a two tier system. The ordinary stage coach had a superior competitor in the shape of the mail coach, which was faster, carried fewer passengers and was more expensive. As far as the east coast was concerned, the principal routes¹⁰ were from Edinburgh via Stirling to Perth, Edinburgh across the Queensferry through Fife to Perth and on to Dundee, Aberdeen and Inverness. There was also a route by Queensferry, or elsewhere to Fife and thence by Tay ferry to Dundee. Most of these were on a daily basis. A rather more comprehensive network of carriers routes, of varying frequency, also existed. Possibly the most highly organised sea passage of the time, on the east coast, was that at Queensferry. A boat was to make the crossing every hour between sunrise and sunset, with a smaller pinnace or yawl on the half hour. A superintendent of the ferry was based on the north side, and regulations covered the fares and freight charges as well as availability of boats and boatmen.

A similar arrangement obtained for the crossings between Leith or Newhaven and Pettycur and Burntisland, although with a rather less frequent service.¹¹

⁹ Bagwell, P.S. 1974 *The transport revolution from 1770*, 54-55.

¹⁰ *Edinburgh Almanack* (sic) 1821, 59-60.

¹¹ *Edinburgh Almanack* 1821, 36-38.

A number of infrequent but regular services also operated across the Forth, such as the *Maggie Lauder*, which plied from Anstruther to Leith on Tuesday mornings at nine, returning two hours before high water on Fridays. There was a similar Pittenweem to Leith service, and a twice weekly run from Elie to Leith¹². In addition there were more or less regular sailings by two companies between Leith and Newcastle, another two operated to Hamburg, one each to Aberdeen (with 4 smacks), Greenock, Hull (with 5 smacks) and Inverness (3 smacks), while the Carron Company ran four smacks between the Forth and Liverpool (probably via the Forth & Clyde Canal, although the sources do not specify). At least two smacks traded between Leith and Perth, four to Stirling and a further two from Leith to Dundee¹³. Services were also established by the mid 1820s from Leith to Helmsdale, Thurso, Wick, Ross and Morayshire.

Meanwhile the men of the Tay were not idle. A ferry service existed from Dundee to Newport, although this appears not to have been very well regulated, and was not without danger. A spectacular accident took place there on Sunday, 4th June, 1815, two weeks before the battle of Waterloo. A ferry pinnace was towing a local yawl out from Newport, and shook out the reefs in her lug sail, perhaps a little soon. The towed yawl began to take some water, and it appears that the man at the helm of the pinnace attempted to clear the tow rope, whereupon his boat broached and filled with water. Of either 23 or 24 persons on board, only the man in the yawl, one of the pinnace crew, and four passengers survived. The man in the yawl was quick enough to cut the tow and keep his boat afloat, and thereafter rescued those he could find. There was some controversy as to whether another pinnace, which was nearby, could have made an attempt at rescue, which it did not. It was also suggested that the crews were generally insufficient and passengers were often asked to take the helm while the sail was trimmed¹⁴.

¹² *Edinburgh Almanack* 1821, 257.

¹³ *Edinburgh & Leith Post Office Directory* 1820 onwards.

¹⁴ *Glasgow Herald*, 9 June, 1815.

The Dundee & Perth Shipping Co was founded in 1798¹⁵ and by the end of the war ran eight smacks, fortnightly to London. From 1819 they had competition from the Dundee & Perth Union Shipping Co's four smacks, until the companies joined in 1826 to form the Dundee, Perth and London Shipping Co.

The Dundee & Hull Shipping Co. was founded in 1799 and ran a fortnightly service with two smacks. One or two others operated from Dundee to Aberdeen, again on a semi-regular basis.

Further north the nature of the trade seems to have been more along the traditional ad-hoc arrangement of sailing when a paying cargo had been assembled. This was especially true in relation to the northern isles, which had no real predictable arrangements at all. Perhaps eight sloops traded between Orkney and Leith, and two from the Shetlands to Leith in the early part of the century, with no direct link at all between Orkney and Shetland¹⁶.

Overall at the dawn of the age of steam, the picture is of a demand for coastwise tonnage broadly proportionate to the population of the hinterlands of the east coast ports. Orkney may be seen as perhaps a special case, having rather more vessels in the trade than might have been expected, perhaps due to the difficulties of weather and the demands of island living. The old pattern of individual ships was giving way gradually to that of the small company, with perhaps half a dozen vessels. As far as possible it was becoming increasingly common, at least in the southern half of Scotland, to advertise definite departure times. In some cases, notably the Forth ferries, a quite rigid timetable structure had already emerged and was expected to be adhered to even by the sailing vessels then employed.

¹⁵ Jackson, G. & Kinnear, K. 1991 *The trade and shipping of Dundee 1780-1850*, 32. Dundee.

¹⁶ Donaldson, G. 1978 *Northwards by sea*, 3-6.

THE STEAMSHIP COMES TO SCOTLAND'S EAST COAST.

The chief purpose of this chapter is to establish a narrative of the introduction of the steamship to the east of Scotland. If we can consider the Forth and Clyde Canal as being part of the Scottish east coast, then the story of the area's steamships began with the trials of the *Charlotte Dundas* in 1802. Since our concern is, however, more properly with east of Scotland sea-going steamers we must advance a little over a decade. The earliest such craft has been claimed to be the *Tay*, in 1813¹. She is reported to have been built at Dundee on behalf of John Robertson, the Glasgow maker of the engine for Bell's *Comet*, who is reputed to have also constructed the engine for the new craft. Little can be told about her early career, beyond that she operated between Dundee and Perth until about 1818, when she was re-named *Oscar*, and transferred to the Glasgow - Lochgoilhead trade².

In fact she does not seem to have begun operating until 1814³. Moreover when she was first registered⁴, at Glasgow in 1821, she was certified as having been built by James Smart at Dundee in 1814. She was modified and lengthened at Port Glasgow in 1818 and 1820 by John and Charles Wood.

She will have to yield her "first" place to Henry Bell's *Comet*, which arrived in the Forth in the early summer of 1813 via the Forth and Clyde Canal⁵. She was apparently brought through for some modification, to the yard of Shaw & Hart at Bo'ness, where Bell had worked as a youth⁶. While there she undertook an excursion to Leith at a fare of 7s6d (37.5p). single. The vessel was then returned to the Clyde, but returned to the Forth in 1816 and

¹ Body,G. 1971 *British paddle steamers*, 22.

² Body,G. 1971 *British paddle steamers*, 26.

³ Buchanan,R. 1816 *A treatise on propelling vessels by steam*, 61. Glasgow.

⁴ PRO BT107/404 Glasgow 18 of 1821.

⁵ Brodie,I. 1976 *Steamers of the Forth*, 5. (In part quoting *Edinburgh Courant* 21 May 1813) see also Osborne,B.D. 1995 *The ingenious Mr Bell*, 153. Glendaruel. (referring to 24 May).

⁶ Osborne,B.D. 1995 *The ingenious Mr Bell*, 53-55. Glendaruel. (in part quoting Morris,E. 1843 *The life of Henry Bell*, 16. Glasgow.)

remained until 1819 when she was sent to the west coast, where she was lost the following year⁷.

The possibilities for successful estuary use of a steamship seem to have been quickly accepted, and 1814 saw the introduction into regular service of a vessel on the Forth. She was the *Stirling* and plied between the town of that name, and Leith, or more commonly Newhaven. Perhaps unexpectedly, due to the vagaries of document survival, it appears that she can claim to have the earliest surviving evidence of registration⁸ of a British steam ship. This quirk of fate is due to the loss of other documentation (including that for the initial registration of *Comet*) in a nineteenth century fire. It would be well to state at this juncture, that this little ship seems to have frequently been confused by writers⁹ with the slightly later *Stirling Castle*¹⁰.

The confusion of vessels registered with similar, or indeed identical names, is a recurring source of difficulty in any research covering the period prior to the Merchant Shipping Act 1894. The further element of confusion caused by un-registered vessels is also at times a factor. In this particular instance the existence of several different *Stirling Castle* names in different parts of Britain within a short period probably helped to perpetuate the error.

Stirling was launched from the Kincardine on Forth yard of John Gray, and while still small, was significantly bigger than the 44 foot long *Comet*. She was 68' long by 15'2" beam, with a measurement tonnage of just over 69 tons. The single masted craft had a quarter deck raised by a mere 1'4", and was embellished with a highlandman figurehead.

⁷ Spratt, H.P. 1958 *The birth of the steamboat*, 88.

⁸ PRO BT107/113 Alloa, 11 of 1814.

⁹ Who seem to have followed an error in House of Commons, Accounts & Papers 1822 *Fifth report of Select Committee on roads from London to Holyhead*, VI.115. The remote possibility of an informal name change which was not recorded in the register of Shipping remains, but there were certainly two vessels.

¹⁰ PRO BT107/413 Alloa, 54 of 1826. Subsequently Official Number 10001.

The newspaper advertisement¹¹ regarding her introduction is a nice example of the thinking of the period.

“Cheap Easy and Safe Conveyance

The

Stirling Steamboat

Elegantly and commodiously fitted up for the accommodation of passengers commenced sailing betwixt Stirling & Leith on Tuesday last and will continue to sail from Stirling every Monday, Wednesday and Friday, and from Leith every Tuesday, Thursday and Saturday while the weather permits. The hours of sailing will be determined by the time of the tides. She performs the voyage in seven hours and passengers are taken in & put out at Alloa, Kincardine &c. Fare from Stirling to Leith - Best Cabin 6s 6d. Second Cabin 4s 6d.”

Her operating pattern serves to illustrate that as yet steam was not all powerful in the face of the elements. She was scheduled to leave Stirling at the time of high water at Leith. The journey was expected to take 7 hours. The first part was assisted by the last of the delayed ebb, known locally as the “lek”, but most of the way through the Windings was into the flood, which would assist steering. As she reached Alloa the ebb would begin and assist as far as Bo'ness and the remainder of the journey would be undertaken in slack water. The upstream departure was at two hours before low water, and had a related pattern, again stemming the tide in the awkward Windings¹².

This service in tidal waters, which, came only five years after the introduction of the *Accommodation* on the St Lawrence¹³ and two years after *Comet* on the Clyde, was still early enough to have some world significance. As a scheduled provision at this early date, rather than a series of excursions, it

¹¹ *Edinburgh Evening Courant*, Monday, 11 July, 1814.

¹² Brodie, I. 1976 *Steamers of the Forth*, 8.

¹³ Preble, G.H. 1883 *A chronological history of the origin & development of steam navigation*, 65. Philadelphia.

must be regarded as amongst the pioneers. The service is a good example of the early type of steamship utilisation in general. Operating largely in a fairly sheltered portion of an estuary, it faced some tricky tidal streams and an awkward winding section, difficult for sailing vessels to negotiate. The local roads system may safely be described as inadequate, yet demand existed to link an established town at the lowest bridging point of a major estuary with the major port of the district. Overall an ideal niche for the steamship.

The proprietors appear to have been fairly confident of success from an early stage, and announced their intention¹⁴ to construct a second vessel. Mention was also made of a coach being run in connection from Edinburgh to Newhaven. This would appear to be the earliest use of Newhaven as a terminal point, it being then a fishing village without a proper pier or harbour. A little over two weeks later¹⁵ came another announcement of the intended construction of a rival vessel, to ply between Alloa and Leith, and intended to return the same day.

The year 1814 also saw a quite remarkable, and largely unheralded delivery voyage of a steam vessel. Having been constructed in Dundee¹⁶ she sailed south for Hull, crossing the bar at Sunderland en route, "in very tempestuous weather". On arrival she entered service between Hull and Gainsborough on the river Trent¹⁷. This vessel appears to have been one of the many to carry the name *Caledonia*, and to have had an astonishing turn of speed for the period. On 15th October, 1814 she was reported as having travelled from Gainsborough to Burton Stather, just short of the Humber, in an hour and a half, at 14 miles an hour. By 14th May the following year she was reported as having made a round trip 122 miles from Hull to Naburn just outside York, and back in "about twelve hours."¹⁸

¹⁴ *Edinburgh Evening Courant*, Saturday, 6 August, 1814.

¹⁵ *Edinburgh Evening Courant*, Monday, 22 August, 1814.

¹⁶ Buchanan, R. 1816 *A treatise on propelling vessels by steam*, 61. Glasgow

¹⁷ Buchanan, R. 1816 *A treatise on propelling vessels by steam*, 64. Glasgow.

¹⁸ Pearson, F.H. 1896 reprinted 1984 *The early history of Hull steam shipping*. 2 Hull.

While perhaps not strictly engaged in the trades which are the subject of our present enquiry, she justifies our attention by her place of building, and reported performance. It is also worth remembering that this delivery voyage pre-dated, by some months, that of the better known *Margery*, from Glasgow, through the Forth and Clyde Canal and down the east coast to London. That journey, under sail, did not take place until January 1815¹⁹.

The *Stirling* ceased trading during the winter, and resumed operation on 5th April, 1815²⁰. Body reports²¹ that in that year another vessel entered service on the Forth, and one between Perth and Dundee on the Tay, but unfortunately he does not provide any other information on these vessels, nor give his source. It is possible that he was in fact referring to the *Tay*, and the *Comet*. Buchanan specifically states²² that only one steam boat was operating on the Tay at this period.

The introduction on the Forth, was the *Morning Star*. She was placed in service between Alloa and Newhaven, as the "Alloa and Kincardine Steamboat", from 14th August, 1815²³. She undertook a daily round trip, with departure times varying according to the tide. She seems to have generally gone up river in the morning, and back down in the afternoon, but completed two upstream trips on Saturdays, spent Sundays at Alloa, and made only a down river journey on Mondays. This vessel reportedly suffered a bizarre accidental stoppage in September, 1819. It was discovered that a salmon had blocked the condenser pipe²⁴.

Only ten days after the introduction of *Morning Star*, the previously announced sister for the *Stirling* was introduced. She was the *Lady of the Lake*, and was noticeably faster than her partner, taking only five hours for

¹⁹ Spratt, H.P. 1958 *The birth of the steamboat*, 93.

²⁰ *Edinburgh Evening Courant*, Thursday, 30 March, 1815.

²¹ Body, G. 1971 *British paddle steamers*, 30.

²² Buchanan, R. 1816 *A treatise on propelling vessels by steam*, 61. Glasgow.

²³ *Edinburgh Evening Courant*, Monday, 14 August, 1815.

²⁴ Kennedy, J. 1903 *The history of steam navigation*, 34. Liverpool. (Quoting the *Berwick Advertiser*).

the voyage, albeit at the higher fares of seven and five shillings for the best and second cabins respectively. Passengers were to be uplifted and put ashore by boat at the intermediate points of Alloa, Kincardine, Bo'ness and Queensferry²⁵.

All three vessels appear to have not been exposed to the mid winter weather, but to have resumed in the springtime. There must remain some doubt on this point, since while the resumption of *Lady of the Lake* in March, and of *Morning Star*, on completion of a refit, in April is documented²⁶, there appears no mention of *Stirling*. This cannot be taken as indicating that she was somehow no longer in service, but might merely indicate that her operators failed, for whatever reason, to advertise her sailings.

This argument may gain some slight strength from the fact that *Comet* was not apparently advertised in the Forth in 1816, yet according to Bell²⁷ she was there, in service between Newhaven and the eastern end of the Forth and Clyde Canal at Grangemouth. Bell is said to have not always been reliable with regard to dates, nor indeed some other matters²⁸, but on balance we may accept this report.

The Newhaven to Alloa service now began to announce the availability of meals on board, and the provision of a connecting land service, onward to Stirling. An elaborate table of fares between intermediate points also began to be published, with children under 10 at half fare, and under 1 carried free. The services again stopped for the winter, and resumed in 1817²⁹. During that season *Morning Star* added Crombie point and Limekilns to her list of places for the transferring of passengers to boats.

²⁵ *Edinburgh Evening Courant*, Thursday, 24 August, 1815.

²⁶ *Edinburgh Evening Courant*, Thursday, 7 March, and Thursday 11 April, 1816.

²⁷ Woodcroft, B. 1848 *A sketch of the origin and progress of steam navigation*, 84. Reprinting a letter from Henry Bell to the editor *Caledonian Mercury*.

²⁸ Osborne, B.D. 1995 *The ingenious Mr Bell*. Glendaruel.

²⁹ *Edinburgh Evening Courant*, various dates.

In September of 1817, almost without fanfare³⁰, a vessel whose name ultimately was to become accepted as that of a ship class, entered service. *Tug*, belonging to the smack operating Edinburgh, Glasgow and Leith Shipping Company, was introduced as a passenger ship, plying from Leith to Grangemouth in the morning, and returning in the afternoons. The fare was two shillings First Cabin, and one shilling Second. Passengers were transferred to and from the pier at Leith in her own boat.

Interestingly, it seems that her safety precautions were a selling point, "The engines of the *Tug* are fitted up on the most superior construction, with safety valves, two of which, inaccessible to the crew, are on the principle lately recommended to Parliament, and the strength of the steam being regulated by a mercurial gauge, no danger is apprehended". This was no doubt a reflection of public interest in the recent report of the House of Commons Select Committee on Steam Boats. She appears to have continued quietly in this role until, with her owners metamorphosis in 1820 as the London, Leith, Edinburgh and Glasgow Shipping Co., she began to assist the company's packets³¹ from Leith to the Forth & Clyde Canal on route for Greenock. She seems to have attracted attention only in passing until about 1824. She was built at Port Glasgow³² by James Barclay and the Wood brothers, and was a flush decked vessel with a single mast. She was 73'10" long, with 17'2" beam, and 8'1" depth of hold. It has been stated that she made her delivery voyage round the north of Scotland³³. While her dimensions put her near the maximum for a transit of the Forth & Clyde Canal, and the Caledonian Canal was yet to open, such a voyage represents a true adventure.

The use of the name "Tug" had hitherto generally referred to a piece of horse harness forming part of the traces³⁴. The nautical use of the term seems to

³⁰ *Edinburgh Evening Courant*, Monday, 22 September, 1817.

³¹ *Edinburgh and Leith Post Office directory*, 1820, 461.

³² PRO BT107/400 Leith, 32 of 1817.

³³ Osborne, B.D. 1995 *The ingenious Mr Bell*, 161. Glendaruel.

³⁴ *Oxford English Dictionary*.

have been limited to the tug-net, towed behind a boat in the mouth of the Spey for fishing from about the fifteenth century³⁵.

We should note that the idea of using steamers for towing purposes was still very much in its infancy, expressed in 1816³⁶ as:

“It is probable that another source of employment will arise to steam boats, that of towing ships whether outward or homeward bound. Towing has already been tried. Two vessels in the Clyde are used to carry goods. It is the opinion of many that most the advantageous method would be to have a separate boat for the engine and to tow lighters”.

Meantime there had been a good deal of public concern regarding the state of the ferry from Dundee across the Tay³⁷, following a serious accident in 1815, to which we have already referred. At that time the ferry was operated by 25 boats, manned by about 100 men and boys, and was unregulated and disorderly. In 1817 the counties of Fife and Forfar accordingly appointed a joint committee to examine the ferry and introduce some improvement. They proposed a reduction in the number of boats to 8, but with stronger crews, operating to a timetable, and obtained an Act of Parliament to regulate them in 1819. During the discussion of the Bill, the introduction of steam was suggested. By this time some 70,000 passengers p.a. were using the route, generating £2,510 in revenue.

The Trustees made enquiries regarding the steam services by then operating, including those in America, at Hamburg, and on the Mersey. With this information they decided to obtain a steamship. She was the *Union*, and somewhat unusual, in that she was a double ended catamaran, with a single paddle wheel mounted between the hulls. The link to the early experiments of Patrick Miller is clear.

³⁵ Robinson, M. 1985 *Concise Scots Dictionary*. Aberdeen.

³⁶ Buchanan, R. 1816 *A treatise on propelling vessels by steam*, 168. Glasgow.

³⁷ Hall, B. 1825 reprinted 1973 *An account of the ferry across the Tay at Dundee*, 4. Dundee.

She entered service towards the end of 1821, and initially plied between Dundee on the north, and Newport and Woodhaven alternately on the south bank. It was quickly established³⁸ that the alternating southern terminal was an inconvenience, and from July 1822 the call at Woodhaven was discontinued. This was found more satisfactory, and by 1824, when a sister ship, *George the Fourth* had been introduced, 100,536 passengers p.a. were being carried, along with 2,564 loaded carts, 474 gigs, 130 carriages, 6,627 cattle, 15,449 sheep and 4,777 horses³⁹.

The two steamers were supplemented by a pair of four man pinnaces, which were available for hire to anyone unwilling to wait for the next steamer, and as the only service at night, when the steamers did not operate for lack of demand.

These two steamships may make a claim to be the world's first sea going, double-ended ro-ro ferries, probably the first commercially successful powered catamarans, and almost certainly the first salt water steamships built without any provision for sails.

A tradition of rope hauled twin hull river ferries exists in the United States, but it may be that the earliest of these were little more than up-graded rafts. Perhaps influenced by these, and more certainly by the influence of Miller, Robert Fulton had been inspired to try a variation. He produced at least a pair of such boats, powered by steam, as river ferries in the Hudson and East rivers at New York⁴⁰. There had also been early double hulled steamboats in Britain; *Eagle*, built by Wright in 1814 and exported to the Seine in 1815, and *Aetna*, built at Liverpool in 1816 as a Mersey ferry⁴¹. These vessels do not however appear to have attracted much attention, although the persons

³⁸ Hall, B. 1825 reprinted 1973 *An account of the ferry across the Tay at Dundee*, 7. Dundee.

³⁹ Hall, B. 1825 reprinted 1973 *An account of the ferry across the Tay at Dundee*, 8. Dundee.

⁴⁰ Flexner, J.T. 1944 re-published 1978 *Steamboats come true*, 337. Boston.

⁴¹ House of Commons 1822 Accounts and Papers. *Appendix to 5th Report of Committee on roads from Holyhead to London*.

investigating steam ferries on the Mersey on behalf of the Tay Ferry Trustees may be assumed to have noted the use of the type. The mouth of the Tay is a very much more exposed location than any of the above.

There are indications that *Union* was indeed influenced by American practice. She was apparently described, soon after her introduction, as “of the American twin species”, “..only one in Britain...except.... one [which] lately plied on the Mersey” and “built from the model of one of the twin boats...in America”⁴². In addition, the City of Dundee museum service have in their possession two plans (Plates 15 and 16)⁴³ which may be of American origin. These have been in store along with a further four plans, three (Plates 17,18 and 19)⁴⁴ of which can be identified with *Union*. The remaining plan, which is in very poor condition, and pending restoration cannot even be photographed, appears to be very probably of *George the Fourth*.

The “American” plans indicate hulls built in bateau style, flat bottomed, with major structural members at the bilge and no keels as such. This is strongly reminiscent of the vernacular style of the eastern United States. They are quite unlike the remaining plans in draughtsmanship, but have a clear similarity with each other and appear to represent different views of the same ship. Plate 16 is dated 1818. Plate 17 uses the American spelling of “center”. While in this period one should not attach excessive importance to spelling, which was frequently erratic, it does fit with an American origin. The “American” documents lack specific provenance in the collection, but it is considered that they may have come into their possession at the foundation of the museum. Given the circumstances of the known enquiries made at the time there is a strong temptation to assign them an American origin. The further temptation to give them a connection with Robert Fulton is very great

⁴² Notes in McManus Galleries, Dundee apparently derived from Dundee Year Book 1910, and in turn from *Dundee Advertiser* 20 July 1821.

⁴³ McManus Galleries, Dundee, Acc.No. 1977-1045-3 *Sketch for a double ferry boat*, and Acc.No. 1977-1045-4 *Section of ferryboat at center (sic) of paddle wheel*. (dated 15 December 1818).

⁴⁴ McManus Galleries, Dundee Acc.No. 197-1045-1, 1977-1045-2 & 1977-1045-3.

and may merit some future investigation in collaboration with scholars in the United States.

The plans of the *Union* may be regarded as very rare survivors. They give a very detailed view of the design of the vessel. They are dated 16 October, 1820 and two of them are endorsed on the rear, to the effect that they form part of the contract documents for the building of the vessel. Examples of such early drawings, identifiable with a contract for a merchant ship, must be very rare. There seems good reason to consider them authentic, and they bear the signature, amongst others, of James Brown, the builder. Other examples exist of his signature⁴⁵, should professional comparison be thought desirable.

On her introduction *Union*, which was built by James Brown at Perth, was described in the press⁴⁶ as consisting of two hulls, each with 76' keels and 11'6" beam, spaced 11'6" apart. She was 92' long on deck. A 32' section at one end was railed off for carriages and livestock, and in this portion the deck was some two feet lower than the remainder. She had an iron rudder, 4'6" long by 3'6" high, at each end, and these were operated by ten foot athwart-ship tillers, which each required two men to handle them properly. For turning in a confined space both helms were in use at the same time. The engines could be reversed by means of a geared apparatus on deck.

We also have a detailed description⁴⁷ of *George the Fourth*. She was likewise constructed by James Brown at a cost of £4,330 14s 10d, with machinery by James & Charles Carmichael of Dundee. She was not as heavily built as her sister, as a result of trials made with the earlier vessel. Her dimensions, were 90ft length by 29ft beam, 6ft 8in depth of hold, and she drew 4ft 6in light and 5ft 4in laden. The hulls were spaced 8ft apart with the 7ft wide, 14ft diameter

⁴⁵ SRO CS96/886.

⁴⁶ *Aberdeen Journal*, 19 September, 1821.

⁴⁷ Hall, B. 1825 reprinted 1973 *An account of the ferry across the tay at Dundee*, 10-17. Dundee.

wheel between them. At her normal trim, the floats of the paddlewheel were immersed about 18 inches. Fore and aft of the paddlebox the space between the hulls was decked over, her deck planking all being athwartships instead of the more usual fore-and-aft. "To a person standing on the deck, she appears to be but one vessel". At each end a space was railed off for livestock, while passengers were accommodated amidships, with access to two cabins. That she may be claimed as a "ro-ro" design seems clear for Hall states "carriages and carts drive in on one side of the river and out again on the other without removing the horses". Folding side ramps were fitted at each side, apparently in much the same fashion as in a car ferry of the 1950s. Hall's description might be interpreted as suggesting modern style bow ramps, but the (un-reproduced) plans indicate side versions.

The hulls of both Dundee vessels were double-ended, flat bottomed and perpendicular sided. The "bows" are quite sharp. According to Hall they were each "angled at 60 degrees to the other hull", although examination of the plans (Plates 17, 18 & 19) does not seem to substantiate this remark. A rudder was mounted at each end, on the centre line. That of *Union* was a simple iron plate, but this was found difficult to control (according to Hall) and in *George the Fourth* a balanced version, 4ft 6in long by 3ft deep, was fitted with the pivot point one third of the way along. At the upper end was a horizontal wheel, connected by a pinion and wheel to the steering wheel. This was in an elevated position above the taffrail, allowing the steersman to see over the paddlebox. Aside from the rudder arrangement and the weight of structure the other main difference between the two vessels lay in the connections between the hulls. In the earlier vessel, (see Plate 19) these consisted of diagonal trusses⁴⁸ from the keelson of one hull to the upper works of the other. This was found to offer excessive water resistance, and a

⁴⁸ Hall, B. 1825 reprinted 1973 *An account of the ferry across the tay at Dundee*, 26. Dundee. See also Plates 17, 18 & 19.

simpler beam arrangement was adopted for the second vessel⁴⁹ (visible in the un-reproduced drawing in the McManus Galleries).

The machinery, which drove her at about 7 knots, consisted of two single cylinder 20 hp engines, one in each hull, each with its own boiler and funnel. They were connected to the common crank shaft, one a quarter revolution in advance of the other⁵⁰. The purpose of this was in order to enable self starting, and is a commonplace of later engineering technique. This is at least an early example, and may not have been applied before in Europe, although one of the earliest Mississippi steamboats, Shreve's *Washington* of 1815, had such an arrangement⁵¹. There is also a report⁵² that in 1814 Boulton and Watt supplied an engine of this type for the *Glasgow*, which thereafter operated in the Clyde. Watt senior is known to have employed a 120 degree lead in some of his land engines, and it may be that this format was used in the *Glasgow*.

By comparison, Bell's *Comet* had a single cylinder engine and a flywheel, as did most land engines of the period. Another aspect of the *George the Fourth* engine arrangements which was definitely intended as an advance, and which was not repeated for some time, was a remote control system. The Carmichaels had devised a system which amounts to extending the control of the reversing gear to the deck, beside the helmsman. This appears to have worked, but equally did not catch on for other vessels. Carmichael's comments⁵³ are worth repeating "it places the engine as much under command as the rudder is, an undoubted improvement on the clumsy method of bawling out to the engineer below, who may not hear.."

⁴⁹ Also confirmed by viewing the plan in possession of McManus Galleries, Dundee, awaiting restoration.

⁵⁰ Hall, B. 1825 reprinted 1973 *An account of the ferry across the Tay at Dundee*, 13-14. Dundee.

⁵¹ Kirby, R.S. et al. 1956 reprinted 1990 *Engineering in history*, 225. New York.

⁵² Murray, A. & R. 1863 *Shipbuilding in iron & wood and steamships*, 115. Edinburgh.

⁵³ Hall, B. 1825 reprinted 1973 *An account of the ferry across the Tay at Dundee*, appendix 2. Dundee.

The vessels were crewed by a coxswain, engineer, five seamen and a fireman. The service operated on the hour from Dundee, and the half hour from Newport, from dawn to dusk, in accordance a published timetable, the first and last sailings varying with the time of year. A more limited Sunday service was also operated. A Superintendent based at Dundee had overall charge, assisted by a Collector, and an elaborate table of rates was laid down. The whole ferry system was overseen by the Joint Trustees, and appears to have been intended to operate as a non-profit making organisation for the benefit of the public.

In 1819 *Dumbarton Castle* had joined the eponymous *Tug* between Leith and Grangemouth⁵⁴. They appear to have divided their time between assisting the dozen small packets belonging to their owners, and providing a passenger service in their own right. In the second role they alternated on a service⁵⁵ from Trinity Chain Pier at 8am and 10am, via Inverkeithing, North Queensferry, Limekilns, Bo'ness, and Crombie Point to Grangemouth, returning at 4.30pm.

On the Leith to Alloa and Stirling route, the original *Stirling* had departed for the Caledonian Canal in 1820, and *Lady of the Lake* continued alone. *Morning Star* also remained in service, at first for the rival Alloa Steamboat Co. This pair then ran day about from Trinity via North Queensferry, Limekilns, Bo'ness, Kincardine and Crombie Point, to Alloa and Stirling. Apart from the Queensferry passage itself, an elaborate cross Forth steam ferry service was emerging. The "Kinghorn Ferry", consisted of the "West Passage" between Newhaven, Pettycur, Burntisland and Aberdour, and the "East Passage" between Newhaven, Pettycur, Kirkcaldy and Dysart. This complex network was operated twice daily in winter, and thrice in summer by *Sir William Wallace*, *Edinburgh Castle* and *Thane of Fife*. This trio were certainly not identical, despite their ownership by the Fife & Midlothian Ferry

⁵⁴ Grant, J. 1883 *Old & new Edinburgh*, 3:212. Edinburgh.

⁵⁵ Reid, W. 1824 *London & Leith smack & steam yacht guide*, 227.

Trustees, and the fact that they were all built by J.& C. Wood at Port Glasgow⁵⁶. The latter two, built in 1821, were comparable in size, at 90ft x 18.9ft x 10.9ft and 91.5ft x 18.6ft x 11ft respectively, and both served for a respectable number of years on the Forth. Their eventual fates were somewhat different. *Edinburgh Castle* was converted to sail and sold to Jersey in 1849, and broken up in 1855. *Thane of Fife* became a schooner in 1846, in similar fashion. Her ultimate destination was rather more dramatic than the breakers yard however, for she was reported wrecked in Fiji on 17th September, 1868⁵⁷.

The career of *Sir William Wallace* was also varied, for she had begun life on the Clyde. It has been suggested⁵⁸ that she was built in 1816 as the *Lord Nelson*, and rebuilt in 1820 before coming to the Forth. It has also been stated that she was in fact built in 1818 by John Wood of Dumbarton⁵⁹, and ran from Glasgow to Belfast, before coming to the Forth in 1821. *Lord Nelson* was also reportedly built by Wood and re-built in 1819 by John Scott of Greenock, before being re-named *Waterloo* and going to the Liverpool to Dublin service⁶⁰. Her true origins may now be lost to us. *Sir William Wallace* was wrecked off Burntisland on 18th January, 1825.

This trio were in competition as providers of cross Firth transportation, not only with assorted smacks owners, but with Queensferry and the services of *Tug* and *Dumbarton Castle*. The Trustees introduced a Sunday service from 24th June, 1821⁶¹ at the same time withdrawing the cutter which formerly stood by for, supposedly emergency, travel on Sundays. This provoked a controversy with the clergy over the encouragement of frivolous Sunday travel⁶². The general attitude seems akin to more recent discussion of the

⁵⁶ Brodie, I. 1976 *Steamers of the Forth*, appendix - fleet list.

⁵⁷ Brodie, I. 1976 *Steamers of the Forth*, appendix - fleet list.

⁵⁸ Brodie, I. 1976 *Steamers of the Forth*, appendix - fleet list. See also entry in Appendix C.

⁵⁹ PRO BT107 Leith 1821/20.

⁶⁰ Cleland, J. 1829 *The rise & progress of Glasgow*. Edinburgh.

⁶¹ *Edinburgh Evening Courant*, Thursday, 21 June, 1821.

⁶² *Edinburgh Evening Courant*, Saturday, 29 September, 1821.

same question in the Western Isles. The owners of *Tug* and *Dumbarton Castle* tried to strike a tone of high moral character in the press, as not operating on Sunday.

The Trustees advertisements also claimed that the journey by their route was “cheaper than Queensferry” because of the shorter land distance, land travel being more expensive than sea. That oldest of the ferry crossings, between North and South Queensferry, had itself acquired a locally constructed steam vessel, *Queen Margaret*, which entered service from Tuesday, 2nd October. The fare was sixpence (2.5p) per adult, threepence (1.25p) per child, eightpence (3.3p approx.) per head of cattle, and seven shillings and sixpence (37.5p) for a full load of freight. The vessel was also to tow the existing ferry boats as required by the superintendent.

On Christmas Eve, *Tug* and her partner were joined by *Surprise* in a new daily steam service from Trinity Pier to Largo at fares of 3/- (15p) First, and 2/- (10p) Second⁶³. In connection with this service “..elegant and commodious coaches will be immediately established, to leave Largo for Cupar and Dundee ferry on the arrival of the boats..”. The market was obviously considered ripe for development, but competition was becoming fiercer. Confidence in the technology was also increasing markedly, for not long before it was considered expedient to cease operation in the upper Forth for the winter, but now midwinter was deemed a suitable time for the introduction of an almost open sea crossing.

This particular operation was not without its problems however. The owners were soon in dispute with the Commissioners of the Northern Lights, who brought an action⁶⁴ in the Admiralty Court, regarding non payment of dues in respect of *Tug* and *Surprise*. This hinged on a dispute over what constituted a voyage. In essence the Commissioners took the view that every time a

⁶³ *Edinburgh Evening Courant*, Thursday, 20 December, 1821.

⁶⁴ SRO CS228/B.16/40, Commissioners of the Northern Lights v William Bruce & others.

vessel went from point A to point B, that was one voyage. The owners argued that a voyage was basically a round trip, that if they managed more than one per day they should not be penalised for efficiency, and that in any case actual crossing of the estuary should be exempt from dues as being part of a public ferry. It is almost needless to say that the matter dragged on for a number of years and consequently it has not been possible at present to locate the final judgement.

In the course of the matter the cashbooks for the two vessels were seized as productions for the court. They should have been eventually returned to the owners but by some mistake were retained and are now in the Scottish Record Office⁶⁵. We are thus accidentally treated to a day by day account of the work and passenger loading of the two vessels.

Amongst other matters these reveal that the owners quickly succumbed to the pressure for a Sunday service. As a random example of loading, the figures for *Tug* on 23rd February, 1821 may be instructive;

To Grangemouth

6 first cabin	@ 3/-	18-0
3 first	@ 2/-	6-0
33 second	@ 2/-	£3- 6-0
12 second	@ 1/6	18-0
7 second	@ 1/-	7-0

From Grangemouth

6 first cabin	@ 3/-	18-0
2 first	@ 2/-	4-0
30 second	@ 2/-	£3- 0-0
4 second	@ 1/6	6-0

⁶⁵ SRO CS96/1419,1420,1421 Cashbooks for *Tug*, 1/12/1820 to 12/10/1822 & 24/2/1823 to 28/6/1823. CS96/1422,1423 Cashbooks for *Surprise*, 16/5/1821 to 1/2/1822.

Total 103	£10- 3-0
less bad silver	1-0
Total	£10- 2-0

It appears that it was customary for the vessels to alternate, sometimes day about, and at others, week about, between the Grangemouth and Kirkcaldy voyages. On days when on the crossing to Fife, entries appear for what seems to be a variable charge for the use of the Trinity Chain Pier at Newhaven, with sums such as 4/11 and 6/9. The basis is not entirely clear but appears to relate to the number and class of passengers. The Fife terminus appears to have varied, with some voyages being extended to Leven and Largo. There is mention of some form of through booking of passengers to and from the Forth and Clyde canal at Grangemouth. Both vessels engaged in towing from time to time. Charges vary between £1-10-0 and £5-5-0, with £2-2-0 predominating.

We may speculate that this depended on the distance towed. The cheap rate appears to relate to a Carron Company smack.

Surprise was wrecked on a voyage to Largo on 1st February, 1822.

The year of 1821 saw another highly significant development in the introduction of the east coast's first true sea-going steamers. The initial vessel was *Tourist*, belonging to the Leith and Aberdeen Steam Yacht Company, who began operating a service with her from Leith to Aberdeen on the 21st May⁶⁶. She departed at 6am on Mondays, Wednesdays and Fridays, calling to pick up passengers from boats off Dysart, Elie (sic Ely), Pittenweem, Anstruther, Crail, Arbroath, Montrose and Stonehaven, taking twelve hours, at a fare of 18 shillings (80p) Cabin or 10 shillings (50p) Steerage⁶⁷. The

⁶⁶ *Edinburgh Evening Courant*, Thursday, 10 May, 1821.

⁶⁷ *Edinburgh Evening Courant*, Saturday, 26 May, 1821.

return journey was made on Tuesdays, Thursdays and Saturdays, with the same calls. The company was concerned from the publication of the initial advertisement to strive for punctuality. “.passengers are requested to be at the vessel ten minutes before hour of sailing; and at intermediate ports, to be on the look out for her approach ready to embark, as she cannot be detained longer than five minutes off each place”. They also intimated the construction of a second vessel, and the intention to introduce a service to Inverness, with an overnight halt in Peterhead. So anxious were they to avoid delays, that for the first six weeks she was not permitted to carry any freight except passengers luggage, and thereafter only small quantities. At some stage in her career, though probably not originally, she was fitted with direct acting engines by Gutzmer⁶⁸ of Leith Walk, Edinburgh.

Curiously the honour of providing the first steam ship service, though as we have seen, not the first steamship journey, from the east coast of Scotland to England, fell to the large smack operating company the London, Leith, Edinburgh & Glasgow Shipping Company. Their *Swift* ran from Leith to Harwich, calling off Shields and Scarborough, on 7th June, 1821. She made at least a couple of trips⁶⁹ on this route before the company deployed her to tow their smacks between Harwich and London from July onwards⁷⁰. It appears that she was a former Leith smack, lengthened and provided with two 40hp engines by Gutzmer. By the following year she was in service between Brighton and Dieppe⁷¹.

The end of June saw the introduction of *Velocity*, belonging to the, smack owning, Aberdeen and Leith Shipping Company⁷². This was in apparent rivalry with the Leith & Aberdeen Steam Yacht Co., yet the companies are interesting as a possible example of a profit sharing agreement, having the

⁶⁸ Russell, J.S. 1841 *On the nature & application of steam & on steam navigation*, 251. Edinburgh.

⁶⁹ *Edinburgh Evening Courant*, Monday, 4 & Thursday, 7 June, 1821.

⁷⁰ *Edinburgh Evening Courant*, Thursday, 5 July, 1821.

⁷¹ House of Commons, Accounts & Papers 1822 *Appendix to 5th Report of Committee on roads from Holyhead to London*.

⁷² *Edinburgh Evening Courant*, Monday, 25 June, 1821.

appearance of a miniature version of the later conference system. In this case two companies set up steamships almost simultaneously on the same route.

The indications are that they co-operated over timetabling, operating on alternate days. While the staggered departure times may have been a matter of expediency, they look very much like an agreement to share the trade.

June was a busy month that year, for on the 20th came the introduction of yet more ships⁷³. Leaving London for Newhaven, was *City of Edinburgh*, built at Blackwall, by Wigram and Green⁷⁴ for the newly formed London & Edinburgh Steam Packet Co. Travelling in the other direction was *Mountaineer* of the Leith & London Steam Packet Co. Fares for both were £4:4s in First Cabin and £2:12:6 in Second.

We may place these developments in context when we consider that this was the same year in which *Rob Roy*, arguably the first of open sea steamers, having completed two years service between Scotland and Ireland, had moved to the English Channel⁷⁵.

City of Edinburgh was a true sea-going steamer. She was 134ft 9in between perpendiculars, and 25ft 10in extreme breadth, and 401 30/94 tons burden⁷⁶. Boulton & Watt supplied her engine, which had two cylinders - described in the language of the day as two engines - giving a total of 80 hp. Her paddles were 18ft in diameter, and had 16 floats, each 8ft by 2ft. Fincham reports that she ran a measured mile at 8.4 mph (sic), and lists as innovations that "blow-out pipes, brine pumps, and the bilge injection, were first used in this vessel". With a beam to length ratio of 1:5.2, she begins to show early signs of the development of the long thin paddle steamer. Comfort was not to be neglected, and she was described⁷⁷ as elegantly fitted, and having a dining saloon for 95 persons.

⁷³ *Edinburgh Evening Courant*, Thursday 14 & Saturday 16 June, 1821.

⁷⁴ Fincham, J. 1851 reprinted 1979 *A history of naval architecture*, 291.

⁷⁵ Burt, F. 1937 *Cross-channel and coastal paddle steamers*, 85.

⁷⁶ Fincham, J. 1851 reprinted 1979 *A history of naval architecture*, 291.

⁷⁷ Reid, W. 1824 *London & Leith smack & steam yacht guide*, xi.

A James Brown, who accompanied her initial voyage, on behalf of the engine makers, described her⁷⁸ as being strongly built, with floor timbers about 12 inches square. Her boiler fires had a 5 inch thick water jacket on all sides. An iron floor was laid in front of the fire doors, for safety when raking out the fires. Her coal was carried in iron boxes on either side of the fireman. She could carry about one third more fuel than was required for the 450 mile voyage, which normally took 58 hours. It had been found that the most suitable coal was to be obtained from Halbeath Main Pit at Inverkeithing in Fife.

The London & Edinburgh Steam Packet Co. had clearly decided to commit themselves to the Newhaven to London service, and were aided in this by the completion of the Stone Pier at Newhaven followed quickly in September 1821, by the Chain pier, a few hundred yards further west at Trinity. These piers were more suitable for paddle steamers than the crowded harbour of Leith, and allowed them to lie afloat with greater security. It was quickly found, however, that there was still insufficient depth for the larger vessels to come alongside on all but the highest tide.

A second vessel, *James Watt*, was already under construction by Wood at Port Glasgow for the London & Edinburgh Steam Packet Co. In due course she and *City of Edinburgh* departed on alternate Wednesday mornings⁷⁹. *James Watt* was even larger at 141ft 11in by 25ft 8in and 433 tons. Her form was very fine, and considered very advanced at the time⁸⁰. Her accommodation was also larger, with dining space for 100 passengers. She had a total engine power of 100hp, and her paddles were a foot wider than those of her predecessor. At 10.03 mph (sic) over the measured mile, she was also significantly faster. The average passage time, for either vessel, was

⁷⁸ House of Commons, Accounts & Papers 1822 *2nd Report of Committee on roads from Holyhead to London*, evidence of James Brown.

⁷⁹ *Edinburgh & Leith Post Office Directory* 1822, 463.

⁸⁰ Fincham, J. 1851 reprinted 1979 *A history of naval architecture*, 291.

about 50 hours. This could be consistently maintained and was thus a dramatic improvement over that for the competing smacks.

We are fortunate in that we have an opportunity to examine the lines of *James Watt*, as she was the subject of a mid nineteenth century technical discussion⁸¹, in commemoration of the death of her designer. This vessel is also reputed⁸² to have been the first steamer to be included in Lloyd's Register, where she featured from 1822. A further claim has been made that she was, for a period, the largest steamer yet built⁸³. Her machinery, built by Boulton and Watt, was also unusual, for she was fitted with reduction gearing⁸⁴. With regard to the Lloyd's entry, some later confusion may have arisen as a similarly named vessel, built in Liverpool in 1824, was in the Register for a number of years.

From Tuesday, 21st August, 1821⁸⁵ the promised *Brilliant* began to operate weekly from Newhaven to Inverness, with an overnight stop at Peterhead, and calling additionally off Aberdeen, Fraserburgh, Banff, Portsoy, Cullen, Lossiemouth, Burghhead, Findhorn, Nairn, Cromarty, Fortrose and Fort George. The fare for the full distance was to be £2.2s Cabin or £1.5s Steerage. Operating in conjunction with her owners' other ship *Tourist*, she did not at first call at any town between Newhaven and Aberdeen as those places continued to be served by the latter vessel. This arrangement proved short lived, however, for from Tuesday 13th September⁸⁶ the *Tourist* was re-deployed to operate between Newhaven and London, while *Brilliant* took over her partner's former duties. It seems probable that this sudden move was prompted by the temporary withdrawal from traffic of *City of*

⁸¹ Russell, J.S. 1861. On the late Mr. John Wood and Mr. Charles Wood naval architects of Port Glasgow. *Transactions of the Institution of Naval Architects*, 11.141-148 & plate. See also Greenhill, B.(ed) 1993 *The advent of steam*, 14 for reprint of the plan but not the article.

⁸² Anon. 1884. *Annals of Lloyd's Register*, 25-28.

⁸³ Murray, A.&R. 1863. *Shipbuilding in iron & wood and steamships*, 116. Edinburgh.

⁸⁴ Russell, J.S. 1841 *On the nature properties & applications of steam & on steam navigation*, 248-249. Edinburgh.

⁸⁵ *Edinburgh Evening Courant*, Thursday, 9 August, 1821.

⁸⁶ *Edinburgh Evening Courant*, Thursday, 6 September, 1821.

Edinburgh.⁸⁷ Alternatively the company may have considered that this was a winter arrangement. In fact it remained in operation, *Brilliant* sailing⁸⁸ from Leith on Monday, Wednesday and Friday, and from Aberdeen on Tuesday, Thursday and Saturday and *Tourist* on a once a week run to London from Leith.

The year 1822 saw a unique opportunity for some publicity for the use of steam power. H.M. George IV made his celebrated visit to Scotland, or more accurately, to the Edinburgh Area. The public interest in the visit was enormous, and the steamship had a significant part to play, which did not go unreported. On 27th July, 1822 *James Watt* arrived at Leith and discharged three of the King's carriages, and a detachment of artillerymen⁸⁹. The following Saturday⁹⁰, it was the turn of *City of Edinburgh*, which brought a hundred cases of the Royal plate, a throne, and for some unexplained reason, a quantity of live poultry, intended for His Majesty's table. *James Watt* had the honour of sharing with the Admiralty steamer *Comet* - not to be confused with the merchantman of the same name - the task of towing the Royal Yacht, *Royal George*⁹¹. She was towed for much of the journey from Thames to Forth.

The two steamships took turn about, until arriving in Leith Roads on the afternoon of Wednesday, 14th August. A fleet of assorted vessels was on hand to welcome them. In addition to the various naval units, and officials, almost anything that would float seems to have put out with spectators. Amongst these latter, was *Queen Margaret*, the steamboat lately obtained by the Queensferry Trustees from Menzies & Co. of Leith, and about to begin twenty years of service on the ferry⁹².

⁸⁷ *Edinburgh Evening Courant*, Monday, 3 & Saturday, 15 September, 1821.

⁸⁸ *Edinburgh & Leith Post Office Directory*, 1822, 463.

⁸⁹ Prebble, J. 1988 *The King's jaunt*, 180.

⁹⁰ Prebble, J. 1988 *The King's jaunt*, 185.

⁹¹ Prebble, J. 1988 *The King's jaunt*, 216-227.

⁹² Brodie, I 1976 *Steamers of the Forth*, appendix - fleet list.

At the conclusion of the visit a similar process took place. *Tourist* conveyed the Royal Company of Archers⁹³ to Port Edgar for the King's departure, and *James Watt* again assisted with the towing of the Royal Yacht⁹⁴. What we might nowadays call the media hype of the occasion, can only have assisted in making the steamship acceptable to the public. The introduction of new ships, and new routes, continued apace.

Already a pattern was developing, with generally small vessels acting as ferries and providing up river communication in the estuaries of the Forth and Tay. Meanwhile larger ships, in some cases very large by contemporary standards, provided a link between the Edinburgh area and London. Similar ships were also increasingly appearing on domestic routes along the east coast. Developments continued in the longer distance coastal trades. We have already noted the early departure of *Swift*. In 1822 *Mountaineer* also departed, in her case for the Liverpool to Dublin trade⁹⁵.

It was becoming clear that the future held a network of intensive services in the estuaries, supplemented by an intention to provide long range open sea services throughout the east of Scotland coastline. The foundations had also been laid for services to major destinations in England. A diagrammatic representation of the level of service being provided in 1822 is given in Figure 1. The first, or experimental, stage of steamship operating was coming to an end. The era of steady and expanding business was beginning.

⁹³ Prebble, J. 1988 *The King's jaunt*, 347.

⁹⁴ Prebble, J. 1988 *The King's jaunt*, 352-354.

⁹⁵ House of Commons, Accounts & Papers 1822 *Appendix to 5th report of Committee on roads from Holyhead to London*.

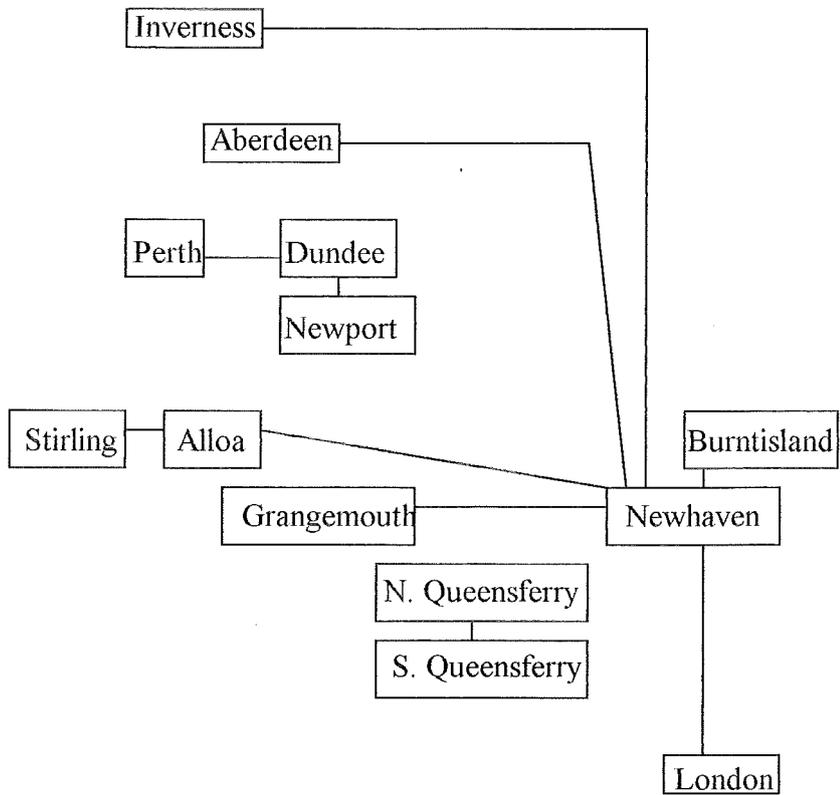
Figure 1: Topological Map - Steamer Routes - East Scotland - 1822

PLATE 15
Plan and elevation of catamaran steamer 1818.

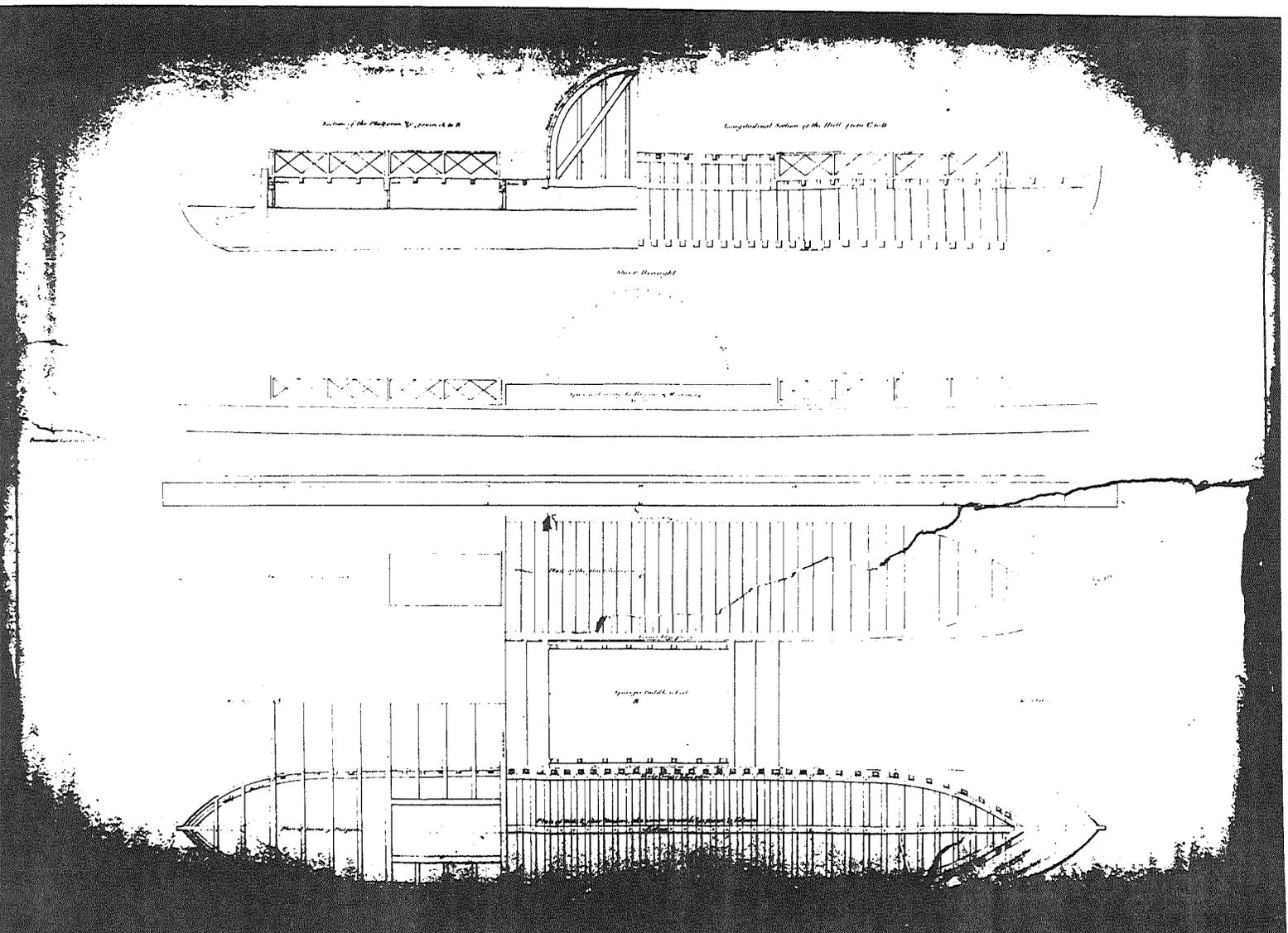
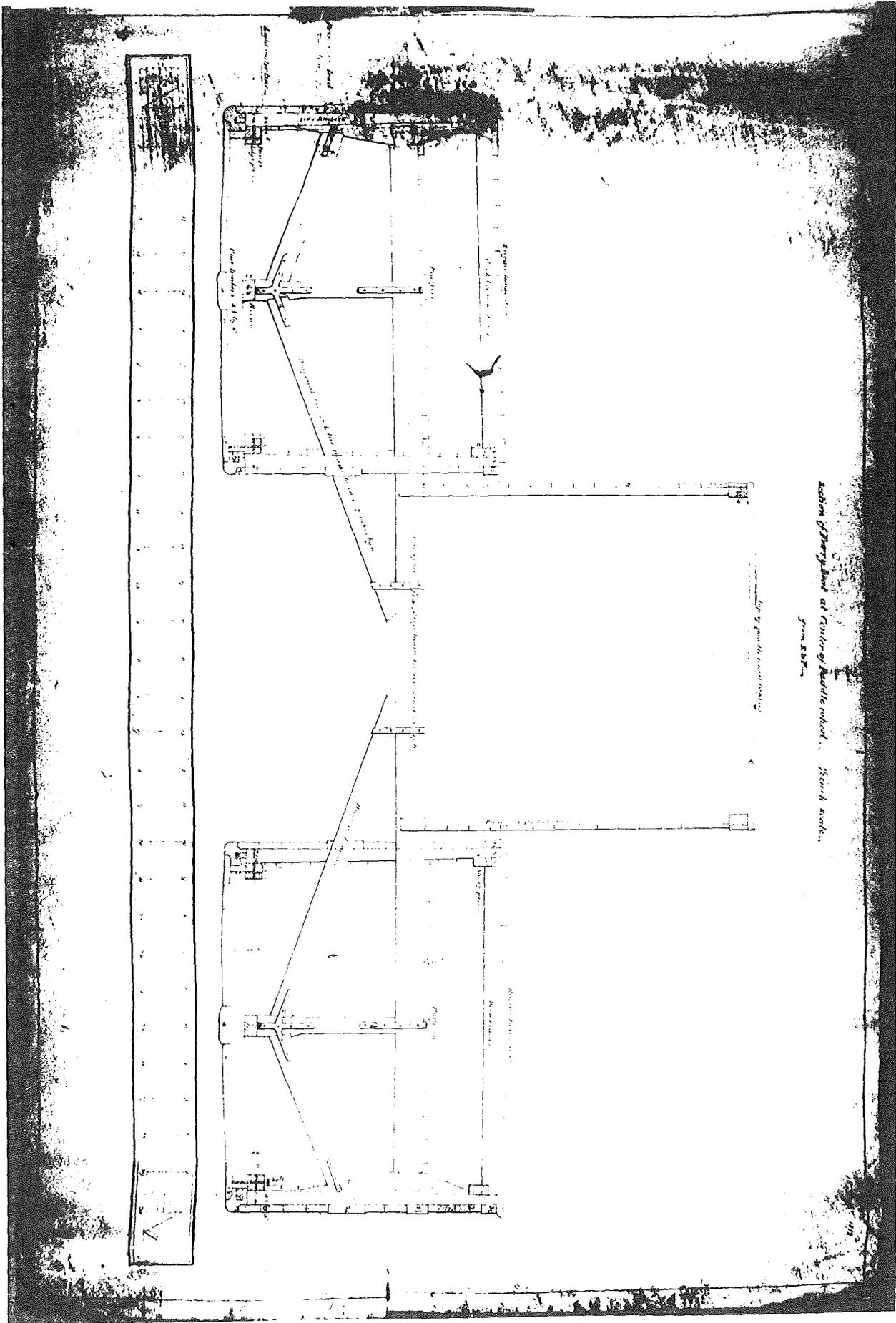


PLATE 16
"Section of a ferry boat at center of paddle wheel 1818"



Section of Ferry boat at center of Paddle wheel. 1818. North end.

PLATE 17
Plan of deck beams and section of catamaran steamer *Union*

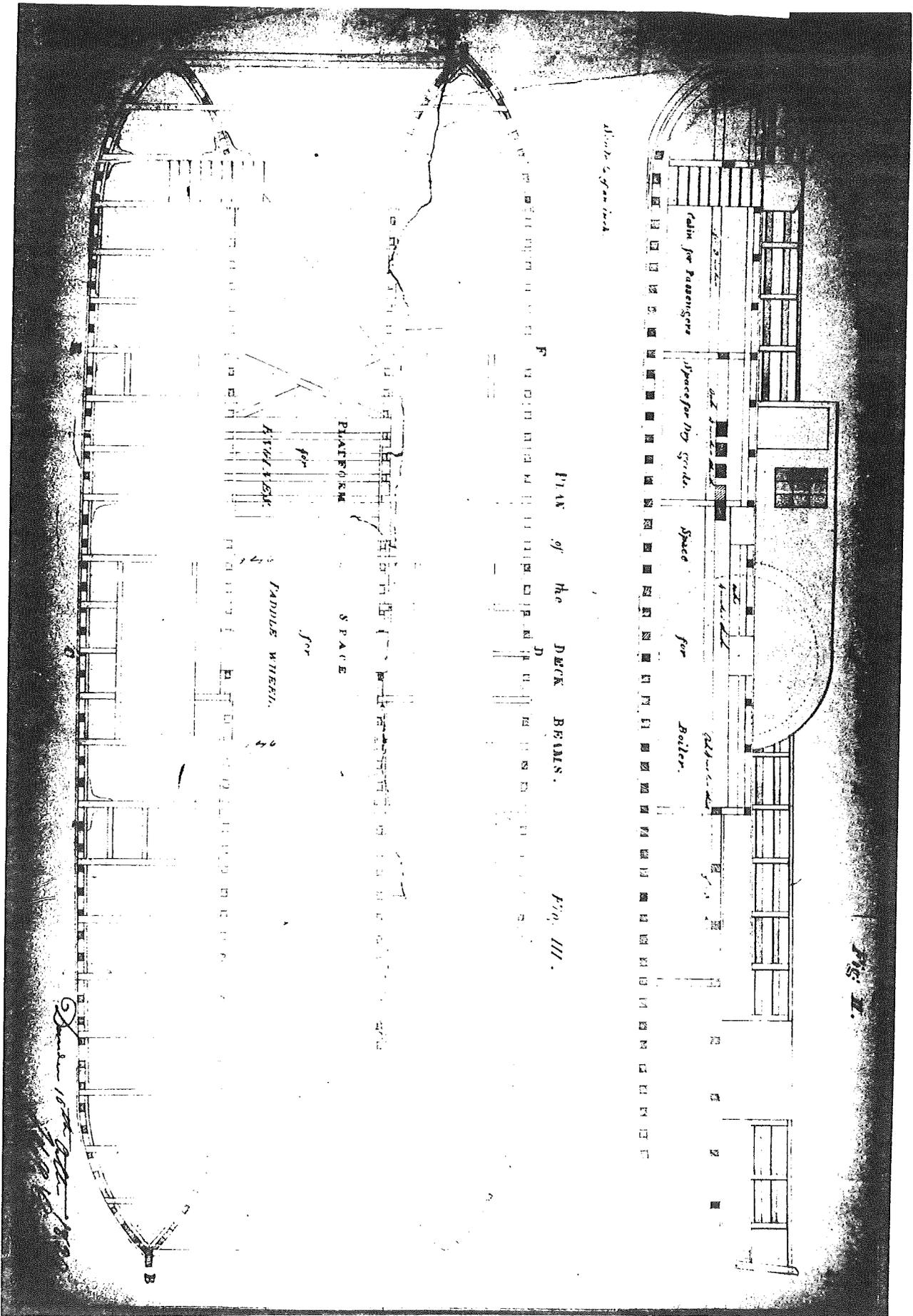


PLATE 18
Deck plan and section of catamaran steamer *Union*

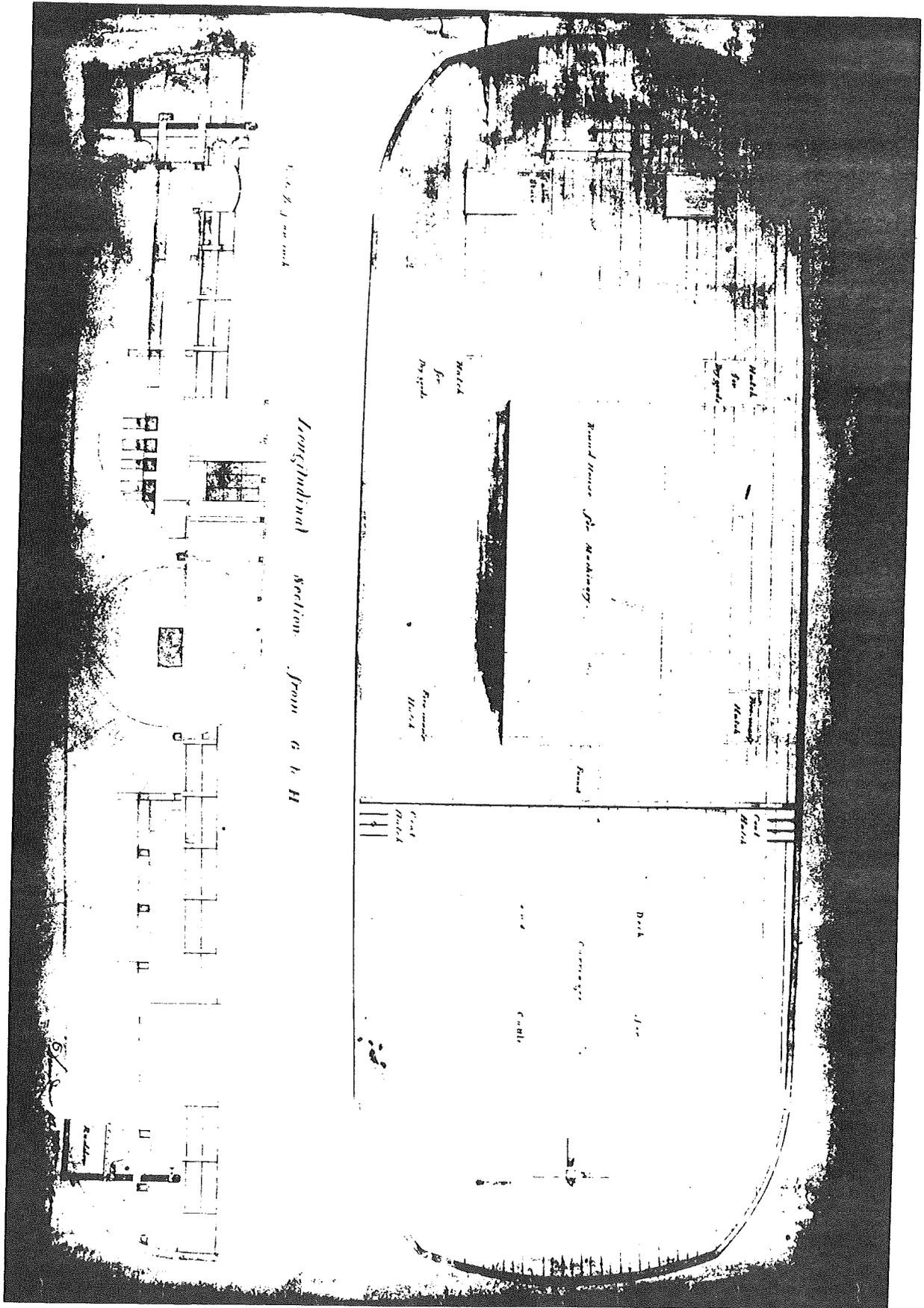
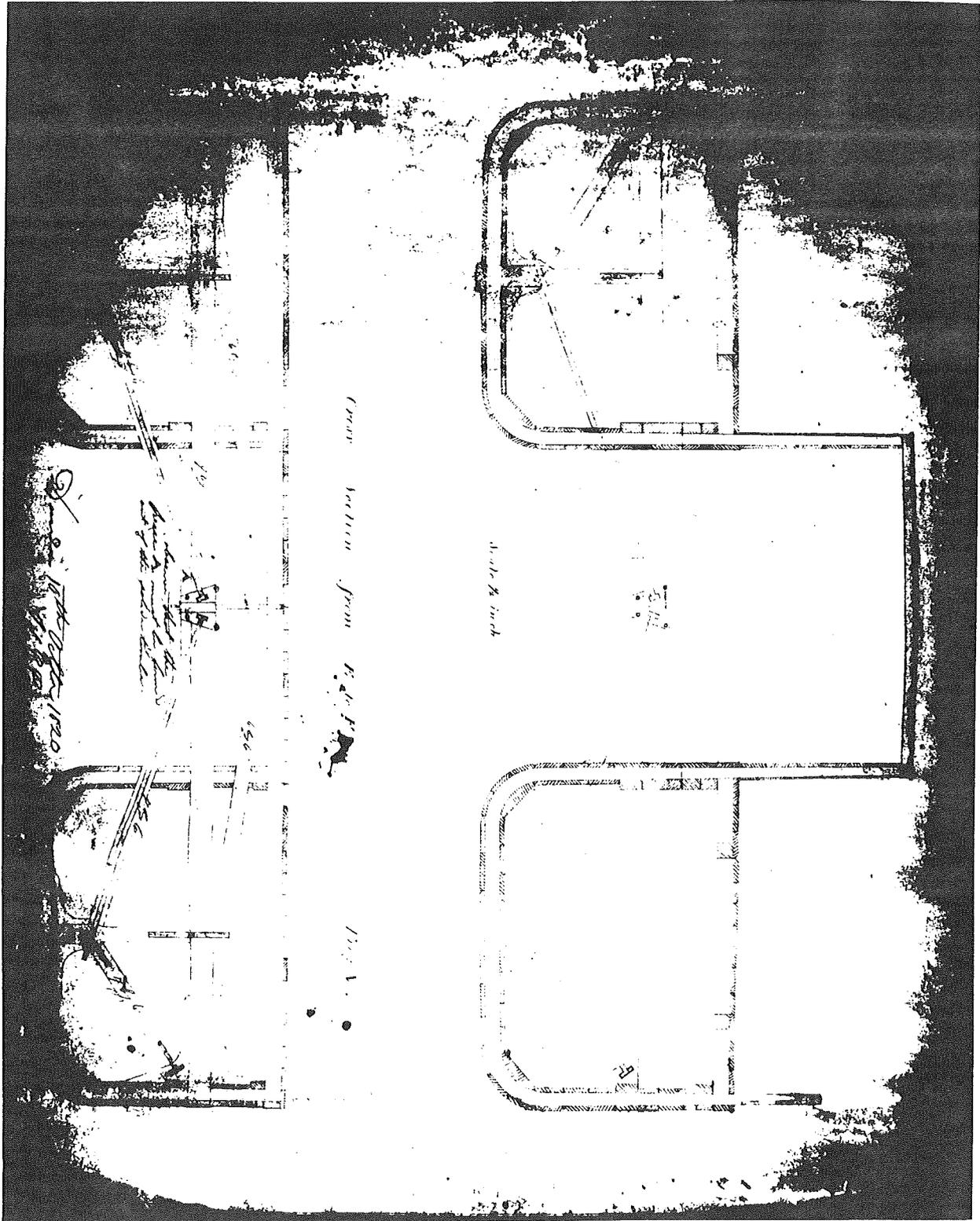


PLATE 19
Cross sections of catamaran steamer *Union*



LONG DISTANCE COASTAL DEVELOPMENTS

TRIUMPH AND DISASTER

Taking Scotland as a whole, it has been stated that by 6 April 1823 there were a total of 33 steamboats in operation, plying from Glasgow to Liverpool, Ireland, the Highlands and on the east coast¹. Several were already carrying the Royal Mail.

As we have seen in the previous chapter, the routes from Aberdeen to Leith and from thence to London were amongst the earliest to introduce steamships. The period of development and consolidation which followed, is marked by a rapid increase in vessel size. Before long some of the largest ships in the world were operating in the area. Since this was accompanied by an increase in the number of ships in the trade, and only a slight reduction in the number of sailing vessels employed, the implication is of a greatly increased number of travellers.

The other main aspect of development lay in the widening of the route network. This was particularly noticeable in the region north of Aberdeen. The service to Inverness became more regular and gradually spread to the northern isles. Further south came the introduction of services from Dundee, and in particular the rise of the importance of Hull as an English terminus.

Overlying both of these patterns was the continuing struggle between the various shipowners to stay in business, or to expand. Some of the changes could reasonably be described as labyrinthine, and the apparently casual nature of some arrangements, coupled with the confusion which can arise in a period when it was still legal to have several ships on the Register with the same name, does not assist the task of clarification.

¹ Sinclair, J. 1824 *Prospectus of analysis of the Statistical Account of Scotland*, 28. Edinburgh.

As early as 1823 the Leith and Aberdeen Steam Yacht Company had dropped out of the Leith to London run and transferred two ships to the London and Edinburgh Steam Packet Company².

An example of the shape of things to come in terms of size was the *United Kingdom*. She was built in 1826 by Robert Steele of Greenock³. While she may or may not have been, as claimed, “the largest ship in the world” she was certainly big for the time. There is more reason to believe that she was, for a time, the largest steamer. This was a claim which had previously been made⁴ in turn for those earlier east coast ships *James Watt* and *Soho*.

United Kingdom had 160 berths, and her gross tonnage was 561. Loaded and coaled she drew 11 feet forward and 12 feet six inches aft. Her draught and overall dimensions, at 175 feet long, with a beam of 26 feet 6 inches, and no less than 45 feet 6 inches over the paddle boxes⁵, excluded her from Newhaven. She operated from off the Trinity Chain Pier.

Although actually owned by a Glasgow based partnership⁶, which initially included David Napier, she was usually advertised in what appears to be conjunction with, *Soho*, *City of Edinburgh*, *James Watt* and *Tourist*, the four ships by now in the hands of the London & Edinburgh Steam Packet Company⁷. The actual advertisements were separate and may merely represent editorial convenience rather than true co-operation by the respective owners.

United Kingdom cost £40,000 to build, and was described as “a specimen of very superior workmanship... a prodigious step in advance in size and power,

² *Edinburgh & Leith Post Office Directory* 1823, 63.

³ Parker, H. & Bowen, F.C. 1928 *Mail and passenger steamships of the XIX century*, 288.

⁴ Murray, A.&R. 1863 *Shipbuilding in iron & wood & steamships*, 116. Edinburgh.

⁵ Anon. 1830 *Edinburgh cyclopedia*, 381. Edinburgh.

⁶ PRO BT107/414 Glasgow 57 of 1826.

⁷ *Edinburgh & Leith Post Office Directory* 1828, 54.

speed and the whole style of her furnishings and appointments”⁸. Her 200hp low pressure engine gave her a reported speed of 11 knots, which made her perhaps one of the fastest built to that date⁹. She burned 17 cwt of coal per hour from her 170 tons of bunker stowage¹⁰.

We have a description¹¹ of a northbound voyage begun on 30 July, 1831, in which “...our company on board the steam vessel was, of course, of a mixed kind, but in the whole tolerably agreeable. We had the Duchess of Roxburgh with her husband Colonel O’Riley and her son the present Duke...”. This particular journey cost our informant £10 for two berths, 7 shillings for beer and wine on board, 2 shillings and sixpence for the steward, and 5 shillings for landing and coach to Edinburgh, total £10:14:6.

She was not destined to have a long career on the east coast, for it appears she was transferred to the Irish Sea by the end of 1833, and reported lost near Kilrush on 27th January, 1834, while on passage from Galway to London¹².

There is, however, a problem with this particular piece of information, for she still appears in a list of 169 London registered steamships¹³ in 1838.

Interestingly enough this highlights the point that amongst a mass of schooner rigged steamships, she was one of the few with square rig. She is also one of the few steam vessels of the period for which spar dimensions are available¹⁴:

⁸ Napier, D.H. 1912 *David Napier, engineer 1790-1869*, 56. Glasgow. Quoting unspecified contemporary sources.

⁹ Ross, J. 1828 *Treatise on navigation by steam*, 147.

¹⁰ Anon. 1830 *Edinburgh cyclopedia*, 381.

¹¹ University of St Andrews, manuscript diary of Mrs C.R. Cotton.

¹² House of Commons, Accounts & Papers 1836 *Select Committee on the cause of shipwrecks*, XVII:373 on.

¹³ House of Commons, Accounts & Papers 1839 *Report on steam vessel accidents*, XLVII.

¹⁴ Ross, J. 1828 *Treatise on navigation by steam*, 148.

Mainmast	81'6" by 1'8"
Main topmast	52' by 1'
Foremast	76' by 1'8"
Fore topmast	50' by 1'2"
Mizzen mast	60' by 1'5"
Fore yard	72' by 1'2"

The explanation for the discrepancy regarding her fate is elusive. She certainly disappeared from the east coast trade. She may have been repaired after the Irish incident, or it may have in fact involved a different vessel of the same name, as yet untraced by the present enquiry. At least as probable is the chance that she was not deleted from the register due to an administrative error.

Meanwhile lesser vessels were beginning to extend the network of steam services. The *Quentin Durward*, registered at a fraction over 78 tons, had been completed at Leith in July 1823, and in the following May was sold to the Leith & Dundee Steam Packet Company, and registered at Dundee¹⁵. They began to operate a Leith to Dundee service three times a week, returning the following day¹⁶, and continued for a short spell until the vessel was sold overseas in June 1827. The following year *Rapid* was similarly employed, taking six hours for the journey¹⁷

The year 1827 also saw the amalgamation of the Aberdeen and Leith Shipping Company with the Leith & Aberdeen Steam Yacht Company, to form the Aberdeen Smack & Steam Packet Company, for the operation of their four smacks and two steamers¹⁸. The following summer *Ardincaple*¹⁹ began operating twice a week between Newhaven Chain Pier and Newcastle.

¹⁵ Dundee Central Library, Dundee Registry Book, 31 of 1824, (Appears to be the local copy of PRO BT107/407).

¹⁶ *Edinburgh & Leith Post Office Directory* 1824, 99.

¹⁷ *Scotsman*, Wednesday, 11 June, 1828.

¹⁸ *Edinburgh & Leith Post Office Directory* 1827, 53.

¹⁹ *Scotsman* Saturday, 7 June, 1828.

Some indication of the level of utilisation now being obtained may be drawn from an official return²⁰ for the year 1828. Details of ships identified as trading on the East coast of Scotland have been extracted below:

Port/Vessel	Tonnage	Crew	Voyage	Trips
<u>London</u>				
<i>Soho</i>	353	15	coasting	14
<i>Tourist</i>	179	12	"	16
<i>City of Edinburgh</i>	301	15	"	19
<i>James Watt</i>	294	15	"	13
<u>Newcastle</u>				
<i>Adeline</i>	36	6	"	13
<i>Ardincaple</i>	87	7	"	41
<u>Aberdeen</u>				
<i>Paul Jones</i>	27	4	towing	n/a
<i>Queen of Scotland</i>	304	20	coasting	10
<i>Brilliant</i>	158	10	"	20
<i>Velocity</i>	134	9	"	44
<u>Dundee</u>				
<i>Hero</i>	80	6	inland	n/a
<i>Athol</i>	90	5	"	n/a
<i>George IV</i>	not registered	4	ferryboat	n/a
<i>Union</i>	"	4	"	n/a
<u>Glasgow</u>				
<i>United Kingdom</i>	335	25	coasting	35
<u>Inverness</u>				
<i>Stirling</i>	50	5	inland	1

²⁰ House of Commons, Accounts & Papers 1830 *Return from every seaport town or harbour in the United Kingdom of all vessels navigated by steam belonging to or usually sailing from such port during year 1/1/1828-1/1/1829*, XXXI:271 on.

Port/Vessel	Tonnage	Crew	Voyage	Trips
<u>Kirkcaldy</u>				
<i>Earl of Kelly</i>	94	3	passage	n/a
<i>Thane of Fife</i>	95	3	"	n/a
<i>Edinburgh Castle</i>	94	3	"	n/a
<u>Leith</u>				
<i>Tug</i>	42	6	unemployed whole year	
<u>Grangemouth</u>				
<i>Lady of the Lake</i>	60	4	coasting	4
<i>Morning Star</i>	73	4	passengers only	n/a
<i>Stirling Castle</i>	75	4	"	n/a
<i>Lion</i>	28	4	"	n/a

A number of the vessels mentioned above were of course engaged in inshore trades, but are included here for convenience. The data was evidently based on Customs information, and concerned with freight traffic, hence the lack of interest in passenger only vessels. It does however give some indication of the number of voyages to be expected annually from typical ships. The information on crew size is also of interest. It is not clear from the return how the crew numbers were obtained, nor quite why this information was wanted by Parliament. This was one of the very few comprehensive lists ever compiled of the crew sizes of early steam vessels. It may have been extracted from the Crew Lists and Agreements, now in the Public Record Office, BT98, but any attempt to now cross check this information would be prohibitively labour intensive.

Aberdeen was increasing in importance as a centre of steam shipping. The first steam ship to be built there was *Queen of Scotland*, launched on 12th April, 1827 by J.Duffus & Co.²¹ In 1829 the Aberdeen Steam Navigation Company was operating her to Hull²². Over the next few years this company

²¹ *The Times*, Wednesday, 18 April, 1827, reprinted from *Aberdeen Chronicle*.

²² Turner, J.R. 1986 *Scotland's North Sea gateway*, 82-83. Aberdeen.

expanded its fleet and began to serve London in addition. Amongst the vessels serving this route was *Duke of Wellington*, which had been built in 1829 by John Duffus at Aberdeen for himself. She is reported to have made at least one very fast passage²³, departing Aberdeen at 4pm on Saturday, 10 September 1831, and arriving off Greenwich at 4pm on Monday 12th. The fare for this was £4:4:0.

In the 1830s *Tourist* and *City of Edinburgh* disappeared²⁴ from the lists of the London & Edinburgh Steam Packet Company and were replaced by *Monarch*. This vessel, which was the largest British merchant steamer at the time²⁵, was to gain a reputation for speed and good service between London and Newhaven. She was designed by Charles Wood, but built at Blackwall by Green, Wigram & Co. At the time of her launch in 1833, she is supposed to have been only slightly shorter than the longest ship then in the Royal Navy. On 21st July, 1834 she made the passage north in only 37 hours. In 1846 she was sold to a Captain Charretie, from whom she was seized by the Government along with two other vessels, on the grounds that she was about to depart for Ecuador in support of Flores²⁶.

Services thrice weekly to Aberdeen and weekly to Inverness from Leith were being advertised by the A.S. & S.P.C. as taking ten and twenty-eight hours respectively²⁷. *Tourist* and *City of Edinburgh* had not vanished completely from the east coast, for they had become the property of the General Steam Navigation Company. That company had still to make themselves felt on the Scottish coast, but were now poised to make a move. Meanwhile two sailing ship companies, new to long distance steamship operation, entered the competition, one on the Dundee to London and the other on the Newhaven to London route.

²³ University of St Andrews, manuscript diary of Mrs C.R. Cotton.

²⁴ *Edinburgh & Leith Post Office Directory* 1831, 47.

²⁵ *Scotsman*, Wednesday, 26 August, 1835.

²⁶ Parker, H. & Bowen, F.C. 1928 *Mail and passenger steamships of the XIX century*, 201 and plate CVIII.

²⁷ *Edinburgh & Leith Post Office Directory* 1831, 48.

The Dundee Perth and London, which had recently entered the towing business on the Tay, and experimented with a chartered steam vessel to London, bought two new steamships - appropriately enough called *Dundee* and *Perth* - from the Port Glasgow yard of John Wood early in 1834²⁸, at a cost of about £20,000 each. These sister ships were both three masted schooners of 399 tons, but the former was registered as 157 feet 7 inches long by 28 feet 1 1/2 inches broad, while the latter was 167 feet 4 inches by 28 feet 5 1/2 inches. Notwithstanding the official difference - which may have been merely a clerical error - they seem to have been regarded as identical ships, and the information, dating from the following year, which provided the detailed description below²⁹ emphasises that point.

They had sleeping accommodation for 105 passengers, in separate ladies' and gentlemen's cabins, with five "family" four berth cabins off the main cabin. The crew were in deckhouses, the captain and engineer being starboard side abaft the paddle box. The engines were supplied by Robert Napier, with two 58 inch diameter cylinders of 66 inch stroke, giving 280 horse power. The funnel and boiler assembly is stated to have weighed 65 tons. The credit for their introduction is given, in the description mentioned above, to the managing director, George Duncan, who was also Dean of Guild of Dundee. Plainly the directors had not been fully sold on the idea "...the violent opposition to the scheme by some of the partners of the Company, and the lukewarmness of others..." being mentioned. Plainly the company was as yet unready to be tied exclusively to steam, and they continued to operate their smacks on the same route.

In a similar fashion, the Leith, Edinburgh & Glasgow Shipping Co., curiously dropping "London" temporarily from their title, began to operate steamers to that place in 1833, with *Royal William* and *Royal Adelaide*, which were

²⁸ Dundee Central Library, Dundee Registry Book, 7 and 15 of 1834.

²⁹ *Dundee Directory & General Register* 1835, xvii-xviii.

joined in 1835 by *Royal Victoria*³⁰. Another concern, the General Shipping Company was operating *Ardincaple* between Newcastle and Leith³¹. In the north the *Brilliant* and *Velocity* had been gradually extending their voyages up the coast, and by 1835 were prepared to serve Orkney³². *Mazeppa* had also appeared as a competitor on the northern route³³, operating at times from Leith rather than Newhaven³⁴. The Dundee to Newhaven service was also resurrected by *Rothsay*³⁵ and *Maid of Islay*³⁶.

While the whole decade of the eighteen thirties was an active one in the trade, 1836 was perhaps the most momentous year. The General Steam Navigation Company, whose existence we have already noted, bought over the London & Edinburgh Steam Packet Company³⁷.

The G.S.N. was already a huge organisation. It originated as a grouping of Thames steam boat owners who came together in a loose agreement in 1820 for the London to Margate trade. They formed a joint stock company in the summer of 1824 and after one year's operations owned some twenty two ships³⁸. This was clearly a major company, serving not only coastal routes, but crossing to the European mainland. They continued growing and snapping up smaller neighbours. By the time they entered the Scottish trade they owned 40 ships and had their own repair yard at Deptford³⁹.

³⁰ *Scotsman*, Wednesday, 14 January, 1835.

³¹ *Gray's Annual Edinburgh Directory* 1833, 44.

³² *Gray's Annual Directory* 1835, 403.

³³ *Scotsman*, Wednesday, 20 May, 1835.

³⁴ *Edinburgh & Leith Post Office Directory* 1835.

³⁵ *Scotsman*, Saturday, 28 February, 1835.

³⁶ *Scotsman*, Wednesday, 22 April, 1835.

³⁷ Cornford, L.C. 1924 *A century of sea trading 1824-1924. The General Steam Navigation Co.Ltd.*, 37.

³⁸ Cornford, L.C. 1924 *A century of sea trading 1824-1924. The General Steam Navigation Co.Ltd.*, 26.

³⁹ Cornford, L.C. 1924 *A century of sea trading 1824-1924. The General Steam Navigation Co.Ltd.*, 38.

After the take over of the London & Edinburgh, they began to switch vessels around the fleet almost at once. *James Watt* carried mercenaries and stores to Spain to fight against Don Carlos⁴⁰, and new ships were introduced.

The year of 1836 also saw an upsurge of interest in Hull as an English destination. In sailing ship days there had always been some services. These were in line with the importance of such a major east coast port, which was also the nearest link to much of the rising industrial heartland of northern England.

The construction of canals linking the port deeper into England strengthened this trade. Now came rail connection, and the possibility of using Hull as an exchange point for a yet more rapid journey south at once presented itself. *Pegasus* was introduced from 6th February on a weekly service from Leith to Hull⁴¹, while by the second week of April she had competition from *St. George*⁴², belonging to the Irish company of that name. From Dundee came *Forfarshire*, on behalf of the Dundee and Hull Steam Packet Company. *Pegasus* was a product of the Glasgow yard of Robert Barclay & Co., and was registered at 132 feet 4 inches long by 18 feet 4 inches broad, and 130 tons⁴³. She was originally owned by her builders in conjunction with Thomas Barclay, before being sold to the Hull & Leith Steam Packet Company in May 1841. She was initially classed 6A1 by Lloyds, but never subjected to the six monthly survey required to keep her classification⁴⁴. Her engine was supplied by Tod & McGregor, and she was considered a fast ship⁴⁵.

⁴⁰ Cornford, L.C. 1924 *A century of sea trading 1824-1924. The General Steam Navigation Co. Ltd.*, 37.

⁴¹ *Gray's Annual Directory* 1836, 398.

⁴² Pearson, F.H. 1896 reprinted 1984 *The early history of Hull steam shipping*, 33. Hull.

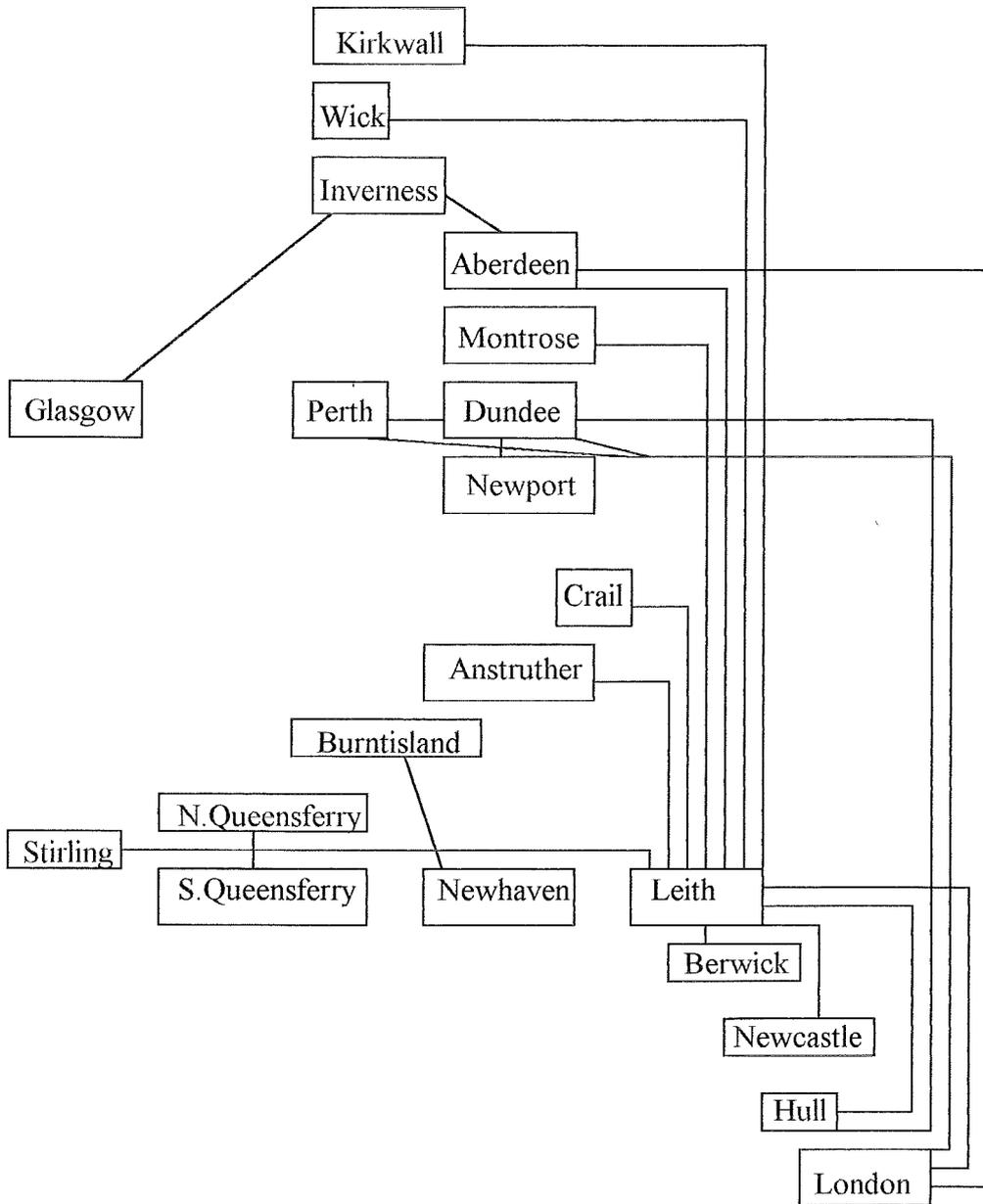
⁴³ PRO BT107/425 Glasgow 67 of 1835.

⁴⁴ House of Commons, Accounts & Papers 1839 *Report on steam vessel accidents*,

XLVII: 130.

⁴⁵ Pearson, F.H. 1896 reprinted 1984 *The early history of Hull steam shipping*, 32. Hull.

Figure 2: Topological Map - Steamer Routes - East Scotland - 1837



By 1837 the Aberdeen Smack and Steam Packet Company had undergone a further name change and assimilation into the Aberdeen Leith & Clyde Shipping Company. This organisation had its origins in the 1790 Leith & Clyde Shipping, which amalgamated in 1810 with the Aberdeen Dundee & Leith to form the Aberdeen Leith Clyde & Tay, usually known as the Aberdeen Leith & Clyde, and strictly speaking having a subsidiary, the Inverness & Leith Steam Packet⁴⁶. This collection eventually became the North of Scotland & Orkney & Shetland Steam Navigation Company, colloquially “the North boats”, in the late Victorian period.

The Aberdeen Leith and Clyde added *Sovereign* to their fleet, and she began to operate in summer as far as Shetland. After a long career with the company, she was sold in the mid sixties, converted to sail in the seventies, and eventually wrecked at Muros, Spain, in 1901⁴⁷.

Further south, *Northern Yacht* and *Modern Athens* now began running in addition to *Rothesay* between Dundee and Leith, daily in summer, three times a week in winter⁴⁸, but *Maid of Islay* had been wrecked off St.Davids, Fife, in September, 1836 due to failure to keep a proper lookout⁴⁹. This route must have seemed attractive to operators, and Andrew Greig, whose activities within the Forth have already been noted, obtained the iron *Benledi* for the service⁵⁰. A short price war ensued. At one stage Greig brought his fare down to 1/- (5 pence) cabin and 6d steerage from Newhaven to Dundee, and an incredible 1/- cabin, 3d steerage for the southward journey⁵¹. He also attempted to pour scorn on the reliability of *Modern Athens*.

On the Leith and Hull route *Innesfail* competed with *Pegasus*⁵². *Vesta* alternated with *Ardincaple* between Leith and Newcastle⁵³.

⁴⁶ Donaldson, G. 1978 *Northwards by sea*, 15. Edinburgh.

⁴⁷ Donaldson, G. 1978 *Northwards by sea*, 111. Edinburgh.

⁴⁸ *Gray's Annual Directory* 1837, 431.

⁴⁹ House of Commons, Accounts & Papers 1839 *Report on steam vessel accidents*, XLVII.

⁵⁰ *Fifeshire Journal*, 3 January, 1839.

⁵¹ *Fifeshire Journal*, 18 July, 1839.

⁵² *Gray's Annual Directory* 1837, 431.

Something of a price war also took place, over the Leith to Hull route, between the operators of *Pegasus* and the St. George Shipping Co. When she was introduced in 1836 the fares had been 30/- first class and 15/- second, with an additional 2/- steward's fee⁵⁴. By 1838 the presence of the St. George's *Cornubia* and *Innesfail* had forced this down to only 12/6 and 5/- respectively on all three ships. This was evidently uneconomic, the St. George Company moved some of their effort to other routes, and the price crept back up to 18/-, plus 2/- for the steward, and 7/6 steerage by 1841⁵⁵.

This was a period of rapid, short term, changes and 1838 also saw *Satellite* operating between Leith and Inverness.

As has already been indicated, the General Steam Navigation Co. were intent on expanding their business. In 1838 they began a direct service on alternate Saturdays, from Leith to Hamburg⁵⁶, using that old stalwart, *James Watt*.

A short lived service from Dundee to Aberdeen was also introduced by the *Rothesay*⁵⁷ in 1839.

Innesfail was still running from Leith to Hull, but had been joined by *Sea Horse* and they were providing a through service from thence on to Rotterdam⁵⁸.

The G.S.N. service from Leith to London was now composed of *Monarch*, *Clarence*, *Caledonia* and *Leith*. By this time the G.S.N. were obviously major participants in the trade along the east coast. In 1841 they had another large vessel, *Trident*, launched for the Leith to London service. She was built by Green, Wigram & Green at Blackwall, and was a three masted schooner,

⁵³ *Edinburgh & Leith Post Office Directory* 1837, 304.

⁵⁴ Pearson, F.H. 1896 reprinted 1984 *The early history of Hull steam shipping*, 33. Hull.

⁵⁵ *Edinburgh & Leith Post Office Directory* 1841.

⁵⁶ *Scotsman*, Wednesday, 25 July, 1838.

⁵⁷ *Fifeshire Journal*, 8 August, 1839.

⁵⁸ *Edinburgh & Leith Post Office Directory* 1838, 305.

registered at 875 tons. Even allowing for the hyperbole common in reports of the period, she was considered to be one of the fastest ships then afloat⁵⁹.

Her speed soon gave the owners a chance for a publicity coup. H.M. Queen Victoria made a visit to Scotland in the late summer of 1842. Having got wind of this, the company made an offer to convey Her Majesty, but this was declined. The Queen travelled north in the Royal Yacht *Royal George*, which was overtaken by *Trident* on her normal service.

This appears to have impressed Her Majesty, and arrangements were made to charter the vessel for the Royal return south. In due course the trip was made in fine style "...on board *Trident* where the accommodation was much larger and better than on board the *Royal George*.....not long after we soon lost sight of all our steamers except the *Monarch* which belongs to the General Steam Navigation Company and which had some of our horses on board. It started at nearly the same time and was the only one which could keep up with us..."⁶⁰. Publicity of this kind could do nothing but good, not only for the company concerned, but for steamship travel in general.

There were troubles along the way however. *Trident* herself, in later life, was subject to a near disaster. On 4 July, 1853, while alongside at St Katherine's Wharf in London she suffered some form of spontaneous combustion amongst a general cargo. She was extensively damaged and scuttled and sank in the river in an attempt to put out the fire⁶¹. She was subsequently raised.

In September 1833 *Ardincaple* was between Holy Island and Bamburgh, on passage from Leith from Newcastle when she was swept by a heavy sea. All on deck including the Captain, Mate, Engineer, Steward and Stewardess and

⁵⁹ Cornford, L.C. 1924 *A century of sea trading 1824-1924. The General Steam Navigation Co.Ltd.*, 42.

⁶⁰ Cornford, L.C. 1924 *A century of sea trading 1824-1924. The General Steam Navigation Co.Ltd.*, 43-44, quoting H.M. Queen Victoria 1842 *Leaves from the journal of our life in the highlands*, entry for 15 September, 1842. See also, *Scotsman*, Wednesday, 21 September, 1842.

⁶¹ House of Commons, Accounts & Papers 1854 *Admiralty register of wrecks & other casualties which occurred in the seas & on the shores of UK during 1853*. XLII:647.

four passengers were flung into the sea. One of the passengers, a Captain Pearson, and three others got back on board and made an attempt to anchor before being rescued by a fishing smack.

On 29th July, 1837 *Monarch* ran into the Dartmouth schooner *May and Ann* in the Thames and carried away the schooner's masts and bulwarks, leaving her a complete wreck. On the 5th of August she had a further collision in Northfleet Hope in the Thames with the Yarmouth steam boat *Apollo* and sank her, killing *Apollo*'s stewardess and two child passengers⁶².

The year 1838, which may, in its early stages, have looked like being a time of triumph, became a time of disaster. *Northern Yacht* and *Forfarshire* were both lost off the coast of Northumberland, near where *Ardincaple* had got into such difficulties.

Northern Yacht had been built in 1835 by Robert Barclay & Co. who also built *Pegasus*. She was lightly built and intended for river service⁶³. She had sixteen or seventeen steam bent frames of American Elm, about eight inches square, tapered to three and a half inches wide at the top. While under construction she had attracted local attention in the Clyde shipbuilding community, but she was not submitted for Lloyds classification. She ran for a time between Glasgow and Ayr, being sold to Thomas Barclay, who described himself as a Glasgow auctioneer⁶⁴.

She was rigged as a schooner, 116 feet 7 inches long by 16 feet eight between paddle boxes under the original measurement, but only 114 feet by 15.2 feet under the new system of 1836, which also reduced her registered net tonnage from 99 tons to a mere 28.3 tons. In May, 1838 she was sold to

⁶² House of Commons, Accounts & Papers 1839 *Report on steam vessel accidents*, XLVII.

⁶³ House of Commons, Accounts & Papers 1839 *Report on steam vessel accidents*, XLVII:130. Evidence of Mr Cumming, Lloyds surveyor.

⁶⁴ PRO BT107/429 Glasgow 14 and 61 of 1836.

Newcastle owners, and was lost with all hands on 11th October while on passage from Newcastle to Leith.

The loss of the *Forfarshire* is rather more widely known than the rest of her career. She was built in 1836 for the Dundee and Hull Steam Packet Company by Thomas Adamson of Dundee, and had a register tonnage of 192.23 tons. She was a two masted schooner, 132.4 feet long by 20.4 feet broad⁶⁵. She seems to have been well thought of when introduced, and instituted a cattle carrying trade to Hull in addition to her passenger and freight business. It is possible that there was some underlying problem with either the ship or the owners, for she seems to have had a fairly steady turnover in crew members⁶⁶, including even the masters.

The copy of her Certificate of Registry in BT107/428, shows that her original captain, James Kidd, only stayed until 11th March, 1837 when he was replaced by James Moncreiff. He was in turn replaced by James Duncan on 9th May, 1838. Duncan lasted less than a week and handed over to John Humble with effect from the 15th. This particular document is something of a curiosity, for the name of Humble actually follows Moncreiff, there is then a space, followed by a second signature for Moncreiff, in pencil, and by a different hand, before the entry for Duncan. Two arrows seem to indicate that the positions of Humble and Duncan are to be reversed. The implication seems to be that Moncreiff's name was for some unknown reason written twice - perhaps the clerk pencilled in his name to indicate the place of signature - Duncan made his entry following the second signature, and Humble decided to write in the space, but he or a clerk made a correction with the arrows.

This point may seem trivial, but it bears on two matters of some significance. In the first place this is an important legal document, and raises questions

⁶⁵ PRO BT107/428 Dundee 95 of 1836.

⁶⁶ PRO BT98/240 Crew lists

with regard to the general reliability of this class of item. On balance it seems most likely that it is a simple clerical error, corrected in the best manner that those involved could think of at the time. This is born out by comparison with the surviving local copy of the same registration⁶⁷, which does not have the alterations, and makes clear the sequence. Without the benefit of this second copy it might have been impossible to clarify this matter. Dundee is unusual in having a full run of such copies.

Of perhaps more significance to the history of the ship is the date of Humble's signature. Many tens of thousands of words have been written, in this century and the last, with regard to the fate of the ship. Most have been concerned almost exclusively with the circumstances of the rescue. Many of those which bother to consider the previous history of the vessel, contain a tale to the effect that she was lost on the first voyage made under the command of Humble. This report is shown to be in error, since she had been in regular service and was lost almost four months after he took command. The probable origin of the report seems to be the *Dundee Perth & Cupar Advertiser* for 21st September, 1838, but it is far from clear how they came to make such a statement.

The actual wreck story needs little repeating. Suffice it to say, that on the night of the 7th September 1838, while on her northbound voyage, she developed boiler trouble and ran on the Big Harcar rock in the Farne Islands, while trying to run for shelter under sail. She earned her place in the history of lifesaving, when Grace Darling and her father rowed their coble to assist. Despite the romantic image created around Grace, there is room for speculation as to quite why the wreck became such a focus of attention. We have seen how the actual disaster was, regrettably, very far from unique. As a point of interest, we have an indication of the severity, or otherwise, of the

⁶⁷ Dundee City Archives. CE70/11/5 Dundee Register of Shipping 1836/95.

weather at the time. The *Pegasus* passed the location of the wreck, southbound, about an hour before the accident without incident⁶⁸.

An old stalwart the *Soho*, was almost lost in 1839. She had been moved from the Leith run to the London to Antwerp service for a period, and was alongside in the Thames when she caught fire (rather in line with the fate of *Trident* some years later, to which we have already alluded). This was so serious that attempts were made to scuttle her to extinguish the flames, but there was not sufficient depth of water. She was saved by the efforts of the crew⁶⁹.

An even more spectacular fate befell her contemporary, *Brilliant* on the 12th December. Having left Leith the previous afternoon, she was approaching Aberdeen in darkness when the Captain was carried overboard from the quarter deck by a heavy sea⁷⁰. In the ensuing confusion she drove broadside onto the North Pier, just inside the entrance. Those on board managed to scramble ashore, not without some difficulty, for the cost of some wetting, and one broken leg. As the vessel was now listing on the pier, fire spread from the boilers to the stern. Shore parties managed to salvage the majority of the cargo, but the ship burned. Captain Wade was drowned.

On Saturday, 13th November, 1841 the *Royal William*, which had just left St Katherine's Wharf in London, for Leith, was in collision with the Folkestone sloop *Aid*, just off the entrance to London Dock, Wapping. The sloop was almost driven under by the impact, and the vessels remained stuck together for about half an hour⁷¹.

An incident⁷², which might have had very serious consequences took place during the early hours of Tuesday, 12th April, 1842. The Aberdeen Steam Navigation Company's ship *Duchess of Sutherland*, commanded by Captain

⁶⁸ *Scotsman*, Saturday, 22 September, 1838.

⁶⁹ Parker, H. & Bowen, F.C. 1928 *Mail and passenger steamers of the XIX century*, 271.

⁷⁰ Ferguson, D.M. 1991 *Shipwrecks of north east Scotland*, 38-40. Aberdeen

⁷¹ *The Times*, Wednesday, 17 November, 1841.

⁷² *The Times*, Thursday, 14 and Friday, 15 April, 1842.

Cargill, ran aground on the Maplin Sand, at the mouth of the Thames, while on passage from Aberdeen to London. About one hundred passengers were taken off by a tug, and she was refloated the next day, with the assistance of a second, suffering only little damage.

In 1843 the *Monarch*, by now in the hands of the G.S.N., was involved in a further serious collision with the East Indiaman *Maitland*, but survived with a badly damaged bow⁷³. On the 28th July that year *Pegasus* was on passage from Hull to Leith when she ran on the isolated rock called the Goldstone, between the Farne Islands and Berwick. She had a crew of eleven, and was carrying 16 or 17 cabin passengers and 30 steerage⁷⁴. The captain, who was on her rudimentary bridge, between the paddle wheels, decided to reverse her off the rock, evidently not realising the severity of the leak, which sank her almost at once. She carried two boats each with a capacity of 18 persons, but which might have held a few more in this emergency. They were lowered by the passengers⁷⁵, and swamped in the process. A witness at the subsequent enquiry, gave a wonderful example of damnation by faint praise. When asked if he thought the captain was sober, he gave the marvellous reply "I think he was pretty sober". Fortunately *Martello*, which belonged to the same owners, came up and managed to pick up three people.

Martello is interesting in her own right as an early iron steamer, with five watertight compartments⁷⁶. She was expected to make the passage from Leith to Hull in twenty hours, with only fifteen allowed for the section from the Bass to Spurn Point.

Royal Adelaide was involved in a fatality on Saturday 18th May, 1844, when she was in collision about 10pm with a yacht off Greenwich⁷⁷. The yacht shot

⁷³ Parker, H. & Bowen, F.C. 1928 *Mail and passenger steamers of the XIX century*, 201.

⁷⁴ House of Commons, Accounts & Papers 1843 *Select Committee on the causes of shipwrecks*, IX:679 on.

⁷⁵ House of Commons, Accounts & Papers 1843 *Select Committee on the causes of shipwrecks*, IX, evidence of Robert Hildyard, seaman travelling as passenger.

⁷⁶ *Edinburgh Evening Courant*, Saturday, 10 February, 1844.

⁷⁷ *Edinburgh Evening Courant*, Thursday, 30 May, 1844.

out between two brigs and was run down by the steamer. The deceased had been below deck in the yacht. At the moment of impact he ran up, and jumped overboard in a panic.

As the century wound on towards its mid point a further series of minor and major accidents involving steamships in the east of Scotland trades, took place, which are summarised below⁷⁸:

28/2/1847 *Royal Victoria*: Collision at night in Thames with sailing vessel, 4 dead.

13/3/1847 *Queen of Scotland*: Collision in Humber with fishing smack.

11/10/1847 *Rapid*: Grounding in Thames.

12/10/1847 *Martello*: Grounding in fog in Forth.

14/10/1847 *Royal Adelaide*: Grounding in Bridlington Bay.

11/2/1848 *Border Queen*: Ran on reef at night off Leith.

12/3/1848 *Queen of Scotland*: Collision at night.

22/10/1848 *Velocity*: Wrecked by striking pierhead at Aberdeen - this was strikingly similar to the earlier fate of *Brilliant*.

11/11/1848 *Border Queen*: machinery accident, collapse of exhaust steam pipe.

3/12/1848 *Glenalbyn*: Collision at night with brig.

7/3/1849 *Britannia*: Fire while taking in cargo at Leith.

May 1849 *Border Queen*: Boiler collapse.

14/7/1849 *Royal Victoria*: Touched on Herwit Rock in Forth during fog.

Amongst this list we must avoid being confused by the tragic loss, of another *Royal Adelaide* on 30th March, 1850, with all 200 aboard, off Margate. This was in fact a Liverpool ship engaged in the Irish trade⁷⁹, and yet another example of ships of the same name in operation at the same time.

By the middle of the century long steamer voyages were becoming routine.

Not only were the Northern Isles well served, but, for example, Leith had

⁷⁸ House of Commons, Accounts & Papers 1851 *Return of steam vessel accidents since 1/1/1847*, House of Commons Order 8/4/1851, LII.

⁷⁹ *Scotsman*, Wednesday, 3 April, 1850.

direct connection with Hamburg every week.⁸⁰ It was also becoming increasingly common for long range excursion trips to be undertaken. Some of these seem to have been in association with delivery voyages, but others do seem to be pure excursions of the type more expected in the great estuaries. Typically such voyages involved a passage round the north of Scotland. An example may be seen in a trip by *Prince of Wales* in the summer of 1842, at the price of £3.3s. She was to leave Glasgow on 14 June, calling at Iona, Staffa, Stornoway and Orkney en route for Leith⁸¹.

We should not suppose from all this steamship activity, that the sailing ship had died on the east coast. This was far from the case. As has already been mentioned a number of companies operated both sail and steam vessels. The Aberdeen Steam Navigation Company had schooners working between Aberdeen and Hull⁸². As late as 1851, the Aberdeen, Leith & Clyde Shipping Company introduced a sailing cutter, *Cock of the North*, to provide a connecting service with their steamers from Kirkwall to the northern islands of the Orkney group⁸³.

Several sailing ship companies attempted to challenge steam by improved sailing vessel types. The most dramatic of this class was possibly the schooner *Scottish Maid*, which was built by Alexander Hall of Aberdeen in 1839. She had the steeply raked bow and fine lines which became a hallmark of the clipper era⁸⁴, and was intended to compete directly with the steamers on the Aberdeen to London route.

In 1842 the old established smack operators, the London & Edinburgh Shipping Company, which had converted six of their smacks to schooners, introduced a further two schooners on the Leith to London route⁸⁵.

⁸⁰ *Scotsman*, Wednesday, 25 September, 1850.

⁸¹ *Scotsman*, Saturday, 11 June, 1842.

⁸² *Aberdeen Journal*, Wednesday, 25 November, 1846.

⁸³ *Scotsman*, Wednesday, 1 January, 1851.

⁸⁴ MacGregor, D. 1988 *Fast sailing ships*, 100-104.

⁸⁵ *Edinburgh and Leith Post Office Directory* 1842, 423.

As late as 1849⁸⁶ sail provided "Packet" services: From Leith or Granton to -

Aberdeen	Saturdays
Aberdour	Daily
Alloa	Wednesdays, Thursdays and two on Saturdays
Banff	One every ten and one every fourteen days
Charlestown	Wednesdays and Saturdays
Dysart	Tuesday and Friday
Elie	Friday
Fraserburgh	Once a fortnight
Glasgow and Greenock	Three times a week
Golspie, Helmsdale & Little Ferry	- Monthly
Hull	Tuesdays
Inverness	Saturdays
Kirkcaldy	Daily
Kirkwall	Once a fortnight
Lerwick	Every Saturday, and once in six weeks
Leven	Weekly
Liverpool	Weekly
London	Wednesdays and Saturdays
Macduff and Banff	Every fourteen days
Montrose	Saturdays
Peterhead	Weekly
Rotterdam	Weekly
St Andrews	Once a fortnight
Stirling	Wednesdays and Saturdays
Thurso	Once a fortnight
Wick	Once a fortnight and every three weeks

⁸⁶ *Edinburgh and Leith Post Office Directory 1849, 357-358.*

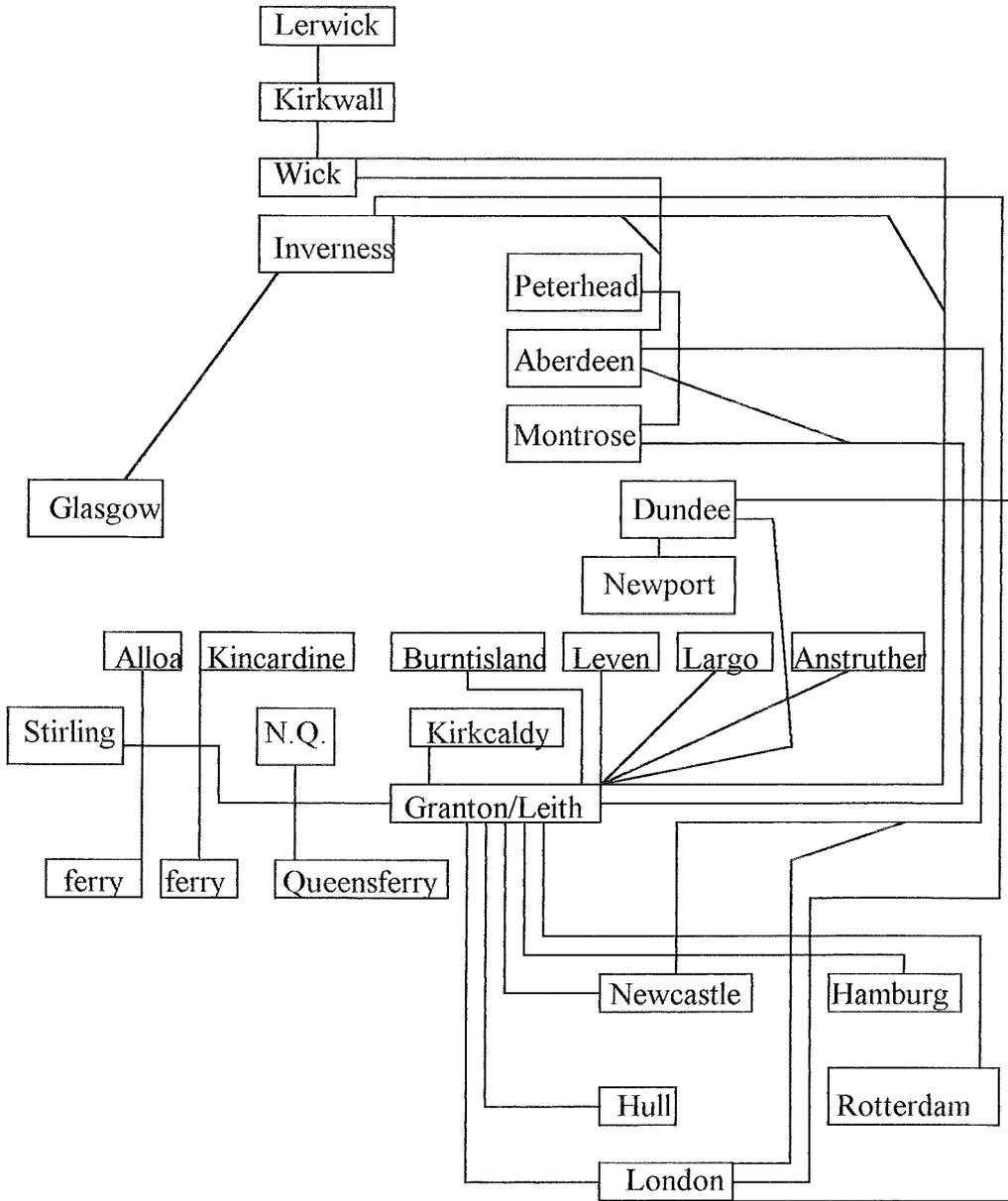
At the same time Leith and Granton steamers served:

Aberdeen	Tuesday, Wednesday, Friday and Saturday
Anstruther	Monday, Wednesday and Friday
Dundee	Twice a day in summer, Tuesday, Thursday and Saturday in winter
Dysart, Largo and Leven	Daily
Hamburg	Saturday and every alternate Friday
Hull	Wednesday and Saturday
Inverness	Tuesday
Kirkwall, Lerwick and Wick	Fridays
London	Wednesday and Saturday
Montrose	Wednesday and Saturday
Montrose and Peterhead	Thursdays
Newcastle	Wednesday and Saturday in summer, Saturday in winter
Rotterdam	Every alternate Saturday
Stirling	Twice a day

In addition

<u>Aberdeen</u> to London	Saturdays
to Inverness	Tuesdays
to Newcastle	Wednesdays
to Wick, Kirkwall and Lerwick	Fridays
<u>Dundee</u> to London	Wednesdays
<u>Inverness</u> to Glasgow	Mondays and Thursdays
to London	once a fortnight
<u>Granton</u> to <u>Burntisland</u>	10 times a day each way
<u>Newhaven</u> to <u>Kirkcaldy</u>	twice daily
<u>Dundee</u> to <u>Newport</u>	14 times a day each way
<u>Queensferry</u>	15 times a day each way
<u>Alloa ferry</u>	15 times a day each way
<u>Kincardine ferry</u>	every five minutes

Figure 3: Topological Map - Steamer Routes - East Scotland - 1849



It is apparent from the foregoing information that it was becoming a matter of routine for the public of the east of Scotland to make journeys by steamship, which would have been regarded as greatly daring a very few years before. It had even entered the field of literature as early as 1821, when John Galt began a series of short stories, published the following year in novel form⁸⁷, which centred round a steamer journey between Leith and London. While Galt did not dwell on his description of the journey of Thomas Duffle and his slightly improbable, *Canterbury Tales* type, companions, he did use the names of the real ships, *City of Edinburgh* for the southward journey, and *Mountaineer* for the return. It may also be considered significant that his fictional western hero prefers to use this route, rather than the costly direct overland alternative, or the possibility of steaming from the Clyde to Liverpool and thence overland.

By the mid point of the century a network of steamship passenger services had evolved from sparse beginnings (Figure 1) through steady progress (Figure 2) towards what was to be, to all intents, its zenith (Figure 3). The new technology had shown itself capable of the task, but not without risk. It still lacked sufficient economy in operation to permit the carriage of bulk cargoes. That was to be the role of the compound engine and was to be a feature of the next quarter century⁸⁸, outwith our present study. Yet, although having the potential threat of railway competition on the horizon, the east of Scotland steamer trade was no longer in any sense some sort of marginal activity.

Steamship travel was come of age.

⁸⁷ Galt, J. 1822 *The Steam-boat*. Edinburgh.

⁸⁸ Bramwell, F. J. 1872 Progress effected in economy of fuel in steam navigation considered in relation to compound engines and high pressure steam. *Proceedings of the Institution of Mechanical Engineers*. Liverpool.

INSHORE DEVELOPMENTS ON THE EAST COAST

The late eighties and thirties were a time of consolidation of the early inshore steamship routes, and the beginning of the eclipse, at least for passenger traffic, of the sailing packet and pulling craft.

This did not happen all at once, but within a relatively short space of time the local passenger traffic in the two great firths of Tay and Forth was dominated by steam. Attempts to retain sailing vessel trade by the establishment of longer crossings in the more open parts of the Forth did not have a long life.

An example of this kind of effort was the smack service from Anstruther to Leith¹, which appears to have been first advertised in 1824. While routes of this type doubtless existed back into a much earlier period, it seems that the stimulus of steamship competition brought in advertising and attempts at regular timing, at least to the extent of stated days of sailing. Sail still had a market, but it was a diminishing one.

An important part of the process was the gradual establishment of better piers. If regular timetabled services were to be maintained then it was essential that the sailing times be made independent of the state of the tide.

This obviously could also have advantages for the larger long distance vessels, but was particularly relevant in the inshore trade because of the even greater scope there for improving the utilisation of ships. The original efforts had been sometimes heavily constrained by tidal conditions. For example in the spring of 1821 the pattern of the Grangemouth, Leith and Kirkcaldy service² had been:

¹ *Edinburgh & Leith Post Office Directory*, 1824, 102.

² *Edinburgh Evening Courant*, Thursday, 8 March, 1821.

For Grangemouth

	From Leith Harbour	From Newhaven
Thur.8	-	8 morning
Fri. 9	8 morning	-
Sat.10	-do-	-
Mon.12	-do-	-
Tue.13	-do-	-

For Kirkcaldy

Thur.8	7 morning	1 afternoon
Fri. 9	-do-	-do
Sat.10	-do-	-do
Mon.12	-do-	-do
Tue.13	-	7am and 1pm

The return services left Grangemouth at 2.30pm and Kirkcaldy at 9am and 3pm. Such arrangements must have been confusing for potential passengers, and can hardly have improved operating efficiency for the owners.

Lenman³, has described the development of many of the ports in our area of interest, but we may highlight some events.

The stone pier at Newhaven had been constructed for the benefit of the fishermen, and was not at first very suitable for embarking passengers into anything larger than a fishing boat. The Trinity Chain Pier, about five hundred yards to the west, seemed to hold out the promise of better things when it opened in 1821⁴ at a cost of £4,000. It was five hundred feet long, but still only gave a depth of about five or six feet at low water, and hence operations⁵ here were not entirely satisfactory.

During some of the early years it was leased to Andrew Greig⁵, an innkeeper.

³ Lenman, B. 1975 *From Esk to Tweed*. Glasgow.

⁴ Grant, J. 1883 *Old & new Edinburgh*, 3:303.

⁵ SRO CS96/3773, CS44/813 and CS44/1829/June 2/Greig.

A brief examination of his activities is instructive. He took the lease from Whitsunday 1828 for three years at £360 per annum. For reasons not entirely clear he built a small jetty beside the pier at a cost of £160, for the specific use of a tender for passengers and goods for the London steamer *United Kingdom*, which was too large to come alongside. Possibly the pier was in steady use by ferries and it was undesirable to have long distance traffic getting in the way. He had a contract with the operators of *United Kingdom* for the landing, and chartered a small steamer, the *Northumberland*, to act as tender. This vessel was, for a short time, also in use between the Chain Pier and Grangemouth⁶. She was costing him £52 a month, and he lost heavily. He became involved in litigation with her owners and they took her away, preventing him fulfilling his contract. The main customers for the pier were the Fife ferries operated by Greenhill, with whom he was a partner in the operation of coaches between Burntisland and Kirkcaldy. He also had a deal with the owner of the small *Victory* which plied between the Chain Pier and Dysart in Fife, for whom he acted as agent at Newhaven. The business did not do well and Greig was made bankrupt in 1828, although he obtained a discharge the following year. The Chain Pier eventually became the property of the Alloa Steam Packet Company in 1840.

The harbour of Leith had a long standing problem with accumulation of sand in a bar at the river mouth. The original docks on the west side of the river, adjacent to the Customs House, suffered from an entrance rather narrow for a paddle steamer, as may be seen from an inspection of the remains. In any case vessels wishing a quick turn round and carrying little in the way of cargo, would not wish to have to use the locks, which only opened near high water. Various schemes to provide a better depth of water by lengthening the breakwaters to improve the natural scour of the river were tried⁷. Such schemes were very expensive and began a cycle of increased charges at Leith

⁶ *Scotsman*, Saturday, 7 June, 1828.

⁷ Lenman, B. 1975 *From Esk to Tweed*, 66-67. Glasgow.

which to some extent may have discouraged shipping from using the port. In fact the Leith rates may not have been as bad as supposed.

An interesting comparison⁸, for 1832, reveals that dues, comparing actual Leith, with the same quantities calculated at the rates charged by Aberdeen and Dundee were:-

	Actual	Rates at Aberdeen	Rates at Dundee
Shipping	£8,969	£1,700	£5,452
Goods imported	8,637	15,300	8,527
Goods exported	1,205	5,700	4,226
	18,811	22,700	18,205

A proposal⁹ was made for the construction of a harbour at Wardie, about a mile west of Newhaven. Here was an example of a seafaring landowner, Boswall, who was prepared to employ an engineer, William Matheson, to draw up plans for a harbour on his own land. The scheme was to be paid for by investors, but they did not materialise. The proposal does however furnish us with a useful picture of the prevailing state of affairs at Leith and Newhaven.

It seems very possible that this suggestion did draw attention to the possibilities of the adjoining Granton area. The Duke of Buccleuch owned the site at Granton, and developed an extensive harbour, in an area which had previously been an open beach. Work was begun in November 1835, and although not fully complete, the harbour was opened for traffic on the day of Queen Victoria's Coronation, 28th June 1838¹⁰.

⁸ *Scotsman*, Saturday, 19 December, 1835.

⁹ Boswall, J.D. 1831 *Letter to the proprietors of steam vessels connected with the Firth of Forth*. Edinburgh.

¹⁰ Grant, J. 1883 *Old & new Edinburgh*, 3:312-313.

Improvements to the pier at Burntisland were also implemented by the Duke. The public were expected to foot the bill for new road access however, and this led to some debate¹¹.

Granton was a fully fledged deep water harbour, able to take the largest ships of the period. We should remember that all ports have risks, and Granton is no exception, especially in foul weather. On 27 October, 1852 three vessels; the tug *Britannia*, sloop *Katy* and the yacht *Wave* were all sunk there while at anchor¹². The harbour was laid out in a manner suitable for rail connection, and in due course was served by the Edinburgh and Northern Railway. Unfortunately, due to various financial problems this did not happen until 1846¹³.

Aberdeen had problems similar to those of Leith, and the same kind of solution was adopted, with pier lengthening¹⁴ undertaken to cause the river to scour the channel.

As facilities improved and experience was gained, much more comprehensive timetabling became the norm. The summer 1832 service of the Fife & Midlothian Ferry Trustees¹⁵ may illustrate this:

Burntisland to Newhaven 0600, 1000, 1200, 1800
 Newhaven to Burntisland 0900, 1000, 1600, 1900 (calling at Pettycur)
 Newhaven to Pettycur 0700, 1030, 1400, 1900

¹¹ *Fifeshire Journal*, Thursday, 23 September, 1841.

¹² House of Commons Accounts & Papers 1852-53 LXXI *Admiralty wreck register 1852*.

¹³ Lenman, B. 1975 *From Esk to Tweed*, 92. Glasgow.

¹⁴ Turner, J.R. 1986 *Scotland's North Sea gateway*, 30-31. Aberdeen.

¹⁵ *Edinburgh Evening Courant*, Thursday, 15 March, 1832.

Pettycur to Newhaven 0800, 1200, 1500
 Newhaven to Kirkcaldy 0600, 1330, 1700
 Kirkcaldy to Newhaven 0830, 1530, 1845

On Sundays the timings were:

Newhaven to Burntisland(calling at Pettycur) 0800, 1400
 Burntisland to Newhaven 1000 (direct), 1800 (calling at Pettycur)

This kind of operation was plainly of a more sophisticated nature than its predecessor, and still more elaborate undertakings were to come. By the end of the 1820s some 120,000 people a year were crossing the Forth¹⁶.

The Trustees proposed the replacement of one of their boats with a new iron vessel. This also proved controversial, on grounds of expense¹⁷.

When His Grace the Duke of Buccleuch introduced his Granton to Burntisland¹⁸ route in 1844 in association with John Gladstone, their two new iron steamers *Granton* and *Burntisland* were to provide ten sailings each way, except on Sundays when there were only five each way. When it is considered that this was, at first, in addition to the service still being provided by the Fife and Midlothian ferry trustees already mentioned, it is plain that the Forth was becoming a busy place. This was not the whole picture, however, for in that year other operators were providing twice daily services to Dysart, Largo, Leven and Stirling, a daily service to Dundee, and twice weekly runs to Alloa and Anstruther¹⁹ not forgetting the Queensferry passage, and the longer distance ships passing in and out. This may represent a degree of over provision, however, for once the Duke's service was fully established, that of the Trustees was to lapse.

¹⁶ *Scotsman*, Saturday, 19 December, 1835.

¹⁷ *Fifeshire Journal*, Thursday, 6 June, 1839.

¹⁸ *Edinburgh Evening Courant*, Monday, 26 August, 1844.

¹⁹ *Edinburgh & Leith Post Office Directory* 1844 352-353.

Much further upstream, a steam ferry had been established at Kincardine, using two vessels, large enough to draw six feet of water. Quite large piers, especially on the south bank, were constructed to facilitate this service²⁰.

Meanwhile on the Tay the question of deepwater piers raised itself from time to time. Complaints²¹ arose in 1841 regarding delays to the ferry at Dundee, and missed rail connections. Traffic on the Tay did not reach anything like the level of intensity of that on the Forth. Development was largely confined to the introduction of steam ferries at Carpow²², the replacement of individual vessels, and very modest expansion of services on existing routes.

The initial services on the Tay had been Dundee based, and this evidently irked some Perth citizens. In 1822 a group of the them formed the Perth Steam Packet Company²³, and began to operate a single vessel to Dundee and Broughty Ferry.

Even such a small vessel as their 91 ton *Atholl* could run out of water in the Tay. By June in her first year of operation they found it expedient to order a flat bottomed boat²⁴, to bring passengers up to the quay at Perth, at times when the steamer was unable to get over the Weal Ford. This tender was to be big enough for 50 persons.

The vessel also experienced rather more direct difficulties connected with shallow water. In the summer of 1824 her bottom was holed on the fluke of the anchor of the Newcastle brigantine *Swift*, off Newburgh²⁵. A series of

²⁰ Menzies, W. 1839 Report on the embankments and ferry piers on the estate of Tulliallan, near Kincardine, in Clackmannanshire. *Prize essays transactions of the Highland & Agricultural Society of Scotland*, new series XII:489-501.

²¹ *Fifeshire Journal*, Thursday, 26 August, 1841.

²² Weir, M. 1988 *Ferries in Scotland*, 107-108. Edinburgh.

²³ Archives, A.K. Bell Library, Perth, B59/22/32. Minutes of Perth Steam Packet Company.

²⁴ Archives, A.K. Bell Library, Perth, B59.22/32. Minutes of Perth Steam Packet Company, 21 June, 1822.

²⁵ Archives, A.K. Bell Library, Perth, B59/22/32. Minutes of Perth Steam Packet Company, 21 August, 1824.

claims and counter claims (for damage to the anchor) arose, but, while the *Swift* had apparently dropped her anchor improperly in the fairway, the incident illustrates graphically how little water there was to spare in some places. The precise resolution of the disputed claims is now unclear.

This was not her only experience of damage. In the previous year she had been in collision, near Dundee Protection Wall, with the steamer *Hero*, belonging to the rival Tay Steam Packet Company²⁶. The dispute over liability and payment in connection with this incident was never settled. The sum due by the Tay Steam Packet Company was eventually included in the financial agreement when the companies amalgamated in January 1825. In September, 1824 she also had a brush with the sloop *Alexander*, whose owners refused to accept an offer of £10, and demanded a further £1-19-8, which was paid to them²⁷.

The most serious mishap was a failure of one of the boilers in May 1824²⁸. This put the vessel out of action for several weeks and cost £20-15-0 to repair. The facts that during the previous month the engineer had been disciplined for drunkenness, and after the incident he was discharged, give a hint as to a possible contributory cause of the problem.

The original crew of the *Atholl* consisted of captain, pilot, engineer and steward. The steward had no wages²⁹, and was to make his money on what he sold. The captain earned 25/- per week (£1.25), pilot 15/- and engineer 30/-. Before entering public service a fireman at 15/- and a sailor at 12/- were added, and within a month a boy at 6/- was authorised³⁰. The most curious

²⁶ Archives, A.K. Bell Library, Perth B59/22/32. Minutes of Perth Steam Packet Company, 25 May, 1824.

²⁷ Archives, A.K. Bell Library, Perth B59/22/32. Minutes of Perth Steam Packet Company, 9 September, 1824.

²⁸ Archives, A.K. Bell Library, Perth B59/22/32. Minutes of Perth Steam Packet Company, 12 May, 1824.

²⁹ Archives, A.K. Bell Library, Perth. B59/22/32. Minutes of Perth Steam Packet Company, 3 April, 1822.

³⁰ Archives, A.K. Bell Library, Perth. B59/22/32. Minutes of Perth Steam Packet Company, 3 April, 7 June, 25 July, 1822.

addition to the crew came in March 1823, when a bugleman was appointed, although his precise functions are unclear. He was to have 14/- per week, and a woollen mattress for his bed on board.

Coal cost the company 5/- per boll from Mr Greenhill at Newburgh, and they also had to pay 1/- per day for shore dues at that place³¹.

When the vessel was laid up for her first winter in November 1822, a General meeting was held and a balance sheet presented:-

Shares	£2500- 0- 0	Cost of Packet	£2704-16- 4
Passages	£ 986- 9- 0	Sailing Expenses	£641- 1-10
Dragging	£18- 4-10	Cash at Bank	£155- 0- 0
Interest	£5- 0- 0	Cash in Hand	£9-16-10
Interest	£1- 1- 2		
Totals	£3,510-15- 0		£3,510-15- 0

Low water was a continuing problem in the Tay. We are told³² that in 1838 it was common for a vessel to have to unload her passengers at a wooden staging “below the ship building yard”, at Perth, although at other times she might get as far as the Lime Shore, or even higher.

Newburgh harbour also presented problems of shiphandling. It was customary to turn and face upstream in order to maintain steerage way and stem the ebbing tide³³.

All along the coast an important growth element in the inshore field, was in towing. From first inception the steam vessel had been advanced as a means of assisting other ships in and out of harbour, and reducing delays by

³¹ Archives, A.K. Bell Library, Perth. B59/22/32. Minutes of Perth Steam Packet Company, 17 May, 1822.

³² Buist, G. 1838 *The steam-boat companion betwixt Perth & Dundee*, 1. Edinburgh.

³³ Buist, G. 1838 *The steam-boat companion betwixt Perth & Dundee*, 39. Edinburgh.

contrary wind or tide. Yet, as has already been remarked, even *Tug* was at first regarded as only for use occasionally in the role which her name implies to the modern reader. It is extremely difficult to identify the first full time steam towing vessel in the area. It is important to realise that even long into the second half of the century tugs, especially in the Forth³⁴, were often pressed into service as excursion steamers.

As the 1820s advanced *Tug* appears to have increasingly fulfilled the duty of assisting lighters, originally six in number, which were described in advertisements as "Tug Packets". These craft were intended for use on the Forth and Clyde Canal, but were given steam assistance from Grangemouth to Leith. At the western end of the journey they could be worked through to Greenock. The owners, the primarily smack operating London, Leith, Edinburgh & Glasgow Shipping Company, can thus be seen as operating a quite elaborate integrated network of services. Not only did they operate smacks between London and Leith, but also from Belfast to Greenock. *Tug* was offered for sale³⁵ in 1828, latterly for only £420. This represented a major depreciation on her 1820 valuation³⁶ of £1,094, plus £1,550 for her engine. At that time she had been described as a "Steam Dragger".

On the Tay, the Dundee, Perth & London Shipping Company chartered the *Atholl*³⁷ in 1828 to tow lighters between Perth and Dundee. Two years later they had obtained their own tug, *Sir William Wallace*, not to be confused with the similarly named passenger ferry operating in the Forth.

At Aberdeen, Alexander Hall³⁸ launched his first tug *Paul Jones* on 22nd August, 1827. In 1838 she was joined in the harbour by *Sea Horse*³⁹. The

³⁴ Brodie, I. 1976 *Steamers of the Forth*. Newton Abbot.

³⁵ *Scotsman*, Saturday, 7 June and Wednesday, 3 December, 1828.

³⁶ SRO CS96/4198.

³⁷ Jackson, G. & Kinnear, K. 1991 *The trade and shipping of Dundee 1780-1850*, 36. Dundee.

³⁸ Turner, J.R. 1986 *Scotland's North Sea gateway*, 75. Aberdeen.

³⁹ House of Commons, Accounts & Papers 1839 Report on steam vessel accidents, XLVII. Also John Duffus builders list in Aberdeen Maritime Museum.

two were operated under the jurisdiction of the Captain Pilot of the port, and had a regular tariff of charges⁴⁰, in 1842:

From the bay to second or upper jetty and from lower quays to sea: under 200 tons 2d per ton, over 200 tons 2 1/2d.

Inward and outward bound to or from Waterloo Quay or Upper Quays to pay extra, under 150 ton 3s6d, over 150 tons 5s.

To or from lower to upper quays or one part of harbour to another, under 150 tons 6s, over 150 tons 10s.

Within the next two years⁴¹ they were joined by *Dorothy* and *Samson*, which implies a good demand for their services.

A kind of hybrid long distance inshore service also came into existence with a terminus at Inverness. The town began to have services to Glasgow, via the Caledonian Canal, once it was fully opened in 1822. This traffic was not without its dangers once the vessels left the western end of the canal, for this is an area of strong tides and sudden high winds. No less a vessel than the original *Comet* came to grief on this service⁴². We shall also consider the fate of the *Stirling* in the chapter on the role of archaeology.

Developments in this period before the arrival of the railway appear to have tended not to involve great technical innovation in the inshore trades. Rather the picture is of steady growth of traffic using the methods of the mid 1820s. Along with Sunday travel, perhaps the most significant, and indeed related beginning, was the birth of excursion travel. Before the coming of the steamer, sea travel was rather too uncertain for the average person to wish to risk day trips.

⁴⁰ *Aberdeen Almanac* 1842, 219.

⁴¹ Turner, J.R. 1986 *Scotland's North Sea gateway*, 75. Aberdeen Also No.52 on Hall's builders list in Aberdeen Maritime Museum.

⁴² Osborne, B.D. 1995 *The ingenious Mr Bell. A life of Henry Bell (1767-1830) pioneer of steam navigation*. Glendaruel.

Not all of these were for hard commercial gain. The Perth Steam Packet Company organised a charitable fund raising outing to Broughty Ferry and back on 25th September, 1823. The band of the Royal Perthshire Militia was in attendance, and 125 cabin tickets at 5/-, and 125 steerage at 3/- were advertised. The proceeds were to go to Perth charities, one half to the Destitute Sick, one quarter to the City of Perth Ladies Society, and one quarter to Perth Dispensary⁴³. A total of £17-9-0 was subsequently distributed by the company.

Excursions were inevitably conducted in a light hearted manner, and this sometimes led to unforeseen and unfortunate consequences, such as the loss (considered in detail in the chapter on archaeology) of the *Windsor Castle* on an excursion to see Queen Victoria board the Royal Yacht on 1st October, 1844.

The Forth continued to be the venue for experiments with new forms of steamship. In 1843 a 40 foot iron vessel, built by Messrs Ruthven of Edinburgh, was undergoing trials. She was propelled by twin water jet nozzles at the ship's side, and made up to 7 knots⁴⁴.

As we have already noticed the steamer companies sometimes became subjected to the rigours of the law. In 1839 the Alloa & Stirling Steam-Boat Co. was sued for damages following an incident at Stirling on 8th September, 1838, when an intending passenger was ejected by the crew⁴⁵. The passenger, Thomas Murray from Blackness, had travelled to Stirling on the 6th by the company's vessel *Forth*. When he attempted to board the crowded *Victoria* for his return journey, he was put ashore by the crew. He at once got back aboard and was again put off. He then re-boarded just

⁴³ Archives, A.K. Bell Library, Perth. B59/22/32. Minutes of Perth Steam Packet Company, 15 and 29 September, 1823.

⁴⁴ Murray, A.&R. 1863 *Shipbuilding in iron & wood and steamships*, 139. Edinburgh.

⁴⁵ Central Region Archives B66/25/777/7.

before the ship sailed. When in midstream he was detected by the crew, who then threw him into a small boat, which took him back to the shore.

He protested to the courts, that his removal was unjustified, that he had suffered physical injury in the process, and that he had been made a fool of in public and felt himself entitled to damages. Regrettably it has not been possible to discover the outcome of the case.

Despite such mishaps we may say that by the middle of the century, steamer operation in the two great estuaries had become a relatively efficient and routine business. As we have seen in examining the offshore routes, that business did not include the carriage of any significant amount of bulk cargo. In the inshore trades, however, towing had been established as a central part of the proper business of the steamship. The pattern of service along the Firths was about to feel the pressure of the railways, but the ferry routes were already an integral part of a quite complex overland transport network.

BUILDERS - LOCAL, CLYDE OR ENGLISH?

The distribution pattern of builders supplying ships for the east of Scotland trades contained a not unexpected scatter.

A complete analysis would be difficult to achieve. Possibly the most accurate method would be to examine all the registration documents for local ports during the period of interest, but this would be extremely time consuming. Additionally, as has been mentioned in the chapter on the effects of legislation, not every vessel was registered.

Fortunately we have available a number of contemporary returns compiled for various Governmental purposes. Not all of these contain data on builders, and some which do must be regarded with a degree of caution, being known to have errors and omissions. Sufficient information is available, however to form some picture of the situation prevailing.

A summary, compiled from information contained in a list¹ of those steam vessels built in Britain up to the early part of 1822, may assist us to form a clearer view of the nature of the national distribution of builders, and the zones supplied. The listing names routes, which have been regionally grouped by the present writer for the purpose of comparison.

It appears that every effort had been made by the original compilers to ensure the completeness of the original list.

¹ House of Commons, Accounts & Papers 1822 *Appendix to 5th Report of Select Committee on roads from Holyhead to London.*

East of Scotland - Inshore Services

Date Built		Area of Building				
		East Scot.	Clyde	Tyne	Thames	Other
1814	(4)	4	-	-	-	-
1815	(-)	-	-	-	-	-
1816	(1)	1	-	-	-	-
1817	(1)	-	1	-	-	-
1818	(-)	-	-	-	-	-
1819	(-)	-	-	-	-	-
1820	(1)	1	-	-	-	-
1821	(6)	2	3	-	-	1
1822	(-)	-	-	-	-	-
Total	(13)	8	4	-	-	1

Offshore east of Scotland - England

1821	(7)	2	4	-	1	-
Total	(7)	2	4	-	1	-

Clyde - West of Scotland Services

1812	(2)	-	2	-	-	-
1813	(4)	-	4	-	-	-
1814	(-)	-	-	-	-	-
1815	(2)	-	2	-	-	-
1816	(2)	-	2	-	-	-
1817	(2)	-	2	-	-	-
1818	(1)	-	1	-	-	-
1819	(2)	-	2	-	-	-
1820	(4)	-	4	-	-	-
1821	(3)	-	3	-	-	-
1822	(2)	-	2	-	-	-
Total	(24)	-	24	-	-	-

Long Distance Irish Sea

1818	(2)	-	2	-	-	-
1819	(3)	-	3	-	-	-
1820	(3)	-	2	-	-	1
1821	(10)	-	6	-	4	-
1822	(8)	-	2	-	-	6
Total	(26)	-	15	-	4	7

English Inshore

1813	(3)	-	-	-	-	3
1814	(4)	-	-	1	-	3
1815	(2)	-	-	1	-	1
1816	(5)	1	-	1	2	1
1817	(6)	1	-	1	3	1
1818	(8)	-	-	-	3	5
1819	(8)	-	-	-	1	7
1820	(8)	-	-	4	1	3
1821	(12)	-	-	3	4	5
1822	(5)	-	-	1	2	2
Total	(61)	2	-	12	16	31

Britain - Continental

1822	(7)	-	1	-	6	-
Total	(7)	-	1	-	6	-

Export from U.K.

1814	(1)	-	-	-	-	1
1816	(1)	-	-	-	1	-
1818	(1)	-	-	-	1	-
1822	(1)	-	-	-	-	1
Total	(4)	-	-	-	2	2
Total	(142)	12	48	12	29	41

Thus, assuming that all vessels have indeed been included in the survey, this would indicate that the east of Scotland, up to 1822, had built just over 8% of all British steam vessels to date. The total number of ships in use in east of Scotland trades closely approximated to this figure, although there had been some interchange of vessels with other areas.

By contrast the Clyde appears more independent in terms of supplying its own needs for steam shipping, and at this point had built some 33% of the British total. Although it is generally considered that the later real domination of the shipbuilding world by the Clyde yards, was related to construction in iron, we can already see the germ of the future growth. Not only was it supplying its own area almost exclusively, but practically dominating the whole west coast. Only a comparative handful of western ships had been built in the Liverpool and Bristol areas, while some, Irish Sea, Post Office packets had Thames origins. We may speculate on the reasons for the pre-eminence of the Clyde at even this early stage. While the influence of the example of Henry Bell should not be discounted, it seems probable that the ready availability of an emerging industrial infrastructure had a greater effect.

We may contrast the early pattern considered above, with the situation some twenty years later, by which time the steam vessel might be properly regarded as established. No directly comparable data is available, but we may usefully examine the relationship between port of registration and place of building, for which we have information more readily at hand.

In 1844² those vessels registered at Scottish east coast ports had building locations as follows;

² House of Commons, Accounts & Papers 1845 *Return of the number of steam vessels registered at the various ports of the United Kingdom on or before 31st December 1844, with notes on their suitability to carry armament.*

Aberdeen	E. Scot.	W.Scot	England
4 built Aberdeen	4	-	-
1 " Dumbarton	-	1	-
2 " Dundee	2	-	-
1 " Dunglass (Bowling)	-	1	-
1 " Glasgow	-	1	-
1 " Greenock	-	1	-
2 " Port Glasgow	-	2	-
2 " Shields	-	-	<u>2</u>
14 total	<u>6</u>	<u>6</u>	<u>2</u>

Alloa

1 built Glasgow	-	1	-
1 " Port Glasgow	-	1	-
1 " Kincardine	<u>1</u>	-	-
3 total	<u>1</u>	<u>2</u>	<u>nil</u>

Dundee

5 built Dundee	5	-	-
3 " Port Glasgow	-	<u>3</u>	-
8 total	<u>5</u>	<u>3</u>	<u>nil</u>

Grangemouth

1 built Shields	-	-	1
1 " Cobble Dean	-	-	<u>1</u>
2 total	<u>nil</u>	<u>nil</u>	<u>2</u>

Inverness

1 built Inverness	1	-	-
1 " Port Glasgow	-	<u>1</u>	-
2 total	<u>1</u>	<u>1</u>	<u>nil</u>

Kirkcaldy	E.Scot	W.Scot	England
1 built Dundee	1	-	-
3 " Port Glasgow	-	3	-
<u>4 total</u>	<u>1</u>	<u>3</u>	<u>nil</u>

Leith

1 built Aberdeen	1	-	-
1 Built Dumbarton	-	1	-
1 " Gateshead	-	-	1
2 " Glasgow	-	2	-
1 " Greenock	-	1	-
1 " Jarrow	-	-	1
3 " Leith	3	-	-
1 " Port Glasgow	-	1	-
3 " Shields	-	-	3
<u>14 total</u>	<u>4</u>	<u>5</u>	<u>5</u>

Montrose

1 built Dunglass	-	1	-
1 " Paisley	-	1	-
<u>2 total</u>	<u>nil</u>	<u>2</u>	<u>nil</u>

Perth

1 built Shields	-	-	1
<u>1 total</u>	<u>nil</u>	<u>nil</u>	<u>1</u>

<u>Total East Scottish</u>	<u>18</u>	<u>22</u>	<u>10</u>
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It may be relevant to compare this with the origins of vessels registered at other ports, but identified trading, or having traded, on or to east coast of Scotland.

London	E.Scot.	W.Scot.	England
1 built Aberdeen	1	-	-
3 " Blackwall(London)	-	-	3
1 " Dundee	1	-	-
1 " Greenock	-	1	-
2 " Leith	2	-	-
1 " Limehouse(London)	-	-	1
1 " Liverpool	-	-	1
1 " Poplar(London)	-	-	1
1 " Port Glasgow	-	1	-
<u>12 total</u>	<u>4</u>	<u>2</u>	<u>6</u>

Berwick

1 built Dumbarton	-	1	-
1 " Glasgow	-	1	-
1 " Greenock	-	1	-
<u>3 total</u>	<u>nil</u>	<u>3</u>	<u>nil</u>

Hull

1 built Aberdeen	1	-	-
1 " Thorne	-	-	1

<u>2 total</u>	<u>1</u>	<u>nil</u>	<u>1</u>
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<u>Total English ships in this trade (17)</u>	<u>5</u>	<u>5</u>	<u>7</u>
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<u>Total in trade on/from E.Scot. coast (67)</u>	<u>23</u>	<u>27</u>	<u>17</u>
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Of the 67 ships with which we are presently concerned, only 20 were built within the confines of their port of 1845 registry. These breakdown as 4 at Aberdeen, 1 Alloa, 5 Dundee, 1 Inverness and 3 at Leith. The overall number of

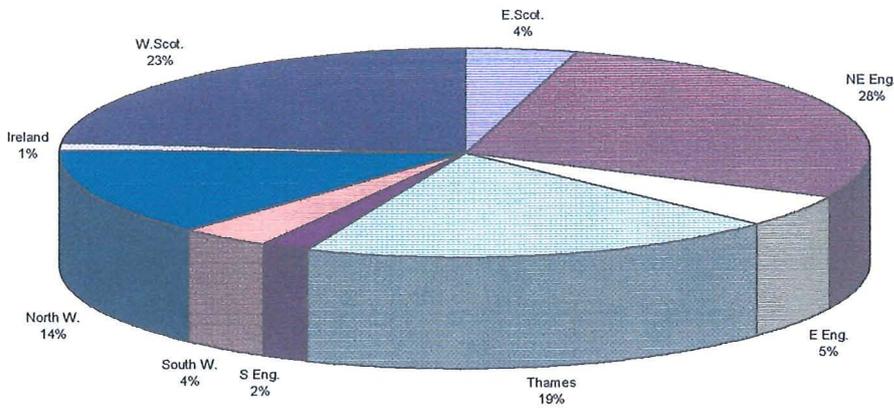
ships mentioned in the return, which can be identified as in the east of Scotland trades, and built at each location is as follows:-

East of Scotland		W.Scot.		England	
Aberdeen	7	Dumbarton	3	Blackwall	3
Dundee	9	Dunglass	2	Cobble Dean	1
Inverness	1	Glasgow	5	Gateshead	1
Kincardine	1	Greenock	4	Jarrow	1
Leith	5	Paisley	1	Limehouse	1
		Port Glasgow	12	Liverpool	1
				Shields	7
				Thorne	1
				Poplar	1
Total	23		27		17

In passing, it may be noted that the available information indicates that all the steam ships registered in east of Scotland ports at this date appear to have been engaged, at least in part, in coastwise traffic on, or from, that coast. There does not appear to be evidence, until the later 1840s, for any steam vessel registered at an east of Scotland port, engaged in International trade, nor in any of the years examined, in trade solely in some other part of the United Kingdom.

Figure 4. Comparison of the output of steamships by different areas of the United Kingdom - derived from House of Commons Accounts & Papers 1839 *Report on steam vessel accidents to Committee of Privy Council for Trade*. XLVII.1.

Building areas of steamships in register 1838 - by number of ships



Building areas of steamships in register 1838 - by tonnage

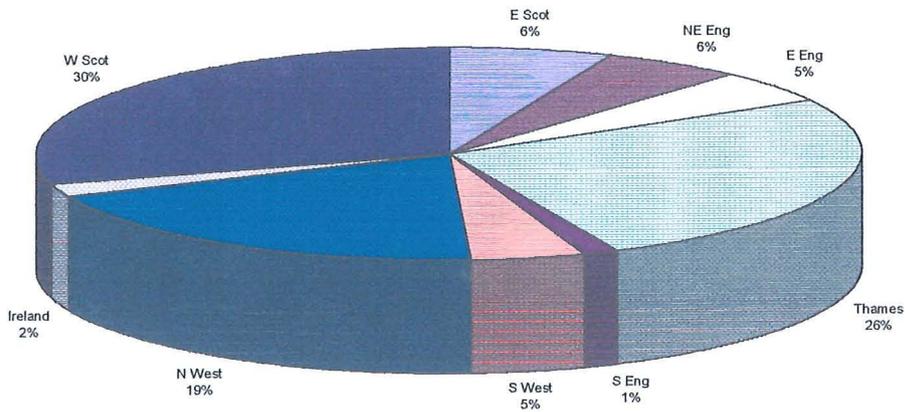
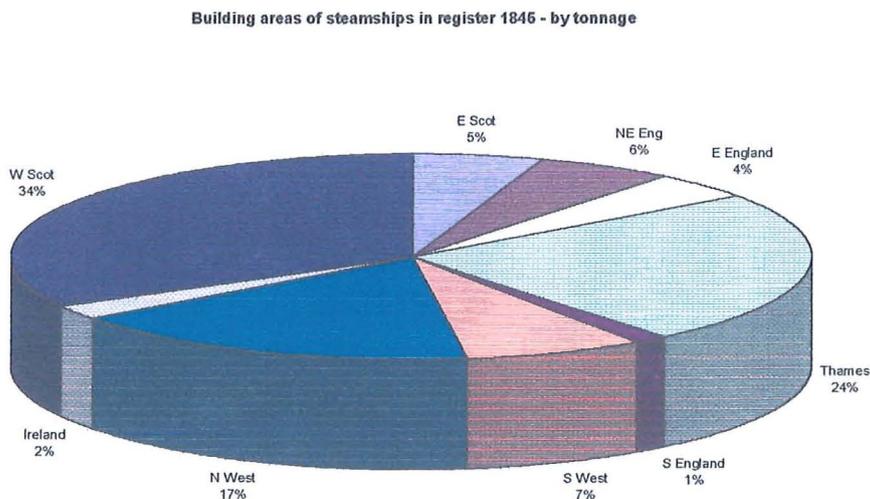
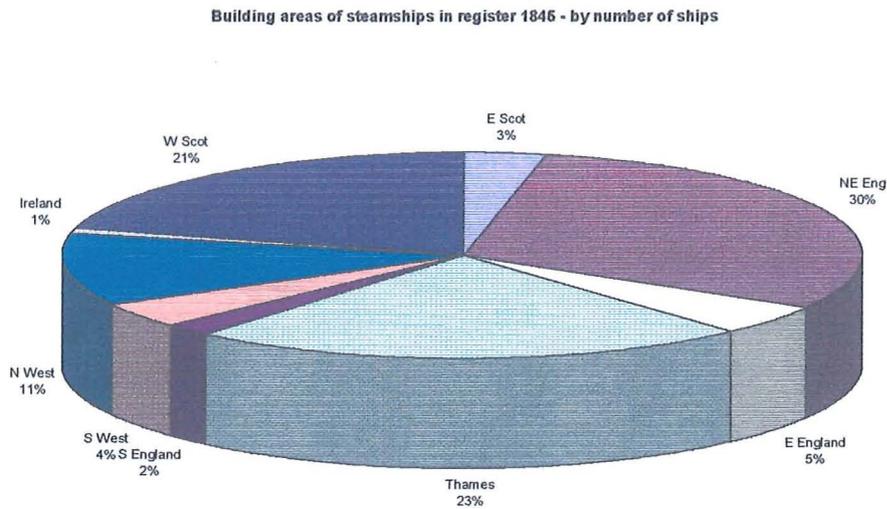


Figure 5. Comparison of the output of steamships by different areas of the United Kingdom - derived from House of Commons Accounts & Papers 1845 *Return of the name and description of all steam vessels registered in the ports of the United Kingdom. XLVII: 545-559.*



It is apparent that, by this date, there are noticeable differences in the relative importance of the various parts of the country as sources of steamships. Caution must be used, however, for as we have already noticed, the south west had, for example, produced the largest ship in the register. Such factors may serve to present some bias in considering the level of activity. For instance, we can see that the importance of the west of Scotland and of the north east of England is reversed depending on whether number of vessels or total tonnage is examined.

The relative significance of the east of Scotland trade at the time may be indicated by reference to the overall number of ships registered in Britain at that date, drawn from the same source.

The 1845 return categorises ships, as having registered tonnages of over, or under, 50 tons. The question of tonnage calculation is a complex one, which we will consider again when we come to examine the influence of legislation.

Scotland -	30 ships	under 50 tons,	total	929 tons
	107 "	over "	"	19,746 tons
England -	356 "	under "	"	8,504 tons
	323 "	over "	"	66,543 tons
Total	816 ships		total	95,722 tons

Of the above totals, the Scottish east coast accounted for -

	17 ships	under 50 tons,	total	369 tons
	34 "	over " ,	"	7,740 tons

for comparison,

Glasgow had	12 ships	under 50 tons,	total	512 tons
	58 "	over " ,	"	10,617 tons
London	86 "	under " ,	"	2,744 tons
	174 "	over " ,	"	46,103 tons

The average size of vessel built in different parts of the United Kingdom varied quite widely. This matter is further discussed in the chapter on ownership, but some indication may also be seen by reference to the pie charts in Figure 4 and 5. It will be seen that the outputs of the various regions are ranked quite differently when the number of vessels rather than total tonnage is examined. This fact should be kept in mind when examining the relevant statistics.

Looking at the available information over the period up to mid century, it appears that the builders of the ships under study were concentrated in four areas. These were the east of Scotland itself, the Clyde, Tyneside and the Thames. Within the east coast the obvious centres of Aberdeen, Dundee and Leith predominate, but it is of interest that a number of lesser ports were involved in constructing at least a small number of steam vessels. Generally these small ports seem to have constructed small vessels for local use. A good example of such a craft is the 60 ton *Morning Star* built at Kincardine in 1815 by Ralph Rae for use on the Forth. Even Inverness managed to build steamers, the 39 ton *Malvina*³ in 1824 and the 18 ton *Ann*⁴, in 1830.

This information appears somewhat at variance with the views of some recent researchers. It has been claimed that in the early years there were “very few steamboats built outside the Clyde in Scotland”⁵. It has also been implied in the same work, that, aside from “a small steam ferry” produced on the Tay in 1814, the east coast did nothing until Aberdeen’s *Queen of Scotland* in 1827⁶.

It appears that it can now be demonstrated that, while the Clyde was indeed already becoming prominent as a steamship building area, we cannot afford to disregard the output of the east of Scotland. Still less can we ignore the influence of English builders in supplying ships for Scottish trades.

A comparison, for 1838, of the place of building of steamships then in the register, and of the distribution by building area, may be seen in the bar charts in Figures 6 and 7.

³ House of Commons, Accounts & Papers 1845 *Return of steam vessels registered*.

⁴ House of Commons, Accounts & Papers 1835 and 1845 *Return of steam vessels registered*.

⁵ Slaven, A. 1993 *Shipbuilding in nineteenth-century Scotland*, in S. Ville (ed) *Shipbuilding in the United Kingdom in the nineteenth century. A regional approach*, 157. St John’s, Newfoundland.

⁶ Slaven, A. 1993 *Shipbuilding in nineteenth-century Scotland*, in S. Ville (ed) *Shipbuilding in the United Kingdom in the nineteenth century. A regional approach*, 158. St John’s, Newfoundland. Note - this appears to give the building date incorrectly, as 1829.

FIGURE 6

Building area of steamships in register 1838

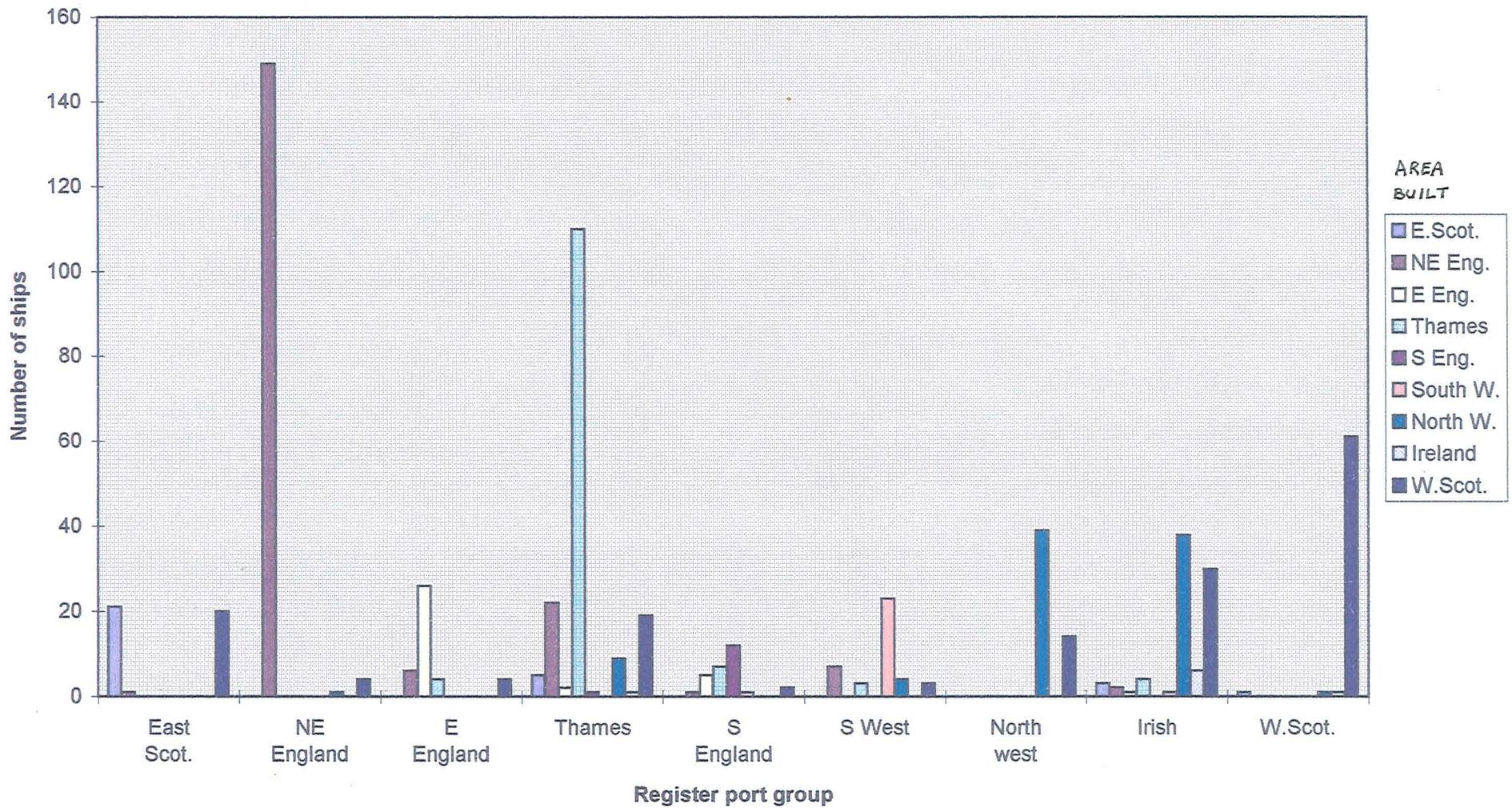
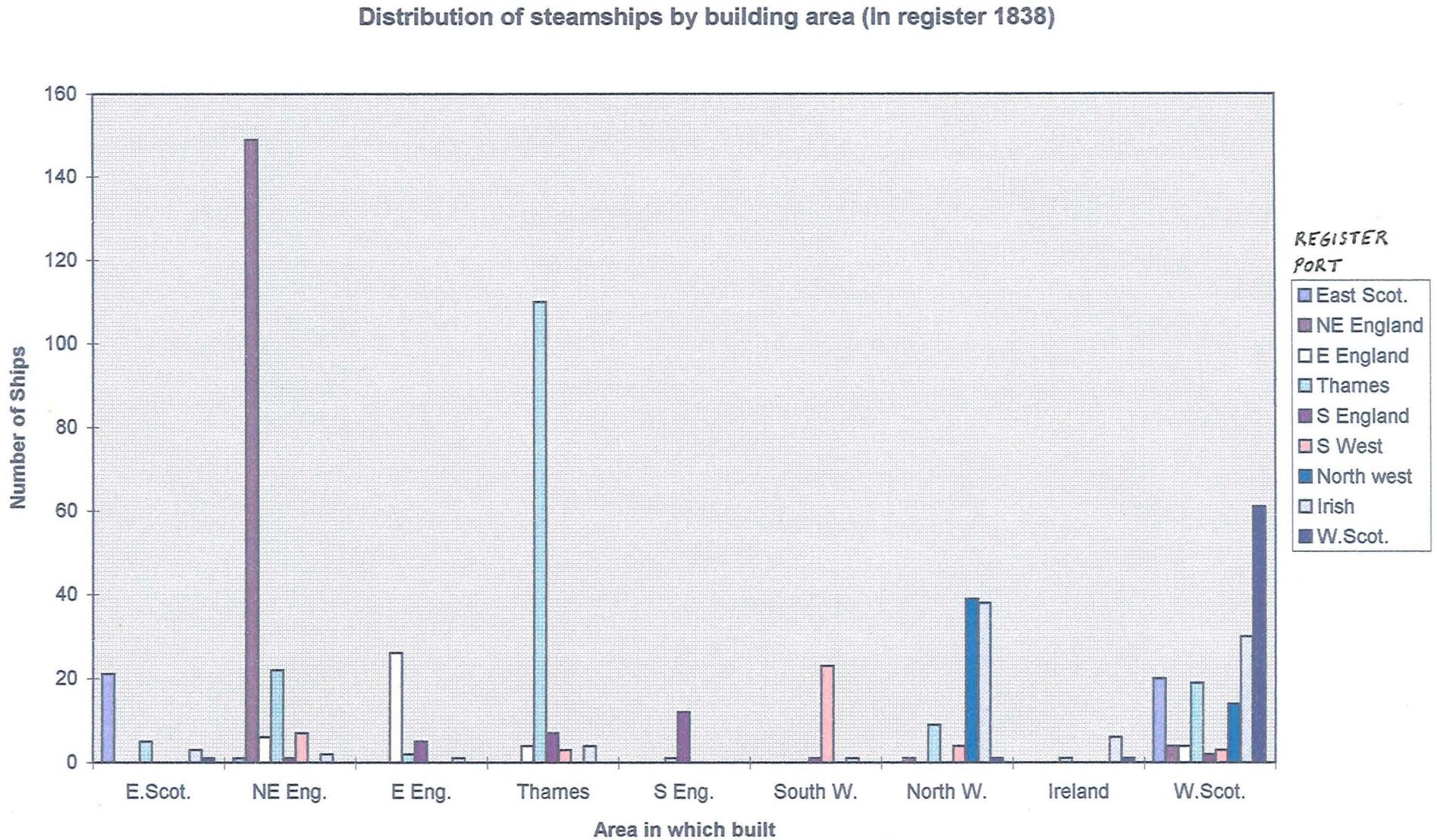


FIGURE 7



Sometimes, the less prominent centres could produce large sea going ships. Perhaps the most obvious of these was *Tourist*, which will be remembered from an earlier chapter as the pioneer of the Aberdeen and Leith service in 1821. She was built in what might seem the rather unlikely setting of Perth, by the yard of James Brown⁷. His yard was at the Lime Shore, in the centre of Perth, and he went bankrupt⁸ in October 1823, owing nearly £4,500.

A major source of his difficulties lay in the building of the steam ship *Royal George* for an Alexander Allan of Brighton. Payment for the ship was, as customary, to be made in instalments. The first payment was not forthcoming, and when the second fell due, Allan offered a Promissory Note for some £866-13-4, endorsed by Captain William Burnside, who was to be the master. Only some £358-8-8 was paid and the Bill was then dishonoured. Much wheeling and dealing then ensued, involving trips to Glasgow and Liverpool, and the ship was eventually disposed of to west coast owners, but Brown claimed to have lost £2,500 on the transaction. Much heat was subsequently generated when it came to light that, on the Tuesday prior to his bankruptcy, he paid over £3,500 to his shipbuilding brothers, John at Montrose and Alexander in Dundee. It was eventually agreed that this was in payment for materials earlier supplied by them. In August 1824 the creditors were paid off at the rate of 3 shillings and 4 pence (about 16 pence) in the pound.

In addition to his apparently leased shipyard and related materials, Brown's assets included a share in the Tay operating steam boat *Atholl*, of which he was the builder⁹ and four shares in the Leith & Aberdeen Steam Yacht Company (original owners of his *Tourist*), apparently in addition to two in a rival

⁷PRO Kew BT107/404 Leith 1821/11

⁸SRO CS96/886.

⁹A.K. Bell Library, Perth B59/22/32. Minutes of Perth Steam Packet Company, 7 February, 1822.

company's ship *Brilliant*. He also owned one eighth of the brig *Caledonia*, trading from Dundee into the Baltic.

Brown's first essay into steamer construction appears¹⁰ to have been the 80 ton *Humber*, which he completed in 1817. She had a 12hp engine by Robertson, and plied between Gainsborough and Hull. As we have already noted, Brown also built the hulls for the Dundee catamaran ferries *Union* in 1822 and *George IV* in 1824. After his brush with insolvency he continued shipbuilding, but appears to have concentrated on sailing vessels. He was still in business in 1838¹¹.

The circumstances of the building of the *Atholl* are of some interest, as an indication of current practice. Brown was one of the original subscribers of the company, which intended to establish a single vessel service on the Tay. He drew up the specifications for the vessel, variously described as 80 or 91 tons, on behalf of the group.

Brown was invited to tender for the construction, as were John Colman & Smart of Dundee, James Garnie of Burntisland, and Sime & Rankine of Leith. Some correspondence ensued, but eventually only Brown, who quoted £967 for delivery in mid April, and a David Wright, quoting £940 but giving no completion date, came forward.

A similar situation arose with respect to the engines. It was originally planned to have a single 24hp unit. Tenders were invited from Abbott, brassfounder, Gateshead; McArthur, Glasgow; Napier, Glasgow; Carmichael, Dundee; and Gutzmer, Leith, for the supply and fitting¹². In due course the specification was

¹⁰ House of Commons, Accounts & Papers 1822 Appendix to *5th Report of Select Committee on roads from Holyhead to London*.

¹¹ Archives, A.K. Bell Library, Perth. CE52/11/3 Perth Register of Shipping 1838/19. Brig *City of Perth* built by James Brown.

¹² A.K. Bell Library, Perth. B59/22/32. Minutes of Perth Steam Packet Company, 26 January, 1822.

modified to require two 15hp engines, and these were supplied by A.& R. Baird of Glasgow for £1270¹³. One half of this was payable on delivery to Perth, and the remainder when fitted in the vessel. There was also to be a six month “uphold” of the engine thereafter, excepting wear and tear.

It appears that *Atholl* may have been re-engined at some stage of her life. No less an authority than John Scott Russell, reported¹⁴ that she, and *Tourist*, had actually been built with direct acting engines by Gutzmer. As he is generally considered as a careful writer it may be considered that she was perhaps subjected to early modification. The Gutzmer type of engine consisted of twin cylinders positioned directly below the paddle crank shaft. The upper ends of the piston rods were connected by short connecting rods to the cranks, with a 90 degree lead¹⁵.

Russell considered that the short stroke enforced on the designer by such an arrangement, tended to outweigh the other advantages of simple design layout.

Sometime in the 1820s a Robert Brown, who may have been a relative of James, became a partner, with Simpson, in a yard at Dundee which was eventually absorbed, in 1877, by Stephens¹⁶.

Curiously enough, in 1822 *Tourist*, although barely a year old, had been dry docked at Sime & Rankine’s of Leith, for repair and alteration. This was undertaken on behalf of the then owners, the Leith and Aberdeen Steam yacht Company. Before the work was finished, they attempted to sell her to none

¹³ A.K. Bell Library, Perth. B59/22/32. Minutes of Perth Steam Packet Company, 21 February, 1822.

¹⁴ Russell, J.S. 1841 *On the nature, properties & applications of steam & on steam navigation*, 251. Edinburgh.

¹⁵ Russell, J.S. 1841 *On the nature, properties & applications of steam & on steam navigation*, 263. Edinburgh.

¹⁶ Lythe, S.G.E. 1963 Shipbuilding at Dundee down to 1914. *Scottish Journal of Political Economy* 9-10:221-222 & 225.

other than Alexander Allan of Brighton, who apparently failed to pay in full for the work, or the ship¹⁷.

Of the Clyde builders, one firm which made a particular mark in the opinion of their contemporaries¹⁸, was that of the Port Glasgow brothers, John and Charles Wood. They were held to be successful leaders in the field of steamship design, and held out as a model to others. They began with no less a vessel than the *Comet* on behalf of Henry Bell. They went on to complete some eighty one steamships by 1859, although the twenties and thirties were their peak period.

The pair also built a number of sailing ships and Charles was responsible for a pair of rather extraordinary 5,000 ton timber carriers, intended to be dismantled after a single voyage from Canada.

John, who died about 1848, is claimed as the more skilled designer, and reputedly liked to do everything with his own hand. His *James Watt*, was regarded as very advanced in her day, and is said by Scott Russell to have been used as a model for other vessels. While most of the firm's output went into west coast and long range trades, they constructed a number of important vessels for the east coast. These were *Tug* (1817) for the Edinburgh Glasgow & Leith Shipping Company, *Thane of Fife* and *Edinburgh Castle* (1821) for Fife & Midlothian Ferry Trustees, *Stirling Castle* for Alloa Stirling & Kincardine Steamboat Co.. On a larger scale were *Dundee*, *Perth* (1832), and *London* (1837) for the company of that name, *Duchess of Sutherland* (1836) for the Moray Firth & London S.P.Co., and *Sovereign* (1836) and *Duke of Richmond* (1837) for the Aberdeen Leith & Clyde Shipping Company. The first four were river ferries with some towing potential, the next four long haul coastal steamers

¹⁷ SRO RH15/206/11

¹⁸ Russell, J.S. 1861 On the late Mr John Wood & Mr Charles Wood, naval architects of Port Glasgow. *Transactions of the Institution of Naval Architects* II:143-148.

and the last two, real open water ships for the Northern Isles and Leith to Inverness trades.

A number of other ships built by the Woods for different areas subsequently found their way into the east coast trades. Those identified were:-

Comet - (1812) built for Henry Bell.

Argyle (1815)) for the Clyde, became an Alloa tug, while *Sir William Wallace* - (1816/18) became a Forth ferry.

Highlander - (1821) built for the Glasgow to Western Isles trade made excursions through the Caledonian Canal to Inverness, as did *Commodore* (1824) and *Maid of Morvern* (1826).

St George came to the Forth in 1826 after five years in the Glasgow - Arrochar service.

Tarbert Castle (1836) was sold in 1838 to the Montrose & Forth Steam Navigation Co.

The brothers appear to have worked closely with both David and Robert Napier, who built the engines for several of the ships. John Wood was also concerned with David Napier in the establishment of the Cunard Line¹⁹

The Wood's products can thus be seen to cover a wide range of early steamship types, from tug, excursion boat and ferry, through to longer range coastal and island steamers with overnight accommodation, and even (outwith our present concerns) ocean crossing ships. The two Napier firms have their own special place in the history of steam ship and marine engine building. In east coast terms

¹⁹ Russell, J.S. 1861 On the late Mr John Wood & Mr Charles Wood, naval architects of Port Glasgow. *Transactions of the Institution of Naval Architects* II:146.

David may best be remembered for the construction of the pair of side lever engines for the 1826, Robert Steele built, *United Kingdom*²⁰

At the time this was claimed, and probably was, the largest, and one of the most powerful ships in the world.

Robert Napier was also a builder of iron ships in his own right. The most significant of these in our present sphere of interest were the train ferries²¹ *Leviathan* and *Robert Napier* of 1850, which we shall consider further. Neither should it be forgotten that he constructed open water ships such as the 1844 *Dundalk*, which was employed by the North of Scotland Steam Packet Company.

Other Clyde firms to build for the east coast included William Denny; Barclay; Tod and McGregor; Lang and a number of other lesser concerns.

Although the first east coast port to build a steam vessel, Dundee's involvement in the building of steam ships, during the remainder of the first half of the century, appears to have been somewhat sporadic. It will be recalled that a beginning had been made as early as 1814 with the construction of *Tay* for local use, and the *Caledonia*, built by Smart for the river Humber. Smart was also one of the few east coast builders to build a vessel which made her way to the Clyde. This was *Margaret*, built in 1816 and sent to the west in the following year²². In the twenties, came another Smart built *Caledonia*, this time for the Tay Steam Packet Company, for whom he also built the little *Hero*²³.

²⁰ Napier, D.D. 1912 *David Napier, engineer 1790-1869*, 56. Glasgow.

²¹ Brodie, I. 1976 *Steamers of the Forth*, fleet list.

²² Cleland, J. 1829 *The rise & progress of Glasgow*, 240-241. Edinburgh.

²³ PRO BT107/428 Dundee 113 of 1836.

The latter vessel is also administratively interesting as an example of a ship in use for thirteen years “within the confines of the port” before being registered. At the end of her life she was likewise almost missed by officialdom, being broken up in 1842, but her certificate not being cancelled until 1846.

The eighteen thirties saw a sudden surge of activity. William Adamson produced *Sir William Wallace*, at the start of the decade for use as a tug in the Tay²⁴ by the Dundee Perth & London Shipping Company. She appears to be one of the earliest vessels officially described in her registry certificate as “a steam tug”, and was also interesting in that she had a round stern.

In the middle of the decade Thomas Adamson produced a number of medium to large sea going steamships. Of these the one of which we know most is *Seahorse*²⁵. She is an example of the “fiddle-shaped” paddle steamer, with narrow waist in way of the paddles. Her machinery and fitting out was undertaken by Peter Borrie, who collaborated with Adamson on other ships at this time. Her equipment included a pair of Hall's condensers. Further reference to this ship is made in the chapter on the effects of legislation and governmental influence.

In the 1840s Carmichaels, who had been involved with the engines for the early Tay ferry catamarans, tried their hand at building a rather more conventional iron replacement²⁶.

Aberdeen had been quick to become involved in the operation of steamships, but was a little slower to begin building them. J. Duffus launched the first of them, *Queen of Scotland*²⁷ on Thursday, 12th April, 1827. She was soon followed by a

²⁴ Central Library, Dundee, Dundee Register of Shipping, 6 of 1831.

²⁵ Anon. 1841 *Conversations lexicon*, 396-397 and plate LXXXV facing 369. Glasgow.

²⁶ *Lloyds Register of Shipping* 1847.

²⁷ *Times*, Wednesday, 18 April, 1827, quoting *Aberdeen Chronicle*.

tug from the yard of Alexander Hall. Duffus also became involved in the ownership of steam vessels, while Hall gained some of his fame by building fast schooners to compete directly with steam. By 1845 W. Simpson was building a 600 ton iron ship²⁸ in the same cramped harbour.

Leith was early involved in modifications, but like Aberdeen was a little slow to begin building steam ships. The first appears to have been *Queen Margaret*, built by Robert Menzies in 1821 for the Queensferry Trustees. By 1826, Sime & Rankine had also entered the field, and in 1831 Menzies built *Royal Adelaide*²⁹ for the Leith to London service. Seven years later they were building an iron replacement for the Queensferry. J. Maxton, who had begun as an engine builder, was also constructing iron ships by 1844.

English builders, for the trade under examination, appear to have been mostly Thames organisations working on behalf of London based companies. The most prolific were Wigram & Green of Blackwall, notably on behalf of the General Steam Navigation Company. Their 1833 built *Monarch* was quoted³⁰ as an outstanding example of an efficient design. Her lines were drawn for the builders by Charles Wood, and her engines installed under the superintendance of Mr Brown of Boulton & Watt. She ran "120,000 miles without costing the owners more than a trifling sum for repairs of any kind to hull or machinery".

Outwith this pattern of London builders providing ships for London companies, in the thirties and forties Miller & Ravenshill also built a number of ferries for the Forth.

²⁸ House of Commons, Accounts & Papers 1851 *Return of steam vessels registered in United Kingdom*.

²⁹ Ballingall, J. 1832 *The mercantile navy improved*, 170.

³⁰ Russell, J.S. 1841 *On the nature, properties & applications of steam & on steam navigation*, 255. Edinburgh.

Amongst the English builders, the most consistent exception to the London bias, was however the steady trickle of vessels, constructed for a variety of customers, by an assortment of builders based on the Tyne. Almost all of these ships were tugs or small ferries.

The overall picture of the origins of the 201 ships identified in the east of Scotland in the present study, indicates that some 51 were built on that coast. Of the rest, 83 were built on the Clyde, 31 in the north east of England (mostly on the Tyne), 19 on the Thames and 7 in the north west of England. It has not proved possible to confirm the origins of the remaining group of 10, but there are good grounds for supposing that at least four of those were built on the east coast.

This distribution may be compared with that for the whole country, portrayed in the pie and bar charts earlier in this chapter (Figures 4,5,6 & 7).

In general it appears that the east of Scotland trades had perhaps more need or willingness than some other areas to obtain vessels from outwith their own area. The local builders were, however well capable of constructing large ships, incorporating new ideas.

The fact that there was such a number of builders in the area may come as a surprise. The east of Scotland can now be considered as rather more important, compared with other parts of the country, than may generally have been suspected.

SOME QUESTIONS OF OWNERSHIP

The ownership of vessels in these trades falls to be examined in respect of two main attributes, namely geographical spread, and organisational type.

Geographically we may divide them into four main categories.

1. Local (to the east coast of Scotland).
2. Elsewhere in Scotland.
3. East coast of England, trade related.
4. Elsewhere

Division by organisational type may be considered in a number of ways.

Size

1. Single ship company
2. Multiple ships, all apparently in east coast trades.
3. Multiple ships in variety of trades.

Character

1. Builder or builder led company.
2. Specialist steamship operating company.
3. Former sailing ship company diversifying.
4. Trustees or other quasi public ownership.
5. Railway.

Examples of all of these ownership types are to be found in the east of Scotland trades before 1850, and some companies of course changed in character during the period, or were the subject of take-overs in one form or another. In similar fashion several ships changed hands during the period, but remained in east of Scotland trades.

It was calculated in 1835 that Scotland, as a whole, owned one fifth of the number of British registered steam ships, and these accounted for one quarter of the tonnage¹.

¹ *Scotsman*. Wednesday, 26 August, 1835.

We must remember that while joint stock companies had existed in some form in Scotland since the middle part of the eighteenth century, limited liability became possible only after 1856². It was desirable to spread the risks of investment in ship owning, but this was not always done to the extent of actual company formation. Shipowning was carried out in terms of sixty four shares, and in the case of a joint stock company the practice was to have three named trustees listed as the owners "as trustees of the company".

Understandably, the earliest steam vessels tended to belong to single ship companies. A good example of this may be seen in 1814, with the *Stirling*. Based in the town of the same name, her operation and fate have already been touched on. She was in fact owned by a group of thirty seven individuals³, allocated one or more sixty fourth shares, in the traditional manner. They consisted of 23 Stirling merchants, two of whom were already partners in business; two soapboilers; a wright and two butchers all from Stirling; along with two tanners from St Ninians and one from Bannockburn; a Glasgow merchant; Henry Bell (owner of *Comet*) - described as engineer of Helensburgh Baths; an Alloa wright; an Edinburgh merchant; John Gray, her Kincardine builder; and John Henderson the first master.

This somewhat motley group can serve to illustrate the kind of highly localised enterprise which could be formed with the sole intention of operating a steamship. It is also interesting to note the involvement of both builder and master as shareholders in this specialist, single ship, company of what we might call the experimental era. In the context of innovation it is difficult to fully interpret the importance of Henry Bell's presence in the list. It is, however, apparent that from the outset the group intended to operate more than one vessel, and within a year one had been added⁴. The operation remained small and localised.

² Michie, R.C. 1981 *Money mania and markets, investment, company formation and the stock exchange in nineteenth century Scotland*, 149. Edinburgh.

³ PRO BT107/113 Alloa 11 of 1814.

⁴ *Edinburgh Evening Courant*, Saturday, 6 August, 1814.

A similar operation was mounted in the following decade on the Tay⁵. On 24th January, 1822 a group of five merchants, three coal merchants, two captains, a writer (solicitor), a shipowner and a shipbuilder, all from Perth, gathered to propose the purchase of a steam boat, to operate between there and Dundee. A number of other local persons eventually became subscribers, and an apparently unsuccessful attempt was made to raise further capital in Dundee. Within a month contracts had been placed for the vessel⁶, the *Atholl*, and subsequently for her engines⁷. She entered service in the middle of June, but the company was short lived, being absorbed by the, Dundee based, Tay Steam Packet Company in January, 1825⁸.

Such operations were often of short duration. In addition, for a number of years, the current legal position required that they should strictly speaking be partnerships, usually termed a “co-partnery” in legal documents, even when loosely called a joint stock company. An organisation of this type appeared in what was in effect a reforming of the Stirling Steamboat Company, in 1828, with a capital of £4,500⁹. Amongst other provisions, article 2 of the initial contract required that no partner should hold an interest in any rival concern. Of some curiosity, is the fact that under article 15, members had only a per capita vote, no matter the extent of their holding.

As a contrast, consider the case of *Tug*, of 1817. In this instance the owners - Edinburgh, Glasgow & Leith Shipping Company - were, and continued to be a large and complex company, engaged in the operation of sailing vessels and lighters on a series of interconnecting routes. They added a steam vessel to their fleet for a specific purpose, and having gained confidence, added others and diversified somewhat in the use to which they put them. In point of fact

⁵ Archives, A.K. Bell Library, Perth. B59/22/32. Minutes of Perth Steam Packet Company.

⁶ Archives, A.K. Bell Library, Perth. B59/22/32. Minutes of Perth Steam Packet Company, 7 February, 1822.

⁷ Archives, A.K. Bell Library, Perth. B59/22/32. Minutes of Perth Steam Packet Company, 27 February, 1822.

⁸ Archives, A.K. Bell Library, Perth. B59/22/32. Minutes of Perth Steam Packet Company, 2 February, 1825.

⁹ Central Region Archives B66/25/777/1. Contract of Co-Partnery of the Stirling Steamboat Company, 1829.

they introduced the use of steam as quickly as anybody. The company nevertheless remained primarily operators of sailing ships for much of the period of study.

It may be recalled that they had begun in 1814 as one of the companies operating smacks from Leith to London¹⁰. In 1820 they amalgamated with another of the smack companies, the Edinburgh & Leith, to form the London, Leith, Edinburgh & Glasgow Shipping Company. From 1831 they began long distance steam operations, from Leith to London, but retained sailing vessels on the same route¹¹. Even in the 1840s they continued in this type of trade. Overall the company appears to have decided not to put all their eggs in one basket.

A similar type of organisation, if on a more limited group of routes, was the Dundee Perth & London Shipping Company. Founded in 1826 by amalgamation of the Dundee & Perth, and the Dundee & Perth Union Shipping Companies¹², they experimented with chartering a steam vessel to pull lighters in the Tay. In the mid 1830s they began to own steam ships in the Dundee to London trade¹³, but this did not stop them operating sailing vessels, indeed in 1836 they re-registered four schooners, four smacks, twelve sloops and a lighter¹⁴.

Examples, in the east coast trade, of Scottish owners from other than the east coast, seem to be pretty much confined to Glasgow. One, which also serves to illustrate a builder led operation, was that of *Pegasus* of 1835. Built by Robert Barclay, she was owned jointly by him and shipowner Thomas Barclay. She operated for some time under this ownership, gradually

¹⁰ Reid, W. 1824 *London & Leith smack & steam yacht guide*, iv. Leith.

¹¹ *Edinburgh & Leith Post Office Directory* 1831, 47.

¹² Jackson, G. & Kinnear, K. 1991 *The trade & shipping of Dundee 1780-1850*, 33. Dundee.

¹³ Jackson, G. 1992 Operational problems of the transfer to steam in T.C. Smout (ed.) *Scotland and the sea*, 163-164. Edinburgh.

¹⁴ PRO BT107/428 Dundee 1836.

transferring some shares to Robert Cook, the master¹⁵. It is not clear whether the builder was deliberately involving himself in ship owning, or if it was always intended to sell the vessel. It may be that the purchase money was slow in coming. We can only speculate. After six years the ship was transferred to the Hull & Leith Steam Packet Company of Leith.

The best example of an English based company operating in the east of Scotland trades must be that of the General Steam Navigation Company. This was a massive organisation for the period, even from its formation at London in 1824. The suggestion that they might enter a particular route was soon enough to make lesser companies tremble¹⁶. A joint stock company operating only steam ships, they quickly came to serve a variety of routes in the Thames, English Channel and North Sea crossings as well as on the east coast. They also displayed some predatory tendencies, absorbing competitors. They formally took over the London & Edinburgh Steam Packet Company in 1836, but had operated in conjunction with them almost from inception. The G.S.N. had global ambitions in its early days, but settled down to concentrate on the trades from England to the nearer parts of Europe, being ultimately absorbed in modern times into the P.& O. group.

A total contrast to the wide ranging activities of such a company may be found in the very specific, quasi public ownership, of various groups of ferry trustees. Organisations of this type, with statutory authority, operated the ferries between Dundee and Newport, Newhaven and various Fife ports, and across the Queensferry passage on the Forth. The Harbour Commission at Aberdeen also operated tugs on a similar basis. One might also include in this category the Commissioners of Northern Lights, who operated the lighthouse tenders *Pharos* and *Skerryvore* out of Leith, although while technically merchant ships, they were not engaged in trade.

¹⁵ PRO BT107/425 Glasgow 67 of 1835.

¹⁶ Jackson, G. 1992 Operational problems of the transfer to steam, in T.C.Smout(ed.) *Scotland and the sea*, 169. Edinburgh.

A final ownership category, whose activities are discussed elsewhere, was that of the railways. As joint stock companies owning only steam vessels, they may be said to have already been categorised, but may be considered a separate case by reason of the peculiar circumstances of the Scottish east coast. While English railways began to be involved in steamship operation in the English Channel to some extent in an effort to drum up business, and Brunel and the Great Western flirted with inter continental extensions of power, the involvement in our area was more integrated to the main business of railway operation.

The reasons for this were geographical, and related to the problems posed by the indentation of the Scottish east coast by the great firths. The crossings of the Forth and Tay were effectively looked on as part of the railway system. The technology to bridge the estuaries was not yet available, and even if it had been the capital outlay might have given pause. Full control of the ferries by the railway was regarded as essential to the success of the rail operation, and quickly came about.

In the course of the present study, some 201 vessels have been identified operating on the Scottish east coast during our period of interest. It must be made clear that these were not all in service at the same time. Some indeed, were regular traders over a long period, but others have only a passing reference. As will be seen from the graph in Figure 8, however, there was a steady increase in the number in service.

The rate of increase may be compared with the national picture, by reference to the graph in Figure 9, depicting the total number of steamships in the United Kingdom. (Note: it has not been possible to obtain figures for all years).

Figure 8. Net total of steamships in service on east coast of Scotland 1813-1850.

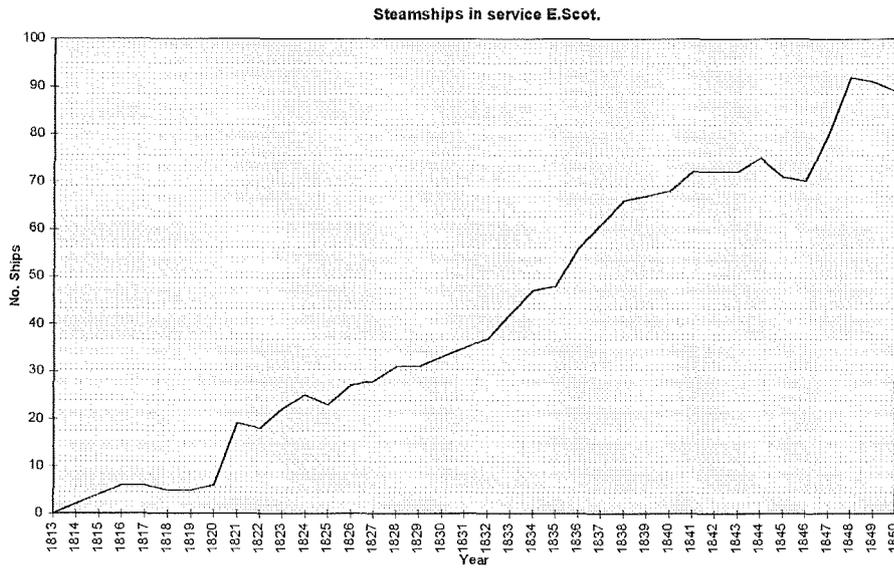
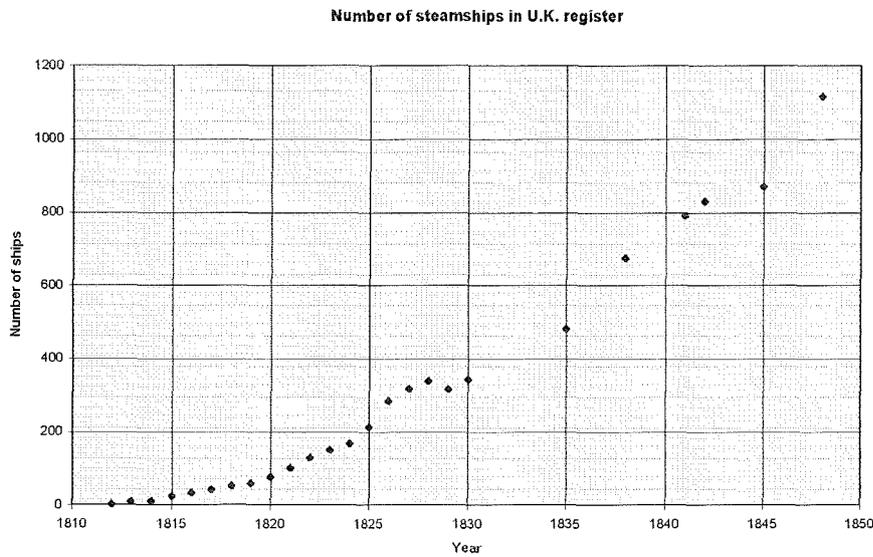


Figure 9. Graph - Number of steamships in United Kingdom Register, 1812-1850.



It has only proved possible to identify the owners of some 173 of the vessels in use off the east of Scotland - or approximately 87%. The ideal solution would have been to examine every volume of the Register of British Shipping (BT107) in the Public Record Office, Kew. Whilst this has been done for a number of vessels, the sheer volume of the task meant that it would absorb a disproportionate effort to complete. Access to the unpublished work of F.W.Hawks, who has made a long term collection of data from that source, helped to fill some gaps. Ownership details were available from other sources, including some published works¹⁷. A limited number of local copies of Certificates of registration survive in the CE series. For details of the sources used in identifying individual ship owners, the reader is referred to Appendix C, in association with the Bibliography.

An analysis of the location of identified owners indicates:-

Local (to the east of Scotland)	127	73.4%
West of Scotland (Clyde)	10	5.8%
N.E. England (mostly Newcastle)	9	5.2%
Thames (London)	18	10%
Ireland	8	4.6%
Overseas (Denmark)	1	0.6%

In a sense only the Irish and Clyde groups, totalling 18 vessels or approximately 10% of the total could be regarded as being owned in areas outside the trade. This is not completely accurate as there is some slight indication of north east English owners operating tugs in the Forth, rather than in a trade between there and home ports. Any attempt to make a comparison of the above data with the national position would unfortunately involve a major research effort. It should come as no surprise to us that local

¹⁷ Such as Brodie, I. 1976 *Steamers of the Forth*.

ownership is so widespread. We are, after all, examining a fleet which contained a high number of relatively small vessels intended for local use.

The effect of the small numbers of “outside” vessels may, however, have been disproportionately large. The Irish ships in use off the east of Scotland were all the property of the St George Steam Packet Co., whose activities in price wars have already been mentioned. Of perhaps even greater influence, almost all the London ships in the trade belonged either to the General Steam Navigation Co., or some of its associates. A number of the Clyde owned vessels included in the total, were engaged in canal trade, through either the Caledonian (which required reasonable sea going capability) or the Forth & Clyde Canal. The effects of these canal traders were perhaps less obvious, but Glasgow seems to have quietly controlled much of those, admittedly limited, trades.

In the absence of full ownership data for the whole of Britain, we may learn something from examining the geographic spread, to which we have access. As a convenient sample, let us consider 1829, 1838 and 1845¹⁸.

Steamship ownership by port group.	1829	1838	1845
Thames	57	169	263
South England (Dover to Southampton)	15	28	34
South West (W. of Southampton to Mid Wales)	15	40	58
North West (Mid Wales to Carlisle)	52	53	68
Irish	26	85	79

¹⁸ House of Commons Accounts & Papers 1830 *Return of number of steam boats in each port of Great Britain* XXVII: 44. 1839 *Report on steam vessel accidents* XLVII: 47. 1845 *Return of name and description of all steam vessels registered in ports of the United Kingdom* XLVII:545.

West Scotland	58	64	76
East Scotland	17	42	50
North East England (Border to Tees)	64	154	192
East England (Whitby to Colchester)	<u>38</u>	<u>40</u>	<u>51</u>
Total	342	675	871

Some of these results are quite dramatic, and may perhaps be more easily interpreted by reference to the pie charts Figure 10 and bar charts Figure 11. Over the sixteen year period depicted, the ownership, as opposed to use in trade, of steamers in the east of Scotland is seen to grow quite dramatically, by some 194%. This compares with the national increase of 156%. If we consider market share, we find that in 1830 East of Scotland owners had 4% of Britain's steamships, (by tonnage) but this had increased by 1845 to 7%. While not perhaps dramatic, this shows a healthy growth situation. Perhaps the most surprising result revealed by these figures is the dominance of the Thames area owners, which in practice meant London. This is seen to have overtaken the north east of England (between the Scottish border and the Tees for present purposes) between 1838 and 1845.

The other major curiosity is seen in the substantial proportion of ships under Irish ownership. From 1838 to 1845 Ireland is the only area to show decline in the number of steamships owned. We might speculate that this in some way reflects the difficulties of the local economy during that period. It is important, however, to remember that, at the latter date, Irish ports still had more steamships registered than those of the east of Scotland, or indeed the

west of Scotland. It has been suggested¹⁹ that in the late 1830s certain companies engaged in the Irish Sea trades transferred registration of their ships from the Mersey to Cork or Dublin, only to transfer them back in the 1840s. Irish companies had easier access to limited liability status than those on the mainland. It has also been suggested that managerial expertise, specifically that of Charles Wye Williams of the City of Dublin Steam Packet Company, was instrumental in producing this result²⁰. This would not seem, however to provide a complete explanation.

Another aspect of the ownership patterns which is worthy of comment, relates to the average size of steamship registered in each part of the United Kingdom. While not a perfect measure, it is convenient to judge "size" in terms of registered tonnage. We should note that, because of changes discussed in the chapter on legislation, it is not appropriate to directly compare tonnages noted at different dates. The tonnages given in this comparison are, however, all net, that is not including engine room. Despite the difficulties in making direct comparisons, it may still be instructive to examine the relationships between size of vessel and its home area of the United Kingdom. The bar chart in Figure 11 seeks to illustrate this point. It is a curiosity of the period that at the time Newcastle had a substantial number of rather small steam vessels in the register. For example in 1829²¹ Newcastle had 53, with a total tonnage of only 1,075, averaging just over 20 tons. At the same time London had 57 ships with a total tonnage of 8,214, average 144 tons; Aberdeen 4, total 623, average 155 tons. The 15 steamers registered at east of Scotland ports had a total tonnage of 1,404, average 94 tons, while the total for the country was then 316, total 26,564, average 84 tons. The reasons for this pattern are obscure, but it does appear that the Tyne was specialising in building and operating tugs. We may speculate that

¹⁹ Cottrell, P.L. 1981 The steamship on the Mersey, 1815-80 in P.L. Cottrell & D.H. Aldcroft *Shipping trade and commerce. Essays in memory of Ralph Davis*, 140-141. Leicester.

²⁰ Harcourt, F. 1992 Charles Wye Williams and Irish steam shipping, 1820-50. *Journal of Transport History*. 3rd series. XIII.2:65-80.

²¹ House of Commons, Accounts & papers 1830 *Return of number of steam boats in each port of Great Britain in 1829* XXVII: 44.

the reasons were associated with the geography of the Tyne area, but it is not completely clear why the difference should be quite so marked.

The question of regional differences in average steamship size has some other interesting aspects. Why, for instance, should the Irish registered vessels be so clearly larger than those on the facing English and West of Scotland coasts? The explanation, referred to above, that this is attributable to a single individual having recognised the advantages of economies of scale, is tempting but might be criticised. The “great man” approach is unfashionable amongst many historians today. The mystery is if anything deepened by examination of individual ships, for the figures for the average size of Thames registered ships are inflated by several ships of over 1,000 tons in 1845. This is also a feature of the total for the south west in that year, where a moderate number of small vessels is rather overwhelmed by the largest steamship in the register, *Great Britain*, of Bristol. This might also be attributed to the energy of “one great man” - Brunel.

It is apparent that there is scope for a great deal of further long term study in respect of the ownership patterns of early British steamships. That the east of Scotland had at least its fair proportion of early steamship owners, may now be stated with some confidence.

Figure 10. Progression in the pattern of steamship ownership.

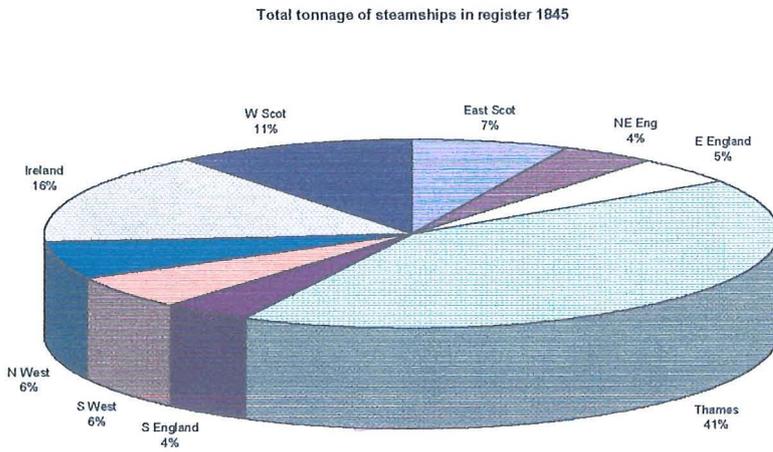
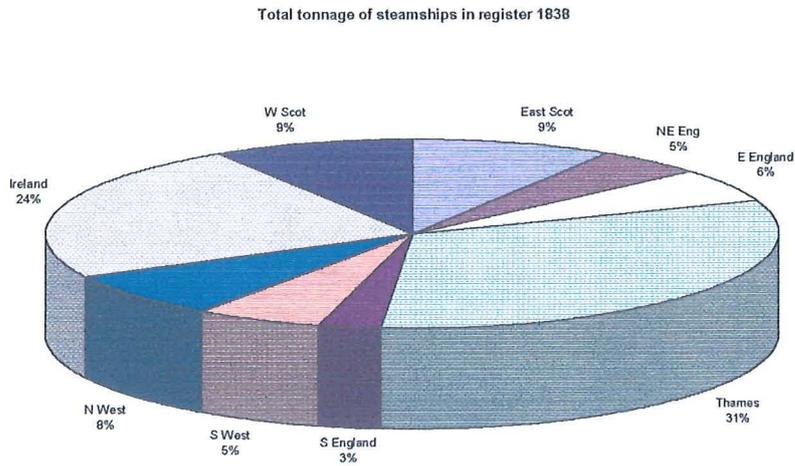
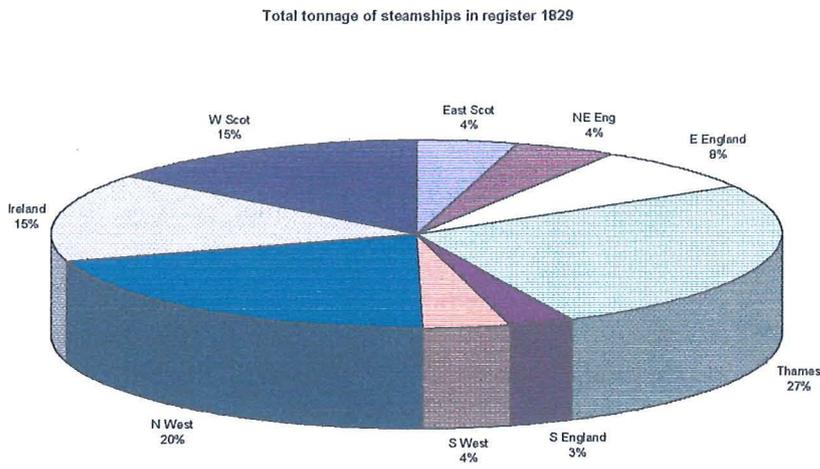
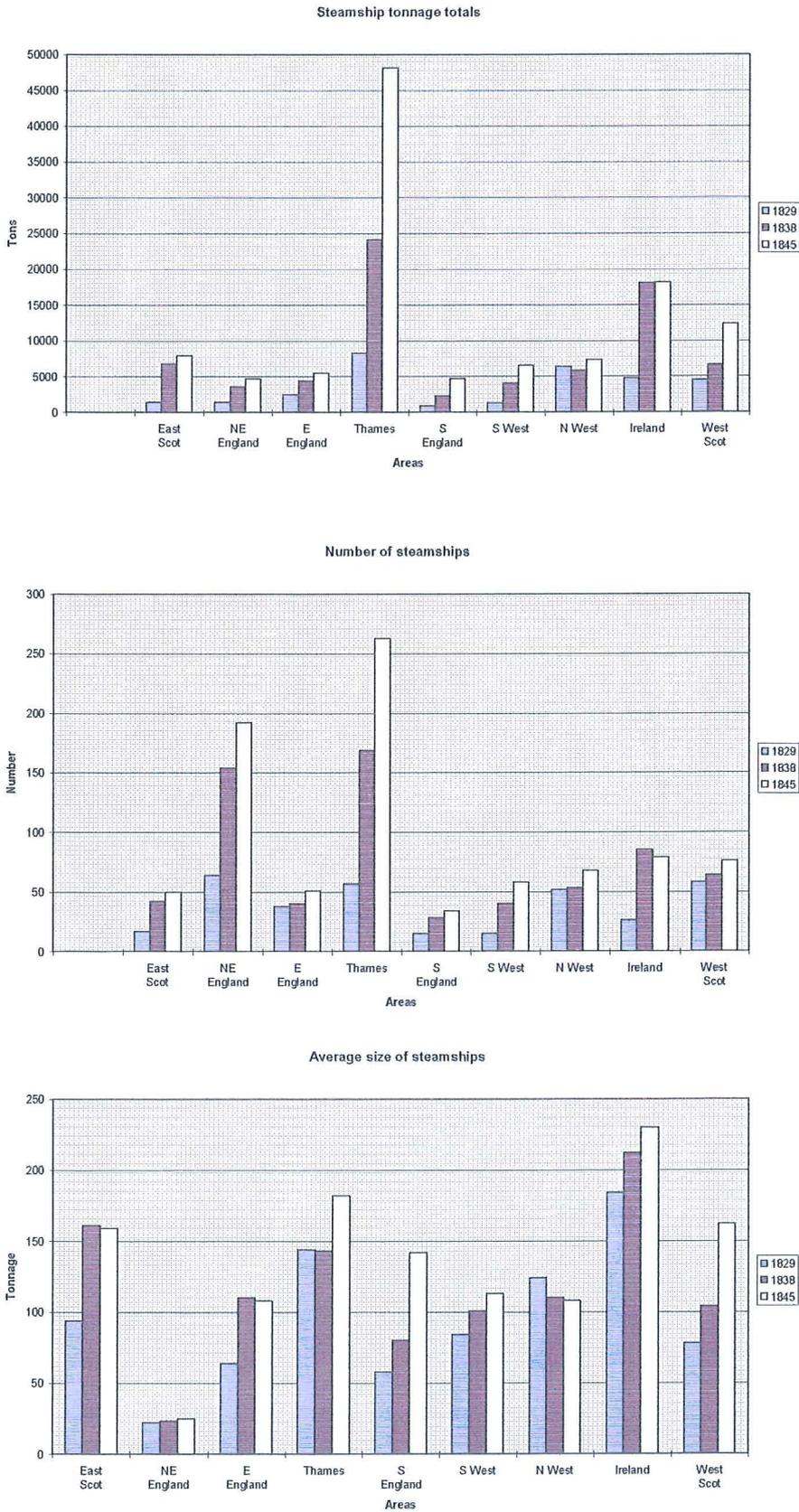


Figure 11. Progression in total tonnage, number of ships & size.



EFFECT OF EARLY RAILWAYS ON EAST OF SCOTLAND SHIPPING.

The effect on east of Scotland shipping of the development of railways was twofold. They were both competitors and customers. Regrettably, actual figures for the level of passenger and freight traffic are not easy to obtain for the first half of the nineteenth century. This is especially the case for steamship passengers. We must, accordingly rely to an extent on anecdote and interpretation. A basis for this lies in considering the reaction of the steamer owners in terms of altered services.

As competitors, the construction of lines parallel to the coast must inevitably have taken traffic away from the sea. Yet perhaps not as much traffic was lost to rail in the early days as might at first be supposed. It may be possible to argue that to some extent the railway generated new business rather than diverting that already existing. It may further be argued that the spur of competition was healthy in causing shipowners to rationalise operations.

As customers the railways must not be ignored. Not only was some construction traffic of short term benefit to certain shipping routes, but the very existence of the rail network brought new business. The overall increase in traffic which began to develop with the associated increase in economic activity can be regarded as having its own significance. Perhaps the most striking result was in the development of services specifically geared to the needs of the railway, in terms of ferry traffic across the Forth and the Tay. It is something of a paradox, that the first influence of the railways on the steamships of the east of Scotland was felt before there were any other than a few highly localised lines in Scotland. This influence was apparent in the selection of English termini for east coast routes, significantly Hull. Hull was in any event a desirable destination due to its proximity to the central and northern English manufacturing areas, and its good links with navigable rivers and the canal system.

When the rail link from Hull to London was completed in 1840 it became even more attractive as a destination for the Scottish passenger in a hurry to reach the south. From as early as 1842 through booking arrangements were made between the Hull and Leith Steam Packet Co. and the Manchester and Leeds Railway. They offered flat rate fares between Leith and Manchester, Leeds, Bradford, Huddersfield, Halifax, Rochdale or Wakefield. The fares were 25/- cabin and first class, 20/- cabin and third class, and 13/- steerage and third class¹. This would have been regarded as quite a daring form of arrangement a hundred and twenty five years later.

The Edinburgh Leith & Granton line reached Trinity in 1842, and Granton harbour only in 1846. The railway was at once interested in having direct control of the ferry portion of a journey to the north. In September 1846 the Edinburgh Perth & Dundee Railway company negotiated with the Duke of Buccleuch and Sir John Gladstone, and acquired the rights to operate a ferry from Granton to Burntisland. They also acquired from them the low water pier at Burntisland, a hotel and offices there, and the four vessels then being operated on the route. The total price was £90,000, plus seven and a half per cent of the gross revenue, to the Duke for the use of Granton. The company considered they had got a bargain, especially as the initial asking price had been £100,000². The deal was subsequently ratified in an Act of Parliament. A similar purchase had taken place in September 1845 in respect of the right of ferry between Broughty Ferry and Ferry Port on Craig (Tayport) in the Tay. In this case the purchase was from W. Stark Dougall, for £12,500. This transaction led to a court case against the proprietors of the ferry between Newport and Broughty Ferry over conflicts of interest at the northern end³.

The Edinburgh and Glasgow Railway was opened on Friday, 18 February, 1842⁴. This was to have more direct effect on canal traffic than on coastal

¹ *Scotsman*, Wednesday, 11 May, 1842.

² *Fifeshire Journal*, Tuesday, 10 September, 1850.

³ *Fifeshire Journal*, Tuesday, 10 September, 1850.

⁴ *Scotsman*, Saturday, 19 February, 1842.

shipping, but together with its associated lines to Stirling, would come to influence the long standing route along the navigable portion of the Forth. The arrival in Newcastle in 1844 of the rails from the south caused a brief upsurge in connecting traffic to that point, but by 1846 Edinburgh had been reached. On 18th June, 1846 the North British Railway was formally opened from Edinburgh as far as Berwick. Intending passengers for the south had then to cross the Tweed in an omnibus. It was not until 29th August, 1850 that the Royal Border Bridge was opened. By 1850 the Link was complete all the way to Aberdeen, albeit by a fairly roundabout route.

Competition grew for the London route by the opening, in early 1848, of the Caledonian Railway's link from Edinburgh to Carlisle. This enabled onward routing by the London & North Western, down the western side of the country, and through the midlands to London.

The most significant technical development in the ship directly attributable to the needs of the railway as a customer, was that of the train ferry. The Forth can boast that it was home to the first such sea going ferry in the world. The iron train ferries *Leviathan*⁵ and her smaller consort *Robert Napier*⁶, were built at Glasgow by Robert Napier, and operated from Granton to Burntisland, and Broughty Ferry to Ferryport-on-Craig (Tayport). They did not normally carry complete trains, but only goods wagons.

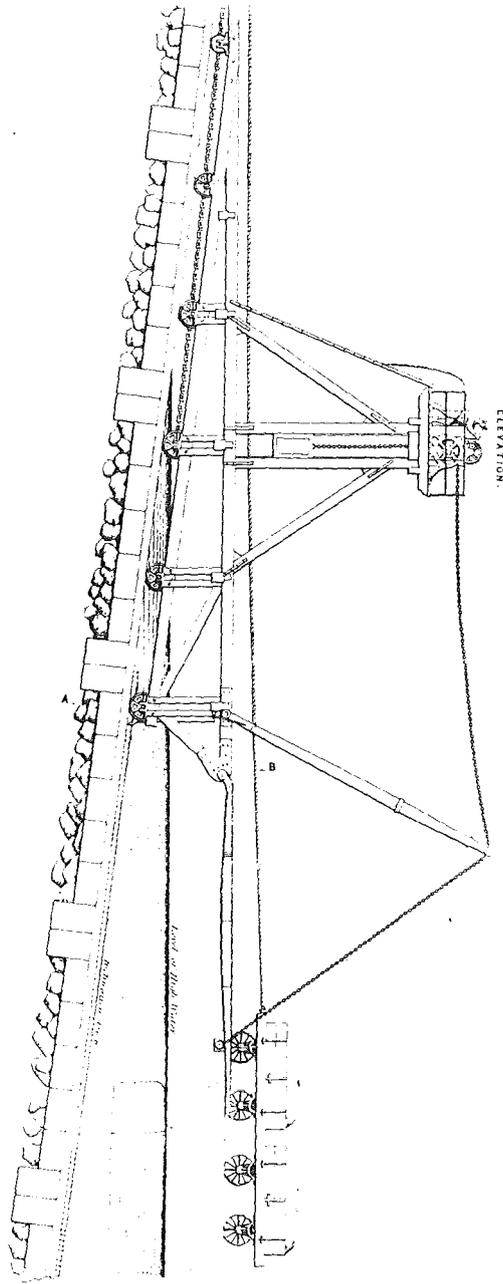
The wagons were loaded by means of a device, held in place by a goalpost shaped gallows, somewhat similar in appearance to the arrangements for a modern car ferry. The significant difference lay in the fact that this structure (Plate 20) was not a pontoon like its modern counterpart. Instead it relied on a cradle running on an inclined plane, and involved a stationary steam engine for haulage⁷.

⁵ PRO BT107/457 Leith 23 of 1850.

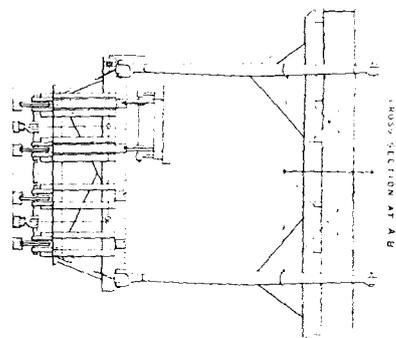
⁶ PRO BT107/457 Leith 24 of 1850.

⁷ Hall, W. 1861 On the floating railways across the Forth and Tay ferries; in connection with the Edinburgh, Perth and Dundee Railway. *Proceedings of the Institution of Civil Engineers*. XX: 376-384 & Plate 4A.

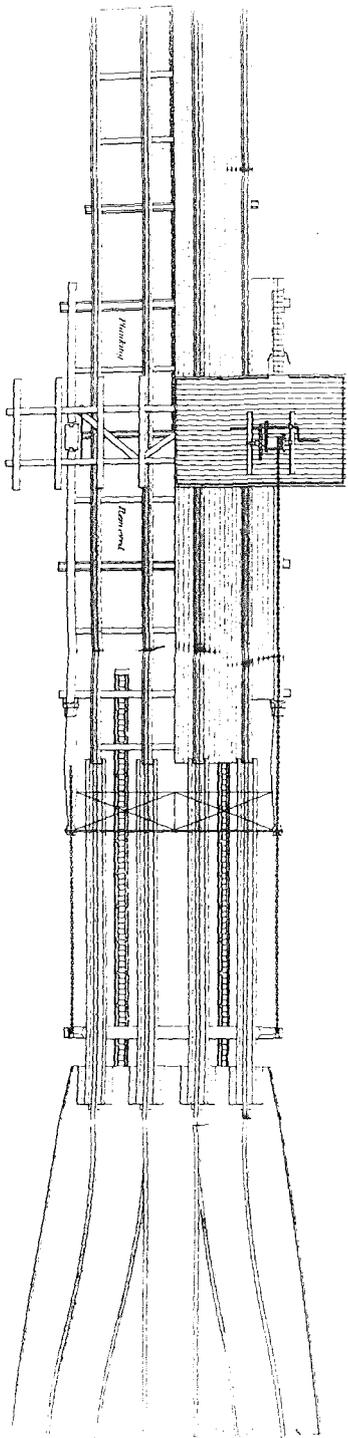
LOADING RAMP
AT THE FORTH AND TAY FERRIES.



ELEVATION.



CROSS SECTION AT A B



PLAN.

SCALE OF FEET

Minutes of Proceedings of the Institution of Civil Engineers, Vol. XX, London 1861, p. 4.

File Minutes of Proceedings of the Institution of Civil Engineers, Vol. XX, pp. 213-227.

PLATE 20

Loading ramp for train ferry

Hall, W. 1861 On the floating railways across the Forth and Tay ferries; in connection with the Edinburgh, Perth and Dundee Railway. *Proceedings of the Institution of Civil Engineers*. XX. Plate 4A.

Rail vehicles do not take kindly to steep gradients, and the tidal difference in this part of the Forth is around 16 feet, hence the need for such an arrangement. Various ideas involving hydraulic or steam cranes to lift the wagons were considered in the early stages. Thomas Grainger, the first engineer of the E.P&D.Railway, produced a design involving 100 foot girders, hinged at one end, with the other resting on a pontoon. This was eventually rejected as being overly vulnerable to severe weather. The man largely responsible for the design implemented, was the manager of the Edinburgh, Perth & Dundee Railway, a then up and coming, young railway engineer called Thomas Bouch. The detail design was left in the hands of William Hall, one of his assistant engineers.

The device resembles a patent slipway, on a gradient of 1 in 6. The wedge shaped travelling platform was 65 feet long by 21 feet wide, and ran on 24 wheels. A number of rail vehicles would be shunted onto the device, which would then be positioned to match the deck height of the ship being loaded.

While the structure at Burntisland was being tested on 26 January, 1850, a workman was fatally injured. He had been under the ramp making some adjustment, to the pawls associated with the steam powered wagon haulage gear, when another man released it, not realising his colleague was still in a danger area⁸.

The service began in February, 1850⁹ on a twice daily basis. A weekly cattle service was also instituted. Bouch's career was to suffer a spectacular eclipse in latter life, after the fall of the original Tay Bridge, which he designed.

The larger vessel, *Leviathan*, was 172 feet long (157.6 feet register) by 54 feet overall beam (32.9 feet register), and powered by a pair of steeple engines, which were independent, enabling her to turn in her own length¹⁰.

⁸ *Fifeshire Journal*, Thursday, 31 January, 1850

⁹ *Scotsman*, Wednesday, 6 February, 1850.

¹⁰ *Scotsman*, Wednesday, 2 May, 1849.

She could carry 30 to 34 wagons, which by the standards of the time, would imply a load of about 300 tons, including the tare weight of the wagons. Heavily laden wagons might have pushed this up to around 400 tons¹¹. She was registered as 301 tons. The wagons were carried on three sets of rails. As originally built she was a double ender with rudder at each end. In service this was found unsatisfactory as it was desired to provide buffers on deck to stop the wagons over running into the water. These were placed at what became the stern. She cost £16,226 to build and her operating costs were about £4,000 per year¹².

The new rail cattle service posed a potential threat to the steam ships all along the coast from Aberdeen to London. From the beginning of March 1850 a daily service was introduced from Aberdeen to London in 44 hours¹³, which no ship could yet match. For passengers it was still possible for the steamer to beat the train between Granton and Aberdeen, the times being six and seven and a half hours respectively¹⁴. The reason for this was, of course, that the rail passenger was obliged to make two ferry voyages as part of his train journey. This could be cut to one ferry when routed via Perth. One train per day did, however, take a mere four and a half hours.

In less dramatic fashion, the introduction of the Stirling and Dunfermline Railway, and similar lines, posed a threat to shipping along the firths. In attempt to combat such lines more ingenious advertising was developed. Within a few months of the opening of the Edinburgh and Glasgow rail route we see attempts to promote combined journeys. A trip by steamer from Granton to Stirling, connecting with a coach to either Castlecary for the

¹¹ Notes provided by British Railways to trainees (including the present writer) during the 1960s, on the history of rail transport, indicate that many rail wagons of broadly similar type (but somewhat greater capacity) to those in use at this period were still in use in the 1960s. The estimate of possible loading is based on the writer's experience in 1965-1970.

¹² Hall, W. 1861 On the floating railways across the Forth and Tay ferries. *Proceedings of the Institution of Civil Engineers*. XX.381.

¹³ *Scotsman*, Saturday, 2 March, 1850.

¹⁴ *Scotsman*, Wednesday, 3 July, 1850.

railway, or to the Union Canal, was suggested as “unquestionably the most interesting” way to travel¹⁵.

While, in the long run, the railways were to destroy much of the coastal passenger ship trade, this did not happen at once, and not, in fact, until after our period of study. The chief interest, with respect to railways, in the present study must be the innovation of the train ferry.

¹⁵ *Scotsman*, Saturday, 16 July, 1842.

**SHIPS MEASURED BY RIDDLE ALL SHAPED LIKE A FIDDLE:
THE EFFECTS OF LEGISLATION AND GOVERNMENTAL
CONTROLS.**

The epigram attributed to Charles Wood

“Ships measured by Riddle,
Turned into a fiddle
And improvements all fiddle-de-dee”¹

is a contemporary reference to the effect on the hull form of steam ships encouraged by the Tonnage Act of 1836.

This is but one area of British Government activity which may be said to have had the potential to make an effect on the development of the early steam ship.

We may divide these activities into various categories.

1. Encouragement by
 - (a) The award of mail contracts.
 - (b) Other Government use and contracts.
 - (c) Royal patronage.
2. Influence of excise provisions, notably the Tonnage Acts, on hull form - an influence not confined to steam.
3. Assistance and encouragement in the construction of suitable piers and other harbour works.
4. The Navigation Acts as an encouragement to British ships - a subject in itself.
5. Influence in encouraging, or discouraging, the export of new technology, thereby stimulating or hampering potential competitors.

¹ Russell, J.S. 1861 On the late Mr John Wood and Mr Charles Wood, naval architects of Port Glasgow. *Transactions of the Institution of Naval Architects* III: 146.

6. Safety matters, expressed by the holding of official enquiries, and the introduction of some regulation.

This included concern about:-

Boilers.

Speed (especially in confined channels).

Qualifications of officers.

Prevention of collisions.

Recognition at night by carrying lights.

Steering position.

Communication between deck and engine.

Boats and emergency gear

The most obvious source of encouragement for the steamship companies was the award of mail contracts, which were at least potentially lucrative. At a minimum they meant a steady source of income. Two factors tended to act against the companies in their quest. One was uncertainty by the Post Office regarding the reliability of a steam service, particularly in winter. The second, somewhat ironically, was the apparent intention of the Government to participate directly in the conveyance of mail by steamship. The importance of this factor in the general rise in the construction and use of steamships should not be under rated. The Admiralty supervised the construction of steam packets for the Post Office from 1821, and at times also took part in conveying the mails by steamer on some routes. They took over the Post Office vessels in 1837².

The nation-wide scale of the Post Office's direct involvement may be seen when we consider that in 1835 they listed³ 27 ships, not all still in service, which had been "...employed under the orders of the Post Office". These represented an initial capital investment of nearly £279,000 over thirteen years. The vessels

² Brown, D.K. 1990 *Before the ironclad*. 47.

³ House of Commons Accounts & Papers 1835 *Return of number of vessels propelled by steam employed under the orders of the Post Office*. XLVIII:554.

were distributed at Dover, Holyhead, Liverpool, Milford, Weymouth and Port Patrick.

Such a determination to participate directly was not seen on the east of Scotland, but did have an influence on the Irish Sea services and progressively on routes to the continent and further afield. The alternative system, which applied on the east coast of Scotland, was for ship owners to undertake the carriage of mail under contract to the Post Office⁴.

In the area with which we are chiefly concerned, the various companies appear to have been eager for mail carrying contracts in much the same way as they might look for any other business. Mail was a high value cargo, and in this period relatively low in volume. It was thus very suitable as freight in a steamship, where space was at a premium.

Apart from warships, which have been considered in detail by numerous writers⁵, the carriage of mail, and the use of government vessels for towing the navy, there were other publicly owned steam ships. The existence of these may, or may not, have encouraged others in the introduction of steamers.

In the context of the east of Scotland, perhaps the most interesting of the publicly owned vessels were those of the Commissioners of Northern Lights. The earliest of their steamers appears to have been the *Skerryvore* of 48 tons, built for them in 1839 by R. Menzies & Sons at Leith⁶. In 1846 they acquired a rather larger ship, the *Pharos* of 207 tons from W. Fairbairn & Son, Blackwall. In point of fact the larger vessel does not seem to have been an unqualified

⁴ For example *Aberdeen Journal*, Wednesday 24 January, 1838. Regarding carriage of mail by Aberdeen Steam Navigation Company between Aberdeen and London.

⁵ Most usefully, Brown, D.K. 1990 *Before the ironclad*.

Smith, E.C. 1937 *Short history of naval & marine engineering*. Cambridge.

⁶ House of Commons Accounts & Papers 1845 *Return of the name and description of all steam vessels registered in the ports of the United Kingdom*. XLVII:349. Also, unconfirmed, in PRO BT107 examined by F.W.Hawks.

success, although she averaged about 12,000 miles per year⁷. Because of lack of stowage space she often had to carry a deck load, and a complaint was minuted, in October 1852, from her master and mate that she was "...a great deal too tender..." when carrying buoys on deck⁸.

The Government was also involved from time to time in chartering steam vessels for a variety of purposes, notably the rapid movement of troops and stores⁹.

The beneficial effect of publicity involved in the Royal patronage of steam vessels should not be ignored. The voyages, to and from Scotland, of George IV and of Victoria have already been mentioned, in the chapters on the introduction of steam on the east of Scotland, and on its offshore development. Additionally there were instances involving other members of the family and indeed of foreign dignities. It is reasonable to assume that these all helped to make such voyages seem both safe and respectable.

The effect of excise controls on ship design is a complex question. The earliest concession¹⁰ came in 1819, when it was permitted to deduct the engine room from the total tonnage. This represented a potential saving in harbour dues for many ships, since these were normally related to register tonnage. It might, conversely be argued that the concession could, at least to some extent, encourage larger engine rooms, to the detriment of carrying capacity. In reality the commercial requirements of trade would probably outweigh such considerations. There is at least a suspicion, however, that builders and owners

⁷ House of Commons Accounts & Papers 1852-1853 *Commissioners for Northern Lights. Return etc regarding steam vessel Pharos. XCVIII:561.*

⁸ House of Commons Accounts & Papers 1852-1853 *Commissioners for Northern Lights. Return etc regarding steam vessel Pharos. XCVIII:563.*

⁹ The earliest such event in the United Kingdom (on the Clyde) appears to have been in 1815. See Bain, J.C. (present writer) 1994 Industrial unrest amongst seamen and an early military use of the steamship. *Mariner's Mirror* 80.2: 217-219.

Other early examples in:- Prebble, J. 1988 *The King's jaunt*. Regarding various vessels used in connection with visit to Leith by H.M. George IV.

Aberdeen Journal, 17 September, 1822. Regarding Government charter of *Brilliant*.

¹⁰ *Tonnage of steam vessels Act 1819. 59 George III. Cap.10.*

may have sought ways to secure the largest possible deduction in respect of the engine room, or to attempt to provide stowage space within.

The “ships measured by Riddle” to which we have already alluded, were those influenced by the 1835 Act¹¹, which was itself a product of the report of the previous year¹². The previous arrangements had certainly become unpopular, and the question of accurate measurement became a matter for press comment. This included criticism that it had taken some fourteen years to advance from the announced dissatisfaction with a method “...which comes as near in its results as would taking the diameters of the masts”¹³. It was further suggested that the existing system, led British ships to be excessively deep. This was expanded as “...built of the clumsiest and most unscientific shape, likewise causing top-heaviness, or crankness, which with bluff ends and wall sides, render our British merchantmen little better than boxes; hence arise the grievances complained of, and which yearly cause an immense loss of British lives and property”¹⁴.

Numerous persons came forward with suggested alternative formulae, for the calculation of a ship’s tonnage, and that drawn up in 1833 by Edward Riddle at Greenwich Hospital, was the basis for that eventually adopted.

It may be worthwhile to quote his original proposal (in the 1834 report) at length, as an illustration of how convoluted a matter this had become:-

“Divide length of the upper deck into six equal parts.

Take depth at the fore, midship and aft points of division from under part of the deck to a point on the ceiling at the inner edge of the limber strake, and take the length at half the midship depth from aft part of the stem to the fore part of the stern post.

¹¹ *Admeasurement of the tonnage and burthen of the merchant shipping of the United Kingdom Act 1835. 5 & 6 William IV. Cap. 56.*

¹² *House of Commons Accounts & Papers 1834 Report on the measurement of the tonnage of ships. XLIX:623.*

¹³ *Scotsman, Saturday, 27 June, 1835.*

¹⁴ *Scotsman, Saturday, 27 June, 1835.*

Divide each depth into five equal parts and take inside breadth under the deck at $\frac{2}{5}$ and $\frac{4}{5}$ reckoned from the deck.

Then take the sum of the depth at fore and aft sections and twice that at midship section.

Again take sum of upper, lower and twice middle breadths at the fore and aft sections and twice the upper and lower and four times the middle breadth at the midship section.

Multiply the product of these two sums by the length, all in feet, divide the result by 79 and the quotient will be the internal capacity in feet³.

The version in the Act¹⁵ is even less easy to comprehend.

“Divide the length of the upper deck between the after part of the stem and the fore part of the sternpost into six equal parts. At the foremost the middle and the aftermost of those points of division, measure in feet and decimal parts of a foot, the depths from the underside of the upper deck to the ceiling at the limber strake. Divide the sum of those three depths into five equal parts, and measure the breadths at the following points;- at one fifth and four fifths from the upper deck of the foremost and aftermost depths and at two fifths and four fifths from the upper deck of the midship depth. At half the midship depth measure length of the vessel from the afterpart of the stem to the fore part of the sternpost, then to twice the midship depth add the foremost and the aftermost depths for the sum of the depths; add together the upper and lower breadths of the foremost division, three times the upper breadth and the lower breadth at the midships division and the upper and twice the lower breadth at the after division. Take the sum of the breadths; then multiply the sum of the depths by the sum of the breadths and this product by the length and the final product by three thousand five hundred, which will give the number of tons for register.”

The overall effect appears to be that a disproportionate potential advantage, in reduction of registered tonnage, could be gained if the midship section of the

¹⁵ *Admeasurement of the tonnage and burthen of the merchant shipping of the United Kingdom Act, 5 & 6 William IV Cap.56.*

vessel was as narrow as possible. This gave rise to a number of builders producing vessels with a narrow waisted, violin like, plan. One would suppose that there would be considerable technical objections to such a design. The hull must inevitably have been less than ideally strong, complicated to construct and possessed of excessive drag. The question of obtaining an efficient water flow from the paddles would also seem to be in doubt.

The scathing reference mentioned at the head of this chapter, seems to suggest that at least a proportion of shipbuilders did not care for the idea. Despite these objections a number of such ships were built. An example, the *Seahorse*, appears in Plate 21¹⁶.

Seahorse, must have been at least a moderately successful ship. Having been built at Dundee in 1837 for the, Dublin based, St George Steam Packet Co., and operated between Leith, Hull and Rotterdam, she was sold to Australia, where she lasted at least until she was thirty years old¹⁷.

In the absence of suitable data, it is impossible to form a judgement on the number of vessels which adopted such an extreme form.

An alternative explanation for the “fiddle shape” of at least one ship with a similar configuration has been offered. It has been suggested¹⁸ that the, Swedish built, *Eric Nordewall*, was given recessed paddle wheels in order to pass more easily through the Gota Canal in Sweden. The existence of the practice in Britain may suggest an alternative hypothesis.

Given the fact that the vessel was constructed in just this period, and allegedly influenced by Scottish practice, it may be that this legislation could even

¹⁶ Anon. *Conversations lexicon*, 396-397, (Plate 21 derived from plate facing page 369). Glasgow.

¹⁷ Greenwood, R. & Hawks, F. 1995 *The Saint George Steam Packet Company 1821 - 1843*, 20. Kendal.

¹⁸ Cederlund, C.O. 1987 *The Eric Nordewall - an early Swedish paddle steamer*. *International Journal of Nautical Archaeology* 16.2:111.

indirectly have had influence on a design for foreign use. Perhaps even more probable, is that the Swedes became aware of the possibility of constructing a vessel in this manner, and adapted the idea to overcome a particular difficulty in their own specifications.

The overall benefit of the Act to ship owners, in terms of a reduction in calculated tonnage, was assessed¹⁹ in 1842, that is after seven years. A comparison of the tonnage for the vessels registered in that seven year period, calculated in accordance with the previous rule and the new one, is instructive:

New built

Steamers 362 46,343 tons (new system) = 53,772 ton (old system).

Other 4,929 723,182 tons (new system) = 732,912 tons (old)

Existing ships(including steam), re-registered

8,437 617,041 tons (new system) = 729,255 tons (old).

For the newly constructed vessels this represents an average reduction of over 20 tons for steamers, or about 13.8% of the tonnage as calculated by the previous method. This compares dramatically with an average of less than 2 tons, or about 1.3% for sailing ships. Plainly the steamship owners had been able to reap the most advantage from the Act. Curiously the greatest benefit was drawn by those re-registering, where the average reduction was over 13 tons, or nearly 15.4%. These figures may help to explain why so many vessels were re-registered in 1836. For example, the Dundee Perth & London Shipping Company re-registered a fleet of twenty sailing vessels and a lighter²⁰.

This method of calculating tonnage was plainly not the complete answer which had been sought. In due course it was replaced in an Act of 1845. The whole question of the calculation of tonnage, and the variety of methods employed at

¹⁹ House of Commons Accounts & Papers 1842 *Return of vessels re-measured since passing of Act for new measurement of shipping*. XXXIX:615.

²⁰ PRO BT107/428 Dundee 1836.

different times and in other countries was discussed at length in a series of articles²¹ some twenty years ago.

The improvement of harbour works was, in general, regarded as a matter for individual localities, or on occasion, shipowners. It did, however, at times involve the passage of enabling legislation in the form of Local or Private Acts of Parliament. These were required at times to enable compulsory purchase of land to construct the works, and were also seen as necessary to authorise matters such as the imposition of regulation on the number of vessels operating a ferry. They might also authorise ferry fare levels in a manner similar to the imposition of road tolls. This level of official involvement might seem surprising, but appears to stem from the ancient legal view of ferries as a public necessity.

At least as far as the east of Scotland was concerned, there seems to have been no great obstruction placed by Government in the way of improvements likely to benefit steamers.

The influence of the Navigation Acts on British shipping in general was of long standing, and has often been discussed in print²². This series of laws began, long before the Union of the Crowns or Parliaments, with the English in 1381 and 1390. Over the years they were amended and expanded. In the period under discussion they were still in force, and effectively prevented foreign vessels, sail or steam, from engaging in trade between British ports. The extent to which this prevented foreign steamship owners from doing something they had any actual wish to do, is impossible to judge.

Foreign vessels were permitted to trade directly from their own country to Britain. The only foreign steam vessel which appears to have begun trading to

²¹ Salisbury, W. Early tonnage measurement in England, etc. *Mariner's Mirror* LII.41, 173, 329. LIII.251. LIV.69-76.

See also MacGregor, D. 1988 *Fast sailing ships*.

²² Most usefully in Lindsay, W.S. 1876 *History of merchant shipping and ancient commerce*. III.

the east of Scotland in the period under consideration was the *Juno*. Ironically she had been built in Aberdeen, and began to operate right at the end of our period, in 1851, between Aberdeen and her home port of Aalborg, Denmark on behalf of the Aalborg Steam Navigation Co²³.

We may speculate that in practice it was unlikely that many foreign organisations had the expertise needed to have made any significant inroad into British steamship business in this period. In addition, for much of the era in question, there would have been serious problems regarding the practicality of delivery voyages, from say, the United States. The best evidence available with regard to the actual origins of the world's steamships in this period probably comes from two British Government surveys, mentioned below. It appears from these, that, of those countries with any significant involvement in steamship construction, Britain, France, the Netherlands, Sweden and the United States could be considered self sufficient. Only Britain had conducted any considerable number of exports.

The question of the extent to which the British Government was anxious to either encourage, or restrict, the export, or indeed import, of steamship technology in this period is difficult to assess properly. There is little obvious evidence of any specific policy. This was the era of the campaign for the abolition of the corn laws and striving towards ideals of free trade, which may be said to have been broadly British government policy after 1846.

There does not appear to have been any restriction placed on export at any stage. Steamships were indeed exported from Britain almost from the first British involvement. We may infer that, insofar as anyone in government gave the matter any thought, they favoured any boost to trade. While we have no evidence of any attempt to limit purchase of ships from abroad, neither do we have any of a British owned steamer of the period being built outwith the British Empire. This may have been as much a feature of the ability of other nation's

²³ *Lloyds Register of Shipping* 1851.

shipyards to produce anything likely to undersell a British product as anything else.

The British Government was interested in the ability of other nations to produce and man steamships, but the interest appears to have had at least as much strategic as commercial implication. As we have already noticed, two comprehensive attempts were made by them to assess the nature of the world's steamers during this period.

The first of these is possibly more concerned than its successor with commercial matters²⁴. Judging by the choice of questions asked, the objective seems to have been, at least to some extent, to have available information that might assist arrangements for British travellers or exports to the various countries, and to form an assessment of the competence of those operating foreign steamships. A question was, however, posed to those compiling the information, regarding the ability of the ships to carry guns.

The second study²⁵ seems more openly concerned with strategic considerations, and the information on the potential of the various ships for the carriage of armament is more complete. Information regarding potential for armament, was also tabulated, at the same time, in the United Kingdom for British owned steam vessels²⁶.

²⁴ House of Commons, Accounts & Papers 1837/1838 *Copies of such information as may be in possession of HM Secretary of State for Foreign Affairs, relative to the number and description of steam-vessels in those ports and countries in Her Majesty may have Consuls, Ministers or Agents.* XLV.353-437.

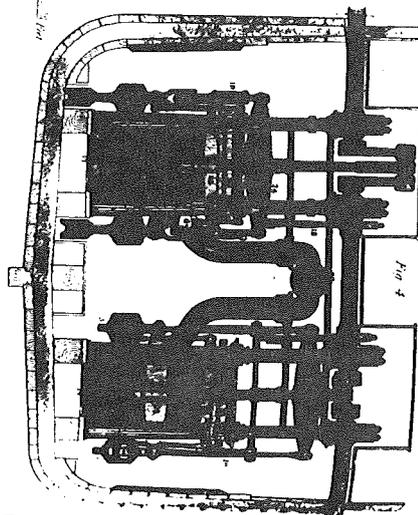
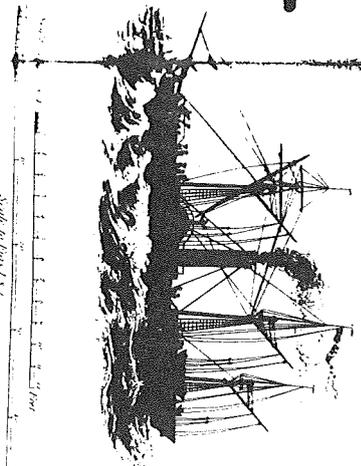
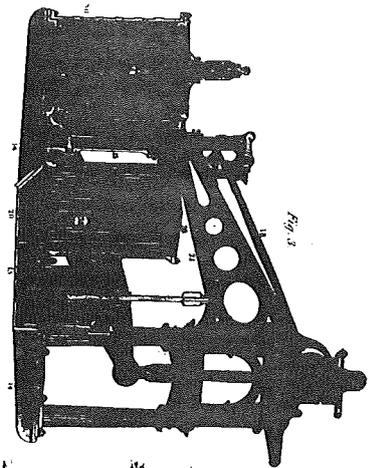
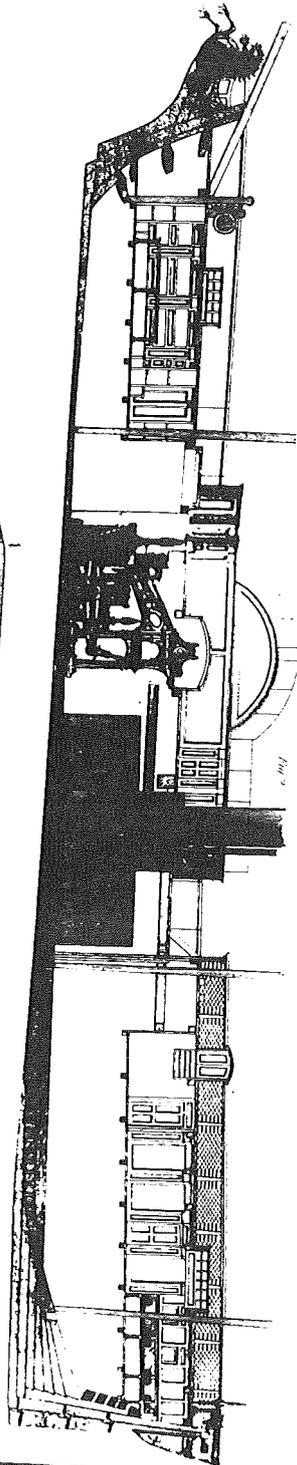
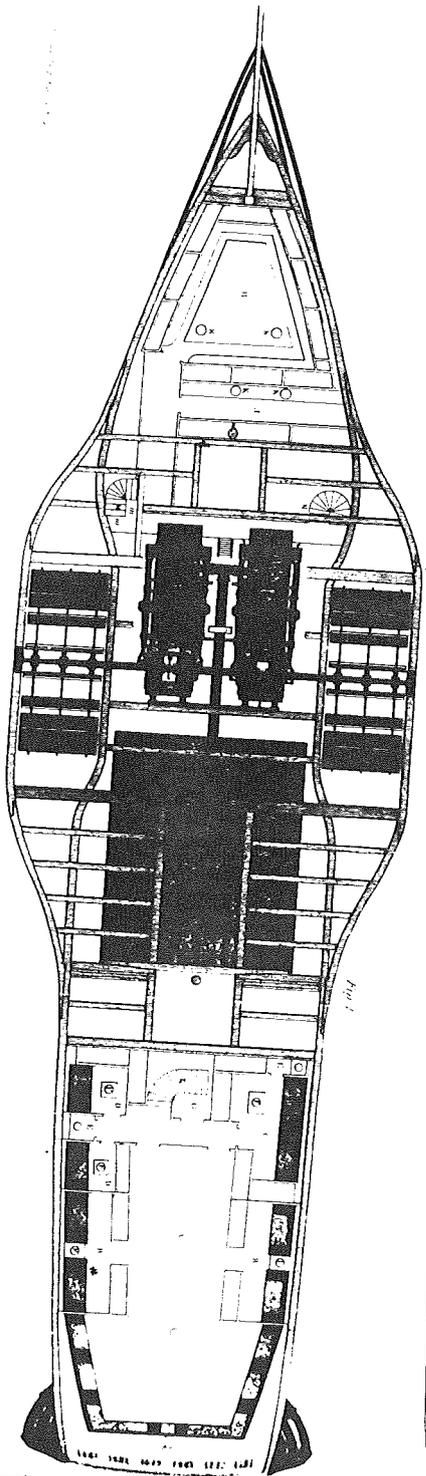
²⁵ House of Commons, Accounts & Papers 1845 *Return of the number and quality of steam vessels in foreign ports in which Her Majesty may have Consuls or Agents.* XLVII.519-537 & 676-679. See also, for a discussion of the report and its implications; Bain, J.C (present writer) 1995 *An 1845 assessment of the world's steamships.* *Mariner's Mirror* 81.3:338-343.

²⁶ House of Commons, Accounts & Papers 1845 *Return of the name & description of all steam vessels registered in the ports of the United Kingdom; showing where and when built, tons, horse power, length, breadth, draught of water, and what armament capable of carrying.* XLVII.545-559.

PLATE 21

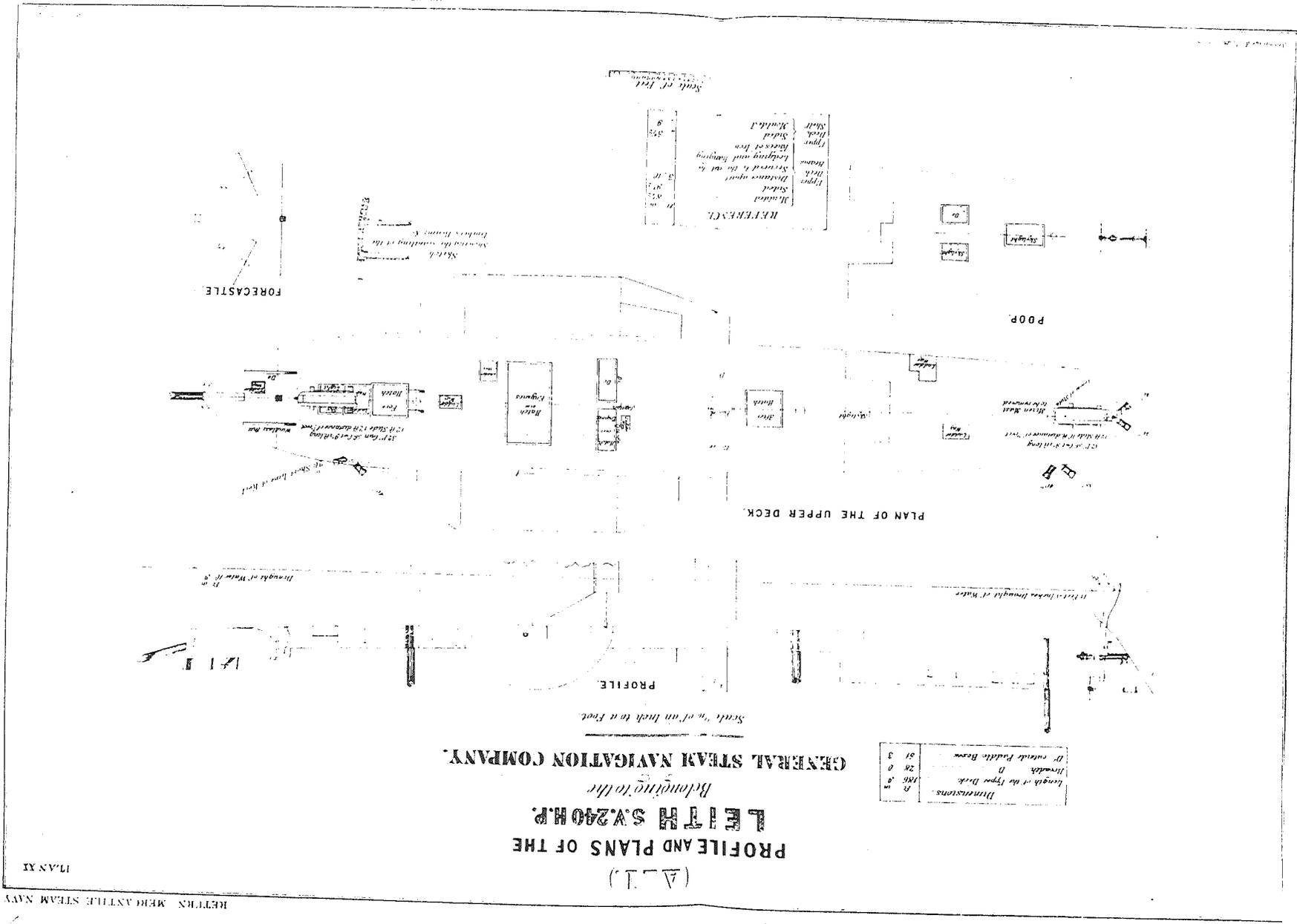
General arrangement for *Seahorse*

Anon. 1841 *Conversations lexicon*, facing 369. Glasgow.



SECTION OF THE SEA HORSE STEAM SHIP, CONSTRUCTED BY T. ROBERTSON & BROS. OF GLASGOW, AS SHOWN IN THE ORIGINAL PUBLICATION.

PLATE 22
Location of proposed armament for paddle steamer Leith
 House of Commons, Accounts & Papers 1852/53 Report on the capabilities
 of the mercantile navy for war, LXI.506-509.



Dimensions

Length of the Upper Deck	116	ft
Breadth	28	ft
Depth of the Paddle Boxes	51	ft

REFERENCE

Material	Quantity
Iron	100
Steel	100
Wood	100
Canvas	100
Paint	100
Other	100

PROFILE AND PLANS OF THE
LEITH S. 240 H.P.
Belonging to the
GENERAL STEAM NAVIGATION COMPANY.

Printed by the House of Commons to be printed 297 June 1853

At the close of the period of our present interest a detailed report was compiled regarding the suitability of British ships²⁷. This went so far as to produce a number of detail drawings indicating where guns were to be mounted in specific ships. Lists of the stores required were also compiled and all in all it appears to have been a serious exercise in contingency planning. Plate 22 gives an example of one of the diagrams prepared at the time.

Although various measures were proposed and discussed, little direct action was taken by the British Government to control the day to day conduct of the shipping industry before the 1840s. Comparison may be made with the Government's attitude to intervention in other aspects of transportation.

The construction and maintenance of roads had been a perpetual headache for legislators in Britain. At the start of our period of interest it was largely a matter of minimal attention to repairs by means of a form of parish based compulsion on local inhabitants. New construction on trunk routes was encouraged by a series of Turnpike Acts which allowed the formation of groups of trustees, who would then construct the road, and pay for it by thereafter having the legal right to exact tolls for its use.

Canals were established in a way which bore certain similarities to the turnpike system, but were essentially the concern of private companies rather than trustees. Government, in the shape of the Forfeited Estates Commission, was behind the earliest proposals for the Caledonian Canal. This may be considered exceptional however, and in general they were concerned merely to permit such undertakings and regularise such matters as obtaining the required land and authorising the raising of tolls.

Safety was regarded as a matter for the owners of the vehicle or boat.

²⁷ House of Commons, Accounts & Papers 1852/1853 *Report on capabilities of the Mercantile Navy for purposes of war*. LXI.418.

The early railways were at first regarded in a similar way to canals. Construction was authorised by private Acts of Parliament. Some of these made a passing reference to the manner in which the line was to be operated. Most energy was devoted to agreement about the need for competing routes, and compensation to landowners.

When it was realised that the most effective system was for the track owners to also operate the trains, some consideration was given to specifying maximum charges, for the protection of the public from possible monopoly. Gradually it became more common to specify minimum standards for construction and operation.

Direct involvement in railway safety matters began in 1840, with formation of the Railway Department of the Board of Trade. Two years later its powers were widened and inspectors were appointed, who were to report on new lines before they were to open. They were also to receive notice of accidents, and report on them, if necessary by the holding of enquiries. The Inspectors were also to give approval for bye-laws.

In 1844 the "Gladstone Act" compelled railway companies to operate at least one train each day in each direction, stopping at all stations, at a minimum average speed of 12mph including stops. Carriages were to be protected from the weather, and fares for these "Parliamentary Trains" were not to exceed 1d per mile. The next year further measures were introduced, requiring standardisation in new construction of lines.

The position with regard to sea transport was, if anything, rather less restrictive. A number of official enquiries, usually in the form of Select Committees of the House of Commons, were held into various aspects of safety, and specific problems of service provision.

Examples of these may be seen in the prevention of boiler explosions²⁸, or the examination of the state of the ferries in the Forth²⁹. British politicians of the first half of the nineteenth century had not yet made up their minds about the proper role of government in relation to interference in commercial matters. They do seem to have had a definite intention to at least make themselves aware of public concerns on safety issues, and to examine, and possibly encourage solutions. On the whole they were not quite as ready to enter into the realm of enforcement.

The first attempt by the British Government to regulate the safety of steamships came in 1817, with the introduction of a Bill³⁰ following on the work of the Select Committee of that year, which had examined the safety of steam boats. This would have required all steamers to be registered. Boilers were to be entirely of wrought iron or copper, and provided with two safety valves, one of which was to be inaccessible to the engine crew and the other accessible to everyone in the vessel. The vessel and boiler were to be inspected annually by an engineer appointed by the Admiralty. This measure never completed all the stages to become law.

It was not until 1847 that legislation³¹ came into effect in Britain specifying the carrying of lights on steamships at night. They were also obliged, for the first time, on meeting head on, to pass each other port side to port side. The same law required all new iron steamers to have fire fighting equipment, and watertight bulkheads between the engine room and the rest of the vessel.

Inspectors could be appointed under the Act to make enquiry into the cause of accidents to steamships.

²⁸ House of Commons 1817 *Report of Select Committee on safety of steam boats*.

²⁹ House of Commons Accounts & Papers 1813-1814 *Report of Select Committee on improvement of Queensferry*. III:119.

³⁰ House of Commons Accounts & Papers 1817 *Bill for securing the safety of passengers in vessels worked by means of steam*. II: 345.

³¹ *Act for the regulation of steam navigation and for requiring sea going vessels to carry boats*. 1846. 9 & 10 Victoria. Cap. 100.

All ships, sail or steam, of over 100 tons now had to carry specified numbers and size of boats. Previously such regulations had only applied to certain emigrant ships.

Even the passage of the Act did not fully resolve some of these matters. For example, the carrying of adequate boats was still a problem in 1912 when the *Titanic* was sunk.

While the desirability of the principles enshrined in the law was perhaps accepted, the process of enforcement had some way to travel before it could be considered fully effective. It was noted³² in 1851 that standardisation of lights was not yet effective. The Act had required compliance by 21 July 1848, but was being widely ignored. The Irish Sea mail steamers, together with those of the British & North American, Royal Mail, General Steam Navigation, Glasgow & Liverpool Steam Packet, Chester & Holyhead and Peninsular & Orient companies had complied, but it appears that elsewhere obedience was far from universal. Even the Government was not setting a very good example, and the best the Admiralty could offer was that "...they had now directed all H.M. Steamers to be fitted by March next".

A good deal of controversy had been involved in formulating such rules. In the absence of legislation there were even attempts at local levels to regulate matters. As early as 1824 local regulations³³ had been suggested in the constricted waterway of the Tay.

The Perth Steam Packet Company and their rivals the Tay Steam Packet Company put forward ten rules for steamboats in the Tay. The proposals were for the creation of By Laws to govern the navigation of the river, and were examined by a judge.

³² House of Commons Accounts & Papers 1851 *Report on systematic supervision of steamers* LII:292.

³³ Archives, A.K. Bell Library, Perth B59/22/32. Minute Book, Perth Steam Packet Company, 21 June, 1824.

They contain some interesting concepts. For example Rule 2 required the vessel being overtaken to keep out of the way of the overtaking vessel - the exact opposite of the modern Collision Regulations³⁴. Rule 3 also required vessels meeting head on, to “Keep to the Larboard”, that is pass starboard to starboard. This is also contrary to later practice.

Conflicting opinion raged for a long time about the appropriate type of lights to be carried on steamships. As late as 1843 Captain Denham, RN, described³⁵ steamers in the Liverpool area as sometimes carrying three lights, distributed one at the foremasthead and one on each paddle box. Of these, only the one on the starboard side was coloured, and what colour appears to have been a matter of taste. Other vessels apparently had lights on the quarters, and some a light on the end of the bowsprit. This witness advocated standardisation on three plain lights, screened so as not to be visible abaft the beam.

At the same period at least one vessel, *Pegasus*, was carrying a white light in the bow and a tri-colour, rather like the masthead light of some modern yachts, on the funnel. This second light showed red to starboard, green to port and white ahead, again in direct contrast to the eventual standard³⁶. It is implied that this configuration was standard for vessels plying between Leith and Hull at this time³⁷.

From time to time, rather less obvious areas of the law impinged on the activities of the companies. Of these, one that could at times have serious consequences, was the legislation relating to smuggling.

The Chief Engineer of the Hull & Leith Steam Packet Company's *Mercator*, was tried before the justices at Leith on 5th November,

³⁴ *International regulations for preventing collisions at sea*. 1972. Rule 13.

³⁵ House of Commons Accounts & Papers 1843 *Select Committee on cause of shipwrecks*. Evidence of Captain Henry Denham, RN. IX: para. 1458.

³⁶ House of Commons Accounts & Papers 1843 *Select Committee on causes of shipwrecks* IX: para. 6722. Evidence of William Brown, mate of *Pegasus*.

³⁷ House of Commons Accounts & Papers 1843 *Select Committee on causes of shipwrecks* IX: para. 6726. Evidence of William Brown.

1850, for smuggling fifty-eight and a half pounds of tobacco³⁸. The goods had been concealed under a plate in the engine room, and found during a Custom's search, after the vessel arrived from its regular trip to Hamburg on 25th September. The grounds for the charge were essentially that the Chief was in charge of the engine room, and if not personally concerned in the concealment, should have either been aware, or taken steps to discover what was taking place. Various character witnesses appeared in his favour. It was stated that he was in the habit of searching the ship himself to deter such acts, and that a coal-trimmer was suspected by the company. The Chief was convicted and fined £100, with the alternative of prison.

While the utility and effectiveness of the various forms of intervention may be debated, they certainly did not lack variety. Furthermore it is clear, as we have seen, that at least one group of shipowners on the east of Scotland (in the Tay) had their own ideas about the need for regulation and set about organising a system. The extent to which government intervention in the steamship business generally led or followed the influence of other areas of technology is open to debate. That it was broadly in line with attitudes regarding railways and mining seems clear.

³⁸ *Scotsman*, Wednesday, 9 November, 1850.

STEAMSHIP STRUCTURES AND THE ROLE OF ARCHAEOLOGY

None of the steamships engaged in trade on the East coast of Scotland before 1850 have survived afloat. Very few from other trades are still above water, and of those that are, the most complete are probably *Great Britain* at Bristol, England, *Dolly* at Windermere, England and *Rigi* at Luzern, Switzerland. None of these vessels can be regarded as very typical of the early period, and in particular none is a sea-going paddle steamer.

In the period under consideration merchant shipyards did not commonly use working drawings, but rather, half models. It also appears that some of those in the marine engineering field, who did use drawings, may have done their best to conceal techniques from possible trade rivals, and did not publish.

Documentation of the ships under present consideration is correspondingly sparse. We are fortunate to have available for study:-

1. Description and full set of lines and general arrangement drawings¹ for *Brilliant* of 1821.
2. Lines plan² for *James Watt* of 1821.
3. Description and general arrangement drawings³ for *Sea Horse* of 1837.
4. Small scale partial lines plans⁴ for *City of Edinburgh* and *James Watt* of 1821.
5. Small scale general arrangement drawings⁵ for *United Kingdom* of 1826.
6. Plan of accommodation⁶ for *Forfarshire* of 1836.
7. Profiles and plans of main decks⁷, for *Leith* of 1837 and *Trident* of 1841.

¹ Hederwick, P. 1830 *A treatise on marine architecture*, 379-383 and plate XXIX. Leith.

² Russell, J.S. 1861 On the late Mr John Wood & Mr Charles Wood, naval architects of Port Glasgow. *Transactions of the Institution of Naval Architects*, II

³ Anon. 1841 *Conversations lexicon*, 396-397 and plate facing 369. Glasgow.

⁴ Fincham, J. 1851 reprinted 1979 *A history of naval architecture*, plate 36.

⁵ Napier, D.D. 1912 *David Napier, engineer 1790-1869*, 32-33. Glasgow. (Reprinted from *Herbert's Encyclopedia*).

⁶ Grace Darling Museum, Bamburgh, Northumberland.

⁷ House of Commons, Accounts & Papers 1852/53 *Report on the capabilities of the mercantile navy for war*, LXI:506-509.

8. General arrangement and sections for *Union* of 1821 and general arrangement probably of *George IV* of 1823.⁸

By chance, it appears that the east of Scotland trades are exceptionally well served, for these few ships were taken as examples by early writers, and there do not appear to be very many more detailed plans available for ships of this period engaged in other trades. For convenience, the plan of *Brilliant* referred to, has been reproduced as Plate 23. The plan of *Seahorse* has been reproduced as Plate 21, that of *Leith* as Plate 22, and *Union* as Plates 17, 18 & 19.

Apart from the handful of plans mentioned, we must rely almost exclusively on descriptions or basic dimensions, and an assortment of paintings and engravings, of variable technical credibility. One of the better paintings, of *Forfarshire*⁹ is reproduced as Plate 24.

We must therefore consider whether the underwater archaeologist can assist us to learn more about steamships of the period. It must be said that the early steamship appears, to date, to have attracted relatively little attention by the archaeological community. The only real exceptions to this have been *Columbus* in the United States¹⁰, *Eric Nordewall* in a lake in Sweden¹¹, *Lady Landsdowne* in Ireland¹² and *Xantho* in Western Australia.

⁸ MacManus Gallery, Dundee

⁹ Oil on canvas by John Ward, Ferens Gallery, Hull

¹⁰ Irion, J.B & Anderson, R.K. 1995 Archaeological investigations of the steamboat *Columbus* (18ST625) in Chesapeake Bay, Maryland: its history, architecture and crosshead steam engine. *Underwater Archaeology Proceedings from the Society for Historical Archaeology Conference*. 119-124. Washington D.C.

¹¹ Cederlund, C.O. 1987 The *Eric Nordewall* - an early Swedish paddle steamer. *International Journal of Nautical Archaeology*. 16,2: 109-133.

¹² Stammers, M.K. 1992 The *Mary* and the *Lady Landsdowne*, in L.R. Fischer (ed.) *Research in maritime history No. 2. From wheelhouse to counting house*, 267-271. (quoting Davies, P. 1971 An expedition to identify and survey the wreck of the paddle steamer *Lady Lansdowne*. *Transactions of the Liverpool Nautical Research Society*. 22-26. Liverpool.)

To the credit of Australia, a number of other early wrecks have been the subject of varying degrees of examination¹³. Some ships of the, somewhat later, period of the American Civil War, have also been investigated, mostly in the United States.

It may be thought that our area of interest has again been fortunate, in that *Xantho*, which has been examined in considerable detail¹⁴, began her career in 1848 in the service of the Anstruther & Leith Steam Shipping Company¹⁵. For the purposes of the present study, however, this is not as useful as it might be, because this iron steamer was so heavily modified during her lifetime, being converted from paddle to screw, as well as lengthened. It may then be an appropriate time to indicate what topics, and what vessels involved in the east of Scotland trades, might be worthy of their consideration, from the historical point of view. Archaeology might assist in shedding light on particular gaps in our knowledge with regard to:-

1. Boiler construction.
2. Structure of paddleboxes, and presence and structure of sponsons.
3. Evidence of existence of bridge

¹³ McCarthy, M. (ed.) 1988 *Iron ships & steam shipwrecks. Papers from the first Australian seminar on the management of iron vessels & steam shipwrecks*. Perth, W.A.

¹⁴ McCarthy, M. 1986 The excavation and raising of the SS *Xantho* engine and Australia's first practical and theoretical seminar on iron and steam ship archaeology. *International Journal of Nautical Archaeology* **15.2**:173-176.

Carpenter, J. 1987 The use of soil stabilising gel media in the conservation of large and small shipwreck artifacts. *IJNA* **16.2**:95-107.

McCarthy, M. 1988 SS *Xantho*: The pre-disturbance, assessment, excavation and management of an iron steam shipwreck off the coast of Western Australia. *IJNA* **17.4**:339-348.

¹⁵ PRO BT107/453 Leith 4 of 1848.

4. Evidence of means of communication between officer of the watch and engine room, bearing in mind that the repeating telegraph belongs to a later era.
5. Any general differences in ship construction between steam and sail in this period.

We must now consider to what extent archaeology represents a likely possibility with respect to the vessels of interest. A great many of the ships are known to have been scrapped at the end of their working lives. Others suffered conversion to sail, to hulks and the like, reducing their historical interest, or had unrecorded ultimate fates. Some were lost in deep water or in very uncertain locations.

This leaves a small number of pre 1850 steam vessels which operated for some part of their lives on the east coast of Scotland, and which either have wreck locations known to sports divers, or for which there may be some reasonable hopes of location:-

Brilliant of 1821, wrecked North Pier, Aberdeen 12/12/1839. Problems - may have burned, site subject to dredging.

Comet of 1812, wrecked Craignish Point, Argyll, Grid Reference NM7598 on 15/12/1820. Problems - partial salvage.

Countess of 1830s, sank Alloa July 1852. Problems - uncertain site.

Duke of Richmond of 1838, stranded on beach, Blackdog north of Aberdeen 7/10/1859. Problems - partial salvage/looting.

Duke of Sutherland of 1847. Iron. Wrecked Aberdeen pierhead 1/4/1853. problems - site subject to dredging.

Forfarshire of 1836, wrecked in Piper Gut, north side Big Harcar Rock, Farne Islands 7/9/1838. Problems - strong tides, popular sports diver site, some salvage.

Hamburg of 1849, wrecked Scotston Head, near St Fergus, 12/10/1862.

Problems - uncertain site, but a reef runs half mile offshore just south of gas terminal.

Maid of Islay of 1815, wrecked on rocks St David's Bay, Fife 3/11/1835.

Problems - uncertain site, bad visibility in area.

Mars, screw steamer of 1848, sank in four and a half fathoms, off

Anstruther, Fife on 2nd May, 1851¹⁶. Problem - uncertain site, salvage attempt.

Pegasus of 1835, wrecked Goldstone between Berwick and Farne on 28/7/1843, sports diver site.

Queen of 1845. Iron. Wrecked on Carr Brigs, Fife 19/4/1857.

Sir William Wallace of 1816, wrecked Burntisland 18/1/1822. Problems - dredging/building harbour works.

Stirling of 1814, wrecked in Inverscaddle Bay, Argyll on 17/1/1828.

Problems - on edge of small river delta, possible silting.

Surprise of 1821, wrecked 1/2/1822 near Leven. Problems - uncertain site.

Tourist of 1821, stranded Great Yarmouth 16/11/1854. Problems - site on beach, possible salvage. Location¹⁷ was on North Beach, 20 fathoms east (sic) of the north pier, after striking the bar and falling off to leeward in a Force 8, south by east.

Velocity of 1821, wrecked North Pier, Aberdeen 25/10/1848. Problems - site subject to dredging.

Windsor Castle of 1838. Iron. Stranded on small sand patch between rocks "not many yards" north of Kilminning Craig, east of Crail, Fife. Survivors walked ashore over rocks at low water. Problems - attempts at refloating and thereafter broke in two.

Plainly some of these wrecks have more archaeological potential than others, but it appears that at least some might be deemed worthy of some attempt to locate and inspect them.

¹⁶ *Fifeshire Journal*, 8, 15 & 29 May, 1851.

¹⁷ House of Commons, Accounts & Papers 1854-55 XXXIV *Admiralty Register of Wrecks*

The most promising targets appear to be *Stirling*, *Windsor Castle*, *Pegasus* and *Forfarshire*.

As a preliminary to proposing archaeological investigation of the wreck sites of these ships, it is appropriate to examine in more detail what we already know about each of them, and what we know of the wreck.

Stirling was built at Kincardine on Forth in 1814 by John Gray¹⁸. As such she was the second steam vessel to be built on the east coast of Scotland, and among the first in Europe. Her initial service between Newhaven and Stirling, has been discussed above.

When first registered she was described as having one deck and one mast, although she had what was described as a break on the quarter deck of 1 foot 4 inches. She was 68 feet long, 15 feet 2 inches broad above the main wales, and had a depth of hold of 7 feet under the beam at the fore part of the main hatchway. The registered tonnage was 69 10/94 tons. She was square sterned and carvel built, and had a highlandman figurehead, and no galleries.

The vessel was re-registered at Inverness on 30th July, 1824, although she may have moved to that port a little earlier. From 11 May 1825¹⁹ she began to operate a weekly service through the Caledonian Canal, by the western sea lochs to the Crinan Canal, and on to Glasgow at the behest of Alec Laird. On Thursday, 17th January, 1828 she was on passage from Inverness to Glasgow²⁰ under Captain Maclean, with about thirty passengers aboard. Amongst these were Macdonnell of Glengarry, chief of his clan, and two of his daughters. The weather was described as "uncommonly bad" with the wind gusting from the south east, with showers of sleet.

¹⁸ PRO BT107/113 Alloa 11 of 1814.

¹⁹ Kennedy, J. 1903 *The history of steam navigation*, 253. Liverpool.

²⁰ *The Times*, Monday, 28 January, 1828.

“A very small boat, and of no great power” she began to get into trouble in the northern part of Loch Linnhe, when she came abreast of “Drimnarbin” - nowadays the motel at Druimarbin - about two miles south of Fort William. The wind then began to take charge of her and set her down to leeward. At noon she drove ashore on the western, Ardgour, side of the loch, “in the bay of Inverscaddell” and became a total wreck. Mr Macdougall, the tenant farmer there, who wrote to the newspapers describing the event, gave the actual location as “under my house”. He also wrote in similar terms to John Laird, agent at Glasgow²¹.

The bay is easily identified as Inverscaddle Bay. This lies in the parish of Kilmallie in Argyll, and is dry at low water springs, except for various fresh water channels running into it. The location of the farmhouse was slightly more troublesome. No farm is nowadays called Inverscaddle as such.

Aryhoulan at grid reference NN017686, is marked on the Admiralty Chart of 1841, which is the earliest large scale survey of the area. The same chart shows “Inverscardale Bay”, calls Rubha Dearg (grid reference NN665670) “Inverscardale Point” and shows a track leading from the farm to that place. Aryhoulan is about a kilometre above high water mark, across marshy ground. The only other contender is Conaglen House at grid reference NN027690. This appears on the Admiralty Chart of 1863, and the six inch to the mile Ordnance Survey map of 1871.

Local tradition²² confirms that the present Conaglen House was built at the site of the former Inverscaddle Farm, the surviving portions of which were demolished about 1883.

In the wreck one passenger was drowned. The remainder were “dragged ashore with ropes”. In the course of this Glengarry and some others were “much hurt in the face and head on rocks”. The survivors then managed to

²¹ Letter noted by Thornber, I. and which appears to be the initial basis of *The Times* report.

²² Provided by Thornber, I and Guthrie, J.

walk to the farmhouse, where Glengarry was put to bed, but succumbed to his injuries eight hours later.

It follows that the wreck site is close inshore in the tidal state prevailing at 1200 on 17th January, 1828, at a place where there are rocks. This eliminates much of Inverscaddle Bay. The only places with rocks are at the two extremes of the bay, and two isolated rock clumps in the centre. One of the isolated rocks, Eilean nan Gall seems unlikely because it is so far into the bay. The north east corner of the bay seems unlikely given the direction of travel of the vessel. The southern end of the bay is a possibility, but requires the ship to run, bow on, into a very obvious mountainside, the wind tending meantime to blow her to starboard.

This leaves the second isolated rock, which is situated in the centre of the bay, on the low water mark, at grid reference NN031681, 56 degrees 45' 45" North, 5 degrees 13' 17" west.

On the chart of 1841 it is not named. The 1863 chart is much more detailed and calls it "Sg'eir mor", which might be translated as "big rock". The most significant map evidence, however, comes from the six inch to the mile Ordnance Survey of 1871, where it is called "Sgeir Mcic ic Alasdair or Glengarry's Rock".

The 1863 chart gives the rock a height of 2 feet, with the nearest sounding, at four and a half fathoms, about 100 yards east. Such an object in such a position might very easily be struck by a small vessel coming south in bad weather and being blown to leeward by a south east wind as described. It could in fact be directly in the path of the vessel in these circumstances if she was close in to the western shore, but would probably be quite hard to spot.

A marginal note on this chart describes the tidal conditions in the area - "the flood makes one hour after low water and runs for 5 hours, its strength being close along the south shore, but rapidly decreases until it arrives abreast Ru

Dearg (south side of Inverscaddle Bay) where it turns at about half tide towards and down the north shore and runs at a velocity of 0.60 knots. The tidal stream in both strength and direction is greatly influenced by the freshes from the numerous rivers and burns". The tidal range is about 13 feet at springs, 9 feet at neaps.

Local tradition²³ confirms that Glengarry's Rock was the site of the accident.

The 1871 Ordnance Map at 1:2,500 indicates that at that period the main channel of the Inverscaddle River (now called the Scaddle) ran into the sea just north of Glengarry's Rock.

A popular diver's guidebook²⁴ mentions Glengarry's Rock as a dive site "On a flat bottom of mud at 12 metres. Rather poor". While this sounds disappointing, the reference to the depth would seem to imply a description of some point a considerable distance from the rock itself. The same source also mentions "Victorious Rock (Grid reference) NN039684. Top of this rock is in 5 metres about half mile east of where the River Inverscaddle enters the loch.....loch drops away to 22 metres plus...".

On 20 and 21 October, 1994 a visit was made to the site by the Archaeological Diving Unit, led by Martin Dean, and accompanied by the writer. A magnetometer scan in the area from the survey boat *Xanadu* detected what might have been a large iron object about 200 feet east of the rock. On the second day an unsuccessful attempt was made to replicate this result. A side scan sonar survey of the area east of the rock was also attempted, with no significant result. Due to an equipment failure, the log of

²³ Letter by Mrs McCallum, Conaglen, a descendant of an eye witness, written circa 1920, and noted by Thornber, I. The lady refers to the vessel as *Stirling Castle* and this name is also used in MacCulloch, D. 1971 *Romantic Lochaber Arisaig & Morar*, which appears to follow Kilgour, W. 1908 *Lochaber in war & peace*.

²⁴ Ridley, G. 1984 *Dive West Scotland. Diver guide to Scotland*, 1:170.

these scans was not preserved. A walk over the rock itself at about half tide revealed the presence of a heavily corroded iron eyebolt, set into the rock with lead. This object could have been placed there at almost any period in history. It has no obvious function, but it may be conjectured that it might have served as an anchorage point for some form of tackle used in an unrecorded salvage attempt. A brief dive was then made on the site, down to about 7 metres depth. The only artefact seen, was a small piece of corroded ironwork, which could not be identified.

The underwater site has good water clarity, although it is very apparent that the river is bringing down large quantities of silt and large lumps of peat. Both north and south of the rock are extensive shallows, where the river delta extends below sea level in line with the main channels. The area then shelves very steeply as a bed of fine silt, down to a kind of plateau between 10 and 14 metres deep, which eventually drops away sharply again, into the very deep centre of the loch.

Given the nature of the area, it is not impossible that some portion of the wreck may exist, either under the silt, or on the plateau, having rolled down the slope.

Windsor Castle was built in 1838 by Tod & McGregor, Glasgow²⁵. She was an iron vessel 130 feet long by 16 feet 6 inches beam, and 151 tons register, and said to be powered by a steeple engine. She appears to have been bought by Greig of Newhaven, trading as the Edinburgh & Dundee Steam Packet Co., in the summer of 1844, and was employed between Newhaven and Newcastle²⁶.

On Tuesday 1st October, 1844 she was employed on an excursion to the Tay²⁷, with about 200 passengers, to view the embarkation of H.M. Queen

²⁵ Brodie, I. 1976 *Steamers of the Forth*, fleet list.

²⁶ *Edinburgh Evening Courant*, Thursday, 15 August, 1844.

²⁷ *Edinburgh Evening Courant*, Thursday, 3 October, 1844.

Victoria in the Royal Yacht. There was a band on board and dancing on deck as they returned in the early evening. She was keeping fairly close in shore, and shortly after beginning her voyage home, she actually struck the Carr Rock beacon, marking a reef off the eastern extremity of Fife, with her starboard bow. She then backed off and passed inshore of the beacon, over the ledge. The vessel at once developed a leak, and began to list. The list alternated from side to side, indicating that she had become alarmingly unstable - presumably due to the free surface effect of the water below decks.

An attempt was made to reach the harbour of Crail, but it became apparent that this was impracticable, and she was beached about two miles east of there.

The location was described as being on a "little patch of sand between ledges" and "a solitary farmhouse could be seen" which was "called Kilminning after the name of a bold craig not many yards south of where the vessel went ashore".

The vessel carried only one boat, which would only hold six persons, and in any case had only one oar. Three fishing boats came up and assisted in removing some of the passengers. At low water the bows were high and dry, and the remainder walked ashore over the rocks.

An attempt was made to patch her and kedge her off, but on the rising tide the keel went on a ledge and she parted in two. The cause of the initial accident was politely described as "not maintaining a lookout".

Kilminning farmhouse was demolished to make way for a wartime airfield, but Kilminning Craig is at NO633085. The area has a sewer pipe running through it, and a filtration plant with a longer outfall pipe is about to be constructed.

Pegasus was built in 1835 by Robert Barclay at Glasgow²⁸. She was a two masted schooner with a raised quarter deck. Her length was 132 feet 4 inches, beam 18 feet 5 inches and depth of hold 11 feet 1 inch. She had a square stern and was carvel built, and had false galleries and a Pegasus bust figurehead. Although evidently operated on their behalf from the outset, it was not until 26th May, 1841 that she was sold to the Hull & Leith Steam Packet Co. and re-registered at Leith. She could carry 120 tons of freight, and had berths for 46 passengers²⁹.

On 28th July, 1843, while on passage from Hull to Leith³⁰, she struck the Goldstone Rock, off Northumberland, between Holy Island and the Farne Islands. She was backed off the rock, and sank in 10 fathoms. The boats were swamped and of the 50 on board only three were saved by the *Martello*. She is said to have turned towards land and went down within a short distance³¹. The location is "a dangerous rock, which dries 1.5 metres, lies two miles ESE of Emanuel Head; Goldstone buoy (green conical {in 1979}) is moored off its NW extremity³²".

The wreck is alleged to be visited by sports divers. In light of this information a brief investigation was made of the area on 2 September, 1995, by members of the Archaeological Diving Unit. This included a dive by Ian Oxley, which failed to locate *Pegasus*, but did discover the wreck of an iron steamship. The vessel located may be *Arbutus*, built in 1854, and wrecked at this location on 17 January, 1890. The area will certainly merit further investigation.

Forfarshire was built in 1836 by Thomas Adamson at Dundee³³. She was a two masted schooner with raised quarter deck, and 132.4 feet long by 20.4

²⁸ PRO BT107/425 Glasgow 67 of 1835.

²⁹ *Scotsman*, Saturday, 28 November, 1835.

³⁰ Pearson, F.H. 1896 reprinted 1984 *The early history of Hull steam shipping*, 66. Hull.

³¹ Anon. 1843 *Annual Register*, 89-90.

³² Hydrographer of the Navy 1973 *North Sea (West) Pilot*, NP54:76.

³³ PRO BT107/428 Dundee 95 of 1836.

feet broad, with 14.9 feet depth of hold, her engine room was 52.6 feet long. her registered tonnage was 192.23 tons. She was employed between Dundee and Hull for the Dundee & Hull Steam Packet Co.

On 7th September, 1838 she suffered engine failure and, in attempting to pass southwards through Piper Gut under sail, struck the north side of the Big Harcar Rock in the Farne Islands off Northumberland, grid reference NU237384. She broke in two and sank. Grace Darling and her father came to the rescue.

Big Harcar is 5 metres high, and there are strong tidal streams and eddies in the area³⁴.

The wreck is allegedly visited by sports divers, but there appears to have been no reported archaeological examination. A very brief visit was made to the area by the Archaeological Diving unit in September 1995, but nothing was found. The very strong tides of the area make any operation difficult, but the site may merit further investigations.

The next step is for further site visits to be undertaken by diving archaeologists, with a view to proposals for proper surveys of these sites.

That such a wreck site of an early steamer can survive in recognisable form has recently been demonstrated. While of a vessel in no way connected with the remainder of this research and not on the east of Scotland, but the west, it may yet serve as an illustration.

Some ten years ago local scallop divers in the vicinity of the island of Scalpay, between Skye and the Scottish mainland, discovered a quantity of timber and a variety of copper pins. This find was not apparently reported at

³⁴ Hydrographer of the Navy 1973 *North Sea (West) Pilot*, NP54:79.

the time but was subsequently made known to Mr Steven Birch³⁵, who lives on Scalpay and has experience of nautical archaeology on wrecks of the Spanish Armada period in Irish waters.

Mr Birch began to investigate the area, and in the inter tidal zone on the reef known as Sgeir Thraid, north of Scalpay he found portions of two engines and a recognisable paddle wheel. He subsequently found a quantity of ornate cast ironwork in the inter tidal zone of the islet of Sgeir Dhearg about one mile east. He contacted the Archaeological Diving Unit for advice and they referred him to the present writer.

Subsequent investigation by Mr Birch and the writer indicates that the material on Sgeir Dhearg is part of the upper frame of a side lever engine, similar in ornamentation to those by Scott Sinclair of Greenock of the 1830s. This material can be shown to match with an upright side lever engine on Sgeir Thraid. It is surmised that some person(s), at an unknown date, has salvaged the portions of this engine frame and conveyed them to Sgeir Dhearg, possibly in order to remove the main bearings.

Also at Sgeir Thraid, in shallow water, is a second engine on its side with one side lever still attached. There is the major portion of a paddle wheel associated with the engine on its side, and portions of a second wheel associated with the first engine. The entire paddle crankshaft is present, in three sections. Nearby are some large timbers, scattered copper piping, what appears to be a portion of boiler and three scattered side levers. Mr Birch previously saw what may prove to be a boiler some 150 yards south of the reef.

Research indicates the strong probability that this vessel is the 232 ton *Irishman*, built by Scott's of Greenock in 1834³⁶, owned by the Drogheda

³⁵ Personal communication to the present writer.

³⁶ Robb, J.F. 1993 Unpublished PhD thesis University of Glasgow. *Scotts of Greenock shipbuilders & engineers 1820-1920. A family enterprise.*

Steam Packet Company and wrecked on 20 September, 1862, while on passage from Liverpool to Portree³⁷. It is hoped that, after further research, there will be a joint publication by the writer and Mr Birch. This is obviously a potentially major find and has been notified to the Archaeological Diving Unit, who intend to examine it with a view to possible recommendation for designation under the Protection of Wrecks Act.

We may say with confidence that archaeology can assist history and vice versa. Despite the general assumption, from school chemistry, that iron regularly exposed to both air and water must quickly corrode away, the state of preservation apparent in the wreck of the *Irishman* gives hope for the survival of other material evidence, even in such apparently unpromising locations.

The worth of continued investigation of such sites is clear.

³⁷ *Lloyds List* 24 September, 1862.

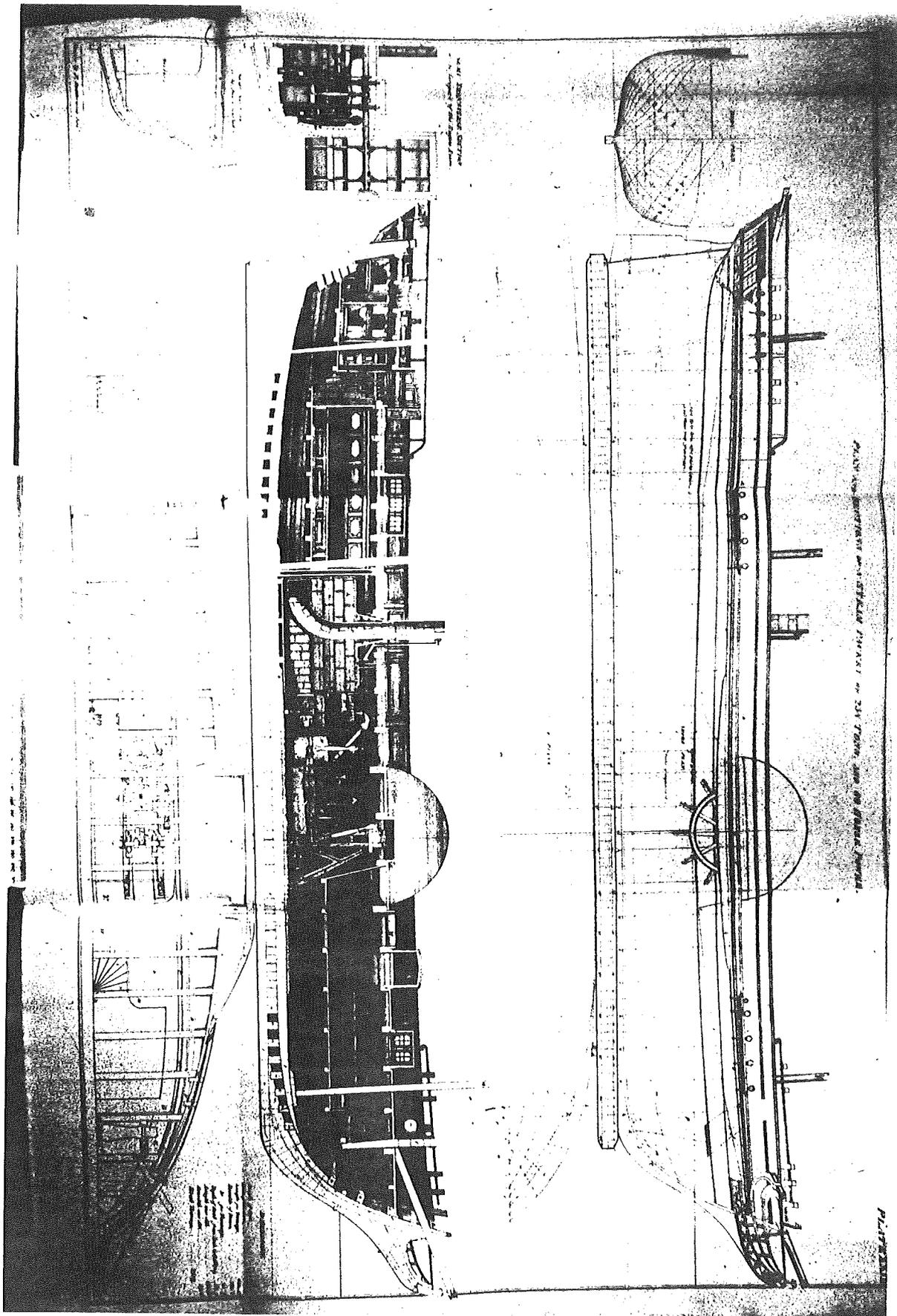


PLATE 23
 "Plan and section of a steam packet" - paddle steamer *Brilliant*.
 Hedderwick, P. 1830 A treatise on marine architecture, Plate XXIX.
 Edinburgh.

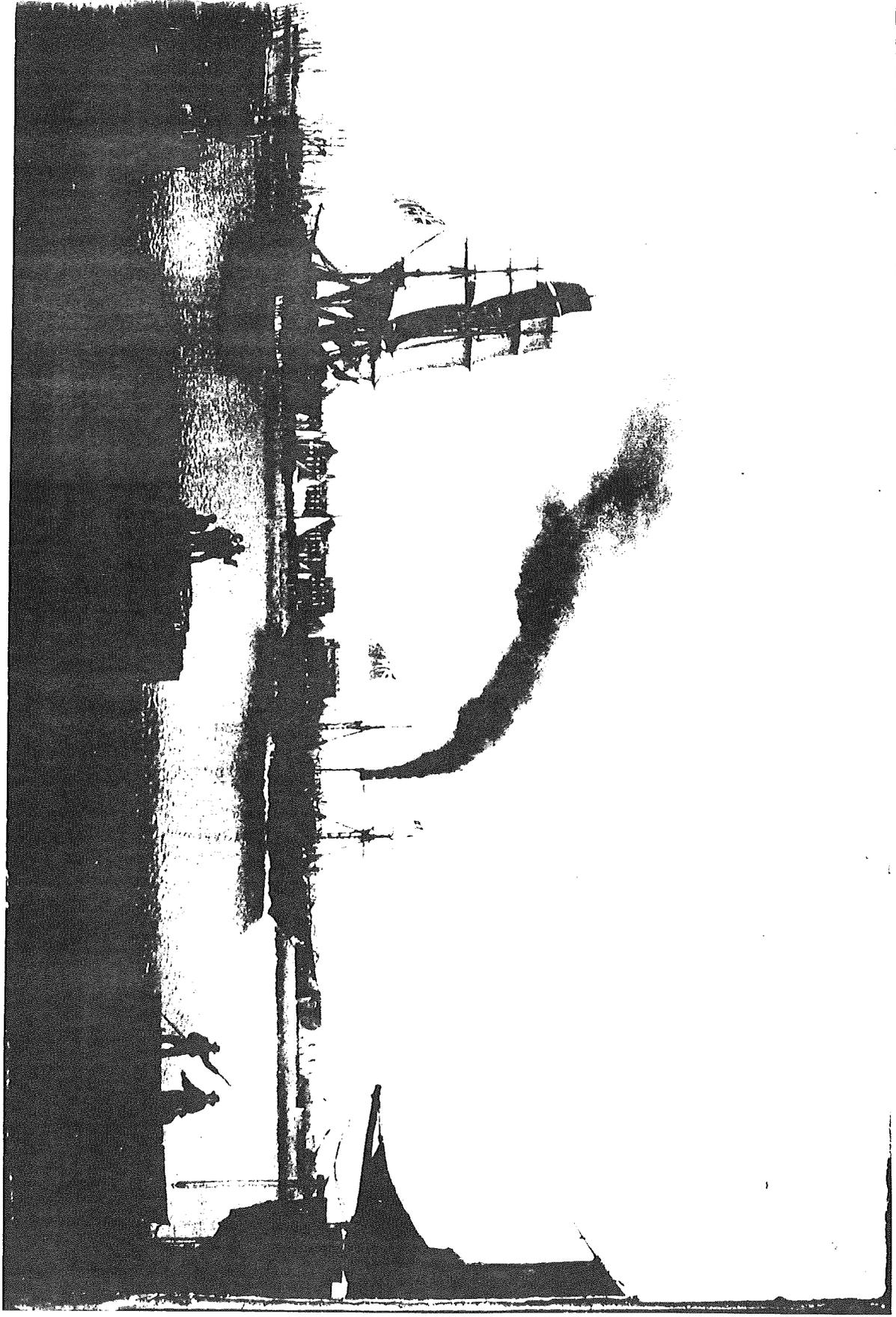


PLATE 24

***“Forfarshire leaving Hull”*, John Ward**

Oil on canvas 24” x 36”, copyright Ferens Gallery, Hull.

CONCLUSION

The east of Scotland trades did indeed have an important role in the early years of the introduction of the steamship. The mere fact that this period and area have had but small attention, would itself make the enquiry worth undertaking, but the nature of the evidence does show an importance which ought to be highlighted.

The geography of the region played an important part in stimulating steamship development. This was especially the case in the two great estuaries of Tay and Forth. Perhaps to an even greater extent than the Clyde they were highways into the interior of the country. Certainly to a greater extent than in the west, they were also barriers. The distribution of population and the consequent demand for transport was an important part of this distinction. The need for north - south transport across these great eastern rivers was of a different nature to that for the services from central Scotland to sparsely inhabited south Argyll and the islands of the Clyde.

In the west the steamer connected areas then almost roadless, as well as linking island chains. In our area the steamers were much more integrated with other forms of transport, first the stagecoach and then the train. Such linkage does not appear to have arisen so quickly in the west¹. (Although by the second half of the nineteenth century integration of rail and steamer services became commonplace on the Clyde area²).

In the period covered by the present work, the differences between east and west coast practice became particularly noticeable as the railways developed, and led directly to the highly specialised ferry links which were integrated into the east coast rail network. Significantly this was especially important for east coast freight traffic. This is almost the only mid century steamship

¹ McQueen, A. 1924 *Echoes of old Clyde paddle-wheels*. Glasgow.

² Thomas, J. & Paterson, A.J.S. 1984 *A regional history of the railways of Great Britain. Volume 6 Scotland. The lowlands and the borders*. Newton Abbot.

cargo trade (apart from livestock) which we can reliably identify. The eventual linkage of rail and steamship on the west coast was largely a product of the passenger excursion. In due course (outwith the period of present study) both coasts of course adopted similar techniques with regard to cargo handling, especially the export of coal.

The east coast has been seen to have introduced the new technology of the steamer at least as quickly as anywhere else. The local owners covered pretty much every feasible combination of organisational type and can lay claim to a willingness to innovate. The range of occupations listed in the various partnerships often came close to covering the proverbial "butcher, baker and candlestick maker". The involvement of such characters as the Newhaven innkeeper Greig is particularly interesting. It is also very apparent that from an early date almost every community of any size on the east coast was seeking a steamship service.

That sail did not give in easily to the newcomer seems evident from the efforts to improve both ships and methods. The introduction of schooners in place of smacks is perhaps the most obvious example, but we must not forget *Scottish Maid* and the "Aberdeen bow". In operational terms, the efforts of the sailing ship owners to introduce credible timetables is perhaps not completely surprising, but was certainly doomed in the long term. We should not however be blind to the fact that, while the smacksmen and the steamer may have often not been in love there were examples of co-operation. A number of companies, not least the Dundee Perth & London, happily continued to operate both steamers and sailing vessels. In the earliest years there were even instances of companies putting on a sailing vessel to replace the steamer in the bad winter weather - a reversal of what many might have anticipated. In truth the question may have been one of operating costs at a time of year when traffic was in any case low. We must further remember that steamer crews, with the possible exception of engineroom staff, were largely recruited from amongst the smacksmen. There is also a recurring

theme of ex Royal Naval officers serving as captains of steamships. At least one documented case exists of a deep sea sailing captain³ becoming master of a steamer and then reverting to sail.

The most pleasant outcome of the present research has been to uncover a number of apparently unused primary sources. There have been few opportunities for historians to study the day to day workings of an early steamship company. Any such opportunity is then doubly welcome. In this context the examination of the minutes of the Perth Steam Packet Company⁴ has great potential interest. While we cannot, by definition, be sure that all their contemporaries would have approved of the methods of working, the overall implication is that this was indeed a typical, if somewhat chaotic, small company.

Considered alongside the surviving documents⁵ relating to the financial difficulties of James Brown of Perth, we have a useful picture, of steamer activity in the Tay to supplement the study of different sources by others⁶.

The chance survival of the loading figures⁷ for *Tug* and *Surprise* in the Forth likewise opens the possibility of further detailed study of that region. The complexity of the routing arrangements of these ships indicate a level of sophistication in planning which might not otherwise have been suspected. Such problems did not need to be addressed in the same manner for a sailing ship operation. Indeed the weather could quickly obliterate any such plan if attempted under sail. Yet here, within a very few years of the inception of a

³ James Moncrieff of the *Forfarshire*, great great great grandfather of the present writer.

⁴ Perth Burgh Archives. B59/22/32 Perth Steam Packet Company, minutes 1822-25.

⁵ SRO CS96/886.

⁶ Somner, G. 1995 *DP&L*. Kendal.

Jackson, G. & Kinnear, K. 1991 *The trade & shipping of Dundee 1780-1850*. Dundee.

Jackson, G. 1992 Operational problems of the transfer to steam, in T.C. Smout (ed) *Scotland and the sea*. Edinburgh.

⁷ SRO CS96/1419-23 and CS228/B.16/40.

steamer service, is evidence of a well thought out system, reminiscent of the techniques of railway timetabling and diagramming of a later period⁸.

Although only of limited use in the present study (in connection with *Tug*) the inventories and related documentation surrounding the 1820 amalgamation of the Edinburgh & Leith and Edinburgh Glasgow & Leith Shipping Companies⁹ have the potential to reveal much more about the organisation of Scottish shipping in general for that period. The inventories in particular, giving values of every vessel owned, and listing all sail sizes and much equipment, in one case down to a backgammon board, might merit publication.

The influence of geography was also felt in more open waters. The violent nature of the North Sea seems to have encouraged owners to ensure that the average long distance east coast steamer was noticeably larger than its contemporaries (Figure 11). That this is not the entire picture is shown by the curious fact that the largest, non ocean crossing, steamers of the period were those of Irish ownership, which were bigger than those owned on the facing north of England coast. A full explanation of this phenomena must await some future investigation of the Irish trades.

It is suggested that the detailed study of the kind of local sources used in this study can give us a different kind of insight into the problems and solutions of the past. We have to accept that the picture can never be complete, but this does not prevent the attempt. Ships are after all, built for use and it is a very proper study to examine, as far as we are able, what they were used for. It may equally be said that ships are built to make money for their owners. The present research will not make much impact on economic history in that sense. Assessments of profitability must depend on the availability of

⁸ Lamb, D.R. 1941 *Modern railway operation*.

Samuel, H. 1961 *Railway operating practice*.

Faulks, R.W. 1965 *Elements of transport*.

⁹ SRO CS44/4198 and CS236/D.4/5.

appropriate accountancy records. It may yet be that others will be able to locate and interpret that type of source.

On a technical level, the discovery of the plans (Plates 15 to 19) of the Tay catamaran ferries is particularly important. The mere existence of such documents is remarkable, given the assumptions hitherto made about the nature of the procurement of merchant ships in the early nineteenth century¹⁰. The possibility that two of them (Plates 15 and 16) may have connections with the United States, as suggested in the discussion of the drawings, might give the collection world importance. In any event they give a most unusual opportunity for the examination of the design of a set of unusual ships.

It is a matter of considerable regret that we are unable here to reproduce the final drawing of the set, which is still to undergo conservation. It is to be hoped that these important documents will be the subject of suitable publication in due course.

We should not forget that a respectable proportion of the ships sailing from eastern Scottish ports were built and owned there (Figures 6 and 7). That those built, were not just small local ferries, may be evidenced by the (Irish owned) trans-Atlantic *Sirius* and the Indian Ocean reaching *Seahorse*, to name but two. The whole question of ownership patterns with regard to early steamships has scope for further detailed investigation and regional comparison.

It also appears that the historical resource composed of the Parliamentary statistical returns and Select Committee reports is capable of much greater exploitation. They are but rarely mentioned as a source in published works on steamers. There seems to be a tendency, not unreasonably, to seek out purely documentary sources. It is surely a mistake to under value the wealth

¹⁰ MacGregor, D.R. 1962 Tendering and contract procedure in merchant shipyards in the middle of the nineteenth century. *Mariner's Mirror* 48.4: 241-263.

of information in the Parliamentary sources. This is particularly true of the minutes of evidence which are included in certain of the reports. We must of course beware of some of the pitfalls in using such material, but that may be said of any kind of historical research. Indeed there may be a field for future enquiry in the consideration of the nineteenth century methodology involved in gathering all this information in the first place.

A related topic concerns the development of safety measures in connection with the steamship. We have seen that there were early local efforts to provide for measures to reduce the risk of collision in the Tay¹¹. Moreover, by examination of the known fate of vessels, we can say with some confidence that the public perception of risk of death by explosion was misguided. While ships did suffer boiler failures, they were rarely real explosions, and most accidents were as a result of collision or running aground.

The numbers speak for themselves. The drama of explosion may have caught the public eye. It indeed caught the eye of authority, leading to the first of the Parliamentary Select Committees on steamboat safety, in 1817. The reality was that steamers of the period were still liable to the same perils as other vessels. No full scale statistical comparison has been made here of the relative frequency of collision and stranding in sailing ships on this coast, but the fact remains that those types of accident did befall steamers more frequently than what might be called purely steam produced mishaps.

Overall the east coast of Scotland may claim to have played a significant role in the introduction of the important new technology of the steamship. Indeed it can claim to have seen the first of a whole specialist class, that of the train ferry. At a more basic level the area also saw experiments with new ideas such as Hall's surface condenser (Plate 4).

¹¹ Archives, A.K. Bell Library, Perth B59/22/32 *Minutes of Perth Steam Packet Company*. See also discussion in the chapter of this work *Ships measured by Riddle all shaped like a fiddle: The effects of legislation and governmental controls*.

It is apparent that there is considerable scope for further co-operation between historians and nautical archaeologists, with specific reference to early steamships involved in the east of Scotland trades. Every possible encouragement ought to be given to proposals to further such co-operation.

The dearth of detailed technical information available from historical sources cries out for re-enforcement by the examination of any artefact which can be located. Conversely the archaeologist can benefit from the advice of historians, both on the location and identification of appropriate shipwrecks and in the formulation of strategies regarding the relative importance of any finds. This is not in any sense a new concept, but it does need to be re-stated and given impetus with regard to the specifics of the investigation of the early steamship in this country.

Above all, it is perhaps the scale of steamship activity on this coast which ought to be regarded as important. The present study tends to confirm that within a short span of years the steamship had become a major component in the local transport system. Equally the district was able to take its place as a builder of steamships capable of any voyage then feasible for the steam vessels of the day. Students of early steamship history cannot afford to underrate the east of Scotland.

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APPENDIX A.**CHRONOLOGY OF EVENTS IN EAST OF SCOTLAND SHIPPING**

- 1790 Forth & Clyde Canal completed.
- 1791 Berwick salmon smacks begin to trade Leith to London.
- 1802 Edinburgh & Leith Shipping Co. begins to run smacks Leith to London. *Charlotte Dundas* trials on Forth & Clyde Canal.
- 1806 Leith opens first wet dock (East Old or Queens Dock).
- 1809 London & Edinburgh Shipping Co. begin running smacks Leith to London.
- 1812 Leith & Berwick becomes London & Leith Old Shipping Co.
- 1813 Bell's *Comet* on short visit to Forth, first east coast steamer.
- 1814 Edinburgh, Glasgow & Leith Shipping Co. begin running smacks Leith to London. *Tay* built Dundee and runs Dundee to Perth. *Stirling* built Kincardine and runs Stirling to Leith for Stirling SB Co.
- 1815 *Lady of the Lake* and *Morning Star* running on Forth.
- 1816 *Comet* returns to Forth until 1819.
- 1817 West Old Dock opens at Leith. *Tug* introduced on Leith to Grangemouth by E.G.&L.
- 1820 E.G.&L. amalgamate with E&L to form London Leith Edinburgh & Glasgow Shipping Co.

- 1821 *Union* catamaran introduced as ferry Dundee to Newport on Tay.
 London & Edinburgh Steam packet Co. begin London to Leith
 service with *City of Edinburgh*, soon add *James Watt*. Newhaven
 Stone Pier and Trinity Chain Pier open. Aberdeen & Leith Sh.Co.
 operate 4 smacks and introduce *Velocity*. Leith &
 Aberdeen Steam Yacht Co. begin Aberdeen to Leith, Leith to
 Inverness and Leith to London.
- 1822 Union Canal and Caledonian Canal finished. Services Inverness to
 Glasgow via canal & west coast. *Queen Margaret* introduced on
 Queensferry.
- 1823 L&ASY sell *Tourist* to L&ESP who use her Leith to London.
 Leith & Dundee SP Co begin. Tay SP Co begin Dundee to Perth.
- 1824 General Steam Navigation Co. formed in London.
- 1825 A&LS renamed Aberdeen Smack & Steam Yacht Co. L&ASY
 make summer trips to Inverness and Wick.
- 1826 AS&SY renamed Aberdeen Smack & Steam Packet Co and
 absorb L&ASY. Glasgow owned *United Kingdom* on Leith to
 London "largest steamer in the world".
- 1827 Duffus builds first Aberdeen steamer *Queen of Scotland*, & A.Hall
 builds first Aberdeen tug, *Paul Jones*.
- 1831 LLE&GS introduce three steamships on Leith to London. GSN

- charter *London Merchant* to Dundee Perth & London Sh.Co.
- 1833 GSN in association with L&ESP operating *City of Edinburgh* on Newcastle to London. Newhaven to Newcastle service operating.
- 1834 DP&L introduce two steamers on Dundee to London.
- 1835 Services Leith to Wick & Orkney. Aberdeen Steam Navigation Co. begin Aberdeen to Leith.
- 1836 Dundee & Leith SP Co operating three steamers. Dundee & Hull SP begin service with *Forfarshire*. GSN take over L&ESP.
- 1837 ASSPC become Aberdeen Leith & Clyde operate Newhaven to Aberdeen, Inverness, Caithness and Orkney. Hull & Leith SP Co operating two ships. DP&L obtain third steamer.
- 1838 *Forfarshire* wrecked on Farne Islands, Grace Darling rescue attempt. *Northern Yacht* lost with all hands in same area. St George SP Co of Dublin operate two ships on Leith, Hull Rotterdam route. Granton harbour comes into use.
- 1842 GSN *Trident* used by HM Queen Victoria, Granton to London.
- 1845 Edinburgh & Glasgow and Edinburgh & Northern Railway begin interest in Forth ferries.
- 1850 World's first train ferries begin operation Granton to Burntisland.

APPENDIX B.**LIST OF PUBLICATIONS BY J. COLIN BAIN,****RELATED TO THE PRESENT RESEARCH.**

1988 A footnote to the story of Grace Darling. *The Scottish Genealogist*

XXXV.3: 125-126. Edinburgh.

1993 A ferry tragedy at Dundee. *The Scottish Genealogist* **XL.4:** 155-156.

Edinburgh.

1994 Industrial unrest amongst seamen and an early military use of the

steamship. *Mariner's Mirror* **80.2:** 217-219.

1995 An 1845 British assessment of the world's steamships. *Mariner's*

Mirror **81.3:** 338-343.

1995 Answer to Query, The Perkins steam-gun. *Mariner's Mirror* **81.4:** 480.

1996 Answer to Query, Steam-draggers. *Mariner's Mirror* **82.1:** 93.

1996 Some personalities in a company amalgamation. *The Scottish*

Genealogist **XLIII.3:** 92-96. Edinburgh.

Pending. The Perth Steam Packet Company and the Atholl. *Proceedings of*

the international conference on steam at sea, 9-12 September 1996,

University of Hull. Hull.

APPENDIX C.**STEAMERS IDENTIFIED WORKING EAST SCOTLAND TO 1850**

ID numbers relate to personal filing system of the candidate.

Authority in italics. [...] indicates source variation for preceding item.

Underlined names have contemporary report of east of Scotland connection.

Abbreviations:

len. = length, b. = beam, eng. = engine, n/a = not applicable, reg. = register,

oa = overall, off.no. = official number.

Duffus list & Hall list. Builders lists in hands of John Edwards, Aberdeen Museum Service.

IE&SinS = Transactions of Institution of Engineers & Shipbuilders in Scotland.

INA/RINA = Transactions of (Royal) Institution of Naval Architects.

BT107 etc: Transcripts & Transactions, British Register of Shipping, Public Record Office, Kew.

HofC etc: refer to Governmental in bibliography.

Surnames: refer to printed works mentioned in bibliography.

Hawks: unpublished research by F.W. Hawks, West Sussex.

McManus: List of research in McManus Galleries, Dundee, possibly compiled by J.Mann c. 1980.

CE/ etc: Copies of British register of Shipping (as in BT107 above) held in local archive offices and at Scottish Record Office (SRO).

Abbey. ID1 **Off. no.** n/a

Built 1822 at Liverpool by C.Grayson for W.Bateman & others,
Birkenhead. **Rig** ?

net ton 53 **gross ton** ? **len.** 76'4" **b.** 16'10"

depth of hold 7'7" **draught** ? *Hawks.*

Altered 89 ton, 98'10" x 17'10" x 10'4". *BT107/215 Liverpool 1833/96*
engine ?

New owner J.Askew & others, Liverpool, *BT107/185 Liverpool 1826/126.*

A.Davies & H.Cretchley, Liverpool. *BT107/215 Liverpool 1833/96*

BT107/247 Liverpool 1837/125.

25/2/1839 sold to J.Watson, Liverpool. *Hawks.*

Owner in E.Scotland use. Newcastle SN Co. *BT107/248 Newcastle*
1837/185. Hawks

Service 1838 Newhaven to Newcastle. *Edinburgh Evening Courant*
12/2/1838.

Withdrawn from Newcastle to Leith. *Edinburgh Evening Courant*
16/7/1838.

Notes. 1834 Liverpool to Wexford. *Hawks.*

Fate 29/3/1839 leaking boiler, then driven ashore Kilchoman, Islay on
passage Newcastle - Liverpool. *HofC 1839.*

Adeline. ID2 **Off.no.** 12348 *HofC 1859*

Built 1828 at North Shields by T.Shelton *Brodie* for ? **Rig** ?

net ton 36 [*HofC 1830*] **gross ton** 67 [*Brodie*] **len.** 70'5" **b.** 17'11" **depth**
of hold 11' [*Brodie*] **draught** 6'6" *HofC 1845.*

engine 40hp *HofC 1845.*

New owner Strakers & Co, Dublin 1830. *Brodie.*

Dublin reg. 30/12/1843, owner T.McNulty, *HofC 1851.*

C.Pearson, Dublin. *HofC 1859.*

Owner in E. Scotland use J. Morris, N. Shields. *Brodie*

Service Newhaven to Newcastle 1828 - 1830 *Brodie*

Notes Newcastle reg. 6 men. 12 trips p.a. in 1828. *HofC 1830.*

Fate Broken up 1874. *Brodie*.

Albert.ID3. **Off.no. ?**

Built 1840 at Port Glasgow by J.Reid & Co. [*Brodie*] for ? **Rig ?**

net ton 92 **gross ton** 146 [HofC 1851] **len.** 121.6' **b.** 19', **depth of hold ?**
draught 3'

engine 75 hp *HofC 1845*.

Owner in E.Scotland use Alloa, Stirling & Kincardine SB Co., reg. Alloa
HofC 1845.

Alloa & Stirling SB Co. Alloa reg. 24/9/1840 *HofC 1851,1852*.

Service Granton to Alloa, Stirling. *Scotsman* 12/1/1842,23/3/1842,
16/7/1842. (assumed 1840 - after 1852)

Notes Collides Alloa Pier & sinks 5/3/1849 *Scotsman* 10/3/1849. In service
Scotsman 2/5/1849

Fate ?

Alice.ID206 **Off.no.?**

Built 1843 at North Shields by ? for ?

Rig ?

net ton 10 **gross ton ?** **len.** 56' **b.** 13' **depth of hold ?** **draught ?**
engine ?

Owner in E. Scotland use ?, Newcastle.

Service at Leith (possible tug). *HofC 1845*.

Fate ?

Ann.ID4 **Off.no. ?**

Built 1830 at Inverness *HofC1839* by Steavenson for H.I.Cameron. *Hawks*.

Rig Sloop

net ton 18 *HofC1839*. **gross ton ?** **len.** 50'9" **b.** 12'3" **depth of hold ?**
draught 4'6"

engine 20 hp *HofC 1845*.

Owner in E. Scotland use Inverness reg. *HofC 1845*.

Service Possible tug, 1830 - after 1845.

Fate ?

Arab.ID5.

Off.no. ?

Built 1835 at Dunglass by Wood & Mills for Clyde Steam Navigation Co.

Rig 2 mast schooner, 1 deck, square stern, carvel, man f head.

net ton 213 17/94 **gross ton** 350 [*Edinburgh Courant* 24/8/1844]

len. 132'9" **b.** 23'11" between wheels **depth of hold** 12'11" **draught ?**

BT107 Glasgow 1835/22.

altered 179 ton *Lloyds* 1841,1842,1844.

engine 150 hp *Edinburgh Courant* 24/8/1844.

New owner Re-reg Dublin 54, 10/12/1836. *BT107 Glasgow* 1835/22.

Dublin & Glasgow Steam Co., reg. Dublin *Lloyds* 1841,1842,1844.

Owner in E.Scotland use ?

Service Granton to Newcastle. *Edinburgh Courant* 24/8/1844.

Notes master William Stewart *BT107 Glasgow* 1835/22.

Capt. Lyle. *Edinburgh Courant* 24/8/1844.

Capt. W. Stokes, Dublin to Glasgow. *Lloyds* 1841,1842,1844.

Fate ?

Ardincaple. ID6.

Off.no. n/a

Built 1826 at Dumbarton by James Lang for Glasgow Helensburgh &

Roseneath Steamboat Co. **Rig** 2 mast schooner, 1 & 1/4 deck, square stern,

carvel, woman bust f head.

net ton 87 4/94 **gross ton** ? **len.** 97'9" **b.** 16'8" **depth of hold** 9'

BT107/414 Glasgow 1826/81. **draught** 5'6"

altered 76 ton, len. 94.9', b. 15.9' *HofC* 1845.

engine 50 hp *HofC* 1845.

New owner re-reg. Newcastle 19/4/1828 no. 48. *BT107/414 Glasgow*

1826/81.

Berwick S Co, Berwick. *Lloyds* 1839, 1841,1842,1844,1847.

Owner in E.Scotland use Shield & Co. Newcastle. *Lloyds* 1836

Service Chain Pier to Newcastle. *Scotsman* 7/6/1828.

Granton to Berwick. *Scotsman* 11/6/1842, 5/3/1845.

Notes master Thomas Brown. *BT107/414 Glasgow 1826/81*.

1829 Newcastle reg. *HofC 1829*.

Capt. Samuel Moubry, Newhaven to Newcastle. *Edinburgh Evening Courant* 29/3/1832.

1/9/1833 Leith to Newcastle, machinery disabled by heavy seas off Holy Island, those on deck swept overboard, towed in by cod smack. 7 dead.

Insufficient cables & sails. Lloyds Reg. *HofC 1839 SV acc*.

Capt. Middlemas, Newcastle *Lloyds 1836*.

Capt. T. Simple, Newcastle to Berwick. *Lloyds 1839, 1841, 1842, 1844, 1847*.

Capt. Thomas Semple. *Scotsman* 11/6/1842

Berwick reg., quarter boat washed up in Jutland. *Edinburgh Evening Courant* 6/1/1844.

Fate Converted to sail, 1847. *Brodie*.

Argyle.ID7.

Off. no. n/a

Built 1815 at Port Glasgow by John Wood & James Barclay & lengthened 1821 by James Lang, Dumbarton, & first reg. for George Brown, Thomas Buchanan.

Rig one mast (sloop?), square stern, 1 & poop decks carvel. In 1839 schooner [*HofC 1839*].

net ton 72 43/94 **gross ton** ? **len.** 91' 1", **b.** 15' 6", **depth of hold** 10' *BT107 Glasgow 1821/7 draught* 4'.

altered to schooner rig. 67 ton. *HofC 1839 SV acc*.

engine 26hp, Greenhead Foundry Co., Glasgow *Cleland*
2x16 hp eng. Greenhead & Co. *HofC 1822*.

14hp side lever eng.. *Eng. & Shipbuilders in Scotland 1881*.

New owner re-reg 29/4/1826 no. 38. *BT107 Glasgow 1821/7*

Owner in E.Scotland use J.Mitchell & others, Alloa. *BT107/418 Alloa 1829/6 (Hawks)*.

Service Alloa, possible tug.

Notes Glasgow to Inverary. Keel 72'. *Cleland*.

Fate Broken up 14/12/1843. *Hawks*.

Atholl ID8.

Off.no. n/a

Built 1822 at Perth by James Brown, for Perth SP Co. **Rig ?**

net ton 80 **gross ton** 91 *HofC 1829*. **len.** ? **b.** ? **depth of hold ? draught ?**

engine 2 x 15hp eng. by A.&R. Baird, Glasgow, cost £1270. *A.K.Bell*

Library B59/22/32.

Owner in E.Scotland use as above until 31/1/1825 then Tay SP Co.

Service Perth - Dundee - sometimes Broughty Ferry.

Notes Cost £967 for hull. Oct. 1823 collision with *Hero* at Dundee.

12/5/1824 one of boilers fails at Dundee. 25/5/1824 further collision by

Hero. 31/1/1825 owners amalgamate with Tay SP Co. of Dundee. *Sandeman*

Library B59/22/32.

1829 Dundee reg. *HofC 1829*.

Fate Lost off St Abbs Head on passage Dundee to Newcastle, 28/9/1835.

Capt. John Burton, all 6 on board saved by fishing smack *Flora*. *Fifeshire*

Journal 10/10/1835.

Auld Reekie ID9.

Off.no. 15778 *HofC1861*

IRON

Built 1847 at Blackwall by Miller & Ravenshill for Edinburgh Perth &

Dundee Rly. *Brodie Rig ?*

net ton 103 **gross ton** 163 **len.** 141.5' **b.** 19.1 **depth of hold** 9.1'

draught ?

engine 68 hp *HofC 1861*. 2 cyl. oscillating engine 34"x33". *Brodie*.

Owner in E.Scotland use EP&DR, Leith reg. *HofC 1861*.

Service Granton to Burntisland. *Fifeshire Journal 20/8/1850*

Notes Saloon fitted 1856, 1880 to Tay, 1890 to Glasgow. *Brodie*.

Fate Scrapped Bergen 1892. *Brodie*.

Balmoral ID10. Off.no. ? IRON, SCREW

Built 1850 at Dumbarton by Wm. Denny & Bros for George Gibson & Mungo Campbell Gibson

Rig 3 mast schooner, round stern, iron, screw, 1 & 1/4 deck

net ton 147.17 *BT107/457 Leith 1850/27*, 172 *HofC 1851* **gross ton** 234

HofC 1851. **len.** 130.2' **b.** 20.2', **depth of hold** 11.2' **draught** ?

engine eng. room 25.4'=62.1 ton, vessel has 2 gearing rooms attached to

eng. room, no.1: 7.6'=0.78 ton, no.2: 25'=5.01 ton *BT107/457 Leith*

1850/27.

New owner sold to Holland 6/10/1857, re-reg. London 56, 30/4/1877.

BT107/457 Leith 1850/27.

Owner in E.Scotland use George Gibson & Mungo Campbell Gibson, Leith

Service Leith to Continent. *HofC 1851*.

23 voyages Leith to Holland in 1851. *HofC 1852*.

Leith to Rotterdam. *Scotsman 10/3/1852*

Notes Master, Wm. Turnbull *BT107/457 Leith 1850/27*.

Capt. John Greig. *Scotsman 10/3/1852*

15 crew, *HofC 1852*.

Fate ?

Benledi. ID11. Off.no. n/a IRON

Built 1836/1837 at Glasgow by Robert Barclay & Co. for Thomas Barclay

Rig 1 mast sloop, square stern, clinker, 1 & poop deck, woman f' head

net ton 102.55 **gross ton** ? **len.** 124.5' **b.** 15.9' **depth of hold** 8.6'

BT107/432 Glasgow 1837/10. **draught** 5'. *HofC 1845*.

engine 80hp [*Edinburgh Evening Courant 13/1/1838*.] 75 hp. [*Fifeshire*

Journal 21/3/1839] 73 hp [*HofC 1845*] eng. room 36.3'=53.07 ton

Owner in E.Scotland use ? reg Leith 3, 15/1/1838. *BT107/432 Glasgow*

1837/10.

Service Chain Pier to Kirkcaldy. *Edinburgh Evening Courant 13/1/1838*.

Chain Pier to Dysart, Leven, Largo *Fifeshire Journal 3/1/1839*

Chain Pier to Dundee. Iron, 100 ton. *Fifeshire Journal 21/3/1839*

Granton to Dundee. *Scotsman* 8/1/1842

Withdrawn from Edinburgh to Dundee for annual overhaul. *Edinburgh Evening Courant* 1/2/1844.

Notes Intended Newhaven to Newcastle. Holds under cabins. *Scotsman* 16/5/1835.

Master, John Brown *BT107/432 Glasgow* 1837/10.

Andrew Greig, agent. *Edinburgh Evening Courant* 13/1/1838.

Capt. Barker. *Scotsman* 8/1/1842

Fate Broken up 1846. *Brodie*.

Benlmond.ID12.

Off.no. n/a

Built 1825 at Dumbarton by J.Lang for Dumbarton SB Co. **Rig ?**

net ton 70 gross ton ? len. 90'11" **b.** 16' **depth of hold 8'** *BT107/412 Port Glasgow* 1825/6 (*Hawks*) **draught ?**

engine 1 cyl. 35hp engine by R.Napier *Kennedy* 1933.

Owner in E.Scotland use A.Allan snr,R.Walker,T.Barclay & others *BT107/423 Glasgow* 1833/24 (*Hawks*).

P.Hansen, T.Strong & others *BT107/237 Newcastle* 1836/93 (*Hawks*).

Service 1833 to Newhaven - Stirling. *Brodie*.

Notes Newhaven to Stirling. June 1836 burnt to water edge, not sufficient boats. *1839 SV acc.*

Sold Flensburg SS Co.,Denmark 19/7/1838. *BT107/237 Newcastle* 1836/93.

Fate ?

Ben Nevis. ID192.

Off.no. ?

Built 1824 at Dumbarton by J.Lang for R.Stewart & others,Glasgow **Rig ?**

net ton 45 gross ton ? len. 82'9" **b.** 13'3" **depth of hold 9'2"** *BT107/411 Glasgow* 1825/17 (*Hawks*) **draught ?**

engine ?

Owner in E.Scotland use Glasgow & Caledonian Canal SP Co. *Scotsman* 17/3/1824.

Service Inverness to Glasgow. *Scotsman* 17/3/1824.

Notes Capt. Robert Bain (ex *Comet*). *Scotsman* 17/3/1824.

Sold 16/9/1829 R.Nielson & others, Stornoway. *BT107/418 Stornoway 1829/10 (Hawks)*.

Fate Wrecked, Carskey near Campbeltown 18/8/1831. *Duckworth & Longmuir*.

Some salvage. *Moir & Crawford*.

Bold Buccleuch.ID13. **Off.no.** 4819 *HofC1861* IRON

Built 1847 at Govan by Smith & Rodger for Edinburgh & Dundee SP Co.

Rig 2 mast schooner, iron, round stern.

net ton 137.67 **gross ton** 209.15 **len.** 149' **b.** 17.1' **depth of hold** 9.1'

draught ? **engine** 120hp [*Lloyds 1851*], eng. rm. 38'

New owner Sold D.Harmer, Great Yarmouth re reg Yarmouth 1849/57.

BT107/452 Leith 1847/8.

Owner in E.Scotland use Edinburgh & Dundee SP Co.

Service Granton - Dundee. *Brodie*.

Notes Goole - Yarmouth, Capt. F.Wright. *Lloyds Reg. 1851*.

Sold to Italy 1862. *Brodie*.

Fate ?

Bonnie Dundee.ID14. **Off.no.** ?

Built 1837 at Dundee by Thomas Adamson for Dundee & Leith SP

Co.,Dundee. **Rig** 3 mast ship, 1 & 1/2 deck, square stern, carvel, female bust

f'head **net ton** 128.4 *BT107/432 Dundee 1837/47* **gross ton** 288 [*HofC 1851,1852*] **len.** 120.4' **b.** 17.7' **depth of hold** 10.4' **draught** 8' [*HofC 1845*]

altered 206 ton, len. 143'8", b. 17'8", draught 8' *HofC 1845*.

199 ton net, 288 ton gross, len. 163'2", b. 17'8",. *HofC 1851,1852*.

engine 130 hp. *Aberdeen Journal 18/7/1838*. By P.Borrie. *Brodie*. eng.

room 52.3'=104.6 ton *BT107/432 Dundee 1837/47*.

Owner in E.Scotland use Dundee & Leith SP Co.

Re-reg. 35, 20/6/1838. *BT107/432 Dundee 1837/47*.

Aberdeen, Leith & Clyde S.Co. 9/3/1840 *CE70/11/6 Dundee 1838/35.*

Aberdeen Leith & Clyde S.Co. *Scotsman 26/2/1842*

AL&C, Aberdeen reg. *HofC 1845.*

Service Aberdeen to Dundee *Aberdeen Journal 18/7/1838*

Granton to Dundee. *Scotsman 25/7/1838.*

Granton to Aberdeen. *Scotsman 26/2/1842.*

Granton to Aberdeen. *Edinburgh Evening Courant 1/2/1844.*

Notes, master David Milne *BT107/432 Dundee 1837/47.*

Appears adv as "Dundee", *Scotsman 3/1/1849*

Capt. Parrot. *Scotsman 16/5/1849* Capt. Crane

Sold 1853 to Maryport. *Brodie.*

Fate 1856 broken up. *Brodie.*

Border Queen. ID15.

Off.no.?

IRON , SCREW

Built 1846 at Inverkeithing by John Scott for John Davidson & Co, Leith.

Rig 2 mast schooner, 1 deck, square stern, woman f^d head.

net ton 108 2506/3500 **gross ton** 155 [*Lloyds 1847,1850*] **len.** 96.3' **b.**

19.1' **depth of hold** 10.7' *CE57/11/2 Leith 1846/33 draught ?*

altered 3 mast schooner.

engine eng. room 20.8'=46 15/3500 ton. *BT107/452 Leith 1847/45.*

Owner in E.Scotland use John Davidson & Co., master Ebenezer Davidson (part owner). *BT107/452 Leith 1847/45.*

Re-reg. Leith, owner David Davidson, master Alexander Ball, 27/9/1848.

BT107/454 Leith 1848/5.

Re-reg. Leith, owner Thomas Scott, master Thomas Duncanson, iron, *BT107/454 Leith 1848/33.*

Rotterdam & Leith SN Co. *Scotsman 25/8/1849*

Re-reg 5/6/1850 Leith *BT107/457 Leith 1850/15.*

Service Leith to Rotterdam. *Lloyds 1847,1850, Scotsman 25/8/1849*

Leith to Europe. *HofC 1851.*

Notes 11/2/1848 ran on reef off Leith. 11/11/1848 machinery accident, exhaust pipe collapsed. May 1849 boiler collapse. *1851 SV acc.*

Master Thomas Duncanson. *BT107/457 Leith 1850/15.*

Fate lost April 1857. *BT107/457 Leith 1850/15.*

Brilliant.ID16. **Off.no.** n/a

Built 1821 at Dumbarton by James Lang for Leith & Aberdeen Steam Yacht Co., Leith **Rig** 3 masts, 1 & 1/4 deck, square stern, carvel, woman bust f head.

net ton 158 91/94 **gross ton** 340 [*Aberdeen Journal 17/8/1821*] **len.** 120'2"

b. 20'6" **depth of hold** 12' *BT107 Leith 1821/18 draught* c8' *Hedderwick*

engine 2 x 30hp. *Edinburgh Evening Courant 9/8/1821.* 2 eng. 80 hp

Aberdeen Journal 17/8/1821

Owner in E.Scotland use L&ASY, Leith as above.

re-reg. *BT107 Leith 1825/42.*

Aberdeen Leith & Clyde Sh.Co. *BT107/413 Aberdeen 1826/51.*

Service Leith to Inverness. *Edinburgh Evening Courant 9/8/1821.*

Newhaven to Aberdeen, Inverness. *Aberdeen Journal 17/8/1821*

Aberdeen to Newhaven 2 per week, plus Sat Newhaven to Dundee & return.

Aberdeen Journal 28/5/1822

Temporarily withdrawn on Government service. *Aberdeen Journal 17/9/1822.*

Newhaven to Aberdeen. *Scotsman 31/7/1824.*

Newhaven to Aberdeen. *Edinburgh Evening Courant 29/3/1832.*

Newhaven to Aberdeen, Cromarty & Inverness, *Scotsman 20/5/1835.*

Aberdeen to Leith. *Lloyds 1836, 1839.*

Aberdeen to Leith & Aberdeen to Inverness. *Aberdeen Journal 1/8/1838*

Notes To be launched in a few days. *Edinburgh Evening Courant 10/5/1821.*

James Rennie, master. *Edinburgh Evening Courant 9/8/1821.*

Refitting *Aberdeen Journal 12/3/1822*

Capt. Dick. *Scotsman 31/7/1824.*

Andrew Crane, master. *BT107/413 Aberdeen 1826/51.*

Capt. Campbell. *Edinburgh Evening Courant 29/3/1832.*

Capt. Daniel Mearns. *Aberdeen Journal 1/8/1838.*

Plans and description. *Hedderwick*.

Fate Wrecked North Pier, Aberdeen 12/12/1839. *Scotsman* 18/12/1839,
Aberdeen Journal 18/12/1839.

Brilliant.ID17. **Off.no.** 7713 *HofC1861* IRON

Built 1848 at Glasgow by Thomas Wingate & Co. for Thomas Barclay &
Robert Cook, Leith **Rig** 2 mast schooner, 1 & 1/4 deck, iron, round stern.
net ton 229 *BT107/454 Leith 1848/26* **gross ton** 335 *HofC 1851* **len.** 170.5'
b. 21.8' **depth of hold** 11.5' **draught** ?

engine 140hp *HofC 1861*. eng. room 46.4'=125.89 ton *BT107/454 Leith*
1848/26.

Owner in E.Scotland use Hull & Leith SP Co. *Scotsman* 3/1/1849,5/1/1850
Barclay & Inkster. *HofC 1861*.

Service Leith to Hull *Scotsman* 3/1/1849,5/1/1850.

Notes Captain H.Paton *Scotsman* 3/1/1849,5/1/1850.

Fate ?

Britannia.ID18. **Off.no.** ?

Built 1835 at London by Fletcher, Son & Fearnall for GSN *Hawks*. **Rig** ?
net ton 219 [*Hancock*] **gross ton** 321 *Lloyds* 1836, 1839 **len.** 136.5' **b.**
24.2' *Hancock* **depth of hold** ? **draught** ?

engine ?

New owner Sold Havre SS Co, rename *Sphinx*? *Parker &Bowen*.

Owner in E.Scotland use GSN London *Lloyds* 1836, 1839.

Service London to Rotterdam. *Lloyds* 1836, 1839.

Leith to London, London to Rotterdam, London to France. *Parker &Bowen*.

Notes Capt. Downie *Lloyds* 1836, 1839.

Fate Scrapped 1847. *Parker &Bowen*.

Britannia.ID19. **Off.no.** 3465 *HofC1861* IRON

Built 1845 at Glasgow by Smith & Rodger [*Brodie*] for reg. 22, 24/5/1845
Rig 3 mast schooner, iron, round stern

net ton 207.18 **gross ton** 327 [*HofC 1851*] **len.** 165.6' **b.** 21.2' **depth of hold** 10.7' **draught** ?

engine 150hp *HofC 1861*. eng. room 49'=120.29 ton *BT107/452 Leith 1847/10*.

New owner Germany 1863 *Brodie*.

Owner in E. Scotland use Hull & Leith SP Co., master Robert Cook (part owner) *BT107/452 Leith 1847/10*.

Leith Newcastle SP Co. *Scotsman 16/6/1849,3/7/1850*

Hull & Leith SP, Leith *HofC 1851*.

Barclay & Inkster, Leith *HofC 1861*.

Service Leith to Newcastle *Scotsman 16/6/1849,3/7/1850*

Notes re-reg Leith 10/3/1847, re-reg. 24, 19/5/1854. *BT107/452 Leith 1847/10*.

7/3/1849 fire while taking cargo at Leith. *1851 SV acc.*

Capt D.Adamson. *Scotsman 16/6/1849,3/7/1850*

Fate ?

Burntisland.ID20.

Off. no. ?

IRON

Built 1844 at Leith by J.Maxton for John Gladstone & Duke of Buccleuch.

Rig ? **net ton** ? **gross ton** ? **len.** 120' **b.**20' **depth of hold** ? **draught** ?

engine 2 x 35hp

New owner April 1851 sold Liverpool.

Owner in E.Scotland use Gladstone & Duke of Buccleuch as above.

1/1/1847 to Edinburgh & Northern Rly.

1/8/1849 EP&D Rly and to Tay.

Service Granton to Burntisland. *Brodie*.

Fate ?

Caledonia.ID21.

Off.no. ?

Built 1820 at Dundee by Smart for ? (presume Tay SP) **Rig** ?

net ton 80 **gross ton** ? **len.** ? **b.** ? **depth of hold** ? **draught** ?

engine 2x15 hp by Carmichael, Dundee. *HofC 1822*.

Owner in E.Scotland use Tay SP Co. *B59/22/32*

Service Dundee to Perth. *HofC 1822.*

Dundee to Broughty Ferry. *Dundee Directory 1824.*

Fate ?

Caledonia.ID22.

Off.no. ?

IRON

Built 1838 at Dundee *Lloyds 1844* by James Carmichael & Co. *Dundee Dir.*

1838. for James Whitton **Rig** Sloop

net ton 120.4 **gross ton** 172 **len.** 102.3' **b.** 20.9' **depth of hold** 7.9'

draught ?

engine ?

engine room 28.8', 51.6 ton *CE70/11/6 Dundee 1840/42.*

New owner J. Giro, reg. London *Lloyds 1844*

Owner in E.Scotland use James Whitton as above.

Service Dundee to Perth. *Dundee Dir. 1838.*

Notes First iron vessel built Dundee. *Bremner.*

Capt. W. Powell, London to Coruna. *Lloyds 1844.*

Fate ?

Caledonia.ID23.

Off.no. 24 *HofC1861*

Built 1836 at Blackwall *HofC 1852/53* by Green Wigram & Green. *Hawks.*

for London Leith & Edinburgh SS Co in assoc with GSN. *Edinburgh & Leith PO Directory. Rig ?*

net ton 423 **gross ton** 706 **len.** 178', **b.** 26.9' **depth of hold** 17.7' [*HofC 1861*] **draught** 12'2". *HofC 1845.*

engine 220 hp beam, by GSN 1836. Tubular boilers. 93 tons fuel for 3 days at 31 ton per day. 10kn, 11kn with sail assist. *MN for war 1852/53.*

Owner in E.Scotland use LL&ESSCo with GSN as above.

GSN from 1839 *Lloyds*

Service London to Leith. *Edinburgh & Leith PO Directory. 1836-1838, Lloyds 1839.*

London to Newhaven. *Edinburgh Evening Courant 10/9/1838.*

Notes Capt. Sharpe. London to Newhaven. 7/9/1838 sees wreckage of Forfarshire on Farne. *Edinburgh Evening Courant 10/9/1838.*

Capt. D. Turner. *Lloyds 1839.*

Capt. Cheeseman, London to Hamburg. *Lloyds 1841,1844.*

Capt. Gibbs. *Lloyds 1847.*

Overall len. 189', b. 29'9, load draught fore 14', aft 15'. Suitable for gun and troop carrying and defensive armament *MN for war 1852/53.*

Picture. London to Granton, *Parker & Bowen.*

Fate Feb, 1864 stranded Flamborough Head & broke up. *Parker & Bowen.*

City of Aberdeen. ID24. **Off.no. ?**

Built 1835 at Greenock by John Scott & Sons for Aberdeen & London

Sh.Co. **Rig** 3 mast schooner, 1 & poop deck, square stern, carvel

net ton 364 8/94 *BT107/425 Aberdeen 1835/20* **gross ton** 662 [*HofC 1845*]

len. 165'6" **b.** between paddle boxes 28'6" **depth of hold** 19'6" *BT107/425 Aberdeen 1835/20* **draught** 14'

Altered len. 188'6", b. 25'8", 663 ton net, 962 ton gross. *HofC 1851,1852.*

re - reg. 12/11/1841 Aberdeen 1841/45

engine 300 hp *HofC 1845* beam eng. by Napier 1835, flue boilers, fuel stowage u/k, 9kn, 10kn with sail assist. *MN for war 1852/53.*

Owner in E.Scotland use Aberdeen & London Sh.Co as above.

Aberdeen SN Co. *BT107 Aberdeen 1836/129.*

Service Aberdeen to London. *Aberdeen Journal 11/1/1837*

Notes Master, Alexander Morrison, *BT107/425 Aberdeen 1835/20 Lloyds 1836.*

re-reg 12/3/1836 no. 129. *BT107/425 Aberdeen 1835/20.*

Collision off Cuckolds Point, Rotherhithe with brig *Esther. Scotsman 14/11/1838.*

For sale in East India Docks, len. 202', b. 27', 662 ton net, 961 ton gross, load draught fore 13', aft 14', deck not suitable for carriage guns, very large overhanging sponsons, needs considerable repairs. *MN for war 1852/53.*

Fate Wrecked, Port William, Jan 1871. *Parker & Bowen.*

City of Edinburgh.ID25. **Off.no.** n/a

Built 1821 at Blackwall by Wigram & Green *BT107/34 London*

1821/160(Hawks) for London & Edinburgh SP Co., London *Edinburgh*

Evening Courant 14/6/1821. Rig ?

net ton 301 **gross ton** ? **len.** 137'2" , 143' on deck **b.** 25'8" **Depth of hold**

14' **draught** ? *BT107/34 London 1821/160(Hawks).*

Altered 401 ton, lengthened and repaired 1840. *Lloyds 1841.*

engine 2x40 hp eng by Boulton & Watt. *HofC 1822.*

2 x side lever, 35.5" x 42" total 80 hp. *Boulton & Watt List (Hawks).*

engine room 152 ton *BT107/81 London 1840/303.*

Owner in E.Scotland use London & Edinburgh SP Co. as above.

General Steam Navigation Co., London *BT107/72 London 1837/316.*

Service 20/6/1821 (maiden voyage) London to Newhaven *Edinburgh*

Evening Courant 14/6/1821.

London to Leith *HofC 1822.*

Newhaven to London. *Scotsman 18/6/1828.*

Newhaven to London. *Edinburgh Evening Courant 18/2/1832.*

London to Sunderland. *Lloyds 1836, 1839, 1840*

London - Antwerp *Lloyds 1841,1842.*

Notes Capt. John Beatson. British oak, passengers only. *Edinburgh Evening*

Courant 14/6/1821.

Plan. Saloon for 95, wheels 18'x8', 16 floats 2' wide. 8 kn, blow out pipes,

brine pumps, bilge injection. *Fincham.*

Capt. Dewar. *Aberdeen Journal 16/5/1827.*

1829 London reg. 301 ton. *HofC 1829.*

Capt. Fraser, *Edinburgh Evening Courant 18/2/1832.*

Capt. Maybank *Lloyds 1836.*

Fate Wrecked East Pier, Ostend 3/4/1842. *BT107/81 London 1840/303.*

City of Hamburg.ID26. **Off.no.** 257 *HofC 1861*

Built 1834 at Rotherhithe *HofC 1845* (or 1836 at Blackwall *MN for war*

1852/53) by McGhie & Hawks. *Hawks.* for GSN *MN for war 1852/53 Rig ?*

net ton 333 **gross ton** 518 **len.** 160.5' **b.** 23.8' **depth of hold** 15.9' [*HofC 1861*] **draught** 10'6". *HofC 1845.*

altered? 1836, len. 186'6", b. 26' 333 ton net, 518 ton gross, load draught fore 10'6", aft 11'3". *MN for war 1852/53.*

engine 140hp beam eng. by GSN 1836, tubular boilers, 83 ton fuel for 4 days at 21 ton per day, 8kn, 8 1/2kn with sail assist *MN for war 1852/53.*

Owner in E.Scotland use General Steam Navigation Co., London as above.

Service Leith to Hamburg. *Aberdeen Journal 22/4/1840*

Notes London to Hamburg. Capt. Wingham *Lloyds 1839.*

Capt. Morris *Aberdeen Journal 22/4/1840*

Capt. Morris, London to Hamburg. *Lloyds 1841.*

Capt. Major. *Lloyds 1844.*

London to Newcastle. Not suitable for transporting guns, but can carry troops and defensive armament. *MN for war 1852/53.*

Fate ?

City of London.ID27. **Off.no.** 26349 *HofC 1861* IRON

Built 1844 at Glasgow by Robert Napier for Aberdeen Steam Navigation Co. *Edinburgh Evening Courant 6/7/1844.* **Rig ?**

net ton 722 **gross ton** 1,117 **len.** 216.8' **b.** 30' **depth of hold** 19.2' *HofC 1861* **draught** fore 12', aft 13' *MN for war 1852/53*

engine 420hp beam eng. by Napier 1844, flue boilers, 240 ton fuel for 7 days at 33 ton per day, 11kn, 12kn with sail assist. *MN for war 1852/53.*

Owner in E.Scotland use ASN as above.

Moir & Co.,Aberdeen *HofC 1861.*

Service Aberdeen to London. *Aberdeen Journal 7/1/1846,28/7/1847*

Notes Departed Greenock 4/7/1844 for Aberdeen. *Edinburgh Evening Courant 6/7/1844.*

Fate ?

Clarence.ID28. **Off.no.** 477 *HofC 1861.*

Built 1836 at Blackwall *HofC 1845* by Green Wigram & Green. *Hawks.*

for London Leith & Edinburgh SS Co., London (in association with GSN?) *Edinburgh & Leith PO Directory. 1837-38. Rig ?*

net ton 426 **gross ton** 766 **len.** 178' **b.** 27' *HofC 1851* **depth of hold** 17.5' *HofC 1861* **draught** 11'3" *HofC 1845*, load draught fore 12', aft 13' *MN for war 1852/53.*

engine 240 hp beam eng. by GSN 1836. Tubular boilers. 130 ton fuel for 4 1/2 days at 30 ton per day. 9kn, 12kn with sail assist. *MN for war 1852/53.*

Owner in E.Scotland use LL&ESS (with GSN ?) as above.

GSN Edinburgh Evening Courant 1/1/1838.

Service Newhaven to London with mail. *Edinburgh Evening Courant 1/1/1838.*

London to Leith. *Lloyds 1842, 1844, 1847, 1850.*

Granton to London *Scotsman 6/11/1839, 12/10/1842, 13/1/1849.*

London to Leith. *MN for war 1852/53.*

Notes London reg. 25/10/1836, len. (oa?)188'6", b. (oa)29'. Suitable for carrying guns & troops & defensive armament.. *MN for war 1852/53.*

Pictures. *Parker & Bowen.*

Fate ?

Colchester. ID194.

Off.no ?

Built ? at ? by ? for ? Rig ?

net ton ? gross ton ? len. ? b. ? depth of hold ? draught ?

engine ?

Owner in E.Scotland use ?

Service Leith to Berwick. *Scotsman 23/3/1842.*

Fate ?

Comet. ID29.

Off.no. n/a

Built 1812 at Port Glasgow by John Wood for Henry Bell Osborne

Rig sloop - funnel used as mast *Spratt*

net ton 28 *Cleland* **gross ton ? len.** 42' **b.** 11'6" [*Cleland*] **depth of hold ?**

draught 5'6" *Inst. Eng.&Shipbuilders in Scotland, 1881.*

Altered 1819 lengthened to 73' 10", on beach at Helensburgh, re-engined.

Osborne.

len. 73' 10", b. 11' 6", depth 7' *BT107/403 Greenock 1820/6 (Hawks).*

engine 3hp eng. by John Robertson, cyl. dia. 11", stroke 16", crank below cycl., flywheel, 2 pairs paddle wheels 7' dia., spur wheel 3' 6" dia. *Inst.*

Eng.&Shipbuilders in Scotland, 1881.

Part of this engine in Science Museum, London. Boiler by David Napier, Camlachie Foundry *Osborne.*

New eng. with one pair wheels. *Inst. Eng. & Shipbuilders in Scotland, 1881.*

14hp *Cleland*

Owner in E.Scotland use H. Bell & others, Reg. Port Glasgow 1813/9, Re-reg. Greenock 1820, *BT107/403 Greenock 1820/6 (Hawks).*

Service Excursion Bo'ness to Leith reported Edinburgh Evening Courant 24/5/1813. *Osborne.*

1816 to 1818 Grangemouth to Newhaven. *Osborne.*

Notes Launched Jan. 1812, keel 38', draught 5'. *Cleland.*

Master William MacKenzie, 4 crew *Osborne.*

Mentioned. *HofC 1822 Rep.roads Holyhead to London.*

Built 1811-1812, 40' keel, b. 11', lengthened to 60' and new engine with one pair wheels *Inst. Eng. & Shipbuilders in Scotland, 1881.*

In service Glasgow to Fort William, 7/12/1820 struck a rock at Sallachan Point, near Corran, and beached for repair. *Osborne.*

Fate 15/12/1820 under Capt. Robert Bain, running south, struck rocks at Craignish Point and total wreck. Various salvage efforts including engine, parts of which may have been used in *Comet II. Osborne.*

Comet II. ID203. **Off.no.** n/a

Built 1821 at Dumbarton by J. Lang for Comet SB Co, Glasgow *Osborne*

Rig ?

net ton 94 **gross ton** ? **len.** ? **b.** ? **depth of hold** ? **draught** ?

engine 25 hp by D. McArthur *Hawks*

Owner in E.Scotland use Comet SB Co., Glasgow.

Service Glasgow Inverness.

Notes Capt. Robert Bain, previously of *Comet*.

Fate Capt Duncan McInnes, run down and sunk 25/10/1825 off Gourock by steamer *Ayr*. Over 60 dead. Salvage. *Osborne*.

Comet.ID30. **Off.no.** 7855 *CE57/11/2 Leith 1852/15*.

Built 1834 at Rotherhythe by Evans *Hawks* for ?, London reg. 1835/400 **Rig**
sloop

net ton 100 2154/3500 **gross ton** 168 **len.** 135.8' **b.** 16.6' **depth of hold**
9'. **draught** ?

engine ?

eng. room 41.6', 67 916/3500 ton. *CE57/11/2 Leith 1852/15*.

Owner in E.Scotland use 3/8/1848 sold to Edinburgh & Northern Rly
Brodie.

1/8/1849 owners become Edinburgh Perth & Dundee Rly.

1850 to Tay ferry.

26/3/1852 sold to J&M Anderson, off service 1854. *Brodie*.

Service Granton to Burntisland. *Brodie*.

Fate ?

Commodore.ID204. **Off.no.** n/a

Built 1824 at Port Glasgow by J. Wood for J.McLeod, Glasgow **Rig** ?

net ton ? **gross ton** ? **len.** ? **b.** ? **depth of hold** ? **draught** ?

engine ?

Owner in E. Scotland use J.Mcleod as above.

Service Glasgow Inverness

Fate Scrapped 1836. *Hawks*.

Cornubia.ID31. **Off.no.** n/a

Built 1832 at Greenock by J.Scott & Sons for Plymouth, Falmouth &
Penzance SP Co. *Greenwood & Hawks*. **Rig** ?

net ton 94 *Lloyds 1836* **gross ton** ? **len.** 108.3' **b.** 17.6' *HofC 1845* **depth of hold** ? **draught** ?

Altered 1849 Converted to sail, schooner, len. 101', b. 15'9" *Greenwood & Hawks.*

engine 80hp *HofC 1845.*

New owner 1834, St George SP Co. having been chartered previously. *Greenwood & Hawks.*

Pimm & Co, Plymouth *Lloyds 1836.*

St George SP Co. *Aberdeen Journal 13/12/1837,10/1/1838*

1840 Joseph Robinson Pim, London. *Greenwood & Hawks.*

1841 J.P.Robinson, London. *Greenwood & Hawks.*

1849 as sail, J.Paddon, Sydney. *Greenwood & Hawks.*

Owner in E.Scotland use St George SP Co. as above.

Service Aberdeen to Leith. *Aberdeen Journal 13/12/1837,10/1/1838.*

27/1/1838 Leith to Hull. *Edinburgh Evening Courant 20/1/1838.*

Notes Capt. T.Ward, owner Pimm,Plymouth, Hull to Dunkirk. *Lloyds 1839.*

Owner - St George SP Co. Capt. Thomas Search. *Aberdeen Journal 13/12/1837,10/1/1838.*

Mentioned as Lloyds reg. *1839 SV acc.*

Fate Lost, as sailing vessel Australia 1852. *Greenwood & Hawks.*

Countess.ID32.

Off.no. n/a

Built during 1830s? **at** ? **by** ? **for** Subscribers to Alloa Ferry *Brodie Rig* ?

net ton ? **gross ton** ? **len.** ? **b.** ? **depth of hold** ? **draught** ?

engine ?

Owner in E.Scotland use Subscribers to Alloa Ferry as above.

1845 sold to Edinburgh & Glasgow Rly. *Brodie.*

Service Alloa ferry. *Brodie.*

Fate 7/1852 sunk Alloa *Brodie.*

Countess of Lonsdale ID33. **Off.no.** 357 *HofC*1861.

Built 1836 at Blackwall by Green Wigram & Green [*MN for war 1852/53*]
for General Steam Navigation Co. *HofC* 1851.

Rig ?

net ton 398 **gross ton** 677 *HofC* 1851. **len.** 174' **b.** 24.7' **depth of hold**
17.4' [*HofC* 1861] **draught** 11'9". *HofC* 1845.

engine 200hp beam eng. by GSN 1836. Flue boilers. 98 ton fuel for 4 days at
24 ton per day. 9kn. 10kn with sail assist. *MN for war 1852/53*.

Owner in E.Scotland use GSN as above.

Service Leith to London. *Edinburgh Evening Courant* 25/1/1838.

Notes Capt. Stranach, London to Hamburg. *Lloyds* 1844, 1847.

London reg. 6/12/1836 *HofC* 1851.

London to Hamburg. **len.** (oa?)183', **b.** 27'(oa?), 397 ton net, 676 ton gross,
load draught f. 11', a. 11'. Not suitable for carrying carriage guns, but can
carry troops and defensive armament. *MN for war 1852/53*.

Fate ?

Courier.ID34

Off.no.?

IRON

Built 1850 at Glasgow by Thomas Wingate & Co. for Thomas Barclay &
Robert Cook, Leith

Rig 2 mast schooner, iron, paddle, round stern, 1 & 1/4 deck

net ton 245.47 **gross ton** 373 [*HofC* 1851] **len.** 175.8' **b.** 21.8' **depth of**
hold 12.1' **draught** ?

engine ? eng. room 44.7'=127.6 ton *BT107/457 Leith* 1850/17.

Owner in E.Scotland use T. Barclay as above.

Service ?

Notes master Richard Rayner, re-reg Hull 42, 10/10/1857. *BT107/457 Leith*
1850/17.

Fate ?

Cyclops.ID35.

Off.no. ?

Built 1825 at Glasgow(?) by Wilson for Forth & Clyde Navigation Co.

Rig horse drawn passage boat

net ton 34 **gross ton** ? **len.** 68' **b.** ? **depth of hold** ? **draught** ?

Alteration 1830 rebuilt as steamer by J.Nielsen, Hamilton Hill(?). 34 ton, 68' x 14'9" x 6'11" *Hawks*.

engine 14hp *Parker & Bowen*.

1830 fitted with engine and stern wheel.

Owner in E.Scotland use F&CN Co as above. *BT107/419 Glasgow 1830/31 Hawks*.

Service Glasgow to Grangemouth and Alloa. *Parker & Bowen*.

Notes Laid up 1827. *Hawks*.

General arrangement drawings. *Parker & Bowen*.

Fate Broken up 7/8/1837 *BT107/419 Glasgow 1830/31 Hawks*.

Dee.ID36.

Off.no. ?

IRON

Built Nov 1846 at Aberdeen by Wm Simpson & A. Hall for Aberdeen Leith & Clyde S.Co. **Rig** schooner, iron,

net ton 97 2/3 **gross ton** ? **len.** 60.1' **b.** 18.5' **depth of hold** 10.5' **draught** ?

engine ?

Owner in E.Scotland use AL&CS as above.

Service "For Forth & Clyde Canal trade"

Notes Reg. Aberdeen *Aberdeen Journal* 4/11/1846, 9/6/1852.

Fate ?

Dorothy.ID37.

Off.no. ?

Built 1839 at Shields by Taylor & Bulmer [*Hawks*] for ? **Rig** ?

net ton 20 **gross ton** 69 [*HofC 1851*] **len.** 66.4' **b.** 15.2' **depth of hold** ?

draught 6'

engine 35 hp *HofC 1845*.

Owner in E.Scotland use J.Robinson, Aberdeen *HofC 1851, 1852*.

Service Aberdeen tug *HofC 1851, 1852. 1843 Com. S'wrecks*.

Notes Tug. Sunk off Ythan 3/9/1841. *1843 Com. S'wrecks*. (assume been salvaged & repaired).

Reg. Aberdeen 20/5/1843 *HofC 1851,1852.*

Fate ?

Duchess of Sutherland ID38. **Off.no. ?**

Built 1836 at *Dunglass 1839 SV acc.* by Wood & Mills for Moray Firth & London SP Co., Aberdeen. **Rig** schooner

net ton 328 **gross ton** 574 **len.** 151' **b.** 24.8' **depth of hold** 17' *Aberdeen Journal 8/11/1837.* **draught** 12' *HofC1845.*

Altered 462 ton, 250 hp, len 180'8", breadth 25'1", draught 12'. Aberdeen reg. *HofC 1845.*

engine 2 eng by Robert Napier 230 hp. 56" dia x 5' stroke. *Aberdeen Journal 8/11/1837.*

eng. room = 246 ton *Edinburgh Evening Courant 8/1/1838.*

Owner in E.Scotland use MF&LSP Co. as above.

SP Co, Inverness *Lloyds 1839, 1841.*

Service London to Inverness. *Lloyds 1839, 1841.*

Aberdeen to London *Times 14/4/1842.*

Notes 27'4" between paddles. 78 berths. Moray Firth & London SP Co. shareholders meeting in Inverness 3/11/1837 decide to "keep her in the trade". *Aberdeen Journal 8/11/1837.*

For sale, at Inverness, *Aberdeen Journal 13/12/1837.*

For auction, coppered & copper fastened, b. between paddles 27'4", 78 berths, wcs, large holds, lying Inverness. Owner (now dissolved) Moray Firth & London SP Co. *Edinburgh Evening Courant 8/1/1838.*

Mention *1839 SV acc.*

Capt. Strachan *Lloyds 1839, 1840.*

Aberdeen to London, grounded on Maplin Sand 11/4/1842. *Times 14/4/1842.*

Capt Cargill, towed off by 2 tugs. *Times 15/4/1842.*

Fate ?

Duke of Richmond.ID39.

Off.no. 18506 *HofC*1860.

Built 1838 *Aberdeen Journal* 27/6/1838.at Port Glasgow by John & Charles Wood *INA* 1861. **for** ? Aberdeen reg. **Rig** schooner 1839 *SV acc.*

net ton 321 **gross ton** 508 **len.** 164.7' **b.** 21.8' *HofC* 1851,1852. **depth of hold** ? **draught** 10'6"

engine 220 hp *HofC* 1845.

240hp. *INA* 1861.

Owner in E. Scotland use ? Aberdeen as above.

Aberdeen Leith & Clyde S Co., Aberdeen, from 17/3/1843 *HofC* 1851,1852.

Service Inverness to London. *Aberdeen Journal* 27/6/1838.

16/10/1838 Newhaven to Inverness. *Edinburgh Evening Courant* 11/10/1838.

Newhaven to Inverness,Cromarty, Invergordon.*Scotsman* 10/11/1838.

Leith to Aberdeen & Aberdeen to Lerwick. *Aberdeen Journal* 2/1/1839.

Granton to Aberdeen. *Edinburgh Evening Courant* 1/2/1844.

Granton to Inverness *Scotsman* 26/2/1842,7/3/1849.

Notes Large cargo capacity, livestock, carriages. Cargo loaded in Leith harbour. Capt. William Campbell. *Edinburgh Evening Courant* 11/10/1838.

Capt Campbell jnr *Scotsman* 16/5/1849

Fate Capt. Hugh Geddes, stranded & lost Blackdog beach 8/10/1859. 1st mate Robert Smart failed to call master when unsure of position. Smart's certificate suspended for 6 months. *Scotsman* 10/10/1859,

11/10/1859.*HofC*1860. also *Ferguson*.

Duke of Sutherland.ID40

Off.no.n/a

IRON

Built 1847 at Glasgow by R.Napier **for** Aberdeen SN Co. **Rig** 3 mast schooner, iron clench, , 1 & 1/4 deck, square stern, man f'head

net ton 514.51 *BT*107/451 *Aberdeen* 1847/10 **gross ton** 804 *HofC*

1851,1852. **len.** 197.9' **b.** 26.2' **depth of hold** 17.5' *BT*107/451 *Aberdeen* 1847/10 **draught** load fore 12', aft 13' *MN for war* 1852/53.

engine 350hp beam eng. by Napier 1847, flue boilers, 156 ton fuel for 5 1/2 days at 36 ton per day, 10 1/2kn, 11 1/2kn with sail assist. *MN for war 1852/53.*

eng. room 58.2'=288.79 ton *BT107/451 Aberdeen 1847/10.*

Owner in E.Scotland use ASN as above.

Service London to Aberdeen *MN for war 1852/53.*

Notes Master, James Anderson. *BT107/451 Aberdeen 1847/10.*

Aberdeen reg. 31/3/1847 *HofC1851.*

Fate Wrecked Aberdeen pierhead 1/4/1853. *Scotsman 6/4/1853* also *Ferguson.*

Duke of Wellington.ID41. **Off.no.** n/a?

Built 1829 at Aberdeen *BT107 Aberdeen 1836/132* by John Duffus. *Duffus list. for ? Rig* 3 mast schooner, square stern, carvel, 1 & poop deck, man bust f'head.

net ton 335 1/94 ton **gross ton** ? **len.** 154' **b.** 27' 10" **depth of hold** 18' 6" *BT107 Aberdeen 1836/132. draught* 13'

engine 200 hp *HofC 1845.*

Owner in E.Scotland use ?, Aberdeen reg 20, 8/6/1829 *BT107 Aberdeen 1836/132.*

Aberdeen Steam Navigation, Aberdeen *BT107 Aberdeen 1836/132.*

Harbour Trustees of Aberdeen *HofC 1851.*

Service Aberdeen to London. *Lloyds 1839, 1841, 1842, 1844.*

Notes Master, John Walker *BT107 Aberdeen 1836/132.*

Capt. Guthrie *Lloyds 1839, 1841, 1842, 1844.*

Diary of voyage Aberdeen to London 10/9/1831. *Diary of Mrs Cotton, Univ. of St Andrews Ms DA865 C7.*

Mention *1839 SV acc.*

Aberdeen Journal 11/1/1837

Fate Vessel broken up 29/1/1851. *BT107 Aberdeen 1836/132.*

Dumbarton.ID42

Off.no.n/a

Built 1820 at Dumbarton by W.Denny[*BT107/415 Port Glasgow 1826/13 (Hawks).*]for ?

Rig 1 mast not rigged, 1 deck, female bust f^r head *Dundee Reg. 1835/23.*

2 mast schooner, square stern, carvel, 1 deck *BT107/433 Leith 1837/14.*

net ton 50 65/94 *BT107/433 Leith 1837/14.* **gross ton** 71 *HofC 1851.*

len. 83'6" **b.** 14'1" **depth of hold** 7'9" *Dundee Reg. 1835/23.* **draught** 5' *HofC 1845.*

Altered len. 81.3', b. 13.2', depth 7.9' *BT107/433 Leith 1837/14.*

45 ton net, 71 ton gross. *HofC 1851.*

engine 45 hp *HofC 1845.*

New owner 1826 Port Glasgow, Dumbarton Steamboat Co *BT107/415 Port Glasgow 1826/13 (Hawks).*

Reg. Glasgow 1833/39 *Dundee Reg. 1835/23.*

Owner in E.Scotland use, William Hutton 17/6/1835, Dundee

William Blair McKeen, Leith, 4/1/1836 *Dundee Reg. 1835/23.*

W.B. McKean, Leith ,5/4/1836 *BT107/430 Leith 1836/41. (Hawks).*

Forth Steam Towing Co, Leith 6/12/1837 *BT107/433 Leith 1837/14.*

Service Presumed tug, 1835-1836 at Dundee, 1836-1852 at Leith.

Notes William Hutton (owner) master *Dundee Reg. 1835/23.*

Shares consigned for debt to Thomas Allan, Leith 28/10/1835. *Dundee Reg. 1835/23.*

5/1/1836 John Harvey now master, re-reg. Leith 5/4/1836. *Dundee Reg. 1835/23.*

Edward Crone, master *BT107/433 Leith 1837/14.*

Mention *1839 SV acc.*

Run down and sunk off Culross 19/8/1841. *1843 Comm shipwrecks.*

Fate Vessel broken up May 1852, *BT107/433 Leith 1837/14.*

Dumbarton Castle.ID43.

Off.no. n/a?

Built 1815 at Dumbarton *BT107/414 Glasgow 1826/85.* by Arch.

McLachlan *Cleland*, or J. Lang *Hawks.* for ?

Rig 2 mast schooner, square stern, carvel, 1 & 1/4 deck

net ton 81 69/94 *BT107/414 Glasgow 1826/85*. **gross ton** 108 *Cleland*.

len. 107'6" **b.** 16'10" **depth of hold** 8'7" *BT107/414 Glasgow 1826/85*.

draught 4'6" *Cleland*.

Altered Lost 1829, repaired & re-reg 9/11/1830 (as sail) no. 34. *BT107/414 Glasgow 1826/85*.

engine 30hp by Duncan McArthur & Co., Camlachie. *Cleland*.

Owner in E.Scotland use John Wilson & others *BT107/414 Glasgow 1826/85*.

Service In 1820 Grangemouth to Leith. *Cleland*.

Trinity Pier to Largo. *Aberdeen Journal* 17/12/1821

From 24/12/1821 Trinity to Largo. *Edinburgh Evening Courant* 20/12/1821.

Notes Launched Feb. 1815, keel 84', beam 16'8" *Cleland*.

Glasgow to Inverary. *Edinburgh Evening Courant* 11/9/1817.

First steamer to travel to Rothesay, Capt. Johnston, *Eng. & Shipbuilders Scotland 1881*.

21/8/1822 on passage Newhaven to Grangemouth in fog with 300 passengers, struck rock off Granton. No casualties. *Edinburgh Evening Courant* 29/8/1822.

Ezekeil McHaffie, master *BT107/414 Glasgow 1826/85*.

Fate Sunk 1829 & raised & converted to sail 1830.

Dumbarton Youth. ID44. **Off.no.** 9246 *HofC1861* IRON, SCREW

Built 1847 at Dumbarton by Denny Bros. for John Colquhoun, William Whyte & Robert Colquhoun, Port Glasgow **Rig** 3 mast schooner, iron, square stern, 1 & 1/4 deck

net ton 186.71 *BT107/452 Port Glasgow 1847/14*. **gross ton** 236

len. 122.6' **b.** 20.8' **depth of hold** 11.9' *BT107/452 Port Glasgow 1847/14*.

draught ?

engine 34hp *HofC1861*.

eng. room 20' = 52.03 ton *BT107/452 Port Glasgow 1847/14*.

New owner ?, Liverpool, 21/12/1850 *BT107/452 Port Glasgow 1847/14*.

1853, J.O.Lever, Liverpool. *HofC 1861*.

Owner in E.Scotland use Colquhoun etc as above?

1848 Leith & Hull SP, Leith *Pearson*.

Colquhoun & Horsfall, Port Glasgow *Lloyds 1850*.

1848 Hull to Leith. Leith reg. owner Leith & Hull SP. *Pearson*.

Service 1848 Leith to Hull *Pearson*.

1850 Leith to Mediterranean. *Lloyds 1850*.

Notes. Could have been on charter to Leith & Hull SP?

Fate ?

Dundalk. ID45.

Off.no. 17017 *HofC 1861*

IRON

Built 1844 at ? by ? for North of Scotland SP? **Rig ?**

net ton 286 **gross ton** 552 **len.** 179' **b.** 26.1' **depth of hold** 15.4' *HofC 1861*.

draught ?

engine 250hp *HofC 1861*.

Owner in E.Scotland use 1844 North of Scotland SP ?

London Leith Edinburgh & Glasgow. *Scotsman 21/1/1852*.

1858 Joseph Falconer, Leith *HofC 1861*.

Service Aberdeen - Inverness 1844?

Granton to London *Scotsman 21/1/1852*.

Fate ?

Dundee. ID46.

Off.no. 7154 *HofC 1861*

Built 1834 at Port Glasgow by John Wood for Dundee Perth & London Sh. Co., reg 26/2/1834 Dundee **Rig** 3 mast schooner, square stern, carvel, 2 & 1/4 decks

net ton 399 17/94 *Dundee Reg. 1834/7*. **gross ton** 639 *HofC1851*.

len. 157'7" **b.** 28' 1 1/2" **depth of hold** 18'3" . *Dundee Reg. 1834/7*.

draught fore 13'6", aft 14' *MN for war 1852/53*.

Altered len. 167'7", b. 28' 1 1/2" *HofC 1845*.

len. 160'7", b. 25'7" *MN for war 1852/53*. (could be clerical errors for 167'7", 28' 1 1/2" per sister ship *Perth*).

engine 300hp beam eng. by Napier 1834, tubular boilers, 120 ton fuel for 5 days at 24 ton per day, 11kn, 12kn with sail assist. *MN for war 1852/53.*

Owner in E.Scotland use DP&L as above.

Service Dundee to London *Scotsman* 3/1/1835.

Dundee to London *MN for war 1852/53.*

Notes John Wishart, master *Dundee Reg. 1834/7.*

14/3/1837 James Kidd now master, 24/10/1838 John Spink now master,

6/11/1838 James Kidd now master. Re-reg. 31, 26/1/1845. *Dundee Reg. 1834/7.*

Found Prussian brig *Frederick* of Liebau in distress off Tees & towed her to Dundee. *Edinburgh Evening Courant* 5/3/1838.

Ship rig. 1839 *SV acc.*

Deck fit for carrying guns, has forecastle & poop & not suitable for pivot guns. *MN for war 1852/53.*

11/1864 sold to France, re-named *Nettono*. Served as cattle boat genoa to Alexandria. *Sommer.*

Sold to foreigners 15/1/1864. *CE70/11/17 & CE70/11/7 Dundee 1845/31.*

Accommodation plan. *McManus Galleries, Dundee.*

Fate ?

Earl of Aberdeen.ID47 **Off.no.** 6837 *HofC1861* IRON

Built 1847 at Govan by R.Napier for Aberdeen SN Co.,Aberdeen **Rig** 3

mast schooner, iron clench,1 & break deck, man f'head

net ton 594.67 *BT107/451 Aberdeen 1847/38.* **gross ton** 907 *MN for war 1852/53.* **len.** 207.9' **b.** 27' **depth of hold** 17.8' *BT107/451 Aberdeen 1847/38.* **draught** load fore 12', aft 13' *MN for war 1852/53.*

engine 375hp beam eng. by Napier 1847, flue boilers, 160 ton fuel for 4 1/2 days at 36 ton per day, 10 1/2kn, 11 1/2kn with sail assist. *MN for war 1852/53.*

eng. room 60.1'=312.59 ton, *BT107/451 Aberdeen 1847/38.*

New owner ?, London1863/130. *BT107/451 Aberdeen 1847/38.*

Owner in E.Scotland use ASN as above.

Moir & Co., Aberdeen. *HofC*1861.

Service London to Aberdeen *MN for war* 1852/53.

Notes Mention *HofC* 1851,1852.

Daniel Mearas, master *BT107/451 Aberdeen* 1847/38.

Fate ?

Earl of Kellie.ID48.

Off.no.?

Built 1826 at Leith by Sime & Rankin for Forth Ferry Trustees **Rig** 2 masts schooner, square stern, carvel, 1 deck.

net ton 94 80/94 *BT107 Kirkcaldy* 1826/31. **gross ton** ? **len.** 96'8" **b.** 20'

depth of hold 10'6" *BT107 Kirkcaldy* 1826/31. **draught** ?

engine ?

Owner in E.Scotland use Forth Ferry Trustees, Kirkcaldy as above.

1829 Kirkcaldy reg. *HofC* 1829.

1831 Fife & Midlothian Ferries *Ballingall*.

Service Newhaven to Pettycur, Kirkcaldy *Brodie*.

Notes Fitted with strengthening bilge pieces. *Ballingall*.

James Hume, master *BT107 Kirkcaldy* 1826/31.

Re-reg 6/7/1834 no 5, Kirkcaldy. *BT107 Kirkcaldy* 1826/31.

Reg. Kirkcaldy. 1839 *SV acc*.

Capt. J.Hume. *Lloyds* 1836.

Fate 21/9/1849 wrecked on coast of Sweden. *Brodie*.

Earl of Rossllyn.ID49.

Off.no.n/a

IRON

Built 1847 at Govan by Smith & Rodger for Edinburgh & Dundee SP Co (Andrew Greig & others) **Rig** 2 mast schooner, square stern, iron

net ton 129.77 **gross ton** ? **len.** 141.7' **b.** 17' **depth of hold** 9' **draught** ?

engine ?

eng. room 36.9' *BT107/452 Leith* 1847/20.

Owner in E.Scotland use E&D SP as above.

Service Leith to Dundee. *Brodie*.

Notes Sold 8/6/1849 to Meckleburg SP Co, Weimar. *BT107/452 Leith 1847/20.*

Fate ?

Eclipse.ID50.

Off.no.?

Built 1836 at Shields *Lloyds 1839* by Woodhouse *Hawks*. for ? Rig ?
net ton 69 *Lloyds 1839*. gross ton ? len. ? b. ? depth of hold ? draught ?
engine ?

Owner in E.Scotland use Leith & Newcastle Steam Co. *Edinburgh Evening Courant 10/5/1838.*

Mitcalf & Co, reg. Newcastle. *Lloyds 1839.*

Service Chain Pier Newhaven to Newcastle. *Edinburgh Evening Courant 10/5/1838.*

Newcastle to Leith. *Lloyds 1839.*

Hull - Leith - Dundee. *Brodie.*

Notes Capt. Walker, *Edinburgh Evening Courant 10/5/1838.*

Capt. G. Jappin, *Lloyds 1839.*

Shields to Hull. *Lloyds 1844.*

Capt. Christie, Newcastle coastal. *Lloyds 1847.*

Fate ?

Edinburgh Castle.ID51.

Off.no.?

Built 1821 at Port Glasgow by John & Charles Wood for Trustees of Forth
Ferries Rig 2 masts schooner, square stern, 1 & poop deck, carvel,
net ton 94 55/94 *BT107 Leith 1821/19.* gross ton 148 *HofC 1822.* len. 90'
b. 18' 10" depth of hold 10' 10" *BT107 Leith 1821/19.* draught 8' *HofC 1845.*

Altered len. 86', breadth 17.4' *HofC 1845.*

53 1899/3500 ton net, len. 86', b. 17.4', depth 10.3' *BT107/452 Kirkcaldy 1847/13.*

Converted to sail 3/5/1854 *BT107/399 Jersey 1854/19.*

engine 2x20 hp eng by Cook. *HofC 1822.*

52 hp *HofC* 1845.

eng. room 33⁷=63 ton *BT107/452 Kirkcaldy* 1847/13.

Owner in E.Scotland use Trustees of Forth Ferries, Leith as above.

Ferries between Leith, Newhaven Burtisland & Pettycur, Kinghorn *BT107 Kirkcaldy* 1826/4.

Fife & Midlothian Ferry Trustees, Kirkcaldy *Lloyds* 1841,1842.

Kirkcaldy Leith & Newhaven Ferry Steamboat Co. *BT107/452 Kirkcaldy* 1847/13.

T.Ness *BT107/456 Leith* 1849/12.

Service Newhaven to Kinghorn. *HofC* 1822.

Newhaven to Kirkcaldy. *Edinburgh Evening Courant* 12/11/1838.

Notes James Hume, master *BT107 Leith* 1821/19.

James Hume, master *BT107 Kirkcaldy* 1826/4.

Kirkcaldy reg. *HofC* 1829.

Capt. J. Walters. *Lloyds* 1836,1841,1842.

Kirkcaldy reg. *HofC* 1845.

Samuel Barker, master *BT107/452 Kirkcaldy* 1847/13.

reg. Kirkcaldy. 1839 *SV acc.*

re-reg. 20/6/1841 no. 9. *BT107 Kirkcaldy* 1826/4.

re-reg Leith 12, 21/5/1849. *BT107/452 Kirkcaldy* 1847/13.

6/11/1849 sold Jersey SN Co. *BT107/394 Jersey* 1849/58.

Fate Broken up 17/11/1853 *BT107/399 Jersey* 1854/19.

Enterprise.ID52.

Off.no.?

Built 1839 at Dundee by Borrie *Hawks*. for Peter Borrie? **Rig** ?

net ton 146 **gross ton** ? **len.** ? **b.** ? **depth of hold** ? **draught** ?

engine ?

Owner in E.Scotland use Peter Borrie, Dundee *Dundee Dir.* 1840.1842.

Service Dundee, possible tug?

Notes Capt. Easson. *Dundee Dir.* 1840,1842.

Fate ?

Erin.ID53

Off.no.n/a

Built 1826 at Greenock by W. Simons & Co. for Dublin & Glasgow SP Co.
Greenwood & Hawks. **Rig** ?

net ton 207 **gross ton** ? **len.** 132' **b.** 22'1" **depth of hold** ? **draught** ?
engine ?

New owner 1834 St George SP Co., Dublin *Greenwood & Hawks*.
1845 J. Redmond, Dublin *Greenwood & Hawks*.

Owner in E.Scotland use St George SP Co. *Pearson*

Service Early part of 1842 Hull to Dundee, *Pearson*.

Fate 1851 broken up. *Greenwood & Hawks*.

Express.ID54.Off.no.15776 *HofC1861*

IRON

Built 1848 *HofC1861* at Blackwall by Miller & Ravenshill *Brodie* for ?
Rig ?

net ton 169 **gross ton** 269 **len.** 153' **b.** 24.1' **depth of hold** 9.8' *HofC 1861*.
draught ?

engine 120hp *HofC 1861*.

Owner in E.Scotland use Edinburgh Perth & Dundee Railway. *Fifeshire*
Journal 20/8/1850.

Service Granton to Burntisland. *Fifeshire Journal* 20/8/1850

Notes reg. Leith 1856, owner Edinburgh Perth & Dundee Rly, iron. *HofC*
1861.

Fate Broken up 1878 *Brodie*.

Fair Trader.ID55.

Off.no.n/a

IRON

Built 1848 at Glasgow by Smith Rodger for Edinburgh & Dundee SP Co.,

Leith **Rig** 2 mast schooner, iron, 1 deck, square stern, woman bust f^r head

net ton 76.35 **gross ton** 131.97 **len.** 147' **b.** 16.2' **depth of hold** 7.5'

BT107/454 Leith 1848/15. **draught** ?

engine eng. room 42.3' = 55.62 ton *BT107/454 Leith 1848/15*.

Owner in E.Scotland use Edinburgh & Dundee SP Co., Leith as above.

Service Chain Pier to Kirkcaldy, Largo *Scotsman* 29/8/1849.

Notes Frederick Meekson, master. *BT107/454 Leith 1848/15.*

19/6/1850 Charles Philip appointed Judicial Factor of Co., 30/6/1850 reg. cancelled, sold to Copenhagen. *BT107/454 Leith 1848/15.*

Sold to Hans Peter Prior, Copenhagen. *CE57/11/2 Leith 1848/15.*

Fate ?

Forfarshire.ID56.

Off.no.n/a

Built 1836 at Dundee by Thomas Adamson for Dundee & Hull SP Co., Dundee. **Rig** 2 mast fore & aft rig (schooner), 1 & 1/4 deck, square stern, carvel, female f head.

net ton 192.23 **gross ton** 365.53 **len.** 132.4' **b.** 20.4' **depth of hold** 14.9'

BT107/428 Dundee 1836/95. **draught ?**

engine 180hp *Edinburgh Evening Courant 17/9/1838.*

eng. room 52.6'=173.3 ton *BT107/428 Dundee 1836/95.*

Sheet iron bunkers. Boilers made by Borrie. Fitted with engine indicator diagram gear. *Edinburgh Evening Courant 22/9/1838.*

Owner in E.Scotland use Dundee & Hull SP Co. as above.

Service Dundee to Hull *Edinburgh Evening Courant 10/9/1838.*

Notes James Kidd, master.

11/3/1837, master now James Moncrieff. 9/5/1838, master now James Duncan. 15/5/1838, master now John Humble. *BT107/428 Dundee 1836/95.*

Painting, *Ferens Gallery, Hull.*

Rudder pintles, crockery, accommodation plan, *Grace Darling Museum, Bamborough.*

Fate 7/9/1838 Wreck, Big Harcar, Farne Islands on passage Hull to Dundee.

Edinburgh Evening Courant 10/9/1838. also per Lloyds List 13/9/1838.

BT107/428 Dundee 1836/95.

40' of wreck lying on Harkars Rock in 8 or 10 fathom from paddle wheels forward right through main hatchway. Boilers in fragments. Cargo new boiler plates. Anchors & some stores removed to North Sunderland. Part of wreck lying a little south of rock. *Edinburgh Evening Courant 17/9/1838.*

Further reports. *Scotsman* 15/9/1838, 22/9/1838. *Aberdeen Journal* 19/9/1838. 1839 *SV acc.*

Forth.ID57. **Off.no.** n/a

Built 1837 at Alloa by John Duncanson for Alloa & Stirling Steamboat Co.,

Alloa **Rig** 1 mast not rigged, 1 deck

net ton 74 2959/3500 **gross ton** 121 **len.** 105.1' **b.** 15.5' **depth of hold** 8.5'

BT107/432 Grangemouth 1837/11. **draught** ?

engine ?

eng. room 33,9'=46 2320/3500 ton *BT107/432 Grangemouth 1837/11.*

New owner 1842 St Petersburg. *Brodie.*

Owner in E.Scotland use Alloa & Stirling SB Co. as above.

re-reg. 9, Grangemouth 18/6/1841. *BT107/432 Grangemouth 1837/11.*

Service Stirling to Newhaven in Sept. 1838 *Central Region Archives*

B66/25/777/7.

Notes David Gentle, master *BT107/432 Grangemouth 1837/11.*

Mention 1839 *SV acc.*

1842 sold St Petersburg. *Brodie.*

Fate ?

Forth.ID58. **Off.no.** 15779 *HofC 1861.* **IRON**

Built 1846 *HofC 1861.* at Hawarden by Hawarden Iron Co. for John

Gladstone *Brodie.* **Rig** ?, iron *HofC 1861.*

net ton 106 **gross ton** 209 **len.** 144.4' **b.** 26.9' **depth of hold** 10.4' *HofC*

1861. **draught** ?

Altered 1847 new boiler, 1853 new boiler, 1858 saloon fitted, 1868 new boiler. *Brodie.*

engine 120hp *HofC 1861.*

Owner in E.Scotland use sold 2/1847 to Edinburgh & Northern Rly.,

1/8/1849 owner now Edinburgh Perth & Dundee Rly. *Brodie.*

Reg. Leith 1856 *HofC 1861.*

1862 North British Rly.

17/12/1879 sold S.M.Smart. *Brodie*.

Service Granton to Burntisland. *Brodie*.

Fate Broken up at Leith 21/6/1880. *Brodie*.

Foyle. ID193.

Off.no.?

Built 1829 at Dumbarton by ? for ? **Rig** schooner

net ton 136 *1839 SV acc.* **gross ton ? len. ? b. ? depth of hold ? draught ? engine ?**

Owner in E.Scotland use Hull & Leith SP Co. *Scotsman 1/4/1840*.

Service Hull to Leith *Scotsman 1/4/1840*.

Notes Capt Turnbull. *Scotsman 1/4/1840*.

Fate ?

George IV. ID60.

Off.no. n/a

Built 1823 at Perth by James Brown for Tay Ferry Commissioners

Rig double ended ro-ro ferry catamaran with single wheel between hulls.

Hall.

net ton 100 *McManus* **gross ton ? len.** 90' **b.** 29' **depth of hold** 6' 8"

draught 4' 6" light, 5' 4" load *Hall*.

engine By James & Charles Carmichael, Dundee. Remote control from deck.

One engine in each hull, driving central wheel. Hulls 8' apart, wheel 14' dia.,

7' wide, floats immersed 18". *Hall*.

Owner in E.Scotland use Tay Ferry Commissioners as above.

Service Dundee to Newport on Tay. *Hall*.

Notes Not reg., crew 4. *HofC 1830*.

Cost £4,330. *McManus*.

Space 39' x 27' railed off for cattle, folding ramps at each end. Horizontal

wheel steering with helmsman elevated to see over paddle box. *Hall*.

Plan probably of this vessel. *McManus Galleries, Dundee*.

Withdrawn by 1837 (lack of reference in *Dundee Directory?*)

Fate Sold for breaking, 1841. *McManus*.

Glasgow.ID61. **Off.no.?**

Built 1829 at Port Glasgow by ? for ? **Rig** schooner

net ton 136 *1839 SV acc.* **gross ton** ? **len.** ? **b.** ? **depth of hold** ? **draught** ?
engine ?

Owner in E.Scotland use ?

Service Dundee to London, St Katherines. *Edinburgh Evening Courant*
16/7/1832.

Dec 1832 London to Dundee *Nautical Mag.*

Notes Dec 1832 master fined for speeding in Thames. *Nautical Mag.*

Capt. McKellar *Edinburgh Evening Courant* 16/7/1832.

Reg. Dundalk. *1839 SV acc.*

Fate ?

Glenalbyn.ID62. **Off.no.?**

Built 1834 at Greenock *BT107 Glasgow 1835/6.* by Scott & Co. Brodie.

for ?, reg. Glasgow 44, 19/9/1834 **Rig** 2 mast schooner, square stern, carvel,
1 deck *BT107 Glasgow 1835/6.*

net ton 190 **gross ton** 284 *HofC 1851.* **len.** 121'4" **b.** 19'4 1/2" **depth of**
hold 12'7" *BT107 Glasgow 1835/6.* **draught** 9' *HofC 1845.*

Altered len. 145'3", breadth 17'8" *HofC 1845.*

engine 110 hp *HofC 1845.*

New owner West of Scotland Insurance Co. *BT107 Glasgow 1835/6.*

Re-reg 20/6/1837 no. 28. North British SN Co., Glasgow. *BT107/432*
Glasgow 1837/28.

Owner in E.Scotland use Re-reg. Berwick 5, 11/5/1838. *BT107/432*
Glasgow 1837/28.

General Shipping Co.(Berwick?) *Edinburgh Evening Courant* 4/6/1838.

Hull & Leith SP Co. *Scotsman* 5/1/1842.

Leith reg. 5/8/1843, owner T.Barclay & others *HofC 1851.*

Chartered by Edinburgh & Dundee SP Co. for winter. *Edinburgh Evening*
Courant 14/10/1844.

Hull & Leith SP Co. *Edinburgh Evening Courant* 6/1/1844.

Service Leith to Berwick. *Edinburgh Evening Courant* 4/6/1838.

Hull to Leith. *Lloyds* 1841,1842,1844,1847,1850.

Hull to Leith. *Scotsman* 5/1/1842.

Aberdeen to Peterhead. *Aberdeen Journal* 28/7/1847.

Notes Daniel Mathieson, master *BT107 Glasgow* 1835/6.

Capt. David McDonald. *Edinburgh Evening Courant* 4/6/1838.

Capt. James Bagan? *Scotsman* 5/1/1842.

Capt. John Brown *Scotsman* 23/3/1842.

Capt. Alex. Blackwood. *Scotsman* 11/6/1842.

Capt. Blackwood *Lloyds* 1847,1850.

3/12/1848 collision with brig *Fate* at night. 1851 *SV acc.*

Iron? Capt. Gunn *Scotsman* 6/6/1849.

Fate 3/1856 wrecked in mouth of Maas. *Brodie.*

Grangemouth. ID64. Off.no. ?

Built 1818 *Hawks* at ? by ? for ? **Rig** ?

net ton ? **gross ton** ? **len.** ? **b.** ? **depth of hold** ? **draught** ?

engine ?

Owner in E.Scotland use ?

Service Newhaven to Grangemouth *Glasgow Herald* 5/6/1818 per *Hawks*.

Fate ?

Granton. ID65. Off.no.? IRON

Built 1844 at Leith by J.B.Maxton for John Gladstone & Duke of

Buccleuch. **Rig** ? iron.

net ton ? **gross ton** ? **len.** 126' **b.** 20' **depth of hold** 9' **draught** ?

engine ?

Altered 3/1856 engine removed, converted to schooner. *Brodie.*

Owner in E.Scotland use John Gladstone & Duke of Buccleuch as above.

1/1/1847 sold Edinburgh & Northern Rly.

1/8/1849 now Edinburgh Perth & Dundee Rly. *Brodie.*

Fate 7/1886 coal hulk at Leith. *Brodie.*

Hamburg.ID66. **Off.no.**7711 *HofC 1861.* IRON SCREW

Built 1849 *HofC 1861* at Govan by Napier *Hawks.* for ? **Rig ?**

net ton 437 **gross ton** 693 **len.** 210.5' **b.**26' **depth of hold** 16.2' **draught ?**

engine 250hp

Owner in E.Scotland use ?

1860 John Webster & others, Aberdeen reg.*HofC 1861.*

Aberdeen Leith & Clyde S.Co. *Ferguson.*

Service Aberdeen to Kirkwall. *Ferguson.*

Notes 1862, Captain Geddes. *Ferguson.*

Fate 12/10/1862 struck Scotstoun Head in gale,on passage Kirkwall to

Aberdeen & total loss. *Ferguson.*

Harlequin.ID67. **Off.no.?**

Built 1837 at Dundee by Thomas Adamson for Thomas Adamson and Peter

Borrie **Rig** 2 mast schooner, square stern, carvel, 1 & poop deck, male

f'head

net ton 55.2 **gross ton** 93.5 **len.** 83.4' **b.** 13.7' **depth of hold** 8.1'

BT107/432 Dundee 1837/9. **draught** 5.5' *Aberdeen Journal 10/1/1838.*

Altered len. 106.7', breadth 13.7', draught 5' *HofC 1845.*

engine 52 hp *Aberdeen Journal 10/1/1838,30/1/1838.*

eng. room 31.9'=38.3 ton (probably by Peter Borrie)

Owner in E.Scotland use Thomas Adamson and Peter Borrie, Dundee as

above. *BT107/432 Dundee 1837/9.*

Peterhead & Aberdeen SN Co, Aberdeen reg 1838/11. *CE70/11/5 Dundee*

1837/9.

Aberdeen reg. *HofC 1845.*

Service Aberdeen to Peterhead. *Aberdeen Journal 10/1/1838, 21/2/1838.*

Notes James Scott, master *BT107/432 Dundee 1837/9.*

Mention *1839 SV acc.*

For sale at Peterhead. *Aberdeen Journal 11/12/1839.*

Fate ?

Harmony.ID68

Off.no. ?

Built 1838 at Shields *HofC 1845*. **by** Taylor & Bulmer *Hawks*. **for ? Rig ?**
net ton 13 **gross ton ?** **len.** 65'3" **b.** 13'3" **depth of hold ? draught** 4'9"
HofC 1845.

Altered len. 78', 26 ton net, 76 ton gross, *HofC 1851*.

engine 26 hp *HofC 1845*.

Owner in E.Scotland use Grangemouth reg. 4/5/1839, owner W.Cowie & others *HofC 1851*.

Service Grangemouth tug?

Fate ?

Helen McGregor.ID199.

Off.no. ?

Built 1835 at Greenock **by ? for ?**, Glasgow **Rig** sloop
net ton 50 1839 *SV acc.* **gross ton** 70 **len.** ? **b.** ? **depth of hold ? draught ?**
engine by Tod & McGregor, Carrick St, Glasgow, first eng. made by firm,
double crosshead, intermediate shaft of cast iron with cranks set on. *E.&SinS*
1881.

Owner in E.Scotland use ?

Service Glasgow to Inverness via Caledonian Canal *E.&SinS 1881*.

Fate ?

Helen MacGregor.ID69.

Off.no.?

Built 1848 at Middlesborough **by** Jackson [*Hawks*] **for ?** Grangemouth
Rig 1 mast sloop, round stern, 1 deck
net ton 27.2 **gross ton** 83 **len.** 83.8' **b.** 16.2' **depth of hold** 9.3' **draught ?**
engine ?

eng. room 34.7'=56.5 ton *BT107/457 Grangemouth 1850/2*.

New owner Re-reg. Glasgow 17/9/1856. *BT107/457 Grangemouth 1850/2*.

Owner in E.Scotland use reg.Grangemouth 3/6/1848

re-reg 11/2/1850 owner Andrew Cowie & others *BT107/457 Grangemouth*
1850/2.

Service Chain Pier to Kirkcaldy, Dysart, Leven, Largo *Scotsman 3/4/1850*

Notes David Sinclair, master *BT107/457 Grangemouth 1850/2.*

Mention *HofC 1851.*

A.Greig, agent *Scotsman 3/4/1850.*

Fate ?

Hercules.ID70 **Off.no.**41471 *Sommer.*

Built 1849 at Dundee *MN for war 1852/53.* by Calman & Martin for

Dundee Perth & London S. Co. Dundee reg. 20/10/1849 **Rig ?**

net ton 36 **gross ton** 98 **len.** 83.7' **b.** 17' **depth of hold ?** *HofC 1851.*

draught load fore 5'6", aft 6'

Altered to lighter 1925.

engine 62hp beam by James Steel, Dundee *Sommer.*

16 ton fuel for 2 1/2 days at 6 ton per day, 11kn, 12kn with sail assist. *MN for war 1852/53.*

New owner 2/1853 sold John Oswald, Melbourne

2/1854 Alex. Dove & John Oswald, Melbourne

11/1883 James Deane, Melbourne

10/1885 Melbourne Coal & Shipping Co.

4/1886 Melbourne SS Co. *Sommer.*

Owner in E.Scotland use D.P.&L as above

Service Dundee tug. *MN for war 1852/53.*

Notes Possibly replaced by larger vessel of same name by 1853, see *HofC 1861.*

4/1853 sailed to Australia with engine unshipped. *Sommer.*

Fate Broken up 1930. *Sommer.*

Hero.ID71.

Off.no.n/a

Built 1823 at Dundee by James Smart for Tay SP Co., not reg. until 1836

Rig 1 mast fore & aft rig, square stern, carvel, 1 deck

net ton 66.35 **gross ton** 116.83 **len.** 88.1' **b.** 17' **depth of hold** 8'

BT107/428 Dundee 1836/113. **draught ?**

Altered schooner 1839 *SV acc.*

engine ?

eng. room 34.3'=50.48 ton *BT107/428 Dundee 1836/113.*

Owner in E.Scotland use Tay SP as above

Service Dundee to Perth *Dundee Directory.*

Notes Oct 1823 collision with *Atholl* at Dundee. 25/5/1824 further collision with same vessel. *Sandeman Library B59/22/32.*

Mention *HofC 1829.*

Fate vessel broken up 14/9/1842 but reg. not cancelled until 25/3/1846
BT107/428 Dundee 1836/113.

Hero.ID72. Off.no.?

Built 1842 at Jarrow *HofC 1845.* by Bider *Hawks.* for ? **Rig ?**

net ton 26 **gross ton** 71 *HofC 1851.* **len.** 70.3' **b.** 15' **depth of hold ?**

draught 4'6"

engine 30 hp *HofC 1845.*

Owner in E.Scotland use R.Stoker & others, Leith reg. 28/11/1842 *HofC 1851.*

Service Leith tug ?

Notes Leith reg. *HofC 1851.*

Fate ?

Highlander.ID73. Off.no.?

Built 1821 at Port Glasgow by John & Charles Wood for

J.Lincoln,J.Nesbett,G.Martin,D.McInnes & others **Rig ?**

net ton 67 [*HofC1822*] **gross ton ?** **len.** 60' **b.** 15' **depth of hold ?**

draught ?

Altered 51 ton, 78'6" x 14'4" x 8'2" *Tobermory BT107/405 Tobermory 1822/5.*

engine 20hp *INA 1861.*

24hp by McArthur *HofC1822.*

Owner in E.Scotland use Highlander SB Co., *Glasgow BT107/414 Glasgow 1826/59.*

Service 1833 Inverness to Glasgow via Caledonian Canal. *Hub of the Highlands.*

Notes Glasgow to Tobermory. *INA 1861.*

Fate Broken up July 1836. *BT107/425 Glasgow 1835/63.*

Humber.ID74.

Off.no.?

Built ? at ? by ? for ? Rig ?

net ton ? gross ton ? len. b. depth of hold ? draught ?

engine ?

Owner in E.Scotland use ?

Service 1842 Hull to Dundee *Pearson.*

Fate ?

Innisfail.ID75.

Off.no.?

Built 1826 at Liverpool by Mottershead & Hayes for Dublin & Cork SN, Cork. **Rig ?**

net ton 202 **gross ton ? len.** 128'6" **b.** 22'2" **depth of hold ? draught ?**

engine ?

New owner 1835 St George SP CO., Dublin.

1843 G.W. Sweeting, London

1843 F. Beresford, London

1844 T. Pope, London *Greenwood & Hawks.*

Owner in E.Scotland use St George SP Co. *Aberdeen Journal 5/7/1837.*

Service Hull to Leith *Aberdeen Journal 5/7/1837.*

Notes Capt. J.Moffat. *Aberdeen Journal 5/7/1837.*

Temporarily withdrawn from Leith to Hull. *Edinburgh Evening Courant 20/1/1838.*

Fate reg. closed 1859 *Greenwood & Hawks.*

Inverness.ID76.

Off.no.?

Built 1832 at Glasgow by Barclay [*Hawks*] for ?, reg. 9/8/1832 Glasgow 36

Rig 2 mast schooner, square stern, carvel, 1 & poop deck

net ton 43 45/94 **gross ton** 70 [*IE&SinS 1881.*] **len.** 82'6" **b.** 12'10" **depth of hold** 8'9" **draught** ?
engine ?

New owner William Young & George Burns, Glasgow 9/5/1835

Re-reg. Glasgow 72 of 2/8/1844. *BT107 Glasgow 1835/16.*

Owner in E.Scotland use William Young & George Burns, Glasgow as above.

Service 1833 Inverness to Glasgow via Caledonian Canal. *Hub of the Highlands.*

1836, Inverness to Glasgow. *IE&SinS 1881.*

Fate ?

Isabella Napier. ID77. **Off.no.** 17946 *HofC 1861.*

Built 1835 at Port Glasgow by ? for ? **Rig** 2 mast schooner, square stern, wood, carvel, 1 & break deck, female bust f head

net ton 242.2 **gross ton** 424.6 **len.** 145.5' **b.** 21.2' **depth of hold** 15.9'

BT107/457 Inverness 1850/14. **draught** ?

engine 280 hp *HofC 1861.*

eng. room 50' = 182.4 ton *BT107/457 Inverness 1850/14.*

New owner Reg. Londonderry in 1839. *1839 SVacc.*

Earl of Eglinton, Ardrossan, Clyde coastal. *Lloyds 1847.*

Reg. London 362, 6/10/1848 *BT107/457 Inverness 1850/14.*

Owner in E.Scotland use North of Scotland SP Co., re-reg Inverness 14/6/1850 *BT107/457 Inverness 1850/14.*

Service Granton to Moray Firth, Sutherland & Caithness. North of Scotland SP Co. *Scotsman 2/5/1849.*

Granton to Inverness. *Scotsman 24/8/1850.*

Notes Capt. Marshall, *Lloyds 1847.*

Capt. Wm. Hodge. New boilers by S.H.Morton, Leith. *Scotsman 24/8/1850.*

Fate Broken up per annual list 1861. *BT107/457 Inverness 1850/14.*

Ivanhoe.ID78 **Off.no.** 7717 *HofC* 1861. IRON SCREW

Built 1850 *HofC*1861. at St Peters, Northumberland by Toward *Hawks*.

for ?, Newcastle **Rig** Schooner, iron, screw

net ton 205.5 **gross ton** 234.6 **len.** 137.2' **b.** 21' **depth of hold** 12.2'

CE57/11/2 Leith 1852/43. **draught** ?

altered 179 ton net, 263 ton gross, 161' x 21' x 11.8'.

engine 70hp *HofC*1861.

Owner in E.Scotland use Thomas Scott, Leith.

5/5/1852 E. Davidson *CE57/11/2 Leith* 1852/43.

(Cox?)& McGregor, re-reg. Leith 1857 *HofC* 1861.

Service Leith to Continent. *HofC* 1851.

24 voyages Leith to Holland in 1851. *HofC* 1852.

Notes crew 16 *HofC*1852.

Fate ?

James Watt.ID191.

Off.no.?

Built 1821 at Port Glasgow by J. & C. Wood *HofC*1822. **for** London &

Edinburgh SP Co. *Edinburgh Evening Courant* 14/6/1821. **Rig** ?

net ton 294 **gross ton** 448 [*HofC*1822.] **len.** 145'8" **b.** 25'6" **depth of hold**

6'7" *BT107/34 London* 1821/296. **draught** 10'3" *HofC*1845.

Altered 295 ton net, 466 gross, 143' x 23.6' x 16.8' *BT107/72 London* 1837/345.

291 ton net, 462 ton gross *HofC*1851.

engine 2 x side lever, 39" x 42" total 100hp *Boulton & Watt list Hawks*.

2x50 hp eng by Boulton & Watt. *HofC* 1822.

Reduction gearing. *Eng. & Shipbuilders in Scotland* 1881.

150 hp *HofC* 1845.

18' paddlewheels *Hawks*.

Owner in E.Scotland use London & Edinburgh SP Co., London as above.

General Steam Navigation Co. 20/9/1837 *BT107/72 London* 1837/345 .

Service Newhaven to Blackwall. *Scotsman* 10/4/1824.

Newhaven to London *Aberdeen Journal* 16/5/1827.

Newhaven to London. *Scotsman* 18/6/1828.

Newhaven to London. *Edinburgh Evening Courant* 28/1/1832.

Newhaven to London. *Scotsman* 7/1/1835.

Leith to Hamburg. *Edinburgh Evening Courant* 12/3/1838.

Leith to Hamburg. *Scotsman* 5/9/1838.

London to Havre. *Lloyds* 1842, 1844, 1847.

Notes To be launched 18/6/1821, 420 ton. *Edinburgh Evening Courant* 14/6/1821.

Initial owners W.Colton, J.Roberts, A.Weston & others *BT107/34 London* 1821/296.

Dining saloon for 100, paddles 18' dia., 9' wide, floats 2' broad, 10 kn.

Fincham.

Assisting Royal Yacht. *Edinburgh Evening Courant* 1/8/1822.

Capt. Dall rescues fishing boat off North Sunderland. Henry Wyart, stewards assistant, rescues woman. *Morning Chronicle* quoted in *Edinburgh Evening Courant* 21/9/1822.

Lines plans *INA* 1861.

Capt Bain. *Aberdeen Journal* 16/5/1827. *Scotsman* 18/6/1828.

1829 London reg. 294 ton. *HofC* 1829.

Capt. Jamieson. *Edinburgh Evening Courant* 28/1/1832.

5/7/1833 ran aground without damage near Flamborough Head. *Lloyds List*.

1836 chartered to carry volunteers from UK to Santander and San Sebastian in Spain to assist Queen Christina. *Hawks*.

At opening of Granton. *Edinburgh Evening Courant* 30/6/1838.

Capt. Thomas King. *Scotsman* 5/9/1838.

1st steamer classed by Lloyds. Supplement 1822 green book. [not seen]

Annals of Lloyds Register. BUT beware 1824 Liverpool ship see *Lloyds* 1836, 1839.

Model in Science Museum, London.

Picture *Parker & Bowen*.

Fate 21/9/1853 broken up. *BT107/72 London* 1837/345.

Juno.ID79

Off.no.?

Built 1851 at Aberdeen by ? for Alborg SN Co., Aalborg, Denmark **Rig** ?**net ton** 213 **gross ton** ? **len.** ? **b.** ? **depth of hold** ? **draught** ?**engine** 180hp**Owner in E.Scotland use** Alborg SN as above.**Service** Aberdeen to Aalborg *Lloyds 1851*.**Fate** ?Kent.ID190.

Off.no. ?

Built 1835 at North Shields by Dowey for General Steam Navigation Co.,London *Hawks*. **Rig** ?**net ton** 15 **gross ton** ? **len.** 56.8' **b.** 12.8' **depth of hold** 6.3 *HofC1845*.**draught** ?**engine** 14hp *Scotsman 3/12/1845*.**Owner in E.Scotland use** GSN as above.**Service** Leith to St Davids *Scotsman 3/12/1845*.**Notes** 28/6/1838 (Victoria's coronation day) First vessel to use Granton, towing yacht *Lufra*. *Edinburgh Evening Courant 30/6/1838*.At Granton. *Scotsman 17/9/1842*."Small steamer" built for GSN, then sold to Admiral Sir Philip Durham. For sale by his executors. *Scotsman 3/12/1845*.**Fate** ?Lady of the Lake.ID80.

Off.no.n/a

Built 1815 at Kincardine by Gray *HofC1822*. **for** ? **Rig** lugger 1839 *SV acc*.**net ton** 50 *BT107/403 Glasgow 1820/11 (Hawks)*. **gross ton** 76 *HofC1822*.**len.** 70'4" **b.** 16'3" **depth of hold** 8'10" **draught** ? *BT107/403 Glasgow 1820/11 (Hawks)*.**Altered** 60 ton, **len.** 77'4", **b.** 16'3", **depth** 8'10". *BT107/411 Glasgow 1825/101. (Hawks)*.**engine** 20 hp *HofC1822*.

Single side lever eng. by James Cook. *Eng. & Shipbuilders in Scotland 1881.*

New owner Reg. Glasgow 1816/18 (missing) *Hawks*.

29/11/1820 re-reg. owner J.Bryce, L.McLellan, J.Cook, A.Hunter, Glasgow

BT107/403 Glasgow 1820/11 (Hawks).

BT107/411 Glasgow 1825/101. (Hawks).

Owner in E.Scotland use ? in 1815.

Re-reg. 18/6/1828, Alloa Stirling Kincardine & Newhaven Steamboat Co.

BT107/417 Alloa 1828/9 (Hawks).

1829 Grangemouth reg. *HofC1829.*

Re-reg. 11/4/1831 T.Cookson.

18/11/1831 T.Cookson & others. *Leith 1831/7 CE57/11/1.*

Service Newhaven to Stirling and back same day. *Edinburgh Evening*

Courant 24/8/1815.

11/3/1816 re-commence Stirling to Newhaven. *Edinburgh Evening Courant*

7/3/1816.

1816 to Elbe for Hamburg to Cuxhaven. *HofC 1822.*

Stirling to Newhaven. Laid up for repair. *Edinburgh Evening Courant*

13/1/1821.

Leith to Stirling. *HofC1822.*

Notes John Gentle, master. *Edinburgh Evening Courant 13/1/1821.*

Fate Reg. closed vessel lost 1843. *BT107/420 Leith 1831/7 (Hawks).*

Lass o Gowrie.ID81 **Off.no.**11511 *HofC1861.* IRON

Built 1841 at Dundee by Peter Borrie. for Dundee & Perth SP Co., Dundee

reg. 5/5/1841. **Rig** Sloop, iron, round stern

net ton 74 **gross ton** 127 *HofC 1851.* **len.** 114'2" **b.** 15' **depth of hold**

14.4' *CE70/11/6 Dundee 1841/26.* **draught** 3' *HofC 1845.*

engine 50 hp *HofC1861.*

eng. room 39', 53.1 ton. *CE70/11/6 Dundee 1841/26.*

Owner in E.Scotland use Dundee & Perth SP Co., Dundee as above.

G.Wallace & another, Dundee *HofC 1861.*

Service Inchyra to Carpow ferry. *Weir*.

Fate Broken up. Reg. closed 5/12/1863. *CE70/11/17*.

Lee.ID189.

Off.no.n/a

Built 1825 at Chester *Lloyds 1839*. by Mulvey for Cork & Liverpool SN Co., Liverpool *Greenwood & Hawks*. **Rig** ?

net ton 188 *Lloyds 1839*. **gross ton** ? **len.** 131' **b.** 22'2" **depth of hold** ?

draught ?

Altered 1845, len. 142'5" b. 21'10" *Greenwood & Hawks*.

engine ?

New owner 22/5/1835 St George SP Co, Dublin

20/1/1844 Cork SS Co., Cork.

1845 I. Horton, London *Greenwood & Hawks*.

1845 S. Price, E.G. Winthrop & R.W. Wood, London

1846 H.J.C. Talbot, C.J. Murray & R. Price, London

1847 W. Bulkeley, London *Greenwood & Hawks*.

Owner in E.Scotland use St George SP Co. *Edinburgh Evening Courant* 19/4/1838.

Service 1839 Dundee to Hull. *New Edinburgh Almanac 1839*.

Notes Hull to Hamburg. Capt. J.Moffat *Edinburgh Evening Courant* 19/4/1838.

Hull to Hamburg. Capt. T. Hayden *Lloyds 1839, 1841*.

Fate 9/4/1851 broken up. *Greenwood & Hawks*.

Leith.ID82.

Off.No. 476 *HofC1861*.

Built 1837 at Leith by ? for General Steam Navigation Co., London

Rig schooner 1839 *SVacc*.

net ton 568 **gross ton** 907 *MN for war 1852/53*. **len.**182' **b.** 27.2' **depth of hold** ? **draught** 12' *HofC 1845*. load draught fore 10'9", aft 11'3" *MN for war 1852/53*.

engine 240 hp *HofC 1845*.

Beam eng. 1837, tubular boilers, 125 ton fuel for 4 1/2 days at 28 ton per day, 9kn, 10 1/2 kn with sail assist *MN for war 1852/53*.

Owner in E.Scotland use GSN as above.

Service Leith to London. *Scotsman* 5/9/1838.

Newhaven to London with mail. *Edinburgh Evening Courant* 1/1/1838.

Granton to London *Scotsman* 12/10/1842, 13/1/1849.

London to Leith *MN for war 1852/53*.

Notes In collision 11/3/1838 with brig *Emma* of Bideford in Long Reach, Gravesend. *Edinburgh Evening Courant* 15/3/1838.

At opening of Granton. *Edinburgh Evening Courant* 30/6/1838.

len.(oa ?) 191'5", b.(oa ?) 29', deck plan of propped armament. *MN for war 1852/53*.

Capt. Jamieson. *Lloyds* 1839.

Capt. Sharp. *Lloyds* 1841, 1842, 1844.

Capt. Lecker. *Lloyds* 1847, 1850.

Picture *Parker & Bowen*.

Fate ?

Leviathan. ID83. **Off.no.** 7834 *HofC1861*. IRON

Built 1849 at Govan by Robert Napier for Edinburgh Perth & Dundee Rly.

reg. Leith 20/9/1850 **Rig** 1 deck, no masts or rig, round stern, iron, paddle,

net ton 301 926/3500 **gross ton** 417 **len.** 157.6' **b.** 32.9' **depth of hold** 8.4'

draught ?

engine 420hp *HofC1861*.

2 Engines independent and able to turn in own length. *Scotsman* 2/5/1849.

eng. room 38.8'=116 4.3/92.4 ton *BT107/457 Leith 1850/23*.

2 steeple type, 56" x 42". re-boilered 1857 & 1865. *Brodie*.

Owner in E.Scotland use EP&DR as above.

1862 owners become North British Railway.

1890 W.T.MacLennan, Glasgow. *Brodie*.

1892 T.C.Glover, Edinburgh. *Brodie*.

Service Granton to Burntisland train ferry. *Fifeshire Journal* 20/8/1850.

Notes First train ferry in world.

John Bain, master *BT107/457 Leith 1850/23*.

re-reg. 40, 29/9/1854. *BT107/457 Leith 1850/23*.

Mention. *HofC1851, HofC 1861*.

August 1878 to Ramage & Ferguson, Leith for major overhaul, estimated at £2,100. During refit major cracks found amidships and strengthening required. *Brodie*.

Fate broken up 1892. *Brodie*.

Lion. ID84. **Off.no.?**

Built 1819(?) at North Shields by ? for ? **Rig** ?

net ton 10 **gross ton** 50 **len.** 63.7' **b.** 13.6' **depth of hold** 8.3' *HofC1851*

draught 5' *Scotsman 9/5/1835*.

engine 27 hp *Scotsman 9/5/1835*.

Owner in E.Scotland use ?

Robert Hall, Leith reg. 10/9/1845 *HofC 1851*.

Service Chain Pier to Grangemouth. *Scotsman 7/6/1828*.

Notes For sale *Scotsman 9/5/1835*.

Fate ?

Liverpool. ID201. **Off.no.?**

Built 1830 at Greenock by ?, London for ? **Rig** schooner

net ton 206 *1839 SVacc* **gross ton** ? **len.** ? **b.** ? **depth of hold** ? **draught** ?

engine ?

Owner in E.Scotland use ?

Service Dundee to London, St Katherines. *Edinburgh Evening Courant 16/7/1832*.

Notes Capt. Hepburn. *Edinburgh Evening Courant 16/7/1832*.

Dundee to London vessel, used London to Oporto with recruits & stores for Don Pedros, reported lost off Portugal, report of loss not true. *Edinburgh Evening Courant 15/11/1832, 17/11/1832*.

Fate ?

Lochryan.ID85.**Off.no.?****Built** 1830 at Dumbarton by Lang *Hawks*. for ? **Rig** ?**net ton** 127 *Brodie*. **gross ton** ? **len.** ? **b.** ? **depth of hold** ? **draught** ?**engine** ?**Owner in E.Scotland use** ?**Service** Granton to Newcastle. *Scotsman* 20/8/1845.**Fate** ?London.ID86.**Off.no.**32519 *Sommer*.**Built** 1837 at Port Glasgow by John Wood for Dundee Perth & London Sh.Co., Dundee **Rig** 3 mast schooner, 2 & poop deck, woman f head, square stern, carvel.**net ton** 405.86 **gross ton** 687.16 **len.** 167' **b.** 25.7' **depth of hold** 18'*BT107/432 Dundee 1837/37 & 1837/48*. **draught** 13'6" *HofC 1845*. load draught fore 13', aft 14' *MN for war 1852/53*.**engine** 350 hp *HofC 1845*.eng. room 56.2'=281.3 ton *BT107/432 Dundee 1837/37 & 1837/48*.350hp beam eng. by Napier 1837, tubular boilers, 120 ton fuel for 5 days at 24 ton per day, 10 1/2kn, 11 1/2kn with sail assist. *MN for war 1852/53*.**New owner** 5/1853 E.Baxter & Son & others, Dundee.

6/1853 Sydney & Melbourne SP Co., Sydney.

7/1856 Australian SN, Sydney.

1861 Harkort & Co., Hong Kong. *Sommer*.**Owner in E.Scotland use** DP&L as above.**Service** Dundee to London *Fifeshire Journal* 3/1/1839.London to Dundee *MN for war 1852/53*.**Notes** Capt. Thomas Ewing. maiden voyage Greenock to Dundee round north Scotland June 1837. *Aberdeen Journal* 14/6/1837re-reg. 48, 5/9/1837 & 27, 17/5/53. *BT107/432 Dundee 1837/37 & 1837/48*.Mention 1839 *SV acc*.Mention *HofC 1851*.

Deck suitable for carriage of guns, unsuitable for mounting pivot guns. Has poop & forecastle. *MN for war 1852/53.*

Fate 6/1863 broken up. *Sommer.*

London Merchant.ID87. **Off.no.?**

Built 1831 at Poplar *HofC 1845.* by Snook *Hawks.* for General Steam Navigation Co., London *MN for war 1852/53.*

Rig ?

net ton 306 ton **gross ton** 476 *HofC 1851.* **len.** 174'5" **b.** 23'5" **depth of hold ?** *HofC 1845.*

draught 10' *HofC 1845.* load draught fore 10', aft 10'6" *MN for war 1852/53.*

Altered len. 183'8", b. 25'9" *MN for war 1852/53.*

engine 200hp beam eng. by GSN 1831, tubular boilers, 65 ton fuel for 2 1/2 days at 24 ton per day. 9kn, 9 1/2kn with sail assist. *MN for war 1852/53.*

Owner in E.Scotland use GSN as above.

Service Chartered to Dundee Perth & London S.Co. in 1833 for Dundee to London. *Sommer.*

London Rotterdam & London to Leith. *Lloyds 1836.*

London to Leith. *Lloyds 1839.*

London to Newcastle *MN for war 1852/53.*

Notes Capt. Stranack *Lloyds 1836.*

Mention *1839 SV acc.*

Capt. Morfee. *Lloyds 1839,1841,1842,1844.*

Capt Chadwick *Lloyds 1847.*

London reg. 29/12/1848, owner GSN *HofC1851.*

Fate ?

Maid of Islay ex Waterloo. ID88. **Off.no.n/a**

Built 1815 launched Jan. 1816 as *Waterloo* at Port Glasgow by John Hunter *BT107/414 Glasgow 1826/44 for ? Rig ?*

net ton 90 gross ton ? len. ?, keel 72' b. 16' depth of hold ? draught 3'6"

Cleland

Altered rebuilt 1826 by William Sissons, Greenock and reg Glasgow, 74 4/94 ton, len. 100'5", b. 15'11", depth 9', 2 mast schooner, square stern, carvel, 1 & poop deck, woman bust f head *BT107/414 Glasgow 1826/44*.

engine 20hp by James Cook, Tradeston, Glasgow. *Cleland*.

New owner Edward Girdwood & Co. *BT107/414 Glasgow 1826/44*.

Owner in E.Scotland use Andrew Grieg, John Sword, Dugald Turner (master), William Guthrie *BT107 Leith 1835/13*.

Service Charlestown - Chain Pier - Dundee. *Scotsman 22/4/1835, 24/10/1835*.

Leith to Dundee. *1839 SV acc*.

Notes [Beware other *Waterloo* re-built by John Scott in 1819 and by 1820 on Belfast - Liverpool. (ex *Lord Nelson* of 1816) - see *Sir William Wallace*].

As *Waterloo*, in 1815 on Glasgow - Tarbert - Inverary, 1816 Glasgow Campbeltown, *Duckworth et al 1935 (per Hawks)*.

In 1820 on Clyde. *Cleland*.

Capt D. Turner (late of *United Kingdom*). *Scotsman 22/4/1835, 24/10/1835*.

Fate Vessel driven ashore on rocks near St Davids 27/10/1835 per Lloyds List 3/11/1835. *BT107 Leith 1835/13*.

Wrecked off St Davids, bad lookout. *1839 SV acc*.

Maid of Leven ID89

Off.no. ?

Built 1839 at Paisley *HofC 1845*. by Barr & McNab *Hawks*. for ? **Rig ?**

net ton 76 gross ton 140 [*HofC1851*] **len.** 120'3" (but 124'3" per

HofC1851) **b.** 19' **depth of hold ? draught 4'** *HofC 1845*.

engine 60 hp

New owner 1857 sold Paris. *Brodie*.

Owner in E.Scotland use J. Gladstone, Montrose reg. 6/9/1844 *HofC 1851*.

Service Granton to Burtisland *Brodie*.

Fate ?

Maid of Morven.ID90 **Off.no. ?**

Built 1826 [but 1821 per *INA 1861*.]at Port Glasgow *HofC 1845*. **by** John & Charles Wood *INA 1861*. **for ? Rig ?**

net ton ? gross ton ? len. 65' **b.** 14' *INA 1861*. depth of hold ? draught 6'6"
HofC 1845.

Altered ?, net ton 39, len. 84'4", breadth 14'7", Inverness reg. *HofC 1845*.
52 ton *IE&SinS 1881*.

engine 30hp *INA 1861*.

44 hp *HofC 1845*.

Owner in E.Scotland use ?

Service 1836 Inverness to Glasgow. *IE&SinS 1881*.

Glasgow to Tobermory. *INA 1861*.

Fate ?

Manchester.ID91. **Off.no.?**

Built 1832 at Manchester **by** Fairbairn & Lillie **for** Forth & Clyde Navigation Co. *Hawks*. **Rig ?**

net ton ? gross ton ? len. ? b.? **depth of hold ? draught ?**

engine ?

Owner in E.Scotland use Forth & Clyde Navigation Co. as above.

Service Glasgow to Grangemouth and Alloa *Brodie*.

Fate ?

Margaret. ID198. **Off.no.?**

Built April 1816 at Dundee **by** Sharp **for ? Rig ?**

net ton 54 **gross ton ? len.** ?, keel 55' **b.**14' **depth of hold ? draught** 3'2"

engine 12hp by John Robertson, Glasgow

New owner ?

Owner in E.Scotland use ?

Service in Tay until 1817

Notes to Clyde, still there in 1820. *Cleland*.

Fate ?

Mars.ID92. **Off.no.**n/a IRON, SCREW

Built 1848 at Dumbarton by Denny Somner. for Dundee Perth & London S.Co., Dundee reg. 20/6/1848 *HofC 1851*. **Rig** ketch *AWR 1851*. Iron.

Screw. *Fifeshire Journal 8/5/1851*.

net ton 62 **gross ton** 90 **len.** 81.8' **b.** 19.2' *HofC 1851*. **depth of hold ?**

draught ?

engine ?

Owner in E.Scotland use DP&L as above

Robert Marshall. *AWR 1851*.

Service Dundee to Grangemouth. *Fifeshire Journal 8,15 & 29/5/1851*.

Leith to Dundee *AWR 1851*.

Notes Capt. Peter Low, 7 crew *AWR 1851*.

Fate 2/5/1851 struck Roan Rock east of Crail and sank off Anstruther. *AWR 1851*.

Sunk off Anstruther Easter, 3/5/1851. *Fifeshire Journal 8,15 & 29/5/1851*.

Martello.ID93. **Off.no.** ? IRON

Built 1842 at Glasgow by Wingate for Hull & Leith SP Co. **Rig ?** Iron.

Scotsman 27/8/1842.

net ton 293 **gross ton** 483 [*HofC1851*] **len.** 171.7' **b.** 23.5' **depth of hold ?**

draught 9'

engine 240 hp *HofC 1845*.

Owner in E. Scotland use H&L SP Co. as above.

T.Barclay & others, Leith reg. 21/1/1843 *HofC 1851*. (apparently traded as Hull & Leith SP Co.)

Service Leith to Hull. *Edinburgh Evening Courant 6/1/1844*.

Leith to Hamburg. *Aberdeen Journal 11/8/1847*.

Leith to Hamburg with mail *Scotsman 3/1/1849*.

Leith to Lubeck 23/5/1849 due to Elbe blockade. *Scotsman 23/5/1849*.

Notes 3 water tight compartments. Rescued survivors of *Pegasus* 21/7/1843 *1843 Comm shipwrecks*.

Capt. Robert Cook. *Edinburgh Evening Courant 6/1/1844*.

12/10/1847 grounded in Forth during fog. *1851 SV acc.*

Capt. A.Blackwood. *Scotsman 23/5/1849.*

Fate Wrecked on Carr Rocks, Fife 28/11/1857. Alex B. Gunn, master.

Failure to keep proper lookout in poor visibility. Certificate of 1st mate

George Sugden suspended 6 months. *HofC 1857/58.*

Mazzeppa. ID94.

Off.no. ?

Built August 1834 at Aberdeen by John Duffus & Co. for themselves

Rig 2 mast schooner

net ton 50 59/94 **gross ton** ? **len.** 79'6" **b.** 15'3" between paddle boxes in

centre of shaft **depth of hold** 9'8" *Duffus list.* **draught** ?

engine ?

Owner in E. Scotland use John Duffus & Co. Aberdeen as above.

Service Newhaven to Aberdeen. *Scotsman 20/5/1835.*

Notes John Ronald, master *Duffus list.*

[Beware Thorn built 1830, 223 ton Hull ship. *Lloyds 1836*]

Fate ?

Menia. ID95.

Off.no. ?

Built 1830 at Port Glasgow *HofC 1845.* by Wood & Ritchie *Hawks.* for ?

Rig ?

net ton 136 **gross ton** 263 *HofC 1851.* **len.** 128.5' **b.** 18.9' **depth of hold** ?

draught 8'4"

engine 120 hp *HofC 1845.*

Owner in E. Scotland use 1834 London & Edinburgh SP Co., London

Hawks.

General Steam Navigation Co., London reg. 27/6/1836 *HofC 1851.*

Service Newhaven to London. *Edinburgh Evening Courant 5/7/1838.*

Notes Capt. Cullen. *Edinburgh Evening Courant 5/7/1838.*

Fate ?

Mercator. ID96. **Off.no.** ? IRON

Built 1848 at Glasgow by Thomas Wingate & Co. for Hull & Leith SP Co.,

Leith **Rig** 2 mast schooner, iron, round stern, 1 1/4 deck

net ton 298.95 **gross ton** 452.24 **len.** 189.5' **b.** 22.8' **depth of hold** 12.5'

draught ?

engine ?

eng. room 49.7'=153.29 ton *BT107/454 Leith 1848/36.*

Owner in E. Scotland use H&L SP Co. as above.

Re-reg 25, Leith 19/5/1854. *BT107/454 Leith 1848/36.*

Service Leith to Hamburg. Carrying Mail. *Scotsman 3/1/1849.*

Notes Robert Cook (part owner), master *BT107/454 Leith 1848/36.*

Capt. Gunn. *Scotsman 3/1/1849.*

Capt. Cook *Scotsman 9/5/1849. Aberdeen Journal 5/1/1850.*

Leith reg. 6/11/1848, owner Hull & Leith SP *HofC 1851.*

Fate ?

Mercury. ID97. **Off.no.** ?

Built ? at ? by ? for ? **Rig** ?

net ton ? **gross ton** ? **len.** ? **b.** ? **depth of hold** ? **draught** ?

engine ?

Owner in E. Scotland use ?

Service 1846 Dundee to Broughty Ferry and "South Ferry". *Dumdee Dir.*

1846/47.

Fate ?

Modern Athens. ID98. **Off.no.** 24187 *HofC1861.*

Built 1836 at Dundee by Thomas Adamson for Dundee & Perth SP Co.,

Dundee **Rig** 3 mast ship, square stern, carvel, 1 & half poop deck, female bust f head.

net ton 132.8 **gross ton** 227.9 **len.** 119.7' **b.** 17.7' **depth of hold** 10.8'

BT107/428 Dundee 1836/161. draught 7' HofC1845.

Altered 1837, 1846 size of engine room, see below.

2 mast schooner *BT107/457 Glasgow 1850/16.*

engine 60 hp. *Scotsman 26/2/1842.*

130 hp *HofC 1845.*

120hp *HofC1861.*

eng. room 46' = 95.1 ton *BT107/428 Dundee 1836/161.*

eng. room 51' = 105.5 ton, 122.5 ton net. *BT107/432 Dundee 1837/18.*

eng. room 45' = 93.09 ton, 131 ton net. *BT107/457 Glasgow 1850/16.*

New owner

David Tod & John McGregor re-reg. Glasgow 20/3/1850 *BT107/457 Glasgow 1850/16.*

Thomas Walker, reg. Liverpool 1854 *HofC1861.*

Owner in E. Scotland use Dundee & Leith SP Co. as above.

Re-reg. 11/3/1837, same owners *BT107/432 Dundee 1837/18.*

same, re-reg. 21/11/1838 Dundee 54.

22/8/1844 Dundee & Edinburgh SP Co

re-reg. Leith 20/3/1846. *CE70/11/6 Dundee 1844/26.*

J. Ramsay, Glasgow *Lloyds 1847.*

re-reg. 6/6/1846 Glasgow 47 *BT107/457 Glasgow 1850/16.*

Service Aberdeen to Dundee. *Aberdeen Journal 18/7/1838.*

Granton to Dundee. *Scotsman 25/7/1838.*

Leith to Clyde. *Lloyds 1847.*

Notes David Milne, master *BT107/428 Dundee 1836/161.*

David Milne, master *BT107/432 Dundee 1837/18.*

108 ton ship. *1839 SV acc.*

Capt. Adamson *Lloyds 1847.*

Robert Pearce, master *BT107/457 Glasgow 1850/16.*

Fate ?

Monarch. ID99.

Off.no. ?

Built 1833 at Blackwall by Green Wigram & Green for (London &)

Edinburgh SP Co. (London) *Fifeshire Journal 6/7/1833. Rig ?*

net ton 516 **gross ton** 872 *HofC*1851. **len.** 204' **b.** 30' **depth of hold** 18'

Fifeshire Journal 6/7/1833 **draught** 11'3" *HofC* 1845.

engine 200 hp Boulton & Watt *Fifeshire Journal* 6/7/1833.

220 hp *HofC* 1845.

Owner in E. Scotland use L&E SP as above.

General Steam Navigation Co., London *Scotsman* 5/9/1838.

Service Newhaven to London. *Scotsman* 20/5/1835.

Leith to London *Scotsman* 5/9/1838.

London to Leith. *Lloyds* 1841, 1842, 1844, 1847.

Notes Launched 30/6/1833. Fitted out off Orchard House, Greenwich. 1200 tons (sic), loa 207' 1 1/2", width 57', o/s paddles 55'4", len. of keel 166', len on deck 193', 140 berths. Largest yet built in England. *Fifeshire Journal* 6/7/1833.

29/7/1837 collision in Thames with schooner *Mary & Ann*. 1839 *SV acc.*

5/8/1837 Capt. William Bain, collision with sv *Apollo* in Northfleet Hope, other sv sank, 3 dead. Lack of steaming lights. 1839 *SV acc.*

Capt. Fraser. Carried 17 horses and several carriages for royal party Granton to London Sep 1842. *Scotsman* 17/9/1842.

Picture

1843 in collision with East Indiaman *Maitland* and badly damaged bow.

1846 sold to Capt. Charette (also bought *Neptune & Glenelg*) apparently for expedition for Flores to Ecuador. Arrested under Foreign Enlistment Act.

Parker & Bowen.

Fate ?

Monarch.ID100.

Off.no. 19412 *CE52/11/3*.

Built 1835 at North Shields by Dowey *Hawks* for John Cowperthwaite, Perth. Newcastle reg. 1835/52. *CE52/11/3*. **Rig** sloop

net ton 18 3305/3500 **gross ton** 49 **len.** 65.4' **b.** 13' **depth of hold** 9.2'

CE52/11/3 1838/14. **draught** 4' *HofC* 1845.

engine 28 hp *HofC* 1845.

Owner in E. Scotland use J.Copperthwaite & Joseph Appleby, Perth reg.

14/6/1838 *CE52/11/3 1838/14.*

Service Tay tug?

Notes Re-reg Sunderland Oct 1860. *CE52/11/3 1838/14.*

Mention *1839SV, HofC1851.*

Fate ?

Monarch ID101.

Off.no. ?

Built 1837 at North Shields *BT107/452 Leith 1847/15.* by Arkley Hawks.

for Stephen Chisholm, reg. Newcastle 64, 8/4/1837 **Rig** 1 mast sloop,
clench, square stern, 1 deck

net ton 13 449/3500 **gross ton** 48 **len.** 61.7' **b.** 14.5' **depth of hold** 7.5'

draught ? *BT107/452 Leith 1847/15 & CE57/11/2.*

engine ?

eng. room 30³=35 1079/3500 ton *BT107/452 Leith 1847/15.*

Owner in E. Scotland use William Turnbull & others, re-reg Leith

22/3/1847 *BT107/452 Leith 1847/15.*

David Wallace, Leith 22, 22/5/1852. *CE57/11/2.*

Notes Adam Cook, master *BT107/452 Leith 1847/15.*

Mention *HofC 1851.*

Fate ?

Montrose ID102.

Off.no. ?

Built 1837 at Greenock by John Scott & Sons **for** Montrose & London SN
Co., Montrose **Rig** 2 mast schooner, square stern, carvel, 1 & 1/4 deck,
woman f'head.

net ton 368 478/3500 **gross ton** 604 **len.** 156.1' **b.** 24' **depth of hold** 16.7'

draught ?

engine 2x130 hp by Scott Sinclair & Co, Greenock, dia 58", stroke 5'6".

Aberdeen Journal 14/6/1837.

eng. room 54.3³=234 1935/3500 ton *BT107/433 Montrose 1837/23.*

New owner ?, re-reg. London 46, 10/2/1841. *BT107/433 Montrose 1837/23.*

Owner in E. Scotland use M&LSNas above.

Service 47' beam over paddle boxes. Maiden voyage Greenock to Montrose
June 1837. *Aberdeen Journal* 14/6/1837.

Capt. David Murray. *BT107/433 Montrose 1837/23*.

Montrose to London. *Aberdeen Journal* 13/6/1838.

Mention 1839 *SV acc*.

For sale at London. *Aberdeen Journal* 15/1/1840

Fate ?

Morning Star.ID103. **Off.no. ?**

Built 1814 *HofC1822*. at Kincardine by R.Rae Brodie. for ?, reg. Alloa
1815/12 (missing) *BT107/403 Alloa 1820/13 per Hawks*. **Rig ?**

net ton 63 gross ton ? len. 81'6" b. 16'2" depth of hold 8'10" draught ?
BT107/403 Alloa 1820/13 (Hawks).

Altered Rebuilt & re-reg. Alloa 27/10/1827, 74 ton, len. 95'4", b. 16'1",
depth 8'1" *BT107/416 Alloa 1827/22 (Hawks)*.

72 ton, eng. room 33 ton, 2 mast schooner, square stern, carvel, 1 & poop
deck, woman bust f'head len. 87.5', b. 14.8', depth 8.6', *BT107*

Grangemouth 1836/46.

Lugger 1839 *Svacc*.

draught 6'6" *HofC 1845*.

engine 26 hp *HofC1822*.

32 hp *HofC1845*.

eng. room 24.5'=33 ton *BT107 Grangemouth 1836/46*.

Owner in E. Scotland use Alloa & Kincardine SB Co. *Edinburgh Evening
Courant* 11/11/1815.

R.&A. Macfarlane, R.Hutton & others, Alloa, re-reg. 23/9/1820 *BT107/403
Alloa 1820/13 (Hawks)*.

Re-reg. Alloa 1825/64 (missing). *Hawks*.

Alloa Stirling & Kincardine Steamboat Co., *BT107/416 Alloa 1827/22
(Hawks)*.

Alloa Stirling Kincardine & Newhaven Steamboat Co., 18/6/1828 re-reg.

BT107/417 Alloa 1828/10 (Hawks).

1829 Grangemouth reg. *HofC 1829.*

Leith, Musselburgh & Fisherrow SP Co., 20/4/1836 re-reg. *BT107/430*

Leith 1836/42 (Hawks).

Alloa & Leith SP Co. 20/4/1836, re-reg Grangemouth *BT107 Grangemouth 1836/46.*

re-reg. 8, 23/7/1844. *BT107 Grangemouth 1836/46.*

Alloa & Leith SP Co., Alloa reg. 23/7/1844, *HofC 1851, 1852.*

Service "Continues to ply" Newhaven to Alloa. *Edinburgh Evening Courant 14/8/1815.*

Laid up for winter, *11/11/1815.*

Refit & again in service Alloa to Newhaven. *Edinburgh Evening Courant 11/4/1816.*

Leith to Alloa. *HofC 1822.*

Leith to Berwick. *Lloyds 1836, 1839, 1841, 1842.*

Alloa to Leith. *Edinburgh Evening Courant 18/7/1844.*

Notes Alloa to Leith Sept. 1819, stopped by salmon blocking condensing water pipe. *British Advertiser* quoted in *Kennedy, J.*

28/4/1839 explosion at Wellington Quay, N. Shields, 2 dead. 6' dia cylindrical boiler, elliptical fire tube 3' x 2'6". Plate corroded from 1/2" down to 0.2". Safety valve rusted. *1839 SV acc.* (possible this may not be same vessel, 2 of this name in reg. at time).

Capt. A. Scott *Lloyds 1836, 1839, 1841, 1842.*

Capt. Ross *Edinburgh Evening Courant 18/7/1844.*

Fate Broken up 1855, reg. closed 12/1/1856. *Brodie.*

Mountaineer. ID104.

Off.no. n/a?

Built 1821 at Greenock by Scott & Sons *HofC 1822.* for Leith & London SP. Co., *Edinburgh Evening Courant 16/6/1821.* **Rig ?**

net ton 124 **gross ton ?** **len.** 86'1" **b.** 18'6" **depth of hold** 11'6" *BT107/358*

Belfast 1824/30 draught ?

engine 2x35 hp by D. Napier. *HofC 1822. & Napier.*

New owner G.Langtry, Belfast *BT107/358 Belfast 1824/30.*

General Steam Navigation Co. *BT107/42 London 1825/317.*

Owner in E. Scotland use Leith & London SP Co. as above.

Service London to Leith *HofC 1822.*

Archibald McLean, master, arrives from London and will leave Newhaven 20/6/1821. Coppered & copper fastenings, *Edinburgh Evening Courant 16/6/1821.*

By 1822 Liverpool to Dublin. *HofC1822.*

1826 London Ostend. 1835 Shoreham Dieppe. *Hawks.*

Fate Wrecked near Shoreham 1838. *Burt.*

1/3/1842 broken up. *BT107/42 London 1825/317.*

Neptune.ID105.

Off.no. ?

Built 1837 at Shields by Bell, North Shields. *Hawks.* **for ? Rig ?**

net ton 174 *Lloyds 1839* **gross ton ? len. b. ? depth of hold ?**

draught ?

engine 100hp *Brodie.*

New owner Mitcalf & Co, reg. Newcastle *Lloyds 1839,1841.*

Owner in E. Scotland use Leith & Newcastle Steam Co. *Edinburgh Evening Courant 10/5/1838.*

1839, Shields & Newcastle General SN Co. *Brodie.*

Service Chain Pier Newhaven to Newcastle. *Edinburgh Evening Courant 10/5/1838.*

1839 on Hull to Leith & Dundee. *Brodie.*

Notes Capt. Humble (wreck of *Forfarshire?*) *Edinburgh Evening Courant 10/5/1838.*

Newcastle to Hull. Capt. G. Nichol *Lloyds 1839,1841.*

Shields to Hull. *Lloyds 1844,1847.*

Fate ?

Neptune.ID106. **Off.no.** 40922 *HofC1861* IRON SCREW

Built [June]1848 at Dumbarton *MN for war 1852/53*. by A. Denny
[Somner] for Dundee Perth & London S. Co., Dundee **Rig** ?, iron, screw
net ton 62 **gross ton** 89 **len.** 81.8' **b.** 19.2' **depth of hold** ? *HofC1851*.
draught fore 7'6", aft 7'6" *MN for war 1852/53*.

Altered 10/1851, *Somner*.

84 ton net 111 ton gross, len. 96.8', b. 19.2', depth 8.8' *HofC1861*.

5/1854 engine removed *Somner*. (this does not tie in with *HofC1861*.)

engine 20hp, 8 ton fuel for 1 1/4 days at 6 ton per day, 8 1/2kn. *MN for war 1852/53*.

20hp by Caird, Glasgow *Somner*.

New owner 11/1857 to Mauritius. *Somner* (Does not tie in with *HofC1861*)

Owner in E. Scotland use DP&L as above.

A.Barrow, reg. Dundee 1854 *HofC 1861*.

5/1854 G. Alison, Dundee & engine removed. *Somner* (does not tie in with above).

Service (Probably Dundee to Grangemouth, see *Mars*).

Notes Mention *HofC 1851*.

Fate 9/1862 removed from register *Somner*.

Newcastle.ID107. **Off.no.** 4376 *BT109/10 Arundel 1856/185 (Hawks)*

Built 1824 at North Shore by Ridley for W.Brown,R.Anderson,
R.Digmoure, M.Knot, Newcastle **Rig** ?

net ton 34. **gross ton** ? **len.** 65'6" **b.** 16'3" **depth of hold** 7' *BT107/137*

Newcastle 1824/162 (Hawks) **draught** ?

Altered depth 8'3" *BT107/188 Sunderland 1826/147 (Hawks)*.

42 ton, 86' x 14.6' x 9.8' *BT107/72 London 1837/30 (Hawks)*.

engine ?

New owners 10/6/1826, W.Lorraine *BT107/188 Sunderland 1826/147*.

Then various others, London and Littlehampton. *Hawks*.

Owner in E. Scotland use Brown & others as above.

Service Newhaven to Dunbar, Berwick, Newcastle. *Scotsman* 10/7/1824.

Notes Capt. Joseph Fidler, A.Greig agent *Scotsman* 10/7/1824.

Fate Broken up 1866. *BT109/75 Arundel* 1863/5626 (*Hawks*).

Newhaven.ID108. **Off.no.** 7668 *HofC1859*.

Built 1847 at Rotherhythe by Thomson *Hawks*. for ? **Rig** ?

net ton 148 **gross ton** 259 **len.** 153' **b.** 21.2' *HofC1851*.

depth of hold 11' *HofC1859*. **draught** ?

engine 150 hp 2 Penn oscillating. *Scotsman* 16/5/1849.

80hp *HofC1859*.

New owner 1851, William Geach, London *HofC1859*.

Owner in E. Scotland use Aberdeen Leith & Clyde S Co. *Scotsman* 16/5/1849.

George Thomson, Aberdeen reg. 16/5/1849 *HofC 1851*

Service Granton to Aberdeen *Scotsman* 16/5/1849.

Notes Capt. Crane. *Scotsman* 16/5/1849.

Fate Scrapped 1886 *Brodie*.

North Star.ID109. **Off.no.** ?

Built 1837 at Aberdeen by John Duffus for John Duffus & Co.,Aberdeen

Rig 3 mast schooner, square stern, carvel, 1 & poop deck, woman f head

net ton 306 1259/3500 **gross ton** 453 **len.** 161' **b.** 24.3' **depth of hold** 13.7'

BT107/432 Aberdeen 1837/38. Also *Duffus list*.

draught 12' *HofC1845*. load draught fore 10'6", aft 11'6" *MN for war* 1852/53.

engine 240 hp *Aberdeen Journal* 24/1/1838.

180 hp *HofC1845*.

eng. room 41' = 147 71/92.4 ton *BT107/432 Aberdeen* 1837/38.

220hp, 8 1/2kn, 9 1/2kn with sail assist. *MN for war* 1852/53.

Owner in E. Scotland use John Duffus & Co., Aberdeen as above.

North of Scotland SP Co. *Aberdeen Journal* 24/1/1838.

Aberdeen SN Co. Aberdeen reg.(17), 3/7/1845 *HofC1851*.

Service Cattle, Aberdeen to London. *Aberdeen Journal* 25/10/1837.

Inverness to London. *Aberdeen Journal* 24/1/1838

Refitted and resumes Inverness to London. *Aberdeen Journal* 20/2/1839

Aberdeen to London. *Aberdeen Journal* 28/7/1847

Aberdeen to Hull *MN for war* 1852/53.

Notes James Anderson, master *BT107/432 Aberdeen* 1837/38.

Mention *1839 SV acc.*

Fate ?

Northern Yacht ID110. **Off.no.** n/a

Built 1835 at Glasgow by Robert Barclay for Thomas & Robert Barclay, Glasgow **Rig** 1 mast smack, square stern, carvel, 1 & 1/4 deck, woman f head.

net ton 99 11/94 **gross ton ?** **len.** 116'7" **b.** 16'8" between wheels **depth of hold** 9'2" *BT107 Glasgow* 1835/25. **draught ?**

Altered 28.3 ton net, 83.3 ton gross, len. 114', b. 15.2', depth 8.7'

BT107/429 Glasgow 1836/61.

engine "upright" (possible steeple) *HofC* 1839.

eng. room 37'=53 ton *BT107/429 Glasgow* 1836/61.

New owner Thomas Barclay, 30/5/1836 *BT107/429 Glasgow* 1836/14.

Thomas Barclay, 11/8/1836. *BT107/429 Glasgow* 1836/61.

Owner in E. Scotland use Leith & Newcastle Steam Co. *Edinburgh*

Evening Courant 10/5/1838.

Re-reg Newcastle 90, 7/5/1838 *BT107/429 Glasgow* 1836/61.

Service Chain Pier, Newhaven to Newcastle. *Edinburgh Evening Courant* 10/5/1838.

Notes Steam bent frames, lightly built for river work, Glasgow to Ayr. 1839 *SV acc.*

Capt. S. Leitch *Lloyds* 1836.

John Leitch, master *BT107/429 Glasgow* 1836/14.

James Cowan, master *BT107/429 Glasgow* 1836/61.

Capt. Middlemas *Edinburgh Evening Courant* 10/5/1838.

Fate 11/10/1838 Sailed from Newcastle for Leith & not heard of again.

Edinburgh Evening Courant 18/10/1838.

11/10/1838 lost with 40 passengers. Report that 4 days earlier master told witness "vessel not worth a straw...boiler caulked with wooden wedges".

1839 SV acc.

Northman ID111.

Off.no.?

IRON

Built 1847 at Dumbarton by Denny Bros. for Orkney SN Co., Kirkwall

Rig schooner, iron clench, man bust f^r head

net ton 128.94 **gross ton** 181.09 **len.** 100' **b.** 20.6' **depth of hold** 12.1'

BT107/452 Kirkwall 1847/6. draught ?

engine ?

eng. room 19.9'=52.15 ton *BT107/452 Kirkwall 1847/6.*

New owner ?, re-reg Glasgow 39, 25/4/1851 *BT107/452 Kirkwall 1847/6.*

Owner in E. Scotland use Orkney SN Co. as above.

Service Leith to Kirkwall. *Scotsman 12/1/1850.* also *Lloyds 1850.*

Notes John Scott, master *BT107/452 Kirkwall 1847/6.*

Kirkwall reg. 6/8/1847 *HofC 1851.*

In dock June 1849. *Scotsman 23/6/1849.*

Fate ?

Northumberland ID112.

Off.no. ?

Built 1826 at Gateshead by ? for ? **Rig ?**

net ton 20 *1839 SVacc.* **gross ton ? len. ? b. ? depth of hold ? draught ?**

engine ?

New owner ?, Newcastle reg. *1839 SV acc.*

Owner in E. Scotland use ?

Service March 1828 chartered by Andrew Greig to act as tender to United Kingdom at Chain Pier, Newhaven. *SRO CS96/3773.*

Chain Pier, Limekilns, Grangemouth. *Scotsman 7/6/1828.*

Fate ?

Paul Jones. ID113.

Off.no. ?

Built 1827 at Aberdeen by Hall for Tug Boat Co., Aberdeen. *Hall list*.**Rig** Not rigged. 1839 *SV Acc*. 1 deck 1 mast, not rigged, round stern, carvel**net ton** 26 65/94 **gross ton** ? **len.** 65'6" **b.** 17'6" **depth of hold** 9'10"*BT107/453 Aberdeen 1848/37. draught 7' HofC1845.***engine** 40 hp *HofC 1845.***Owner in E. Scotland use** Tug Boat Co., Aberdeen, as above.? re-reg. Aberdeen 28/4/1830 *BT107/453 Aberdeen 1848/37.*Alexander Duthie & John Duffus, 29/7/1848 *BT107/453 Aberdeen 1848/37.*Re-reg 26, 29/8/1851. *BT107/453 Aberdeen 1848/37.***Service** Aberdeen, towing. *HofC 1829.***Notes** No. 52, *Hall list.*William Baxter, master *BT107/453 Aberdeen 1848/37.*Mention *Hof C 1851.***Fate** ?Pegasus. ID114.

Off.no. n/a

Built 1835 at Glasgow by Robert Barclay for Thomas & Robert Barclay**Rig** 2 mast schooner, 1 & 1/4 deck, square stern, carvel**net ton** 130 32/94 **gross ton** ? **len.** 132'4" **b.** 18'5" **depth of hold** 11'1"*BT107 Glasgow 1835/67. draught ?***engine** ?**Owner in E. Scotland use** Thomas & Robert Barclay, Glasgow, as above.Hull & Leith SP Co., Leith *Lloyds 1836.*Hull & Leith SP Co., 26/5/1841 shares transferred *BT107 Glasgow 1835/67.***Service** Intended for Hull to Leith. *Scotsman 28/11/1835.*Hull to Leith. *Edinburgh Evening Courant 26/5/1838.*Dundee *Lloyds 1839.*Aberdeen to Leith *Lloyds 1841.*Hull to Leith *Scotsman 5/1/1842, 11/6/1842.***Notes** Due to be launched soon. 46 berths *Scotsman 28/11/1835.*Robert Cook, master *BT107 Glasgow 1835/67.*

Capt. R. Cook *Lloyds* 1836.

Has ladies cabin *Edinburgh Evening Courant* 26/5/1838.

Mention 1839 *SV acc.*

Capt. N. Cook *Lloyds* 1839.

Grounded off St Monans 5/5/1839. *Scotsman* 8/5/1839.

Capt. John Brown *Scotsman* 27/5/1840.

Capt. J. Brown .Repaired 1840. *Lloyds* 1841, 1842.

Capt. Alex. Miller *Scotsman* 5/1/1842, 11/6/1842.

Fitted with bridge. 1843 *Com. Shipwrecks*.

Fate Lost on Goldstone. 11 crew, 16/17 cabin, 30 steerage passengers. 6 survivors rescued by *Martello*. 1843 *Com. Shipwrecks*.

Vessel struck rock (illeg.) between Farne Islands and mainland & sank 20/7/1843. *BT107 Glasgow* 1835/67.

Perth. ID115. **Off.no.** 7127 *HofC*1861.

Built 1834 at Port Glasgow by John Wood for Dundee Perth & London Sh.Co., Dundee reg. 13/5/1834 **Rig** 3 mast schooner, 1 & 1/4 deck, square stern, carvel, female f^r head

net ton 399 5/94 **gross ton** 639 [*HofC*1851] **len.** 167'4" **b.** 28'5 1/2" **depth of hold** 18'3" *Dundee Reg.* 1834/15. **draught** load, fore 13'6", aft 14'6" *MN for war* 1852/53.

Altered ship rig 1839 *SV acc.*

Dundee reg. 12/7/1845, len. 160'1", b. 25'6", 379 ton net, 639 ton gross. *HofC* 1851.

engine 300hp beam eng. by Napier 1834, tubular boilers, 120 ton fuel for 5 days at 24 ton per day, 10 1/2kn, 11 1/2kn with sail assist. *MN for war* 1852/53.

New owner 7/1861 General Steam Navigation Co., London *Sommer*.

Owner in E. Scotland use DP&L as above.

Re-reg. 34, 11/7/1845. *Dundee Reg.* 1834/15. owner DP&L *HofC*1861.

Service Dundee to London. *Scotsman* 3/1/1835, 7/1/1835.

Dundee to London *Fifeshire Journal* 3/1/1839.

London to Dundee *MN for war 1852/53.*

Notes John Spink, master *Dundee Reg. 1834/15.*

Capt. Spink. Spontaneous combustion in bunkers while moored in Thames
25/9/1835. *Scotsman 30/9/1835*

Mention *HofC 1845.*

Deck suitable for carriage of guns, has forecastle & poop, not suitable for
mounting pivot guns. *MN for war 1852/53.*

Fate Destroyed by fire in Royal Dockyard, Deptford while in use as hulk,
8/11/1864. *Sommer.*

Perthside.ID205 **Off.no.** ?

Built 1840 at North Shields by ? for ? **Rig** ?

net ton 20 **gross ton** ? **len.** 72.2' **b.** 14.8' **depth of hold** ? **draught** ?

engine ?

Owner in E. Scotland use ?, Newcastle

Service at Leith in 1845 *HofC 1845.* (possible tug).

Fate ?

Pharos.ID116 **Off.no.** 7864 *HofC1861.*

Built 1846 at Millwall by Wm. Fairbairn & Son *Sommer.* for Commissioners
of Northern Lights, Leith reg. 28/5/1846. **Rig** ?

net ton 207 **gross ton** 296 **len.** 140' **b.** 20.2' *HofC 1851.* **depth of hold**

13.6' **draught** ?

Altered 10/1864 243 ton net, 328 ton gross, len. 171.6' *Sommer.*

engine 150Hp *HofC1861.*

New owner Thomas Williamson, Barrow 6/1877. *Sommer.*

Owner in E. Scotland use Com. of Northern Lights as above.

Aberdeen, Grimsby & Hull SP Co. 9/1861.

Owners change co. name to Aberdeen & Hull SN Co. 1863.

Aberdeen, Newcastle & Hull Steam Co. Ltd 10/1866. *Sommer.*

Service Lighthouse tender

Notes Voyage to France in 1851. Crew 26. *HofC 1852.*

Beware 182' sister vessel same name reg. 1854, no. 10283. *HofC 1861.*

Fate Broken up 1877. *Sommer.*

Prince of Wales.ID117. **Off.no.** 10044 *HofC 1861.*

Built 1845 *HofC1861* at Port Glasgow by J. Reid & Co. *Brodie.* for Alloa & Stirling SB Co., Alloa *HofC1851.* **Rig** ?

net ton 93 **gross ton** 153 **len.** 130.3' **b.** 21.1' *HofC1851.* **depth of hold** 7.9' *HofC1861.* **draught** ?

engine 80hp. *HofC 1861.*

By R. Napier *Brodie.*

New owner 1876 to Glasgow.

1879 to Russia. *Brodie.*

Owner in E. Scotland use Alloa & Stirling SB Co.,as above.

Service Granton to Alloa,Stirling *Scotsman 7/3/1849.*

Fate ?

Prince of Wales.ID195. **Off.No.** 23114 *HofC1861.* IRON

Built 1842 at Blackwall by Wigram & Green for General Steam Navigation Co., London *Scotsman 13/4/1842.* **Rig** ? iron *MN for war 1852/53.*

net ton 139 **gross ton** 246 **len.** 180' **b.** 21' *HofC 1851.* **depth of hold** 10' *HofC 1861.* **draught** load, fore 5'6" aft 5'6" *MN for war 1852/53.*

engine 260 hp *Scotsman 11/6/1842.*

140hp beam eng by Miller & Ravenhill 1843, tubular boilers, 19 ton fuel for 1 day at 20 ton per day, 11kn, 12kn with sail assist. *MN for war 1852/53.*

136hp *HofC 1861.*

Owner in E. Scotland use GSN as above.

4/8/1849, London re-reg. same owner.*HofC1851.*

Service Glasgow, Iona, Stornoway, Orkney, Granton,London.*Scotsman 11/6/1842.* (may have been only maiden voyage, not intended for regular).

Notes London to Margate. Fit to carry passengers only. *MN for war 1852/53.*

Fate ?

Princess Royal ID119. **Off.No.** 733 *HofC1861*.

Built 1841 at Blackwall by Wigram & Green for General Steam Navigation Co., London *Scotsman* 13/4/1842. **Rig** ?

net ton 494 **gross ton** 748 **len.** 177.7' **b.** 25.4' *HofC 1851*. **depth of hold** 17.8' *HofC1861*. **draught** load fore 13', aft 13' *MN for war 1852/53*.

engine 230 hp from Deptford *Scotsman* 13/4/1842.

200hp beam eng. by GSN 1841, tubular boilers, 105 ton fuel for 4 days at 25 ton per day, 9kn, 9 1/2kn with sail assist. *MN for war 1852/53*.

Owner in E. Scotland use GSN as above.

Re-reg London, same owner, 30/10/1850 *HofC1851*.

Service London to Leith *Scotsman* 13/4/1842.

Granton to London. *Scotsman* 12/10/1842.

Granton to London. *Edinburgh Evening Courant* 22/1/1844.

London to Hamburg. *Lloyds* 1847.

London to Hamburg *MN for war 1852/53*.

Notes Maiden voyage 6/4/1842. 130 berths. Capt. Morris. *Scotsman* 13/4/1842.

Capt. Gibbs *Lloyds* 1847.

len. (oa) 182'6", b. (oa) 28', 494 ton net, 748 ton gross. Suitable for carrying troops & guns and for defensive armament. *MN for war 1852/53*.

Fate ?

Princess Royal ID118. **Off.no.** ?

Built 1842 *Dundee Dir.* 1842. at Broughty Ferry by Borrie *McMamus*.
for Tay Ferry Trustees **Rig** ?

net ton 181 *Dundee Dir.* 1842. **gross ton** ? **len.** ? **b.** ? **depth of hold** ?

draught ?

engine By Borrie *McMamus*.

Owner in E. Scotland use Tay Ferry Trustees as above.

Service Tay ferry *Dundee Dir.* 1842.

Notes Master - Duncan. *Dundee Dir.* 1842.

Fate Scrapped 1861 *McMamus*.

Queen.ID120. **Off.no. ?** IRON

Built 1840 at Dundee *HofC 1845*. **by** J.C. Carmichael *Brodie*. **for ?**

Rig 2 masts *Brodie*, iron *Lloyds 1847*.

net ton 91 **gross ton ?** **len.** 106'5" **b.** 20'2" **depth of hold** 10.2' [*Brodie*]

draught 6'3" **engine** 70 hp *HofC 1845*.

New owner 1849 J. Nicholson, Liverpool.

1854 J. Newton, Liverpool.

1858 W.& T. Jollith, Liverpool. *Brodie*.

Owner in E. Scotland use Trustees of Fife & Midlothian Ferry, 1840 -1844.

Brodie.

Kirkcaldy, Leith & Newhaven Ferry SB Co., 1844 - 31/3/1849. *Brodie*.

Kirkcaldy reg. *HofC 1845*.

Kirkcaldy & Leith Ferry Co. *Lloyds 1847,1850*.

Service Forth ferry

Notes Capt. S. Barker *Lloyds 1847,1850*.

Fate Scrapped 1859. *Brodie*.

Queen.ID121. **Off. No.** 10060 *HofC1861*.

Built 1840 at North Shields *BT107/457 Alloa 1850/8*. **by** Ellis *Hawks*. **for ?**

Rig 1 mast sloop, clench wood, 1 deck.

net ton 24 **2321/3500 gross ton** 63 **len.** 67' **b.** 14.7' **depth of hold** 8'

BT107/457 Alloa 1850/8. **draught** 4' *HofC 1845*.

Altered 6 ton net, 54 ton gross., len. 68.7', b. 16.2', depth 7.7', Inverness reg. 1856 *HofC1861*.

engine 30 hp *HofC 1845*.

eng. room 29.6'=37 2352/3500 ton *BT107/457 Alloa 1850/8*.

25 hp *HofC 1861*.

Owner in E. Scotland use ?, Re-reg. Leith 2, 19/1/1844 *BT107/457 Alloa 1850/8*.

John Gillespie Aitken, Christine Hosie, re-reg. Alloa, 29/8/1850 *BT107/457 Alloa 1850/8*.

?, re-reg Inverness 14, 10/5/1856. *BT107/457 Alloa 1850/8*.

Thomas Keenan, Inverness *HofC 1861*.

Service (Tug?) at Leith 1844 - 1850, Alloa 1850 - 1856, Inverness 1856 - ?.

Notes James White, master *BT107/457 Alloa 1850/8*.

Fate ?

Queen.ID122.

Off.no. ?

IRON

Built 1844 at Aberdeen by Wm. Simpson & A. Hall *Hall list*. **for** Aberdeen
Leith & Clyde S.Co., Aberdeen.

Rig ?, iron *Edinburgh Evening Courant 2/9/1844*.

net ton 382 **gross ton** 613.99 **len.** 184.6', 194' **oa** 25.4', over boxes 47'

depth of hold 15.4' *Hall list*. **draught ?**

Altered 382 ton net, 662 ton gross. *HofC 1851, 1852*.

engine 262hp *Edinburgh Evening Courant 2/9/1844*.

260 hp *Aberdeen Journal 28/7/1847*.

Owner in E. Scotland use AL&C as above.

Service Granton to Aberdeen, Wick, Kirkwall, Lerwick. *Aberdeen Journal*
28/7/1847.

Granton to Inverness, Wick, Orkney *Scotsman 7/3/1849*.

Granton to Wick, Kirkwall, Lerwick, with mail *Scotsman 8/8/1849*.

Notes Launched 29/8/1844 *Edinburgh Evening Courant 2/9/1844*.

Aberdeen reg. 15/4/1845, owner AL&C *HofC 1851*.

Capt. Campbell *Aberdeen Journal 28/7/1847*.

Capt. Campbell *Scotsman 16/5/1849*.

Very difficult vessel to steer. Had bridge. *HofC 1857/58*.

Fate Wrecked on Carr Rocks, Fife, 18/4/1857. James Murray, master. 1st

mate James Morison sent lookout below & left bridge for up to 40 minutes.

Failed to call master off Bell Rock as ordered. Failed to keep proper lookout.

Morison's Certificate suspended for 1 year. *HofC 1857/58*.

Queen Margaret.ID124.

Off.no. ?

Built 1821 at Leith by Menzies & Son **for** Trustees of Queensferry

Aberdeen Journal 4/4/1821. **Rig ?**

net ton 100 *HofC 1822*. **gross ton ? len. ? b. ? depth of hold ? draught ?**

Altered lengthened by 7' in 1828. *Brodie*.

engine by Cook, Glasgow. *Aberdeen Journal 4/4/1821*.

Owner in E. Scotland use Trustees of Queensferry as above.

Service South Queensferry to North Queensferry.

Notes Invitation to tender. Design by Mr Scott, superintendent of Queensferry. *Edinburgh Evening Courant 10/3/1821*.

Commence Queensferry 2/10/1821. *Edinburgh Evening Courant 1/10/1821*.

Design by Mr. Scott, RN, Superintendent of the Queensferry. *Aberdeen Journal 4/4/1821*.

For sale in 1841. *Brodie*.

Disposed of 1838 *Duckworth & Longmuir*.

Fate ?

Queen of Scotland. ID125. **Off.no.** 5347 *HofC 1861*.

Built 1827 at Aberdeen *BT107 Aberdeen 1836/128*. by J. Duffus & Co.

Duffus list. for John Duffus *Aberdeen Journal 17/7/1827*. Aberdeen, reg. 43, 17/8/1827 *BT107 Aberdeen 1836/128*. **Rig** 3 mast schooner, 2 deck, square stern, carvel *BT107 Aberdeen 1836/128*.

net ton 304 46/94 *BT107 Aberdeen 1836/128*. **gross ton ? len.** 159'2"

b. 26'6" **depth between decks** 6'2" **draught ?**

Altered 435 ton, len. 161'1", b. 24'2" *HofC 1845*.

435 ton net, 620 ton gross len. 161'1", b. 24'2". *HofC 1851*.

421 ton net, 583 ton gross, len. 166', b. 26', depth of hold 16', *HofC 1861*.

engine 2 x 75 hp, *Times 18/4/1827*.

160 hp *HofC 1845*.

150hp. *HofC 1861*.

New owner sold 23/1/1843 to Joseph Gee, Hull, re-reg Hull 3, 11/2/1843. *BT107 Aberdeen 1836/128*.

Joseph Gee, Hull reg. 25/8/1843 *HofC 1851*.

Thomas Hodson & others, Hull *HofC 1861*.

Owner in E. Scotland use John Duffus, Aberdeen as above.

A&LSC, Aberdeen *Lloyds* 1836.

Aberdeen SN Co, *BT107 Aberdeen* 1836/128.

Aberdeen SN Co. *Aberdeen Journal* 14/6/1837.

Service Aberdeen to London. *Aberdeen Journal* 17/7/1827.

Aberdeen to London. *Aberdeen Journal* 14/6/1837.

Aberdeen to Hull. *Aberdeen Journal* 21/2/1838, 22/4/1840.

Aberdeen to Hull. *Lloyds* 1839, 1841, 1842.

Hull to Hamburg. *Lloyds* 1844, 1847.

Notes Launched 12/4/1827. First SV built at Aberdeen *Times* 18/4/1827.

Capt. John Walker. *Aberdeen Journal* 3/6/1828.

Mention *HofC* 1829., 1839 *SV Acc.*

Capt. J. Pearson *Lloyds* 1836.

Capt. J. Cargill, *Lloyds* 1839, 1841, 1842.

Capt. W. Cape *Lloyds* 1844, 1847.

13/3/1847 collision in Humber with fishing smack, 1 dead. 12/3/1848

collision with *Rob Roy*. 1851 *SV acc.*

Reg. Hull 1860 *HofC* 1861.

Picture. *Ferens Gallery, Hull*.

Fate ?

Quentin Durward. ID126 **Off.no.** n/a

Built 1823 at Leith by Sime Rankin for R. Ogilvie, G. Crichton, Leith

BT107/406 Leith 1823/19 (*Hawks*)

Rig 3 mast schooner, square stern, carvel, man bust f' head.

net ton 78 32/94 **gross ton** ? **len.** 100'8" **b.** 16'5" **depth of hold** 9'3"

Dundee Reg. 5/5/1824 *Dundee* 31. **draught** ?

engine ?

New owner sold to foreigners 29/6/1827. *Dundee Reg.* 5/5/1824 *Dundee*

31.

Owner in E. Scotland use 10/6/1823 Ogilvie & Crichton, Leith, as above.

Leith & Dundee SP Co., Dundee. *Dundee Reg.* 5/5/1824 *Dundee* 31.

Service Leith & Trinity to Crail, Anstruther, Elie, Dundee. *Scotsman* 31/7/1824.

Notes James Craigie, master *Dundee Reg.* 5/5/1824 *Dundee* 31.

Renamed *Danica* or *Dania*. In 1841 at Copenhagen. *Hawks*.

Dania "Built Scotland unknown date & place", 100 ton, 94' x 29', draught 6'. Crew 10. 60 hours fuel at 5 bushels per hour. 6 1/2 knots to 6 3/4 knots. Cost £2,500. 40hp low pressure engine fitted Zealand. In use on Large Belt, once weekly, Aarhus to Callundborg in 8 hours, goods and passengers. *HofC* 1837/38 *XLV*. (Not mentioned in *HofC* 1845 *XLVII*).

Fate ?

Rapid. ID127. **Off.no.** n/a

Built 1825 at Gateshead by J. Bowlt for R. Thomson & R. Lambert, Newcastle, reg. 29/6/1825 **Rig ?**

net ton 35 **gross ton ?** **len.** 65' **b.** 16'9" **depth of hold** 10' *BT*107/146

Newcastle 1825/331 *Hawks*. **draught ?**

engine ?

Owner in E. Scotland use R. Thomson & R. Lambert, as above.

Service Newhaven Chain Pier to Dundee. *Scotsman* 11/6/1828.

Notes R.Lambert, master. *Scotsman* 11/6/1828.

Fate Destroyed by fire off Kirkcaldy, Friday 8/4/1831. *Times* 13/4/1831 quoting *Scotsman*.

Burnt in Kirkcaldy Roads c.1831. *Ballingall*.

Regalia. ID128. **Off.no.** ?

Built ? at ? by ? for ? Rig ?

net ton 71 **gross ton** 105 **len.** 90.7' **b.** 18.2' *HofC* 1851. **depth of hold ?**

draught ?

engine ?

Owner in E. Scotland use Montrose & Leith S Co, *Scotsman* 16/6/1849.

Charles Boinie, Montrose reg. 19/3/1849, *HofC* 1851.

Service Leith to Montrose. *Scotsman* 16/6/1849.

Notes Capt. John Taylor. *Scotsman* 16/6/1849.

Fate ?

Rival.ID129.

Off.no. ?

Built 1847 at Middlesborough by Jackson for ? Rig ?

net ton 14 gross ton ? len. 64.7' b. 13.3' depth of hold 7' Hawks.

draught ?

engine ?

Owner in E. Scotland use A.Greig *Scotsman* 20/6/1849. (May be only the agent).

Service Newhaven Chain Pier to Aberdour, Inverkeithing. *Scotsman* 20/6/1849.

Fate ?

Rob Roy.ID200.

Off.no. ?

Built 1834 at Greenock by ? for ? Rig sloop

net ton 42 1839 SV acc. gross ton 70 IE&SinS 1881. len. ? b. ? depth of hold ? draught ?

engine ?

Owner in E. Scotland use ?

Service In 1836 on Inverness to Glasgow. IE&SinS 1881.

Fate ?

Rob Roy.ID130.

Off.no.22511 HofC1861.

Built 1847 at Middlesborough by James Jackson for Andrew Cowie & others, Grangemouth Rig 1 mast sloop, 1 deck, round stern, clench, man bust f'head

net ton 19.6 gross ton 39.8 len. 63.5' b. 13.1' depth of hold 6.8'

draught ?

engine ?

eng, room 23.2'=20.2 ton BT107/452 Grangemouth 1847/10.

Owner in E. Scotland use Andrew Cowie & others, Grangemouth, as above.

Same owner, 19/2/1850. *BT107/457 Grangemouth 1850/3.*

Service Grangemouth tug?

Notes David Sinclair, master *BT107/452 Grangemouth 1847/10.*

12/3/1848 collision with *Queen of Scotland. 1851 SV acc.* (might be different vessel).

John Dick, master *BT107/457 Grangemouth 1850/3.*

Mention *Hof C 1851.*

Fate vessel broken up 27/12/1871. *BT107/457 Grangemouth 1850/3.*

Robert Napier. ID131 **Off.no.** 7835 *HofC1861.* IRON

Built 1850 at Govan by Robert Napier for Edinburgh Perth & Dundee Rly, reg. Leith 20/9/1850 **Rig** no mast or rig, iron, 1 deck

net ton 144 481/3500 **gross ton** 234 481/3500 **len.** 129.6' **b.** 23.3' **depth of hold** 8.5' **draught** ?

Altered 1876, len. 137.4', b. 24.4', depth 8.5'. *Brodie.*

engine ?

eng. room 42'=90 ton *BT107/457 Leith 1850/24.*

Owner in E. Scotland use EP&DR as above.

Re-reg. 41, 29/9/1854. *BT107/457 Leith 1850/24.* (same owner, see *HofC1861.*)

Service Granton to Burntisland train ferry.

1880 work boat at re-building of Tay bridge. *Brodie.*

Notes Wm. Morrison, master *BT107/457 Leith 1850/24.*

Mention *HofC 1851.*

Fate coal hulk 1888. *Brodie.*

Robert the Bruce. ID132. **Off.no.** n/a

Built c.1823 *Hawks.* at ? by ? for Subscribers to the Alloa Steam Ferry

Rig ?, catamaran

net ton ? **gross ton** ? **len.** 76' *Brodie.* **b.** ? **depth of hold** ? **draught** ?

engine ?

Owner in E. Scotland use Subscribers to the Alloa Steam Ferry, as above.

Service Alloa ferry.

Fate Scrapped in 1840s. *Brodie*.

Rothesay. ID133. **Off.no. ?**

Built 1831 at Dumbarton 1839 *SV acc.* by J. Lang *Brodie*. for ? **Rig** 2 mast schooner

net ton 58 **gross ton ?** **len.** 93.6' **b.** 15' **depth of hold** 8.9' *CE70/11/5*

Dundee 1836/124 draught ?

engine ?

By D. Napier *Brodie*.

New owner Sold to Hull 23/6/1840 *CE70/11/5 Dundee 1836/124*.

Sold to Hull c. 1839 by liquidators. *Brodie*.

Owner in E. Scotland use Dundee & Leith SP Co *CE70/11/5 Dundee 1836/124*

Advert in assoc with DPL. *Scotsman 15/4/1835*.

?, reg. Dundee. *1839 SV acc.*

Service Newhaven Chain Pier to Dundee having been refitted. *Scotsman 28/2/1835*.

Dundee to Aberdeen. *Aberdeen Journal 31/7/1839, Fifeshire Journal 8/8/1839*.

Notes Capt. J. Chapman *Aberdeen Journal 31/7/1839, Fifeshire Journal 8/8/1839*.

Withdrawn by Owner Dundee & Leith SP Co *Aberdeen Journal 9/10/1839*.

Fate ?

Royal Adelaide. ID134. **Off.no. ?**

Built 1832 at Leith *BT107/457 Leith 1850/3*. by Robert Menzies for London, Leith, Edinburgh & Glasgow Shipping Co., Leith **Rig** 3 mast schooner, wood, 1 & break deck, female f'head *CE57/11/1 Leith 1832/11*.

net ton 324 62/94 **gross ton** ? **len.** 155' **b.** 26'8" **depth of hold** 15'3"

BT107/457 Leith 1850/3. draught 14' *HofC1845.*

Altered 431 ton net, 676 ton gross, len. 174'1", b. 24'8", load draught fore 13', aft 14' *MN for war 1852/53.* (assume dimensions are o/a, hence only tonnage differs, see notes).

engine 2 eng., 200hp made in Greenock *Edinburgh Evening Courant* 26/7/1832.

2 x 100 hp *Scotsman* 7/1/1835.

200hp beam eng. by Scott & Sinclair 1832, tubular boilers, 100 ton fuel for 4 days at 24 ton per day, 8 1/2kn, 10kn with sail assist. *MN for war 1852/53.*

Owner in E. Scotland use LLE&G, Leith as above.

Re-reg 31/1/1850 Leith, same owner, re-reg 2, 18/1/1851. *BT107/457 Leith 1850/3.*

Service Leith to London, St Katherines. *Edinburgh Evening Courant* 9/7/1832.

Leith to London in 47 hours *Edinburgh Evening Courant* 26/7/1832.

Leith to London. *Scotsman* 7/1/1835.

Granton to Irongate Steam Wharf, London *Scotsman* 21/7/1849.

Leith to London *MN for war 1852/53.*

Notes Spaces in floors filled, caulked outside & inside. *Ballingall.*

Open day at St Katherines. Capt. Mills, extreme len. 175', extreme b. 44', 1230 ton (sic), 114 passengers, stowage for 260 ton cargo. Capt. Basil Hall's apparatus for steering forward. *Edinburgh Evening Courant* 26/7/1832.

Collision in Woolwich reach, Thames with Whitstable oyster smack *Fawn*, 2 dead. *Fifeshire Journal* 7/11/1835.

Capt. J. Mill *Lloyds* 1836.

Mention 1839 *SV acc.*

Capt. J. Allison *Lloyds* 1844, 1850.

18/5/1844 collision off Greenwich with yacht *Chameleon*, 1 dead from yacht. *Edinburgh Evening Courant* 30/5/1844.

14/10/1847 grounded in Bridlington Bay 1851 *SV acc.*

Collision 8/9/1848 off Orfordness with schooner *Arrow*. *Scotsman*
19/5/1849.

Deck not suitable for carrying guns or arming, large overhanging sponsons
built in the frame to give deck accomodation, lower deck forward and large
holds for troops or stores. *MN for war 1852/53*.

Beware 1850 wreck of same name London - Cork vessel on Goodwins.

Fate ?

Royal George.ID135. **Off.no. ?**

Built 1830 at Gateshead by W.Hawks, Son & Co. for themselves Rig ?

net ton ? gross ton ? len. 69.4' b.15.4' depth of hold ? draught ?

engine 40hp

**Owner in E. Scotland use W. Hawks, Son & Co. as above, chartered by
A.Greig.**

Service Alloa ferry. *Brodie*.

Fate ?

Royal Tar.ID136. **Off.no.?**

Built 1836 at Glasgow by Tod & McGregor *Brodie* for ? Rig Sloop

net ton 79 1839 *SVacc* gross ton ? len. 125.7' b. 16' depth of hold 8.8'

draught ?

engine ?

New owner 1846 to Liverpool.

Owner in E. Scotland use A. Greig 1843-45.

Edinburgh & Dundee SP Co 1845-46.

Service Newhaven to Largo & Dysart. *Scotsman* 3/5/1845.

Leith to Dundee. *Brodie*.

Fate ?

Royal Victoria. ID137. **Off.no.?**

Built 1835 at Leith by Robert Menzies for London Leith Edinburgh & Glasgow Sh.Co., Leith **Rig** 3 mast schooner, 1 deck, square stern, carvel, woman f^r head

net ton 354 24/94 **gross ton** ? **len.** 155'3" **b.** 28' **depth of hold** 19' *BT107*

Leith 1835/7. draught ?

Altered 466 ton len. 165'6", b. 25'3", draught 14' *HofC 1845.*

466 ton net, 766 ton gross, len. 165'6", b. 25'3", load draught fore 12'6", aft 14' *MN for war 1852/53.*

engine 240 hp, *HofC 1845.*

300hp beam eng. by Scott & Sinclair 1835, tubular boilers, 120 ton fuel for 4 days at 30 ton per day, 10kn, 10 1/2kn with sail assist. *MN for war 1852/53.*

eng. room 55.8'=290 ton *BT107/457 Leith 1850/1.*

Owner in E. Scotland use LLE&G as above.

re-reg. 26, 1/9/1840, *BT107 Leith 1835/7.* (same owner)

30/1/1850 same owner, *BT107/457 Leith 1850/1.*

?, Re-reg Aberdeen 13, 22/3/1855. *BT107/457 Leith 1850/1.*

Service Intended Leith to St Katherines Wharf, London. Being fitted out, *Scotsman 14/1/1835.*

Leith to London *Lloyds 1836.*

Leith to London. *Scotsman 23/3/1842.*

Granton to London *Scotsman 13/1/1849, 21/7/1849.*

Leith to London *MN for war 1852/53.*

Notes James Mill, master *BT107 Leith 1835/7.*

Capt. J. Mill, *Lloyds 1836.*

Mention *1839 SV acc.*

Capt. Mann, *Lloyds 1839.*

Capt. Micklerid. *Lloyds 1841, 1842, 1844, 1850.*

28/2/1847 collision at night in Thames with sailing vessel, 4 dead. 14/7/1849

touched on Harwit Rock on passage Leith to London. *1851 SV acc.*

Mention *HofC 1851.*

Deck not suitable for armament or carrying guns, large overhanging

sponsons built into frame, lower deck forward and large holds for troops or stores. *MN for war 1852/53.*

Fate ?

Royal Victoria ID138. **Off.no.** 24205 *HofC1861* IRON

Built 1838 at Paisley by Barr & McNab [*Brodie.*] for ? **Rig** 1 mast sloop, iron, 1 & 1/4 deck *BT107/451 Dundee 1847/18.*

net ton 58.47 **gross ton** 96.47 **len.** 106.8' **b.** 13.2' **depth of hold** 7.3'

draught ?

engine ?

eng. room 36.5' = 38 ton

New owner ?, reg. Greenock 42, 23/6/1842 . *BT107/451 Dundee 1847/18.*

John Charleton, Rhyl 4/11/1854 *CE70/11/7 Dundee 1847/18.*

?, re-reg Chester 3, 15/2/1855. *BT107/451 Dundee 1847/18.*

John Tarleton, Chester. *HofC1861.*

Owner in E. Scotland use

Dundee & Perth SP Co., re-reg. Dundee 1/4/1847 *BT107/451 Dundee 1847/18.*

Service Dundee to Perth?

Notes James Catanach, master *BT107/451 Dundee 1847/18.*

Fate ?

Royal William ID139. **Off.no.** n/a

Built 1831 at Aberdeen *BT107/457 Leith 1850/2.* by John Duffus *Duffus list.* for London Leith Edinburgh & Glasgow S. Co., Leith. *Scotsman 14/1/1835, 23/3/1842, 13/1/1849, 21/7/1849.* **Rig** 3 mast schooner, 1 & break deck, square stern, wood carvel, man f^r head. *BT107/457 Leith 1850/2.*

net ton 293 1839 *SV acc.* **gross ton ?** **len.** 152'7" **b.** 25'6" **depth of hold** 17' *CE57/11/1 Leith 1831/7.* **draught ?**

Altered Lengthened 1838. *Lloyds 1841.*

325 917/3500 ton net, 540 ton gross, len. 156', b. 23.2', depth 17.2'.

BT107/457 Leith 1850/2. draught 14' *HofC1845.*

engine 200hp *Edinburgh Evening Courant* 26/7/1832.

180 hp *HofC*1845.

eng. room 49.8'=215 61/924 ton *BT107/457 Leith* 1850/2.

Owner in E. Scotland use LLE&G, Leith as above.

Re-reg. Leith 32, 25/7/1845, re-reg 31/1/1850 *BT107/457 Leith* 1850/2.

Same owners. *HofC*1851.

Service Leith to London, St Katherines. *Edinburgh Evening Courant* 26/7/1832.

Leith to London. *Scotsman* 7/1/1835.

Notes Capt. William Chapman *Edinburgh Evening Courant* 26/7/1832.

Capt. Chaplin *Lloyds* 1836.

At opening of Granton. *Edinburgh Evening Courant* 30/6/1838.

Collision 13/11/1841 off Wapping with sloop *Aid*. *Times* 17/11/1841.

Capt. Richardson. *Lloyds* 1841,1842.

Capt. Mekelred. *Lloyds* 1844,1847,1850.

Sold to alien May 1852. *BT107/457 Leith* 1850/2.

Fate ?

St George ID151. **Off.no. ?**

Built 1826 at Port Glasgow *BT107/433 Leith* 1837/14. by John & Charles

Wood *INA* 1861. **for ? Rig** 2 mast schooner, 1 deck, square stern, carvel.

net ton 63 515/3500 **gross ton** 113 **len.** 97' **b.** 16.2' **depth of hold** 8.3'

BT107/433 Leith 1837/14. **draught ?**

engine 48hp *INA* 1861.

eng. room 34.4'=50 54/92.4 ton *BT107/433 Leith* 1837/14.

New owner ?, reg Port Glasgow 1832/23. *BT107/433 Leith* 1837/14.

Owner in E. Scotland use Archibald Adam (master), James Henderson & Alexander McKellar *BT107/433 Leith* 1837/14.

Re-reg 28, Leith 31/12/1838. *BT107/433 Leith* 1837/14.

Reg. Leith. 1839 *SV acc*.

Leith reg. *HofC* 1845.

Service Chain Pier, Dysart, Largo. *Scotsman* 28/2/1835.

Chain Pier to Dysart, Largo *Fifeshire Journal* 7/4/1841.

Granton to Dysart, Largo. *Scotsman* 12/10/1842.

Notes Glasgow to Arrochar. *INA* 1861.

Fate ?

St George.ID202.

Off.no. n/a

Built 1832 at Liverpool by J. Wilson & Sons for St George SP Co.,

Liverpool *Greenwood & Hawks*. **Rig ?**

net ton 164 **gross ton ?** **len.** 135'1" **b.** 20'1" **depth of hold ? draught ?**

engine 55hp by Fawcett & Preston, Liverpool

New owner St George SP, Dublin, 9/4/1835 (company changed base).

1842 F. Longworth/ Prince Edward Island SN Co., Quebec.

1846 W. Stephenson & others, Quebec.

1850 Newfoundland SS Co., St Johns, Newfoundland.

1851 C.F. Bennett & others, St Johns, Newfoundland. *Greenwood & Hawks*.

Owner in E. Scotland use St George SP, Dublin *Pearson*.

Service 1836 Hull to Leith *Pearson*.

Fate Vessel lost 1852. *Greenwood & Hawks*.

St Kiaran.ID152.

Off.no. ?

Built 1835 at Greenock *BT107/454 Leith 1848/20*. by R. Duncan & Co.

Hawks. **for ?**, reg. Campbeltown 4, 23/12/1835 **Rig** 2 mast schooner, 1 & 1/4 deck, square stern, carvel, man f head.

net ton 128 70/94 **gross ton ?** **len.** 115'10" **b.** 19'1" between paddles

depth of hold 11'11" *BT107/454 Leith 1848/20*. **draught ?**

engine ?

eng. room 37'4" *BT107/454 Leith 1848/20*.

New owner ?, re-reg. Glasgow 81, 30/9/1851. *BT107/457 Leith 1850/13*.

Owner in E. Scotland use John Davidson & Ebenezer Davidson *BT107/454 Leith 1848/20*.

James Waldie, Leith *BT107/454 Leith 1848/34*.

John Macindoe, Leith *BT107/454 Leith 1848/35*.

James Waldie, Re-reg. 7/5/1850 Leith *BT107/457 Leith 1850/13*.

Service Leith to Peterhead *Scotsman 6/6/1849*.

Leith to Peterhead, carrying fish *Scotsman 16/7/1849*.

Notes Capt. J. Napier, reg. Campbeltown. *Lloyds 1836*.

Thomas Robinson, master *BT107/454 Leith 1848/20*.

Capt. Cooper *Scotsman 16/7/1849*

Mention *HofC 1851*.

Fate ?

Samson.ID140. **Off.no.** 20427 *HofC1861*.

Built 1840 at South Shields **by ? for ? Rig ?**

net ton 27 *HofC 1845*. **gross ton** 102 **len.** 88.3' **b.** 16.8' **depth of hold** 9.8'

HofC1861. **draught** 6' *HofC 1845*.

engine 60 hp *HofC 1845*.

Owner in E. Scotland use J.Robinson, Aberdeen reg. 22/12/1843, *HofC 1851,1852*.

R. Hall & others, Leith *CE57/11/2 Leith 1853/3*.

Jolliffe & Co., reg. Leith 1853, *HofC1861*.

Service Aberdeen tug 1843 - 1853?

Leith Tug from 1853- after 1861?

Fate Broken up. Reg. closed 9/11/1870. *CE57/11/2 Leith 1853/3*.

Samson.ID141. **Off.no.** 13537 *HofC1861*.

Built 1840 at Cobble Dean, Northumberland *BT107/457 Grangemouth 1850/1*. **by** Melville *Hawks*. **for ?**, reg Grangemouth 29/8/1840.

Rig 1 mast sloop, 1 deck, wood, square stern

net ton 22 1061/3500 **gross ton** 68 **len.** 70.9' **b.** 15.3' **depth of hold** 8.7'

BT107/457 Grangemouth 1850/1. **draught** 4'6" *HofC 1845*.

engine 30 hp *HofC 1845*.

eng. room 30.8'=45 2833/3500 ton *BT107/457 Grangemouth 1850/1*.

New owner re-reg Glasgow 9/1858. *BT107/457 Grangemouth 1850/1*.

J. Lynars, Glasgow *HofC1861*.

Owner in E. Scotland use ?, reg Grangemouth 29/8/1840, as above.

Andrew Cowie & others, re-reg Grangemouth 11/2/1850 *BT107/457 Grangemouth 1850/1*.

Service Grangemouth tug 1840 - 1858?

Notes James Sinclair, master *BT107/457 Grangemouth 1850/1*.

Fate ?

Satellite.ID142.

Off.no. ?

Built Feb. 1838 at Aberdeen by John Duffus & Co. for themselves

Rig 2 mast schooner *Duffus list*.

net ton 104 *Duffus list*. **gross ton** 250 *Aberdeen Journal 24/1/1838*.

len. 109.3' **b.** 19.5' **depth of hold** 11.8' *Duffus list*. **draught ?**

engine 100 hp *Aberdeen Journal 24/1/1838*.

Owner in E. Scotland use John Duffus & Co. *Duffus list*.

North of Scotland SP Co. *Aberdeen Journal 24/1/1838*.

North of Scotland SN Co. *Edinburgh Evening Courant 19/4/1838*.

Service Tender to *North Star*. *Aberdeen Journal 24/1/1838*.

Aberdeen to Inverness. *Edinburgh Evening Courant 19/4/1838*.

Aberdeen to Inverness, advertised with St George SP Co. *Aberdeen Journal 2/5/1838*.

Aberdeen to Leith. *Aberdeen Journal 1/8/1838*

Notes Walter Strachan, master *Duffus list*.

Mention *1839 SV acc*.

Fate ?

Sea Horse.ID143.

Off.no. ?

Built 1837 at Dundee *1839 SV acc*. by Thomas Adamson *Conversations*

Lexicon. for St George SP Co., (Dublin) *Edinburgh Evening Courant 19/4/1838*. **Rig** schooner *1839 SV acc*.

net ton 243 *1839 SV acc*. **gross ton** 600 *Aberdeen Journal 5/7/1837*.

len. 156'6" **b.** 22'8" *HofC1845* **depth of hold ? draught ?**

engine 250 hp *Aberdeen Journal 5/7/1837*.

By Peter Borrie, Dundee. Eng. room len. 54', b. 23'6", 12' high, boilers len. 28', b. 21', 9'6" high. Eight furnaces, cylinders ahead of paddle shaft, 2 Hall's condensers, 2 eng. 55" dia, 5' stroke, 21 strokes per minute, wheels 21' dia., 8'6" broad. *Conversations Lexicon*.

New owner 1840 B. Boyd, London. *Greenwood & Hawks*.

London reg. employed in Australia. *Hof C 1845*.

1848 W.S. Boyd, Sydney, NSW.

1849 W. Dawes, Sydney.

1849 R. Towers & A.C. Derrick

Owner in E. Scotland use St George SP Co. as above.

Service To Rotterdam with mail June 1837. *Aberdeen Journal 5/7/1837*.

Hull to Rotterdam. *Edinburgh Evening Courant 19/4/1838*.

Leith - Hull - Rotterdam?

Notes len. on deck 170', keel 150', b. over paddle boxes 48', len. of quarterdeck 65', b. of quarterdeck 30', load displacement 800 ton, load space 15,200 cubic feet. After saloon 40' long with 54 berths plus 10 loose, fore cabin 30 berths, ladies cabin 18 berths. Galley and wcs adjoining paddle boxes. general arrangement drawings. "Fiddle shape". *Conversations Lexicon*.

Capt. J.W. Bouch *Aberdeen Journal 5/7/1837*.

Capt. Bouch, *Edinburgh Evening Courant 19/4/1838*.

22/3/1867 registration cancelled "No longer sea going". *Greenwood & Hawks*.

Fate ?

Sea Horse. ID144. **Off.no. ?**

Built April 1838 at Aberdeen by John Duffus for Aberdeen Harbour Trustees not reg. until Sept. *Duffus list*. **Rig** foresail rig. 1839 *SV acc*. **net ton** 24 *HofC1845* **gross ton ?** len. 81' b. 19' **depth of hold** 10.7' *Duffus list*. **draught** 8' *HofC 1845*.

engine 70 hp *HofC 1845*.

Eng. room 51.6' *Duffus list*.

Owner in E. Scotland use Aberdeen Harbour Trustees, as above.

Aberdeen reg. *HofC 1845*.

Service Aberdeen tug?

Notes James Urquhart, master *Duffus list*.

Fate ?

Severn.ID145.

Off.no. n/a

Built 1825 at Liverpool *Lloyds 1839*. by J. Wilson for Cork & Bristol SN Co., Dublin *Greenwood & Hawks*. **Rig** ?

net ton 201 **gross ton** ? **len.** 130'11" **b.** 22'1" *Greenwood & Hawks*.

depth of hold ? **draught** ?

Altered 216 ton, lengthened 1833 *Lloyds 1839*.

len. 143'1" *Greenwood & Hawks*.

engine 2 x 60hp by Fawcett, Preston & Co. *Greenwood & Hawks*.

New owner 1835 St George SP Co., Dublin

20/12/1843 Cork SS Co., Cork.

1845 Evans, Liverpool. *Greenwood & Hawks*.

Owner in E. Scotland use St George SP Co., Dublin, as above.

Service 1840 Dundee to Hull. *Pearson*.

Notes Hull to Hamburg. *Edinburgh Evening Courant 19/4/1838*.

Capt. Knocker, Hull to Hamburg. *Lloyds 1839, 1841*.

Fate Broken up 1849 *Greenwood & Hawks*.

Sir William Wallace.ID146.

Off.no. n/a

Built 1830 at Dundee by W. Adamson for Dundee Perth & London Sh. Co.,

Dundee **Rig** 1 deck, no mast, steam tug, round stern, carvel

net ton 63 53/94 **gross ton** ? **len.** 75'7" **b.** 16'8" **depth of hold** 7'7 1/2"

Dundee Reg. 1831/6. **draught** 6' *HofC1845*.

Altered 44 ton 1839 *SV acc*.

23 ton, **len.** 72'7", **breadth** 15'1" *HofC 1845*.

23 ton net, 70 ton gross, *HofC 1851*.

engine 40 hp *HofC 1845*.

Owner in E. Scotland use DP&L as above.

Re-reg 54, 6/10/1840, *Dundee Reg. 1831/6.*

DP&L *HofC1851.*

Service Tug on Tay.

Notes John Smith, master *Dundee Reg. 1831/6.*

James Peddie, master 6/10/1840. William Elders, master 24/1/1842

CE70/11/6 Dundee 1840/54.

Fate Broken up 1851 *Sommer.*

Broken up. Reg. cancelled 14/1/1852. *CE70/11/6 Dundee 1840/54.*

Sir William Wallace (ex *Lord Nelson per Brodie*) ID147. **Off.no.** n/a

Built 1816[*Hawks*] 1818 at Port Glasgow by John Wood & Co. for ? **Rig** 2

masts, 1 deck

net ton 59 43/94 **gross ton** ? **len.** 81'6" **b.** 16'3" *BT107 Leith 1821/20.*

depth of hold 9'1" *BT107 Leith 1821/20.* **draught** 5'9" *Cleland.*

Altered Built as *Lord Nelson* & re-named, but see notes.

11/1818 to 3/6/1819 rebuilt by J. & C. Wood and J. Barclay, Port Glasgow

BT107/402 Glasgow 1819/11 (Hawks).

engine 30hp by Duncan McArthur, Broomielaw, Glasgow. *Cleland.*

32 hp by Cook. *HofC1822.*

New owner 22/6/1819 J. Wilson, J. Colquhoun, R. Scott *BT107/402 Glasgow 1819/11. (Hawks).*

4/7/1820 J. Cook *BT107/403 Glasgow 1820/3 (Hawks).*

Owner in E. Scotland use Trustees Forth Ferries, Leith *BT107 Leith 1821/20.*

Service Commence 23/4/1821 Newhaven to Pettycur & Burntisland.

Edinburgh Evening Courant 21/4/1821.

Newhaven to Kinghorn. *HofC 1822.*

Notes Launched May 1818, keel 71', 84 ton. In 1820 plying Glasgow to Belfast. *Lord Nelson*, 71' keel, built 1816 by John Wood, Port Glasgow & Co, re-built 1819 by John Scott, Greenock as *Waterloo*, 100' keel plying Liverpool to Dublin in 1820. *Cleland.*

See also *Maid of Islay*. Dimensions do not tally & appears *Cleland* or *BT107* may be in error. (As legal document *BT107* should be preferred, but mistakes exist).

Andrew Watson Cook, master *BT107 Leith 1821/20*.

Fate Vessel lost 7/2/1825. *BT107 Leith 1821/20*.

Skerryvore/Skerry Vere. ID148 **Off.no. ?**

Built 1839 at Leith *HofC 1845*. by R. Menzies & Sons for Commissioners of Northern Lights, Leith *Hawks*. **Rig ?**

net ton 48 **gross ton ?** **len.** 87'3" **b.** 17'5" *HofC1845*. **depth of hold ?**

draught ?

engine ?

Owner in E. Scotland use Commissioners of Northern Lights, as above.

Service Lighthouse tender.

Fate ?

Soho. ID149. **Off.No.** 333 *HofC1861*.

Built 1823 at Blackwall *HofC 1845*. by Wigram? for M. Wigram, J. Roberts, A. J. Mackenzie & others *BT107/36 London 1823/275 (Hawks)* **Rig** 3 mast schooner *Parker & Bowen*

net ton 292 **gross ton** 353 [*HofC1829*.] **len.** 150'5" **b.** 17'8"

depth of hold 17.3' [*HofC1861*.] **draught** 11'1". *HofC 1845*.

Altered 242 ton net, 433 ton gross, len 150.5', b. 25.8', *HofC 1851*.

len. 159'6", b. 27'1", load draught fore 13', aft 13'. *MN for war 1852/53*.

engine By Boulton & Watt *Scotsman 10/4/1824*.

2 side lever by Boulton & Watt, 42" x 48" total 120 hp. *Boulton & Watt list (Hawks)*.

engine room = 191 ton. *BT107/100 London 1849/57 (Hawks)*.

200 hp *HofC 1845*.

200hp 1823 beam eng. by GSN, tubular boilers, 60 ton fuel for 2 1/2 days at 24 ton per day, 8kn, 9kn with sail assist. *MN for war 1852/53*.

Owner in E. Scotland use Wigram & others, London as above. (Could be trustees of L&E SP).

London & Edinburgh SP Co., London *BT107/37 London 1824/114 (Hawks)*.

General Steam Navigation Co., London from 1824. *Hancock*. (Appear to have traded as or been in association with L&E SP)

30/1/1836 GSN *BT107/68 London 1836/31 (Hawks)*.

Service Newhaven to Blackwall, calling off Scarborough. *Scotsman 10/4/1824*.

Newhaven to London. *Scotsman 18/6/1828*.

Newhaven to London. *Edinburgh Evening Courant 19/3/1832*.

Newhaven to London, *Scotsman 7/1/1835*.

London to Antwerp. *Lloyds 1850*. London to Antwerp *MN for war 1852/53*.

Notes Capt. Beatson, *Scotsman 10/4/1824*.

Capt. Beaton. *Aberdeen Journal 16/5/1827*.

Capt. Beaton *Scotsman 18/6/1828*.

Capt. Bain, *Edinburgh Evening Courant 19/3/1832*.

Capt. Fraser, *Scotsman 7/1/1835*.

Capt. William Bain, spontaneous combustion in bunkers while on Lisbon to Falmouth. *1839 SV acc*.

Picture *Parker & Bowen*.

Fate 1/10/1863 register closed, broken up. *BT107/100 London 1849/57*.

Sovereign. ID150. **Off.no.** 7759 *HofC1861*.

Built 1836 at Port Glasgow by John Wood for Aberdeen Leith & Clyde Sh.Co., Aberdeen **Rig** 3 mast schooner, 2 & 1/4 decks, square stern, carvel **net ton** 206.26 **gross ton** 378.52 **len.** 154.5' **b.** 21.4' **depth of hold** 14.7' *BT107/427 Aberdeen 1836/79. draught 10'6" HofC1845*.

Altered 278 ton *HofC 1845*.

279 ton net, 451 ton gross. *HofC 1851, 1852*.

221 ton net, 417 ton gross, 157.1', 23.4', 14.4', *HofC 1861*.

Converted to sail 1872 *Brodie*.

engine 210 hp, *HofC 1845*.

200hp. *HofC* 1861.

eng.room 50.6' = 172.26 ton *BT*107/427 *Aberdeen* 1836/79.

New owner 1865 ?, London *Brodie*.

Owner in E. Scotland use Aberdeen Leith & Clyde Sh.Co., Aberdeen as above.

Re-reg. 13, 31/3/1841. *BT*107/427 *Aberdeen* 1836/79.(same owner).

Aberdeen reg. 31/3/1841, owner Aberdeen Leith & Clyde SC, *HofC* 1851, 1852.

John Webster & others, reg. Aberdeen 1857 *HofC* 1861.

Service Leith to Aberdeen, Wick, Kirkwall. *Aberdeen Journal* 8/3/1837.

Leith to Lerwick *Aberdeen Journal* 5/7/1837.

Leith to Aberdeen. *Edinburgh Evening Courant* 1/1/1838.

Aberdeen to Leith. *Aberdeen Journal* 18/7/1838.

Granton to Aberdeen, Inverness, Wick, Kirkwall. *Scotsman* 26/2/1842, 3/1/1849.

Notes Charles Phillips, master *BT*107/427 *Aberdeen* 1836/79.

Mention 1839 *SV Acc*.

Capt. Phillips. *Aberdeen Journal* 18/7/1838.

Capt. Phillips, *Scotsman* 26/2/1842, 3/1/1849.

Capt Snowie *Scotsman* 16/5/1849.

Fate 7/1/1901 wrecked at Muros, Spain *Brodie*.

Staffa.ID153 **Off.no.** ?

Built 1822 at Glasgow by ? for ? **Rig** ?

net ton 37 **gross ton** ? **len.** 79'4" **b.** 10'5" **depth of hold** ? **draught** 4'6"

engine 40 hp *HofC* 1845.

Owner in E. Scotland use ?

Glasgow reg. *HofC* 1845.

Service 1833 Inverness to Glasgow via Caledonian Canal. *Hub of the Highlands*.

1836 on Inverness to Glasgow. *IE&SinS* 1881.

Fate ?

Stirling ID154. **Off.no.** n/a

Built 1814 at Kincardine by John Gray for James Henderson & others including Henry Bell, Alloa **Rig** 1 mast, square stern, carvel, quarterdeck break 1'4", highlandman figurehead.

net ton 69 10/94 **gross ton** ? **len.** 68' **b.** 15'2" **depth of hold** 7' *BT107/113 Alloa 1814/11. draught* ?

Altered Re-built 1825 by J. Lang, Dumbarton, 50 ton, len. 79'2", b. 15', depth 7', re-reg. 26/4/1825, *BT107/411 Inverness 1825/4 (Hawks)*.

engine 12 hp *HofC1822*. Cast iron boiler. *Scotsman* 10/7/1819.

Owner in E. Scotland use Henderson & others as above. Trading as Stirling SB Co.?

?, re -reg Inverness 30/7/1824 no. 5. *BT107/113 Alloa 1814/11.*

J.M. Grant, J. Cargill, A. May & others, re-reg.30/7/1824 Inverness *BT107/408 Inverness 1824/5 (Hawks)*.

11/5/1825 Alex.A. Laird *Kennedy, J.*

Service 5/7/1814 commence Stirling to Leith. *Edinburgh Evening Courant* 11/7/1814.

5/4/1815 re-commence Newhaven to Stirling after refit. *Edinburgh Evening Courant* 30/3/1815.

About 1820 on Inverness to Fort Augustus. *Osborne*.

1822 Inverness to Fort Augustus. *HofC1822*.

11/5/1825 fortnightly Glasgow to Inverness by Caledonian Canal, from 20/9/1826 weekly. *Kennedy, J.*

Notes, John Henderson, master. *BT107/113 Alloa 1814/11.*

6/8/1814 coach connection from Newhaven to Edinburgh. *Edinburgh Evening Courant*.

22/5/1815 master now John Cowan. 30/10/1817 master now Peter Sutherland. *BT107/113 Alloa 1814/11.*

Boiler explosion at Grangemouth, Monday 5/7/1819, safety valve in cast iron boiler failed? Nine injured. Capt. Sutherland. *Scotsman* 10/7/1819.

60 ton.. Renamed *Stirling Castle?* *HofC 1822*. (possible confusion).

Capt. Maclean. *Times* 28/1/1828.

Fate Wrecked Inverscaddle Bay, Argyll, 17/1/1828. *Times* 28/1/1828.

Aberdeen Journal 30/1/1828.

Stirling Castle. ID155. **Off. no.** 10001 *HofC*1861.

Built 1826 at Port Glasgow by John Wood & Co. for Alloa Stirling & Kincardine Steamboat Co., Alloa **Rig** 1 mast lugger, 1 deck, square stern, carvel. *BT107 Alloa 1826/54*.

net ton 75 22/94 *Edinburgh Evening Courant* 27/1/1844. **gross ton** 98 *HofC*1851. **len.** 90'9" **b.** 17'8" **depth of hold** 6'8" *BT107 Alloa 1826/54*. **draught** 6.9' *HofC*1845.

Altered 57 1378/3500 ton n.m., len. 88', b. 16.9' *Edinburgh Evening Courant* 27/1/1844.

52 ton net, 92 ton gross, len. 88', b. 16.9', depth 8'. *HofC* 1861.

engine 45hp eng. by Robert Napier, Vulcan Foundry, Glasgow. *Edinburgh Evening Courant* 27/1/1844.

40hp *HofC* 1861.

Owner in E. Scotland use Alloa Stirling and Kincardine SB Co. as above.

?, re-reg 18/6/1828 no. 12. *BT107 Alloa 1826/54*.

Reg. Grangemouth *HofC* 1829.

In 1833 Stirling SB Co. *Central Region Archives B66/25/777*.

Reg. Alloa 1839 *SV acc*.

Kirkcaldy reg. *HofC* 1845.

Smith & Co. *Lloyds* 1847.

Andrew Ray, Alloa reg. 13/6/1849 *HofC* 1851, 1852.

John McMillan & others, reg. Alloa 1849 *HofC* 1861.

Service 1833 Newhaven to Stirling. *Central Region Archives B66/25/777*.

Newhaven Chain Pier to Isle of May excursion. *Scotsman* 3/6/1835.

Been Leith to Anstruther. *Edinburgh Evening Courant* 27/1/1844.

Notes Robert Duncanson, master *BT107 Alloa 1826/54*.

Capt. Strathie killed falling in Lauchlin Rose & Son graving dock at Leith while vessel under repair. *Scotsman* 11/11/1835.

For sale, with business. Two holds. Suitable also for livestock. *Edinburgh Evening Courant* 27/1/1844.

Capt. A. Grant, *Lloyds* 1847.

Fate broken up 6/1872 *Brodie*.

Success.ID156 **Off.no.** 19731 *HofC* 1861.

Built 1838 *HofC* 1861. at Gateshead by Wood *Hawks*. for ? **Rig** ?

net ton 22 **gross ton** 51 **len.** 64.7' **b.** 13.8' **depth of hold** 8.2' *HofC* 1861.

draught ?

engine 28hp *HofC* 1861.

Owner in E. Scotland use W.McAll, Leith, reg. 2/7/1846, *HofC* 1851.

Daniel Robertson, reg. Leith 1854 *HofC* 1861.

Service Leith tug?

Fate ?

Surprise.ID157. **Off.no.** n/a

Built 1821 *HofC* 1822. at Dumbarton by J. Lang *Brodie*. for Edinburgh

Glasgow & Leith S. Co. (inferred from) *SRO CS96/1422,1423*. **Rig** ?

net ton 120 *HofC* 1822. **gross ton** ? **len.** ? **b.** ? **depth of hold** ? **draught** ?

engine ?

Owner in E. Scotland use Edinburgh Glasgow & Leith S. Co., as above.

Service Newhaven Trinity Pier to Largo. *Aberdeen Journal* 17/12/1821

From 24/12/1821 Trinity Pier, Newhaven to Largo. *Edinburgh Evening Courant* 20/12/1821.

Cash books giving loadings to Kirkcaldy and Grangemouth in *SRO CS96/1422,1423*.

Notes At Greenock 11/5/1821. *SRO CS228/B.16/40*.

Fate Feb. 1822 totally wrecked on coast of Fife. *SRO CS228/B.16/40*.

1/2/1822 in gale, driven ashore near Leven, crew & 4 passengers aboard, all saved. *Edinburgh Evening Courant* 4/2/1822.

Swift.ID158. **Off.no.** ?

Built 1821 by lengthening Leith smack **at** ? **by** ? **for** London Leith
Edinburgh & Glasgow S.Co. *Edinburgh Evening Courant* 4&7/6/1821.

Rig ?

net ton 250 *HofC* 1822. **gross ton** ? **len.** ? **b.** ? **depth of hold** ? **draught** ?
engine 2x40 hp by Gutzmer *HofC* 1822.

Owner in E. Scotland use LLE&G as above.

Service 7/6/1821 Leith to Harwich *Edinburgh Evening Courant* 4 &
7/6/1821.

Now towing owners smacks Harwich to London. *Edinburgh Evening
Courant* 5/7/1821.

1822 Brighton to Dieppe. *HofC* 1822.

Fate ?

Tarbert Castle.ID159. **Off.no.** ?

Built 1836 **at** Dunglass **by** Wood & Mills **for** Castle SP Co., Glasgow

Rig 2 mast schooner, 1 & poop deck, square stern, carvel, woman bust
f head.

net ton 100.82 **gross ton** 198.52 **len.** 122.2' **b.** 18.9' **depth of hold** 10'
BT107/429 Glasgow 1836/89. **draught** 6'6", *HofC* 1845.

engine 100 hp *HofC* 1845.

eng. room 46.9'=97.7 ton *BT107/429 Glasgow* 1836/89.

Owner in E. Scotland use Montrose & Forth SN Co. 24/3/1838, re-reg
Montrose 13, 5/4/1838. *BT107/429 Glasgow* 1836/89.

Shand & Co., reg. Montrose, *Lloyds* 1844.

Service Granton to Montrose. *Scotsman* 11/6/1842.

Montrose to Leith. *Lloyds* 1844.

Notes Donald Currie, master *BT107/429 Glasgow* 1836/89.

reg. Montrose. 1839 *SV acc.*

Capt. James Galloway. *Scotsman* 11/6/1842.

Capt. Galloway, *Lloyds* 1844.

Montrose reg. *HofC* 1845.

Fate ?

Tarset.ID160

Off.no. ?

Built 1835 *HofC 1845*.at North Shields by Sorny *Hawks*. **for ? Rig ?**

net ton 8 gross ton ? len. 54'6" b. 13'2" depth of hold ? draught 4'

engine 14 hp

Owner in E. Scotland use ?, Leith reg. *HofC 1845*.

Service Leith tug?

Fate ?

Tay later *Oscar*.ID161.

Off.no. n/a

Built 1814 at Dundee by James Smart **for ? Rig** 1 mast/funnel, 1 deck, 1

engine, square stern, carvel.

net ton ? gross ton ? len. ? b. ? depth of hold ? draught ?

Altered lengthened 1818 and 1820 by John & Charles Wood, Port Glasgow
and re-named 22/11/1819 *BT107 Glasgow 1821/18*.

54 ton, draught 3'2" *IE&SinS 1881*.

engine 12hp *IE&SinS 1881*.

Possibly by J. Robertson, Glasgow (owner of this ship and builder of *Comet*
engine).

New owner Andrew Dow, Glasgow first reg. 7/9/1821.

re-reg 20/12/1827 no.47. *BT107 Glasgow 1821/18*.

28/12/1827 re-reg. owner Lochgoil & Loch Long Steamboat Co. *BT107/416*
Glasgow 1827/47 (Hawks).

Owner in E. Scotland use J.Robertson, Glasgow

Service Dundee to Perth. (1814 to 1818) *Davies*.

1820 in Clyde, *Steamboat Companion* quoted in *IE&SinS 1881*.

Notes Peter Graham, master *BT107 Glasgow 1821/18*.

Built 1815 *HofC 1822*.

Fate Broken up 20/2/1836. *BT107/416 Glasgow 1827/47 (Hawks)*.

Tay.ID162. **Off.no.** n/a

Built 1835 at Dundee by Thomas Adamson for Tay SP Co., Dundee

Rig 1 mast fore & aft rig, 1 & poop deck, square stern, carvel.

net ton 119 **gross ton** ? **len.** 103.4' **b.** 21' **depth of hold** 9.2' *BT107/428*

Dundee 1836/112. draught 4' *HofC 1845.*

Altered schooner 1839 *SV acc.*

engine 60 hp *HofC 1845.*

eng. room 35.1' = 73.3 ton *BT107/428 Dundee 1836/112.*

New owner Reg. cancelled sold foreigner 30/3/11846. *BT107/428 Dundee 1836/112.*

Sold to Borleid Ushishaw, St Petersburg 27/3/1846. *CE70/11/4 Dundee 1836/112.*

Owner in E. Scotland use Tay SP Co., Dundee, as above.

Service Dundee to ?

Notes David Tosh, master *BT107/428 Dundee 1836/112.*

Fate ?

Tay.ID163. **Off. no.** 21624 *HofC1861.* SCREW

Built 1850 at ? by ? for ? **Rig** ?, screw

net ton 455 **gross ton** 560 **len.** 141.6' **b.** 29' **depth of hold** 19.6'

draught ?

engine 73 hp

Owner in E. Scotland use William Clark, reg. Dundee 1858 *HofC 1861.*

Service Dundee to ?

Fate ?

Tayfield.ID164 **Off.no.** ?

Built 1836 at Dundee by Thomas Adamson for John Anderson & others, Dundee **Rig** 1 deck, no masts, round stern, carvel

net ton 60.6 **gross ton** 144.6 **len.** 96.5' **b.** 20.2' **depth of hold** 8.8'

BT107/432 Dundee 1837/29. draught 4'6" *HofC1845.*

Altered engine removed c. 1853 *McManus.*

engine By Borrie, Dundee. *McManus*.

60 hp *HofC1845*.

eng. room 43.7'=84 ton *BT107/432 Dundee 1837/29*.

New owner c1853 to Australia under sail.

Owner in E. Scotland use for Adamson & others as above.

Same group - Trustees of Tay Ferries, Dundee. 26/1/1840. *CE70/11/6*

Dundee 1837/29.

John Barrie & T.Boyd, re-reg 66, 20/12/1850, *CE70/11/6 Dundee 1837/29*.

1853 to Dundee speculators. *McManus*.

Sevice Dundee ferry.

Notes Cost £4,700 *McManus*.

James Duncan, master *BT107/432 Dundee 1837/29*.

Mention *1839 SV acc*.

During Australian gold rush went to Melbourne. Engine never re-fitted.

Traded under sail.

Fate Wrecked near Richmond River 1859. *McManus*.

1/12/1859 Wrecked as sailing schooner, Richmond River Bar, N.S.W. *Atlas of NSW wreck sites*.

Thane of Fife.ID165. **Off.no.** 31521 (sail) *BT108/312 Melbourne 1856/39*.

Built 1821 at Port Glasgow by John & Charles Wood for Trustees of Forth Ferries, Leith **Rig** 2 masts, 1 & poop deck, square stern, carvel.

net ton 95 51/94 **gross ton** 148 [*HofC1822*.] **len.** 91'6" **b.** 18'8" **depth of hold** 11' *BT107 Leith 1821/22*. **draught** 7' *HofC1845*.

Altered schooner *1839 SVacc*.

62 ton, len. 88'3", breadth 17'2" *HofC1845*.

29/12/1846 converted to sail. *BT107/450 Leith 1846/40 (Hawks)*.

engine 2x20 hp eng by Cook. *HofC1822*.

50 hp *HofC1845*.

New owner Various Glasgow, 1856 Melbourne, Sydney, Aukland. *Hawks*.

Owner in E. Scotland use for Trustees of Forth Ferries, Leith as above.

Re-reg. Kirkcaldy 13/1/1826 no. 5. *BT107 Leith 1821/22*.

Re-reg 25/6/1841 no. 10. *BT107 Kirkcaldy 1826/5.*

Kirkcaldy reg. *HofC 1829.*

Kirkcaldy reg. *1839 SV acc.*

Fife & Midlothian Ferry Trustees, reg. Kirkcaldy. *Lloyds 1839, 1841, 1842.*

Kirkcaldy reg. *HofC 1845.*

Service Newhaven to Kinghorn. *HofC 1822.*

Notes Capt. W. Lawson *Lloyds 1839, 1841, 1842.*

Fate 17/9/1868 wrecked as sailing vessel in Fiji. *BT108/323 Auckland 1867/16 (Hawks).*

Thane of Fife. ID166. **Off.no.** 15777 *HofC 1861.* IRON

Built 1847 *HofC 1861.* at Blackwall by Miller & Ravenshill for Edinburgh & Northern Rly. **Rig** ?, iron. *Brodie.*

net ton 107 **gross ton** 171 **len.** 141' **b.** 18.3' **depth of hold** 9.7' *HofC 1861.*

draught ?

engine 70hp *HofC 1861.*

2 cyl. oscillating 34" x 33" *Brodie.*

New owner 1890 W. T. MacLennan, Glasgow.

1891 O.S.S. Piper, Port Talbot.

1892 J. Rosmussen & Racine, Stavanger, Norway. Re-named *Turisten.*

Brodie.

Owner in E. Scotland use Edinburgh & Northern Rly. as above. 1847 - 1/8/1849. *Brodie.*

Edinburgh Perth & Dundee Rly, reg. Leith 1856 *HofC 1861.*

1862 - 11/11/1890 North British Rly. *Brodie.*

Service 1847 - 1853 Granton to Burntisland. *Brodie.*

1853 - 1879 Tay ferry. *Brodie.*

Fate Sank in Bergen fairway, Norway, 14/9/1893. *Brodie.*

Tiger. ID168 **Off.no.** 7755 *HofC 1859* IRON?

Built 1847 at North Shields by William Cooper for Ralph Stoker, Leith, 22/3/1847 **Rig** 1 mast sloop, 1 deck, round stern, clench (could be iron).

net ton 13.9 **gross ton** 57.3 **len.** 70.6' **b.** 14.3' **depth of hold** 8.4'

BT107/452 Leith 1847/14. draught ?

engine ?

eng. room 33.4'=43.4 ton *BT107/452 Leith 1847/14.*

Owner in E. Scotland use R. Stoker as above.

Service Leith tug *HofC1860.*

Notes John Dixon, master *BT107/452 Leith 1847/14.*

Mention *HofC 1851.*

Fate Register closed, totally wrecked 8/10/1859. *BT107/452 Leith 1847/14.*

Driven ashore 9/9/1859 in Elie Bay, Fife. Awards by Mercantile Marine Fund for gallant rescue. *HofC1860.*

Tourist.ID169.

Off.no.n/a ?

Built 1821 at Perth by James Brown for Leith & Aberdeen Steam Yacht Co., Leith reg. 23/5/1821 **Rig** 3 masts, 1 & 1/4 deck raised 12", quarter galleries.

net ton 179 6/94 **gross ton** ? **len.** 119'4" **b.** 22'6" **depth of hold** 12'6"

BT107 Leith 1821/11. draught 10'. *HofC 1845.*

Altered 1822, put into dock at Sime & Rankine, Leith for repair & alteration. *SRO RH15/206/11.*

15/11/1832 236 ton, 139'8" x 22'6" x 11'8" *BT107/61 London 1832/307.*

18/5/1836 112 ton 136' x 20.4' x 12.3' *BT107/69 London 1836/235.*

112 ton net, 257 ton gross, len.136', b. 20'4" *HofC 1851.*

len.oa 142', b. oa 22'7" *MN for war 1852/53.*

engine 2 eng.80 hp *Aberdeen Journal 30/5/1821,13/7/1821.*

2 x 50hp "on the first motion" *Edinburgh Evening Courant 10/6/1822, 28/11/1822.*

100 hp, beam eng. by GSN, 1821. Tubular boilers, 35 ton fuel for 2 1/2 days at 14 ton per day. 8kn, 9kn with sail assist. *MN for war 1852/53.*

Owner in E. Scotland use L&ASY Co., Leith as above.

For sale by L&ASY *Edinburgh Evening Courant 10/6/1822, 28/11/1822.*

4/7/1823 M.Wigram,J.Roberts, C.H.Turner & others. *BT107/36 London 1823/207 (Hawks).*

5/3/1824 London & Edinburgh SP Co. *BT107/37 London 1824/115 (Hawks).*

15/11/1832 General Steam Navigation Co. *BT107/61 London 1832/307 (Hawks).*

Service 21/5/1821 commence Newhaven to Aberdeen. *Edinburgh Evening Courant 10/5/1821.*

Aberdeen to Leith. *Aberdeen Journal 30/5/1821,13/7/1821.*

Transferred from Leith to Aberdeen onto Leith to London from 13/9/1821. *Edinburgh Evening Courant 6/9/1821.*

Leith Harbour to London *Edinburgh Evening Courant 8/7/1822.*

London to Leith. *HofC 1822.*

London to Antwerp. *Lloyds 1836, 1839, 1841.*

London to Calais. *Lloyds 1844.*

London to Calais *MN for war 1852/53.*

Notes William Bain, master *BT107 Leith 1821/11.*

William Bain, master *Edinburgh Evening Courant 10/5/1821.*

65 berths. For sale. Can be at sea in 24 hours. *Edinburgh Evening Courant 10/6/1822, 8/7/1822, 28/11/1822.*

1822, Capt. Bain. Court case re failed sale of vessel and account for repairs. *SRO RH15/206/11.*

Capt. Whitcomb *Lloyds 1836, 1839, 1841.*

Mention. *1839 SV acc.*

Capt. Lash. *Lloyds 1844.*

Capt. Grant. *Lloyds 1847,1850.*

Crew 15, 10 voyages to France in 1851. *HofC 1852.*

Deck not fit for carriage of guns, ship fit only for merchant use. *MN for war 1852/53.*

Fate Stranded Yarmouth beach 16/11/1854 *Brodie.*

Register closed 16/3/1855, stranded and broken up Yarmouth beach *BT107/69 London 1836/235 (Hawks).*

Toward Castle. ID197. **Off.no ?**

Built 1822 at Dumbarton by J. Lang for Toward Castle SB Co. **Rig** sloop
[1839 SVacc]

net ton 79 **gross ton ?** **len.** 101' 10" **b.** 16' 9" **depth of hold** 9' BT107/405
Glasgow 1822/14 (Hawks) **draught ?**

engine 45hp by D. McArthur exchanged 1831 for 150 hp from *Brenda*.
Duckworth & Langmuir.

Altered 7/9/1831, 97 ton, 115' 6" x 17' 1" x 10' 10" BT107/420 Glasgow
1831/25 (Hawks).

97 ton 1839 Svacc.

New owners 7/9/1831 C.Girdwood & J.Berry BT107/420 Glasgow 1831/25
(Hawks).

6/10/1834 Clyde SN Co. BT107/424 Glasgow 1834/49 (Hawks).

10/4/1844 City of Glasgow SP Co. BT107/445 Glasgow 1844/42 (Hawks).

21/11/1849 Robert Bell & Co. BT107/455 Glasgow 1849/63 (Hawks).

19/3/1850 T.Fletcher BT107/328 Goole 1850/8 (Hawks).

Owner in E. Scotland use Clyde SN, Glasgow see above (in 1838).

(27/6/1849) 7/7/1849 (J. Waldie) (Hawks).

J.B. Thomson CE57/11/2 Leith 1849/17

Service In 1838 on Glasgow to Inverness. *Duckworth & Langmuir*.

Peterhead to Leith, carrying fish. *Scotsman* 16/7/1849.

Notes Capt. Thomson. *Scotsman* 16/7/1849.

Fate 28/11/1854 broken up. BT107/328 Goole 1850/8 (Hawks).

Transit. ID170 **Off.no. ?** IRON?

Built 1848 at South Shields BT107/454 Leith 1848/31. by Bider Hawks.

for ?, reg. 21/3/1848 Newcastle 60 **Rig** 1 mast sloop, 1 deck, round stern,
clench (iron?).

net ton 14.1 **gross ton** 49.9 **len.** 65.2' **b.** 14.5' **depth of hold** 7.8'

BT107/454 Leith 1848/31. **draught ?**

engine ?

eng. room 29.3'=35.8 ton BT107/454 Leith 1848/31.

New owner Re-reg Scarborough 7, 2/4/1852. *BT107/454 Leith 1848/31.*

Owner in E. Scotland use John Barry, 15/8/1848, Leith *BT107/454 Leith 1848/31.*

Service Leith tug 1848 - 1852?

Notes John Waters, master *BT107/454 Leith 1848/31.*

Mention *HofC 1851.*

Fate ?

Trident.ID171. **Off.No.** 734 *HofC1861.*

Built 1841 at Blackwall by Green, Wigram & Green for General Steam Navigation Co., London *Times 9/9/1841.* **Rig ?**

net ton 645 **gross ton** 971 *MN for war 1852/53.* **len.** 192'7" **b.** 28'7" **depth of hold ? draught** 11'8" *HofC 1845.*

Altered len. (oa)197'5", **b.** (oa) 31' load draught fore 14'6", aft 14'6" *MN for war 1852/53.*

engine 260hp *HofC1845.*

260hp beam eng., tubular boilers, 165 ton fuel for 6 days at 28 ton per day, 10kn, 11 1/2kn with sail assist. *MN for war 1852/53.*

280hp. *HofC 1861.*

Owner in E. Scotland use GSN as above.

Service Granton to London *Scotsman 17/9/1842, 13/1/1849.*

London to W. Indies. *Lloyds 1844, 1847.*

London to Leith. *Lloyds 1850.*

London to Leith *MN for war 1852/53.*

Notes Launched 7/9/1841 *Times 9/9/1841.*

Capt. Sharpe. Carried Queen Victoria south Sept 1842. *Scotsman 17/9/1842.*

Capt. McDougal *Lloyds 1844, 1847.*

Deck plan for proposed armament. *MN for war 1852/53.*

Painting. *Parker & Bowen.*

Fate 1878 out of register and laid up. 1884 to coal hulk. *Parker & Bowen.*

Tug ID172. **Off. no.** 12616 (sail)*Hawks*.

Built 1817 at Port Glasgow by John & Charles Wood for Edinburgh Glasgow & Leith Sh.Co., Leith **Rig** 1 mast, flush deck, square stern, carvel.

net ton 93 79/94 **gross ton** ? **len.** 73'10" **b.** 17'2" **depth of hold** 8'1"

BT107 Leith 1817/32. draught 5', keel 73' *Cleland*.

Altered Re-reg. 20/8/1838 no longer steam, *BT107/435 Leith 1838/14 (Hawks)*.

engine 2 x 16hp eng. by D.McArthur, Broomielaw, Glasgow. *Cleland*.

2 safety valves, mercury steam gauge. *Edinburgh Evening Courant*

22/9/1817.

New owner ?, Maryport (as sail) *BT108/120 Maryport 1871/7, (Hawks)*.

Owner in E. Scotland use Edinburgh Glasgow & Leith Sh.Co., Leith as above.

Re-reg. Leith, 23/1/1819 no.20. *BT107 Leith 1817/32*. (owners amalgamate 1820 with Edinburgh & Leith S. Co. to form London Leith Edinburgh & Glasgow Sh. Co.)

LLE&G, re-reg. 22/12/1825, *BT107/412 Leith 1825/94 (Hawks)*.

LLE&G, re-reg. 14/1/1829, *BT107/418 Leith 1829/3*.

19/6/1829 Robert Williamson. 13/8/1838 sold to Davis Jackson & Robert Innes & re-reg Leith 1838/14. *CE57/11/1 Leith 1829/3*.

Service Leith to Grangemouth. *Edinburgh Evening Courant 22/9/1817*.

In 1820 plying Grangemouth to Leith. *Cleland*.

Trinity Pier to Largo. *Aberdeen Journal 17/12/1821*.

From 24/12/1821 Trinity to Largo. *Edinburgh Evening Courant 20/12/1821*.

Leith to Stirling. *HofC 1822*.

Been re-fitted. Trinity to Grangemouth, daily, Trinity to St Davids & Inverkeithing morning & evening. *Scotsman 10/4/1824*.

Notes Launched Apr. 1817 *Cleland*.

Cash book giving loadings to Kirkcaldy & Grangemouth, in 1820. *SRO CS228/B.16/40 CS96/1419,1420,1421*.

18/5/1820 owner Edinburgh Glasgow & Leith Shipping Co, value vessel
£1094 & eng. £1550, owner amalgamating with Edinburgh & Leith S.Co.
SRO CS96/4198.

For sale £420. *Scotsman* 7/6/1828 & 3/12/1828.

Fate Broken up 7/12/1876, *BT108/120 Maryport 1871/7, (Hawks).*

Tulliallan Castle. ID173 **Off.no.** n/a

Built 1828 at Kincardine by Gray for Subscribers to Alloa Steam Ferry

Rig ?

net ton ? **gross ton** ? **len.** 80' **b.** 16' **depth of hold** ? **draught** ?

engine 34 hp

Owner in E. Scotland use Subscribers to Alloa Steam Ferry, as above.

Service Kincardine ferry.

Fate Withdrawn c 1835. *Brodie.*

Union. ID167. **Off.no.** n/a

Built 1821 at Perth by Brown for Tay Ferry Commissioners [*Hall*] **Rig**

none, double ended catamaran

net ton 100 **gross ton** ? **len.** on deck 96' **b.** oa 34' **depth of hold** ?

draught ?

engine 15 hp eng in each hull.

Eng. room 22' *Aberdeen Journal* 19/9/1821.

By Carmichael *Hall.*

Owner in E. Scotland use Tay Ferry Commissioners, as above. Not registered.

Service Dundee to Newport-on-Tay *Hall.*

Notes Keel 76", b. of each hull 11'6", hulls 11'6" apart.

32' railed off at one end for cattle. Hulls joined by beams "fortified with iron" Tiller each end. Iron rudders. *Aberdeen Journal* 19/9/1821

Cost £4,245-8-6. *Hall.*

Possible plan in *McMamus Gallery, Dundee.*

Fate Sold 1837 for breaking *McMamus.*

United Kingdom. ID174. **Off.no.** n/a

Built 1826 at Greenock by Robert Steele for William Gray, James Dennistoun, Colin Arnot, David Napier (engineer), Glasgow **Rig** schooner, 1 & 1/4 deck & topgallant forecastle, square stern, carvel, woman f head.

net ton 335 23/94 **gross ton** ? **len.** 157' **b.** 26' between paddleboxes

depth of hold 13'8" *BT107/414 Glasgow 1826/44.* **draught** ?

engine 200hp low pressure engine, 170 ton bunkers, 17cwt per hour used.

By David Napier(part owner) *Edinburgh Cyclopedia.*

120 hp *HofC1845.*

Had copper boilers. *Eng.&S'Builders in Scotland 1881.*

Owner in E. Scotland use Gray & others, Glasgow as above.

29/6/1827 Napier disposed of his shares to other partners. *BT107/414*

Glasgow 1826/44.

?, re-reg. London 17/7/1833 no.208. *BT107/414 Glasgow 1826/44.*

Service Newhaven to Greenwich. *Aberdeen Journal 9/7/1827.*

London to Newhaven. *Scotsman 18/6/1828.*

Diary of voyage London to Newhaven, July 1831. *Diary of Mrs Cotton, Univ. of St Andrews Ms DA865 C7.*

Newhaven to London *Edinburgh Evening Courant 27/2/1832.*

Newhaven to Hamburg with Charles X & suite. *Edinburgh Evening Courant 27/9/1832.*

Notes Len. on deck 175', keel 147', b. 45'6", depth 12', upper deck to keel 18', spar sizes given, 48 crew, 160 berths *Edinburgh Cyclopedia.*

James Oman, master *BT107/414 Glasgow 1826/44.*

6/7/1827 at Leith master now Swan Blyth, *BT107/414 Glasgow 1826/44.*

Glasgow reg. *HofC 1829.*

Capt. Turner, staterooms contain 2 berths each. Ladies cabin amidships.

Surgeon aboard. *Edinburgh Evening Courant 27/2/1832.*

Model in *Science Museum, London.*

Picture *Parker & Bowen.*

Fate Wrecked near Kilrush on passage Galway to London 27/1/1834. *1836*

Com. S'Wrecks. (Is this same vessel? Disappeared from E. Scotland.)

But London reg. *HofC 1845*. (Could be an administrative oversight).

Velocity. ID175.

Off.no. n/a

Built 1821 at Dumbarton by William Denny for Robert Catto & Alexander Brown, Aberdeen **Rig** 3 masts, 1 deck, square stern, carvel, woman f'head.

net ton 134 42/94 **gross ton** ? **len.** 111'8" **b.** 20'2" **depth of hold** 11'7"

BT107/404 Aberdeen 1821/13. draught ?

Altered re-measured under 1836 Act, 154.461 ton net, 225.741 ton gross, len. 118.4', b. 18.3', depth 11.5', 3 mast schooner. *BT107/427 Aberdeen 1836/37.*

174 ton, len. 144', breadth 18'4", draught 8', *HofC 1845.*

engine 2 eng. iron funnel *BT107/404 Aberdeen 1821/13.*

2 x 40hp Glasgow. *Edinburgh Evening Courant 7/5/1821.*

2 x 20 hp eng. *HofC 1822.*

eng. room 31.3' = 71.28 ton. *BT107/427 Aberdeen 1836/37.*

100 hp *HofC 1845.*

Owner in E. Scotland use Robert Catto & Alexander Brown, Aberdeen as above.

Aberdeen Shipping Co. *Edinburgh Evening Courant 7/5/1821.*

Aberdeen Leith & Clyde S Co. *Aberdeen Journal 4/5/1821.*

?, re-reg 20/10/1825 no. 94. *BT107/404 Aberdeen 1821/13.*

Aberdeen Leith & Clyde Sh.Co. wish ownership transfered to William Duthie, 31/7/1844, *BT107/427 Aberdeen 1836/37.*

10/9/1844 William Duthie *BT107/445 Aberdeen 1844/26.*

9/10/1844 Aberdeen & Newcastle SN Co. *BT107/445 Aberdeen 1844/30.*

Aberdeen & Newcastle SN Co. *Aberdeen Journal 28/7/1847.*

Service Aberdeen to Leith *Aberdeen Journal 4/5/1821.*

Resuming Apr. 1822. *Aberdeen Journal 13/3/1822.*

Leith to Aberdeen. *Scotsman 3/4/1824.*

Newhaven to Aberdeen *Aberdeen Journal 28/3/1827.*

Inverness & Aberdeen to Newhaven. *Edinburgh Evening Courant 29/3/1832.*

Newhaven to Aberdeen, Wick & Kirkwall. *Scotsman* 20/5/1835.

Aberdeen to Leith. *Lloyds* 1836, 1839, 1841.

Aberdeen to Leith. *Aberdeen Journal* 18/7/1838.

Aberdeen to Peterhead & Aberdeen to Newcastle. *Aberdeen Journal* 28/7/1847.

Notes Launched 1/5/1821 *Edinburgh Evening Courant* 7/5/1821.

James Bell, master *BT107/404 Aberdeen* 1821/13.

In service. Capt. James Bell *Aberdeen Journal* 4 & 30/7/1821.

11/9/1821 master now Wm Stephen, 13/4/1822 master now Andrew Crane
BT107/404 Aberdeen 1821/13.

Capt. Crane *Scotsman* 3/4/1824.

Capt. Beverly *Aberdeen Journal* 28/3/1827.

Mention *HofC* 1829.

Capt. Phillips *Edinburgh Evening Courant* 29/3/1832.

Capt. C. Phillips *Lloyds* 1836, 1839, 1841.

Capt. Crane *Aberdeen Journal* 18/7/1838.

Mention 1839 *SV Acc.*

Capt. John Stewart. *Aberdeen Journal* 28/7/1847.

Fate 22/10/1848 wrecked by striking pierhead entering Aberdeen. 1851 *SV acc.*

Vesta ID196.

Off.no. ?

Built 1837 at Newcastle 1839 *SV acc.* by ? for Newcastle Steam Co.,

Newcastle *Lloyds* 1839. **Rig** ?

net ton 179 *Lloyds* 1839, 1841. **gross ton** ? **len.** ? **b.** ? **depth of hold** ?

draught ?

engine ?

Owner in E. Scotland use Newcastle Steam Co., Newcastle as above.

Chartered to Orkney SN Co. June 1849 *Scotsman* 23/6/1849.

North of Scotland SP Co. *Scotsman* 11/8/1849.

Service Newhaven to Newcastle. *Edinburgh Evening Courant* 12/2/1838.

Newcastle to Granton. *Scotsman* 11/6/1842.

Leith to Kirkwall direct. *Scotsman* 23/6/1849.

Leith to Aberdeen, Wick, Thurso, Stromness. *Scotsman* 11/8/1849.

Notes Capt. W. McCall, , Newcastle to Hull. *Lloyds* 1839,1841.

Mention 1839 *SV acc.*

Capt.W.McCall. *Scotsman* 11/6/1842.

Fate ?

Victoria.ID176. **Off.no. ?**

Built 1831 at Gateshead by ? for ? **Rig ?**

net ton 15 *HofC* 1845. **gross ton** 35 *HofC* 1851. **len.** 56'6" **b.** 12'4"

depth of hold ? draught 4' *HofC* 1845.

engine 14 hp *HofC* 1845.

Owner in E. Scotland use W.B.McKean, Leith reg. 9/11/1842 *HofC* 1851.

W.B. McKraw & another *HofC* 1861. (possible mistake for McKean see *HofC*1859.)

Service Leith tug?

Notes No off.no. shown in *HofC*1859 or 1861.

Fate ?

Victoria.ID177. **Off.no. ?**

Built 1834 at Glasgow *BT107/432 Grangemouth* 1837/18. by Hunter & Dow Brodie. for ?, reg Alloa 9, 29/7/1834 **Rig** 1 mast not rigged, 1 & 1/4 deck, square stern, carvel, woman bust f' head.

net ton 63 1426/3500 **gross ton** 91 **len.** 97.4' **b.** 14.9' **depth of hold** 7'

BT107/432 Grangemouth 1837/18. **draught** 3'6" *HofC*1845.

engine 34 hp *HofC*1845.

eng. room 24.2'=27 1140/3500 ton *BT107/432 Grangemouth* 1837/18.

Owner in E. Scotland use ?, Alloa, as above 1834 - 1837.

Alloa & Stirling Steamboat Co., re-reg 30/9/1837 *BT107/432 Grangemouth* 1837/18.

Stirling Alloa & Kincardine SB Co. *Edinburgh Evening Courant* 7/4/1838.

Stirling Alloa & Kincardine SB Co. *Scotsman* 16/7/1842.

Alloa & Stirling SB Co. "Lately sold" by Stirling SB Co. 23/10/1845.

Central Region Archives B66/25/777/7&8.

Alloa reg. *HofC 1845.*

Service Granton to Stirling. *Scotsman 16/7/1842.*

Notes Thomas Morrison, master *BT107/432 Grangemouth 1837/18.*

Lugger, reg. Alloa. *1839 SV acc.*

8/9/1838 incident with passenger being ejected by crew at Stirling leads to court case 23/10/1845 against owners Alloa & Stirling SB Co. *Central Region Archives B66/25/777/7&8.*

Fate Vessel lost on voyage to Copenhagen November 1845, reg. cancelled March 1848. *BT107/432 Grangemouth 1837/18.*

Victoria.ID178. **Off.no.** 6836 *HofC1861.* IRON

Built 1848 at Glasgow *Lloyds 1850.* by Tod & McGregor *Hawks.*

for Aberdeen & Newcastle SN Co., Aberdeen. *Lloyds 1850. & HofC 1851.*

Rig ?, iron *Lloyds 1850.*

net ton 153 **gross ton** 279 **len.** 148.5' **b.** 19.9' *HofC1851.*

depth of hold 10.2' *HofC1861.* **draught** ?

engine 110hp *Lloyds 1850.*

Owner in E. Scotland use Aberdeen & Newcastle SN Co., Aberdeen reg. 28/11/1848 *HofC 1851,1852.*

Service Aberdeen to Newcastle *Lloyds 1850.*

Fate ?

Victory.ID179. **Off.no.** n/a

Built 11/11/1825 at Howden Pans, Northumberland by J. Dowey for

N.B.Moody, T.Cookson, R.Hogg, J.Ogilvie, Newcastle **Rig** ?

net ton 33 **gross ton** ? **len.** 64'4" **b.** 17'2" **depth of hold** 8'5" *BT107/186*

Newcastle 18256/15 (Hawks). **draught** ?

engine ?

engine room = 54 ton *BT107/262 Newcastle 1839/147 (Hawks).*

Altered 16/2/1830, 47 ton, 74' x 17'2" x 8'5" *BT107/419 Kirkcaldy 1830/1*
(*Hawks*).

15/7/1839, 21 ton, 73.1' x 15.5' x 8.8' *BT107/262 Newcastle 1839/147*
(*Hawks*).

New owners 6/4/1836 J.Pletts, N.Elstor, North Shields *BT107/237*
Newcastle 1836/75 (Hawks).

Owner in E. Scotland use Moody & others, Newcastle as above.

16/2/1830 T.Cookson, J. Ogilvie, R.Hogg *BT107/419 Kirkcaldy 1830/1*
(*Hawks*).

9/2/1831 Dysart, Leith, Edinburgh, Leven & Largo SP Co. *BT107/420*
Kirkcaldy 1831/1 (Hawks).

Service Newhaven Chain Pier to Dysart. 1828/29 *SRO CS96/3773*.

Newhaven to Largo 1826 to 1832. *Brodie*.

Notes 1828/29 Andrew Greig acts as agent at Newhaven *SRO CS96/3773*.

Fate 25/5/1852 register closed - broken up. *BT107/262 Newcastle 1839/147*
(*Hawks*).

Victory.ID180. **Off.no.** 6909 *HofC1861*.

Built 1844 at South Shore, Durham *BT107/451 Aberdeen 1847/30*.

by R. Dixon *Hawks*. **for** ?, reg. Stockton 50, 12/10/1844 *BT107/451*
Aberdeen 1847/30. **Rig** 1 mast sloop, 1 deck, square stern, male bust f head.

net ton 41 288/3500 **gross ton** 92 **len.** 91.2' **b.** 14.5' **depth of hold** 9'

BT107/451 Aberdeen 1847/30. **draught** ?

engine 60hp *HofC 1861*.

eng. room 36.1'=50 3446/3500 ton *BT107/451 Aberdeen 1847/30*.

New owner ?, re-reg Liverpool 219, 23/2/1861. *BT107/451 Aberdeen*
1847/30.

Owner in E. Scotland use Aberdeen Leith & Clyde Sh. Co., Aberdeen,
re-reg 1/7/1847 *BT107/451 Aberdeen 1847/30*.

David Fox, Reg. Aberdeen 1847 *HofC 1861*.

Service Aberdeen to Leith?

Notes William Hall, master *BT107/451 Aberdeen 1847/30*.

Mention *HofC 1851, 1852.*

Fate ?

Water Witch.ID181

Off.no. ?

Built 1840 *HofC 1845.* at North Shields by Bider *Hawks.* for ? **Rig ?**

net ton 12 **gross ton ?** **len.** 57' **b.** 12'1" **depth of hold ?** **draught** 4'

engine 14 hp *HofC 1845.*

Owner in E. Scotland use ?, Leith reg. *HofC 1845.*

Service Leith Tug, at Queensferry during 1842 Royal visit. *Brodie.*

Fate ?

William Adam.ID182.

Off.no. ?

IRON

Built 1838 at Leith by Menzies & Co. for Queensferry Trustees **Rig ?**

net ton 49 **gross ton ?** **len.** ? **b.** ? **depth of hold ?** **draught ?**

engine 40 hp, by J.B. Maxton & Co.

Owner in E. Scotland use Queensferry Trustees, as above 1838 - 1864.

North British Rly. 9/1864

R.Slimon, Leith, 11/1866

Service North Queensferry to South Queensferry 1838 - 1864.

Granton to Burntisland. 1864 - 1866. *Brodie.*

Fate ?

William Innes.ID183.

Off.no. ?

Built 1825. *Hawks.* at ? by ? for ? **Rig ?**

net ton ? **gross ton ?** **len.** ? **b.** ? **depth of hold ?** **draught ?**

engine ?

Owner in E. Scotland use ?

Service 1825 Newhaven to Newcastle. *Brodie.*

Fate ?

William IV ID184.

Off.no. n/a

Built 1831 at London *Lloyds 1844*. by A. Gordon, Deptford for J. & W. Watson, Liverpool *Greenwood & Hawks*. **Rig** ?

net ton 151 **gross ton** ? **len.** 115'10" **b.** 21'1" *Greenwood & Hawks*.

depth of hold ? **draught** ?

Altered 1832, 176 ton net, len. 134'6" *Greenwood & Hawks*.

engine ?

New owner W. H. Smith, Brighton 1843. *Greenwood & Hawks*. (but see below)

Owner in E. Scotland use St George SP Co., Liverpool, 1832.

St George SP Co., Dublin 4/5/1835 *Greenwood & Hawks*.

St George SP Co. *Aberdeen Journal 13/12/1837*.

St George, Dublin *Lloyds 1844, 1847*.

Service Aberdeen to Hull. *Aberdeen Journal 13/12/1837*.

London to Dublin. *Lloyds 1844, 1847*.

Notes Capt. Bouch *Lloyds 1844, 1847*.

Fate Broken up 6/7/1848 *Greenwood & Hawks*.

Windsor Castle ID185.

Off/no. n/a

IRON

Built 1838 at Glasgow by Tod & McGregor for Castle SP Co., Glasgow

Rig ? iron

net ton 151 **gross ton** ? **len.** 130' **b.** 16'6" **depth of hold** ? **draught** ?

engine 50 hp 1cyl steeple eng. *Brodie*.

Owner in E. Scotland use Edinburgh & Dundee SP. *Edinburgh Courant 29/7/1844*.

Service Leith to Dundee. *Edinburgh Courant 29/7/1844*.

Newhaven Chain Pier to Berwick & Newcastle. *Edinburgh Courant 16/8/1844*.

Fate 1/10/1844 wrecked near Kilminning Craig, Fife. *Edinburgh Courant 3/10/1844*.

Xantho. ID186. **Off.No.7802** 1986/87/88 *IJNA*. IRON, CONV. SCREW
Built 1848 at Dumbarton by Denny & Co. for Anstruther & Leith Steam
 Sh.Co., Anstruther **Rig** 2 mast schooner, 1 deck, round stern, iron, woman
 f' head.

net ton 44.26 **gross ton** 92.52 **len.** 114.8' **b.** 17.8' **depth of hold** 8.4'

BT107/453 Anstruther 1848/4. draught ?

Altered 62 ton net, 110 ton gross, len. 106'8", b. 16'8" *HofC 1851, 1852.*

44 ton net, 97 ton gross, len. 114', b.17.8', depth 8.4' *HofC 1861.*

1871 Lengthened & converted to screw *1986/87/88 IJNA.*

engine 60hp, *HofC 1861.*

eng. room 31.6' = 48.26 ton *BT107/453 Anstruther 1848/4.*

As screw, by Penn. *1986/87/88 IJNA.*

New owner Re-reg. Scarborough 8/1860. *BT107/453 Anstruther 1848/4.*

William Spong, Scarborough reg. 1860 *HofC 1861.*

1870 sold to J.McGann, Wick. 1871 sold to R. Stewart, Glasgow. *Brodie.*

Sold to Australia *1986/87/88 IJNA.*

Owner in E. Scotland use Anstruther & Leith Steam Sh.Co., Anstruther, as
 above.

Service Anstruther to Leith.

Notes James Addison, master *BT107/453 Anstruther 1848/4.*

9/12/1856 master Wm. Weddell; 29/9/1857 master David Gellatly; date?

master John Galloway; date? master Wm. Weddell; 27/12/1858 master

William Snowie; 20/6/1859 master John Crawford. *BT107/453 Anstruther
 1848/4.*

See also:- no.11 *Denny List.*

Fate sunk Port Gregory, W.A. 17/11/1872. *1986/87/88 IJNA.*

**SUPPLEMENT - VESSELS BUILT ON EAST COAST BUT NOT
APPARENTLY USED THERE.**

Caledonia.

Built 1814 *Buchanan* (or 1816 *HofC1822.*) at Dundee by Smart for ? Rig ?

net ton 80

engine 12hp by Robertson *HofC1822.*

Notes sailed to Hull, for Hull to Gainsborough via river Trent. *Buchanan.*

1814 Gainsborough to Burton Staher in hour & half at 14mph. 14/5/1815

Hull to Naburn (outside York) and return in 12 hours. *Pearson.*

Selby to Hull *HofC1822.*

“Dredging machine”

Built Jan. 1848 at Aberdeen by Simpson for Pasha of Egypt, Alexandria.

Aberdeen Journal 12/1/1848.

Dunoon Castle

Built 1826 at Dundee by ? for ?, Glasgow rig sloop

net ton 100 1839SVacc.

Eagle.

Built 1826 at Perth by ? for ?, Cork rig sloop

net ton 119 1839 Svacc. **len.** 102.7' **b.** 17.6' **draught** 4' **engine** 75 hp.*HofC*

1845.

Esk

Built 1849 at Leith by ? for Royal Mail SP Co., London rig ?, screw

net ton 284 ton

notes London to West Indies, Capt. T.Sawyer. *Lloyds reg.* 1851.

Forth.

Built 1841 at Leith by R. Menzies for Royal Mail SP Co. *Parker & Bowen*, reg. London 1844. **net ton** 1148 **len.** 213' **b.** 33'6" **draught** 17'7" **engine** 400 hp. *Ret of SV 1844 & 1845.*

Gazelle.

Built May 1840 at Aberdeen by Wm. Simpson & Alexander Hall for "a Prussian company".

notes "a small steamer" *Aberdeen Journal 13/5/1840.*

Humber.

Built 1817 at Perth by Brown for ? rig ?

net ton 80 **engine** 12hp by Robertson

notes Gainsborough to Hull. *HofC1822.*

Iris.

Built 1841 at Aberdeen by Alexander Hall for "a Danish company" rig schooner **net ton** 187 or 280, 310 ton old measure **len.** 159.3' **b.** 19.2' **depth** 12' **engine** Wm. Simpson *Simpson/Hall builders list.*

notes In 1845 reg. Copenhagen, plying Alborg, Aarhus, Copenhagen. *Ret of SV in Foreign Ports.* Photograph exists.

Jardine.

Built 1835 at Aberdeen by Alexander Hall no. 68, for Alex Grant, London, as yacht rig schooner [*1839SVacc.*] **net ton** 58 **len.** 81'9" **b.** 17'1" **depth** 9'6" **engine** 30 hp

notes contract price £500 *Hall builders list.*

1845 reg. London. Not capable of armament. *MN for war.*

Majorquin.

Built 1837 at Aberdeen by John Duffus

net ton 400 len. 136' b. 26' draught 9' engine 120 hp. *Aberdeen Journal* 14/6/1837.

notes In 1845 departs Palma, Majorca every Wed. for Barcelona, returning Sat, also Spanish Govt. mail contract. *Ret of SV in foreign ports.*

Malvina.

Built 1824 at Inverness by J. Gordon

net ton 39 len. 58' b. 15'9" depth of hold 5'11" BT107/48 London 1826/529 (*Hawks*).

notes Reg. London 29/5/1826, 1845 reg. London, 1852 reg. London, owner J.W. Whinfield. *Ret of SV 1845 & 1852.* also 1839svacc.

Register closed April 1855.

Napier.

Built pre 1836 at Leith by ? for ?, British owner

net ton 140 len. 79' b. 30' draught 7'

engine 2 = 80hp low pressure, 6kn, 8 days fuel at 1/2 ton per hour.

service Lisbon to Oporto.

notes Captured as blockade runner and thereafter employed by Portuguese government. *HofC1837/38.*

Royal George.

Built 1823 at Perth by James Brown for Anthony Henry Gutzmer, Moubry Stenhouse & James Brown. reg. Leith.

net ton 159 83/94 len. 115'9" b. 21'7 1/2" depth of hold 11'6"

engine eng. room 37'. *BT107/405 Leith 1822/19.*

notes re-reg. London 1823/173. *BT107/405 Leith 1822/19.* Sold west coast. *SRO CS96/886.*

Royal Tar.

Built 1832 at Aberdeen by John Duffus for Dublin & London Sh.Co. reg.

Dublin net ton 307 len. 154' b. 27'9" draught 13'7" engine 265hp

notes A1 sheathed copper, master J.O.Herd *Duffus list*.

schooner, reg. London. Lloyds Reg. 1839 *SV acc*.

In 1841 Capt. Brooks, Peninsular SP Co, London to Gibraltar AE1, *Lloyds Reg. 1841, 1844*.

Mention *HofC 1845*.

1845 reg. London capable of carrying 2 heavy guns. *MN for war*.

Sirius.

Built 1837 at Leith by Menzies & Son [*Eng.&S'Builders Scotland 1881.*]

for St George SP Co., Dublin *Lloyds 1844. rig* schooner [*1839SVacc.*]

net ton 450 **len.** 178' **b.** 25'8" **depth** 18'3"

engine by T.Wingate, Glasgow, 2 side lever eng. 270hp, cyl. dia. 60", stroke 6', wheels 24' dia., Hall's condensers.

notes Atlantic crossing, Subsequently on Glasgow to Cork, wrecked 1847. *Eng.&S'Builders Scotland 1881.*

Urania.

Built 1836 at Alloa **for** ?, St Petersburg, Russia **net ton** 180 **engine** 50hp

Ret. of SV in foreign ports 1845.