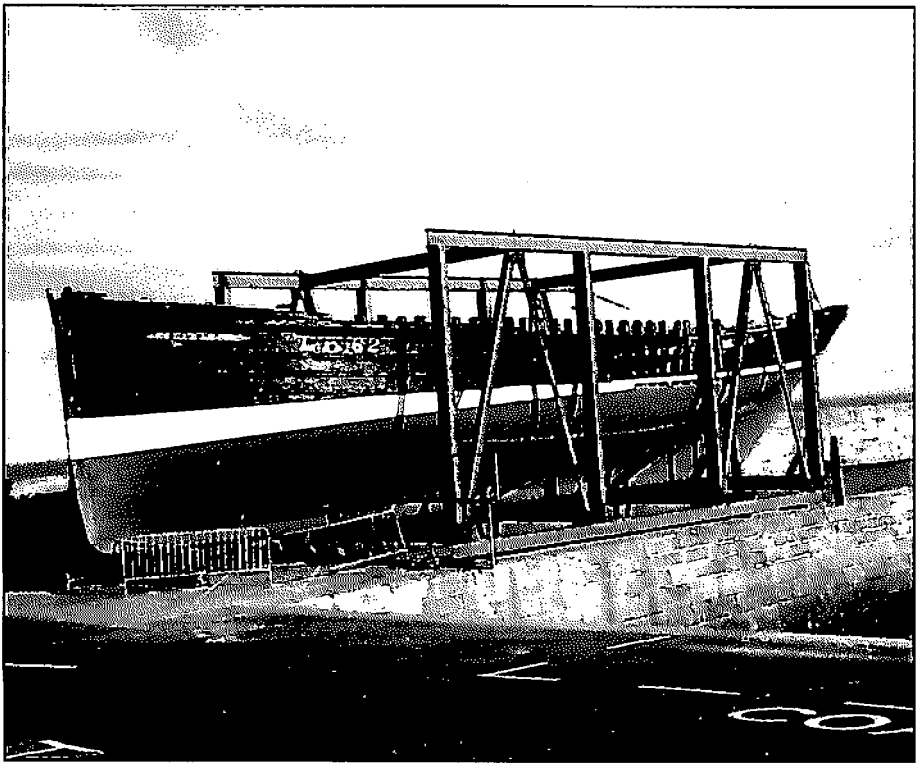
Kate Newland

The Zulu Herring Drifter:

A case study of historic vessel preservation at the Scottish Fisheries Museum



Stavanger Museums Årbok, Årg. 108 (1998): s. 83 - 104, 1999

Introduction

In the UK at any given time there are numerous campaigns to save seagoing vessels; the Swan - a sailing Fifie fishing vessel - at Shetland, the frigate Unicorn - an early 19th century naval vessel, and the RSS Discovery - Scott's Antarctic exploration ship at Dundee, and the Glenlee a steel sailing barque at Glasgow, are just a few successful Scottish examples to illustrate the wide range of vessel types involved. This paper describes the steps taken by one institution, the Scottish Fisheries Museum, to preserve Research LK62, a 78 foot (approx. 24 metres) wooden herring drifter known as a Zulu.

The Scottish Fisheries Museum is an independent museum based in Anstruther, Fife, on the east coast of Scotland, and recently received full registration as a 'national' museum. It was established in 1969, and has expanded rapidly to be housed in several harbour-front buildings which cover virtually all aspects of the Scottish fishing industry. The museum currently has a collection of 15 full size boats, including the *Research* which was acquired in 1979. Over the past 20 years, trends in boat preservation and expansion of the museum have led to the majority of these boats being taken from the water and placed, within purpose built structures. The museum still retains two vessels afloat; *Reaper* (Fifie) and *White Wing* (Baldie) maintained by volunteers and used for promotional activities. The recognition of the *Research* as a historically important boat, and now as the last surviving first class[1] Zulu, has culminated in the collection of substantial material on her working life, and a focussed effort to preserve her in the best possible manner.

The Museum has chosen not to rebuild the boat itself; instead it will form the centrepiece of an exhibition. The displays will interpret the history of the Zulu type and relate the history of Research LK62 within the context of the Scottish fishing industry, to provide an exhibition which will be valuable for both academic study and public enjoyment.

19th Century Scottish Herring Industry & Fishing Fleet

The 19th century witnessed the rise of the herring fishery in Scotland and greatly increased demand for "Scotch" cured herring. At the beginning of the 19th century around 50,000 barrels were being produced annually. This increased to over 1,000,000 by the 1880s.[2] In order to improve the method of curing, a strict inspection of cured fish with a graded system of branding was introduced in 1808. This consisted of branding the barrel with the outline of a crown with

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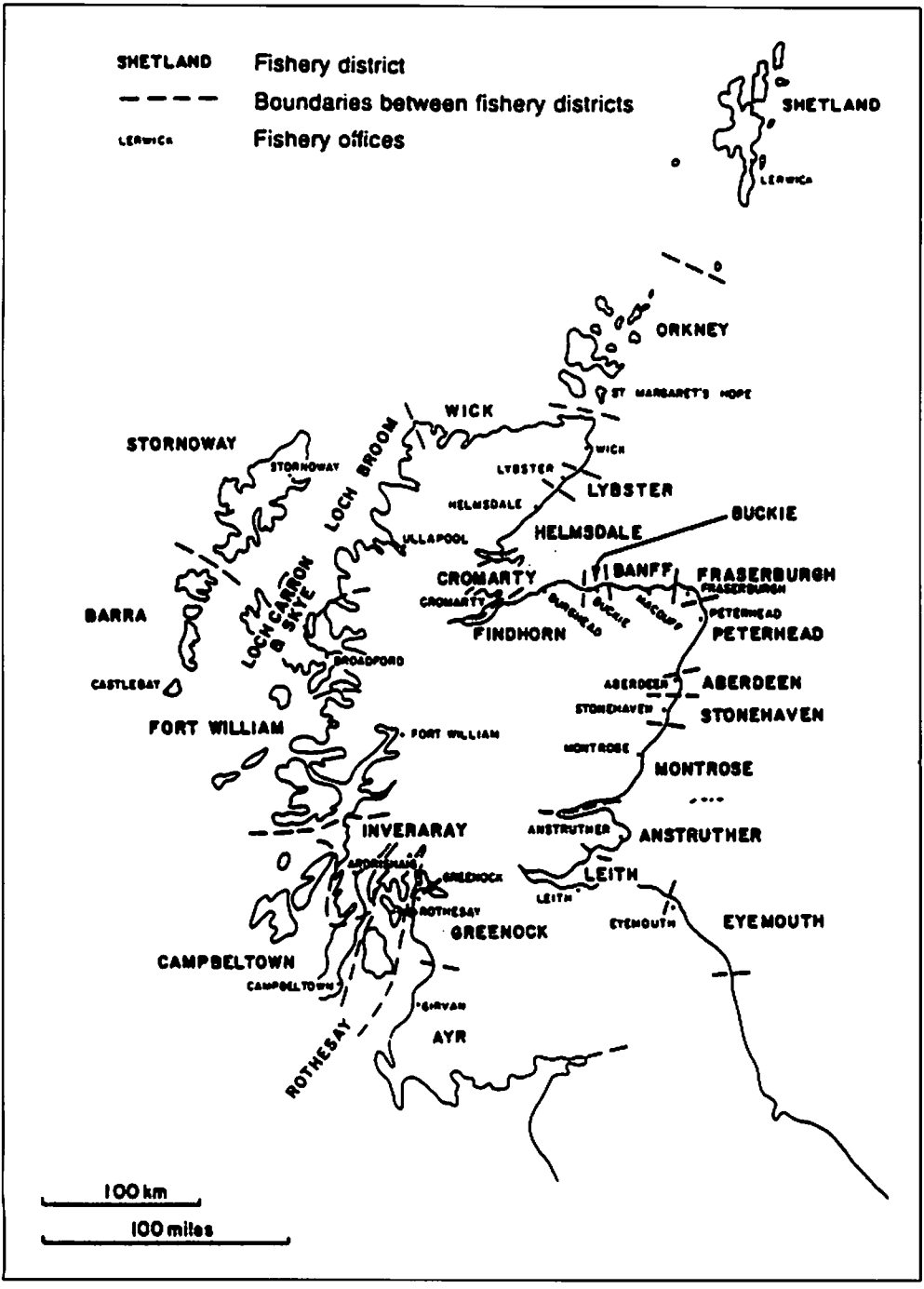
Title page:
Research LK62, safely removed from Anstruther Harbour January 1998, awaiting a decision from the Heritage Lottery Fund to decide her future. Copyright Kate Newland.



Scottish fishing districts and fishery offices, 1893-1953. Copyright James R. Coull.

the words 'Scotland', an indication of the size of fish, the year, the initials of the fisheries officer and the curer. It remained legal to cure herring in any fashion, but only those conforming to the stated standards received the Crown Brand.[3] One of the main criteria was that the herring should be gutted by knife and packed within 24 hours of being caught, which required faster fishing vessels able to race back to port to land their catch.

The demand for Scotch cured herring increased rapidly in Europe and it was exported in great quantities to Germany and the Baltic regions of Russia. Larger curers were also able to market their herring on the strength of their own reputation, independently from the Crown Brand. From the mid century Scotland took over from Norway as the leading exporter of 'King Herring'. With the price almost doubling during the 1850s,[4] the 'Scotch' herring was set to dominate the market well into the twentieth century. This rapid growth of the herring industry hastened the need for the improvement of fishing vessels.

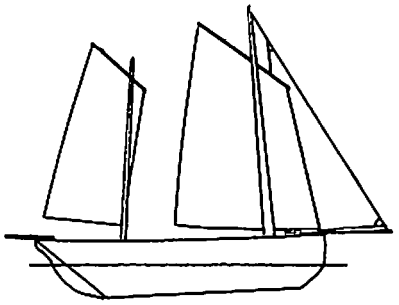
The Washington Report, following upon the great disaster of August 1848 when 124 boats were lost and 100 fishermen lost their lives, included descriptions of the two main boat types found in Scottish waters.[5] These were the Scaffie, found along the north east coast of Scotland in the Moray Firth, and the Fifie, found all along the east coast except for the Moray Firth. The Scaffie's chief characteristics were a curved stem and forefoot and a very steeply raked stern, which allowed the boats to turn easily. The boats were usually rigged with two masts, sometimes three, with lug sails and were very light to allow them to be beached. The Fifie was sharp and deep with a near vertical stem and stern and long straight keel. They were fast, but not as manoeuvrable as the Scaffie with a shorter keel. The Fifies used a simple dipping lug rig set on a large unstayed mast and a standing lug on the mizzen. Despite the simplicity of this rig, it required great skill to operate safely, particularly on decked vessels, since there was nothing to prevent fishermen being knocked overboard whilst dipping the lug when going about.

The Scaffie and the Fifie dominated the Scottish east coast fishing fleets at this time,[6] the Fifie's reputation as a superior sea going vessel being its ability to run with the wind, contrasting with the Scaffie's better turning ability, but lack of staying power. There was a concern to develop the design and performance of fishing vessels in the latter decades of the 19th century, particularly as the need for increased speed to and from the fishing grounds became crucial to ensure a good price for the catch with the Scotch cure brand.

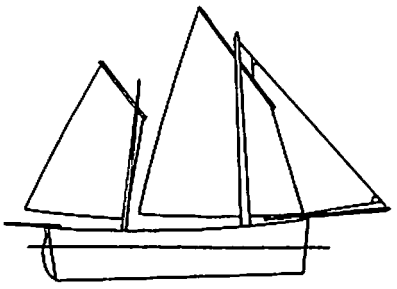
The Zulu

Usually the origin of vernacular vessel design remains anonymous. However, in the case of the Scottish Zulu herring drifter, a rare opportunity has arisen to document the emergence of a new design. The history of the Zulu type can be fully documented from its origins in 1878 to the day in 1968 when the last such drifter retired from the sea.

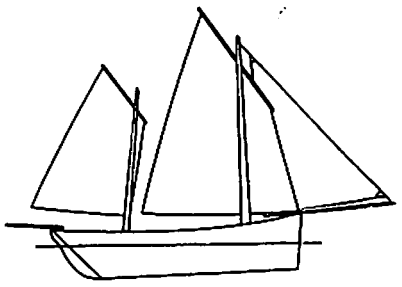
In 1878, William Campbell, a Lossiemouth skipper commissioned the building of a new boat to a revolutionary design. The vessel, appropriately named the Nonesuch, combined the good points of both the Fifie and Scaffie. This combination has often been attributed to the result of a marriage between fisher folk who could not agree on the type of boat to have built, one having grown up with Scaffies and the other being used to Fifies. Thus a compromise was arrived at and the vessel was built with the stem and bows of a Fifie, while the stern was modelled on the



***Scaffie*, c.42 feet (12.5 metres)**

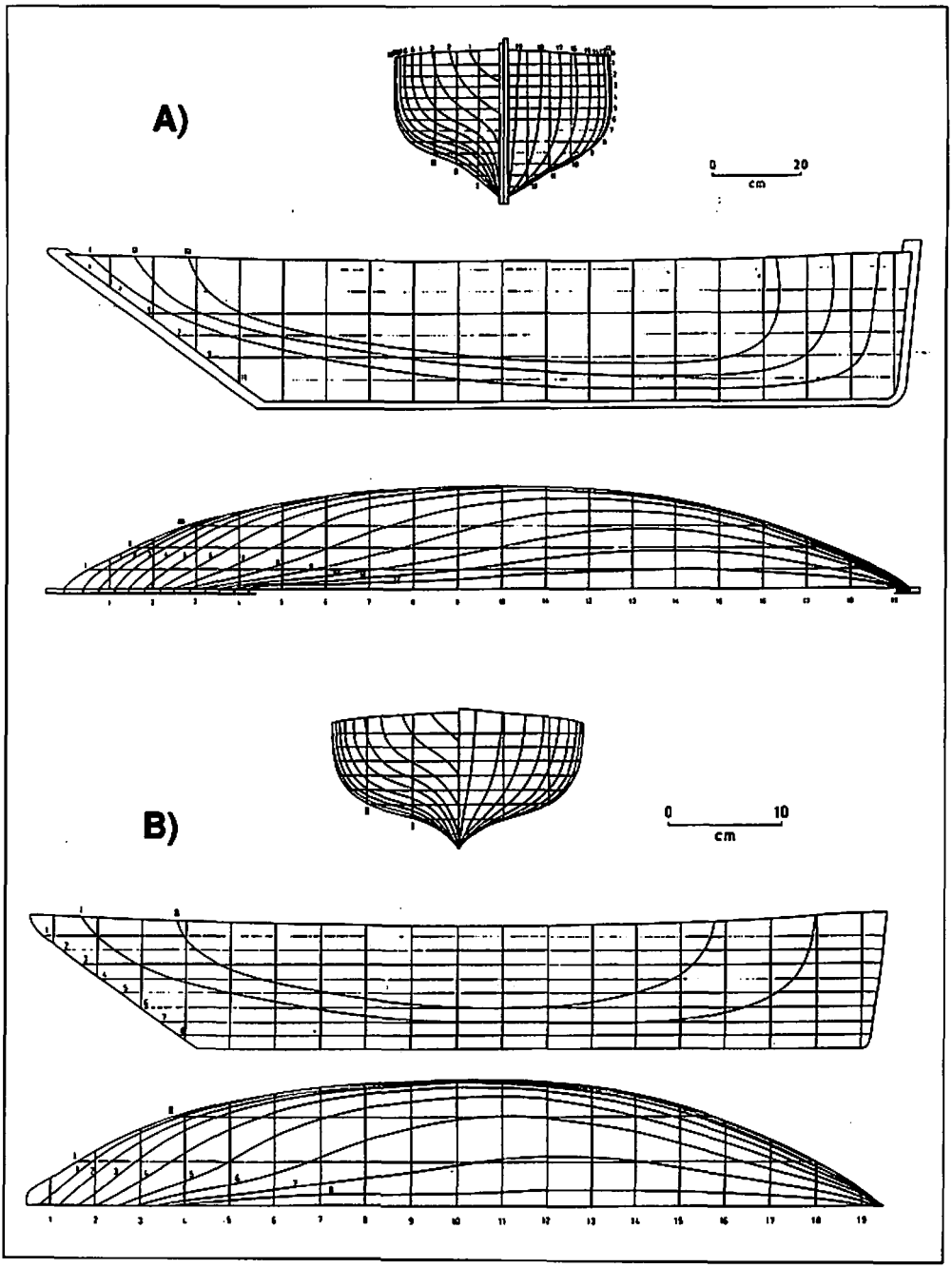


***Fifie*, c.70 feet (21.3 metres)**



***Zulu*, c.80 feet (24.3 metres)**

The different hull forms of the Scaffie, Fifie and Zulu sailing herring drifters, with sail plans; c. 19th century Scotland. Copyright Matthew Tanner.



(A) The lines of the Zulu, *Carolina* BF 953, built 1903, keel length 60', and (B) the Zulu, *Waterlily* BF1212 built by W & J Slater, Banff; 1903 keel length 60'; both illustrating the sharply raking stern of the Zulu herring drifter. Copyright Helen D. Prescott.

lines of a Scaffie. There are a number of versions of this tale wherein the husband came from Lossiemouth in the Moray Firth, and the wife from Fife, or Fraserburgh where the Fifie was used. There is a further account stating that 'two boat builders, one of whom preferred the Fifie and the other the Scaffie, sealed the marriage of their son and daughter by constructing a vessel which had the main features of their favourites'.[7]

A more plausible explanation for the origin of the Zulu is that fishermen needed to travel further for herring and therefore needed a more powerful, fast boat.[8] There was additional merit in building this new vessel, combining the features of the Scaffie and the Fifie, for a straight stem was easier to cut from one piece of wood than the curved stem of the Scaffie. It resulted in a longer keel, with the longer waterline allowing for greater speeds to be achieved when loaded with a catch on return to harbour; the long under rake of the new type protected the rudder when manoeuvring in small busy harbours. In addition to greater speed, it increased the available deck space aft and allowed a greater spread of canvas in light winds.[9]

The raked stern and straight stem are often used as the definitive description of the Zulu, with the raked angle being stated as 45° from the vertical. However, recent research using line plans and half models, has shown that this angle is less than 40°,[10] an interesting observation requiring further detailed research and analysis.It would seem then that the combination of Fifie and Scaffie was probably a logical decision taken to produce a functional and economic fishing vessel, "the inevitable product of an era of change within the Scottish fishing industry",[11] and came about "not by evolution, but by joining together the upright stem of the Fifie and the raked stern of the Scaffie".[12]

The Zulu, as invented by Mr. Campbell of Lossiemouth, provides a remarkable contribution to Scottish maritime history and technology. The *Nonesuch* INS 2118, was registered 5 July 1878 as a first class, clinker built sailing drifter with a keel length of 39 feet.[13] It rapidly became the model for a large fleet of similar boats.

Until the 1880s, Zulus were all clinker-built with keels not exceeding 40 feet. When bigger and more powerful vessels were required there was a shift to carvel construction. The largest class of Zulu had a keel of 60 feet, giving an overall length of between 78 and 80 feet, and used the steam capstan for hauling the fishing gear and hoisting the vast sails. All of these massive vessels were constructed without the aid of plans or drawings, and would have been based on half models, the boat builder's experienced eye and the owner's individual preferences.[14]

Huge foremasts of Norwegian white wood were used, one of the largest having a circumference of 6'9" (2 metres). This would have stood unsupported by any standing rigging. A typical foresail required 333 square yards (278 square metres) of canvas and the mizzen 220 square yards (184 square metres). Ballast for these boats would consist of 30 tons of stone gathered from the seashore. When manoeuvring these huge vessels in light winds the crew would use "sweeps" (oars) and poles to negotiate their way out of harbours. There would be six sweeps, each 26 feet long and two poles or "wands".[15] An additional spar was kept for squaring the jib when running; at 36 feet long, this would have increased performance in much the same way as a modern spinnaker boom does. Impressive speeds must have been reached (up to 11 knots), and it is no surprise that no photographic evidence exists to bear witness to this feat. No doubt it would have been a practice that could only be undertaken with any degree of safety on the open sea, and not within the approaches to a harbour where pierhead photographers would be found.

Since the turn of the last century, Zulu herring drifters have become synonymous with the best of Scotland's fishing traditions. They became famous throughout the North Sea and epitomised the Scottish contribution to the industry in the closing stages of the era of the sailing fishing boat. There is no doubt as to the importance of the Zulu in the development of the Scottish herring industry. Both as a sailing lugger and later as a motorised drifter, the Zulu was a characteristic sight from Lerwick to Yarmouth. At the turn of the century there were 480 Zulus registered at the north east port of Buckie alone.[16]

The name "Zulu"

In the name given by fisher folk to this new, successful boat type there is a direct reference to the British involvement in the Zulu Wars of 1879 in South Africa and to the influence which this episode had upon the Scots imagination. It was fitting to give this new and powerful class of fishing vessel a suitably awe inspiring title and the Zulu wars had made an impact on the late 19th century British public opinion. The Scots involvement in the wars extended to three regiments: the Royal Scots Fusiliers, the 90th (Perthshire Light Infantry) and the 91st Argyllshire Highlanders.[17] Contemporary Scottish newspaper reports of the events in Africa suggest that there was a great deal of sympathy and admiration for the Zulu warriors. The East Aberdeenshire Observer notes;

> 'Nobody has risen more in popular respect lately than the Zulu. The more we have learned of his character, as a warrior at least, and a brave man, the more we have been impelled to admire him...the stories of his heroism which have come from the seat of war by every man, are steadily winning for him popular regard..The Zulu is an enemy who is entitled to our respect for he has dearly won it...It is surely a matter of deep regret that it should be necessary to slay such a people by the thousand as we are now doing. . .it does add to the natural regret that a brave people defending their country should be made the victims of English aggression.'[18]

At the same time as newspaper articles were reporting their disgust at the needless loss of life, and blaming the inept British military commanders, who could have prevented Isandhlwana and Rorke's Drift,[19] Cetshwayo, the Zulu chief, was portrayed in the Banff newspapers as fearsome, noble and courageous, defying British imperialist authorities. The new Zulu sailing drifters were playing a similar role with this new design, defying the introduction of steam power to the fishing fleet.

Scots fisher folk already viewed themselves as living in distinct or separate communities and would find it natural to identify themselves with the Zulus.[20] Few, if any individuals, would live in coastal communities who had not been born there.

> 'They have always formed communities of their own, more conservative in many ways than agricultural or industrial workers. They were and still are more closely knit together. Until comparatively recent times they intermarried amongst themselves. It was a rare thing for a young man to

take a bride from a neighbouring village, and an almost unforgivable offence if she came from the country."[21]

The name "Zulu" was not used to describe the *Nonesuch* INS 2118 in the Fishing Vessel Registry of 1878, but from 1882 onwards there appear vessels described by the Registry as "Zulu" type. *Transvaal* BF 2031 and *Cetawayo* INS 358 were also used as names for fishing vessels, the latter being registered 7 March 1884, the owner is William Campbell of Lossiemouth.

There is one entry which appears in the 1881 Registry of a "decked lugger built at Lossiemouth". Interestingly the same vessel is described in 1883 as "Zulu boat, clinker built". The vessel actually named *Zulu* BF 662, registered 1882, may have given rise to the name being adopted for the type and she is described as a "Zulu clinker-built boat: decked: lugger rigg: jib, foresail and mizzen."[22] However, an earlier reference to "Zulu" being used has been found in the East Aberdeenshire Observer, 30 August 1881 following a severe storm off the north east coast of Scotland relating the return of fishing vessels to the harbour,

'The first to arrive was the Zulu, of Inverness, no. 3179 . . .'[23]

The name of this vessel was *Renown* INS 3179, thus the newspaper was not referring to the vessel's name, but to the class "Zulu". Thus, there is no definitive public declaration granting the new style of fishing vessel as a "Zulu". What is clear, is that three years following the launch of the first of this type, the name has come into common use both unofficially in local newspapers and officially in the Port Registers. This is not the only occasion where world events have influenced the naming of fishing vessel types; other examples include the 'Baldie', named after Garibaldi during the 1860s and also the seine net fishing vessels in the 1960s known as 'sputniks' after the Russian satellites.

The Last Zulu Herring Drifter, Research LK62

It is against this rich historical background that the Scottish Fisheries Museum acquired the vessel *Research* LK62, originally known as the *Heather Bell* BF 1206, built at Stephen's Yard, Banff in 1903. *Research* has had the longest working life of any vessel of her type, and withdrew from fishing in 1968. She started life as a sailing lugger, was later refitted as an auxiliary motor drifter and finally had a seine net winch installed to pursue white fish. During the Second World War she saw Admiralty service around the Orkneys and Shetlands.

The Museum has been fortunate in obtaining copies of some of the boat's documentation, covering her working life from 1903 through the various changes of ownership and skipper, to her final retirement from regular commercial fishing. It includes her vessel registration documentation as well as a series of 'settling up' papers, and receipts for work carried out on the boat when she was based at Whalsay, Shetland.

Working Life 1903 - 1935

The *Heather Bell*, as the *Research* was initially named, was commissioned by Alexander Paterson and was built by W & G Stephen of Banff. The boat first appears in the Register of Sea Fishing Boats in Scotland on 2 May 1903, with 5 May 1903 as the date registered to Alexander

Paterson. The vessel was lug rigged with a jib, foresail and mizzen and was equipped for fishing using nets and lines, with accommodation for up to 8 crew members. Her only mechanical device would have been a steam capstan for hauling nets and hoisting her foresail.

The launch from the boatyard was described a few days earlier in the Banffshire Journal of Tuesday 28th April 1903 as:

> "Banff boat launch, Yesterday before an interested gathering of spectators, there was successfully launched from the yard of Messrs Stephen, Greenbanks, a large and finely designed Zulu fishing boat. The vessel is built to the order of Messrs Alexander Paterson 8 High Shore; George Paterson 5 High Shore; William Lyall 2 High Shore; and Andrew Lyall jun.; Low Shore, MacDuff. As it left the ways the boat was christened "Heather-Bell" by Miss Bella Lyall, sister of one of the owners. All the usual up to date appliances complete the outfit of the vessel, which is of the following dimensions: - length of keel 60', over stems 78 feet 6 inches, breadth of beam 19 feet 10 inches, depth 7 feet 3 inches."[24]

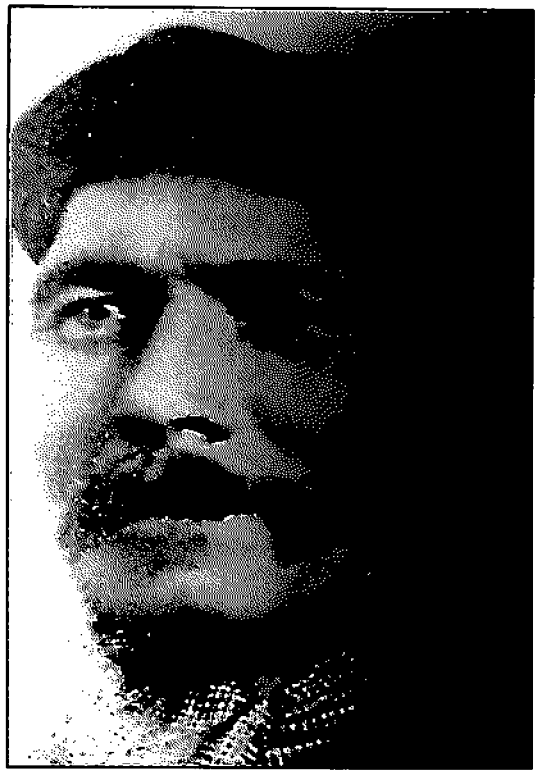
At this time, steam drifters were gradually being adopted as the preferred method for prosecuting the herring, but the initial expense of building a steam drifter and subsequent higher running costs remained as a barrier to many fishermen, and they continued to have sailing drifters built. The cost of a steam drifter in 1900 was more than twice the amount paid for a first class sailing drifter, approximately £1,500 for steam, as against £500 - £700 for sail.[25]

Until 1912 the vessel operated as *Heather Bell* BF 1206, working out from Macduff harbour, in Banffshire, and during this period she had three skippers.[26] In April 1912, the *Heather Bell* was sold to William Ritchie of Rosehearty, Fraserburgh and her registration number was changed accordingly to FR 498. According to the available documentation, in February 1917, the boat was fitted with an auxiliary motor, probably a 30HP (Horse Power) Kelvin. This was a practice being increasingly used, and by 1915, the numbers of motorised fishing vessels outnumbered those powered by steam, and where possible sailing boats were being converted to motor.[27]

Her subsequent change of ownership was followed with an additional auxiliary motor fitted in 1919, which may have been another 30HP Kelvin engine. The boat's Registration still cites her original lug sail, foresail, jib and mizzen as a means of propulsion, plus the auxiliary engines. It appears that the vessel was not used for Admiralty service during the First World War,[28] but this is an area which requires further research to verify.[29] In 1917 the vessel changed ownership twice within a few months, first in February and then again in May.

During the 1920s her engines were upgraded to two 60HP Kelvins and her rig was changed from lug sail to a ketch rig, which involved her mizzen mast being shifted aft. This alteration may have included the addition of a wheel house. Finally, during the 1920s, *Heather Bell* was owned by the Watts of Broadsea, who kept her for 5 years before selling her on to John Duthie Mitchell of Sandhaven.

These first 32 years of her working life were spent working out of the harbours of north east Scotland and included Banff, Fraserburgh, Rosehearty, Macduff, Broadsea and Sandhaven. Although she changed ownership a number of times in the Registry, most of her crew would have been related to one another, and the changes of ownership may have been due to men re-



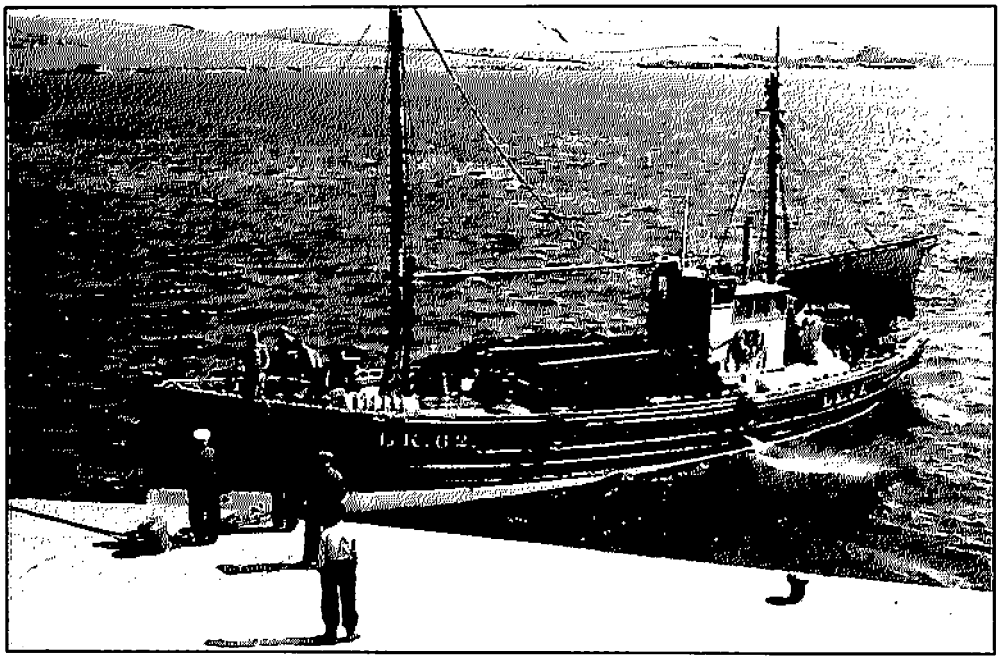
William Ritchie, owner of the *Heather Bell* FR498, 1912 - 1917.

tiring or to taking on their own boat. Her crew included the skipper, an engineer, a cook and usually 4 - 5 men.[30] She is also described in the Registers as carrying lines for catching haddock, cod and whiting during the winter. During the herring season the crew would work with up to 60 drift nets. However the herring fishing was in decline in north east Scotland and in April 1935 the *Heather Bell* FR498, a converted Zulu motor drifter, was sold on for £300[31] to Shetland, and her Fraserburgh Registry was closed.

Working Life 1935 - 1968

On her arrival in Shetland the *Heather Bell* FR498 was registered under the name *Research* and given a new registration number LK62. The name *Research* had been used for her owners' previous vessel, a 72 foot sailing Fifie *Research* LK828, sold to be broken up for firewood and fence posts. Her new crew were from the Shetland island of Whalsay, the owner/skipper was John George Anderson and her driver (engineer) was Gilbert (Gibbie) Williamson who drove the boat for her entire working life in Shetland.

Research received her new boat licence on the 18 July 1935, from the Herring Industry Board. This licence entitled her to fish herring from 1 July 1935, through to 30 September 1935. The



Research LK62, working as a motor drifter in the 1960s at Lerwick, Shetland.
Copyright Peterson Collection, Shetland Museum.

new boat soon established herself as a successful vessel, and in the summers of 1935 and 1936 earned £1,037 (gross) and £1,100 (gross) respectively.[32] In the vessel's 'Crew's Settlement' papers for 1936, the total from gross fishing is divided between the crew, nets and boat. Each received 241 Pounds, 7 Shillings and 4 Pence (£241.7.4); the remainder £410.9.9 was used to pay for stores, maintenance, oil, the 'Driver's share' of £36 and the 'Cook's share' of £27,[33]

> "They had good fishings in the *Research* ever since they got her. She was lucky -but on the other hand it was more than luck. They maintained good nets, which was crucial. . .If a boat had a bad season or so...and they couldn't hold the herring, letting you into a vicious circle- no fish, hence old nets, hence no fish and so on..."[34]

Following the outbreak of the Second World War, *Research* was requisitioned for war service. In September 1940[35] she was used by the Admiralty as a boom defence vessel and a number of her crew accompanied her as naval ratings, including Willie Anderson, Robert Polson (later skipper), and Johnny Irvine. From 1943 she operated as a store carrier or "flit boat", taking supplies to troops based at Unst, Sullom Voe and Whalsay[36]; Saxaford, Graven, and Fair Isle,[37] and towards the end of the war she was finally moved to Scapa Flow, in the Orkney Islands.

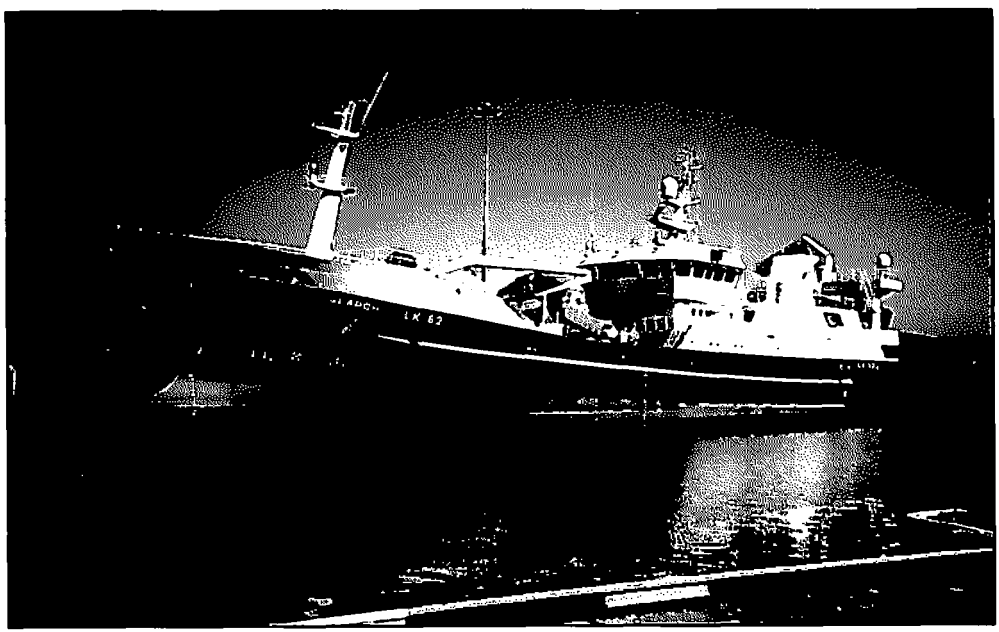
In 1945 she returned to Whalsay in good condition from her war service and resumed fishing with Robert Polson as skipper. In 1946 the boat had a seine net winch installed, which allowed

her to take part in the new winter fishery, and gradually the owners began to install more modern electronic appliances for navigation and fishing. In 1950 a radio set was fitted and this was followed in the mid-1960s with an echo sounder. However there were some things the boat could not convert to or compete with - the new huge purse seiners. After 1955, the crew decided to pursue the summer herring only, and for a crew consisting of semi-retired fishermen and young inexperienced fishermen, they were remarkably successful. In 1963 the Kelvin 60s were given a major overhaul, but by 1968 the crew decided to retire - Robert Polson was 71 and Gibbie Williamson 65, the same age as Research. On her last night at sea she still caught a very respectable 46 crans of herring (1 cran = approx. 1000 herring).

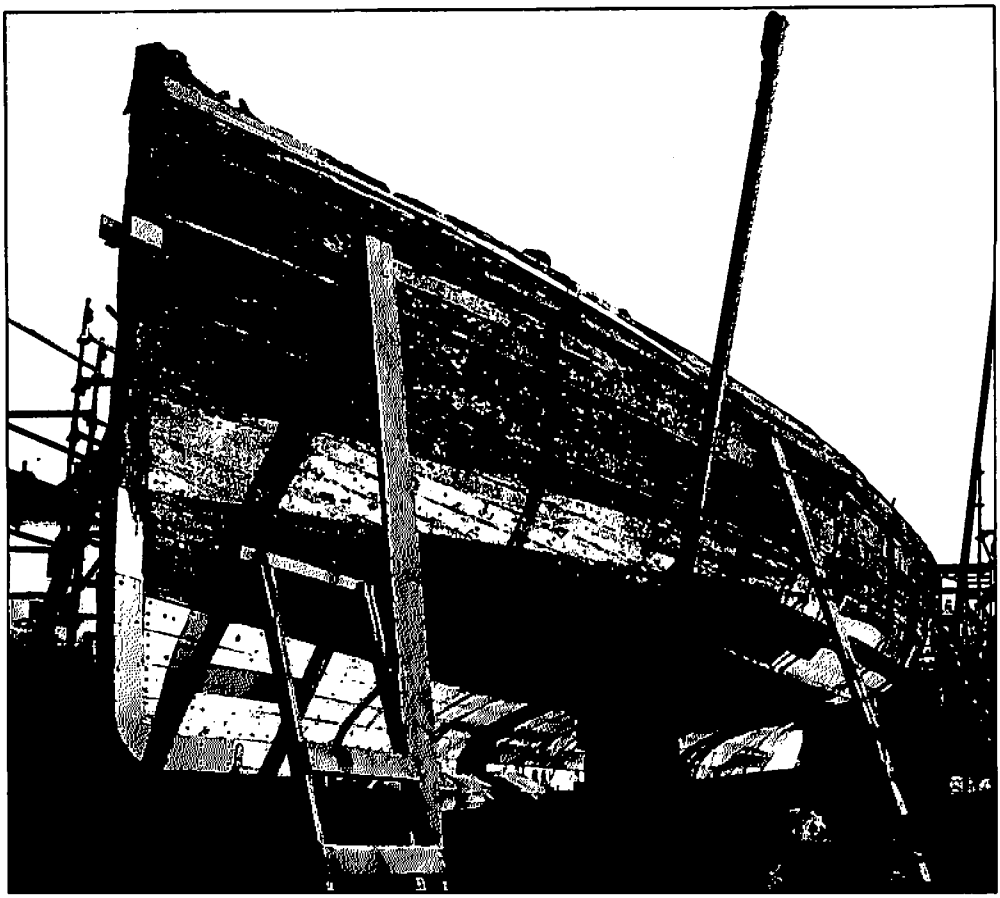
The name *Research* has continued to be used and, in 1982 a Norwegian built purse seiner *Research* LK380 joined the Whalsay fleet, followed by a larger vessel in 1987, also renamed *Research*. Finally in 1997 the fifth *Research* arrived at Whalsay, this time with the LK62 registration number. This *Research* LK62 is a modern stern trawler built by Slipen Mek Verksted of Sandnessjøen, Norway, is 221 feet (67.4 metres) in length and cost over £9,000,000, rather more than the £300 of its namesake, when purchased in 1935.

Campaign to preserve the vessel 1970–1999

A great deal of respect is held for the old *Research* and her crew in Shetland, many of today's fishermen having worked their apprenticeship on her. When her commercial fishing days



The new stern trawler, *Research* LK62, built in Norway by Slipen Mek Verksted to a design by Skipsteknisk of Ålesund; Shetland July 1997. Copyright Dennis Coutts, Shetland.



Research LK62 on the slip at Miller's Yard, St Monans with her new keel, 1983.

came to an end she was not broken up for firewood or fence posts but instead was purchased by a fish merchant, John Phillips from Lerwick, and in 1973 the Shetland Maritime Trust was formed.

The Trust was set up with the purpose of preserving the *Research*, and one of the principal aims was to keep her afloat as a museum, with the added possibility of taking visitors on trips around Lerwick harbour. Unfortunately this project was unable to raise the necessary funds, and she lay derelict for a number of years. By 1979 the vessel had sunk at her berth in Hays Dock, Lerwick.

At this point the Scottish Fisheries Museum became involved, and with the goodwill of certain Shetlanders, and the efforts of Dr Robert Prescott (Museum Trustee and Director of the Scottish Institute of Maritime Studies at the University of St Andrews), a salvage expedition was organised. This involved some minor repairs prior to her being towed from Shetland to Anstruther, Fife where the museum is based.

Scottish Fisheries Museum Phase I (1979 - 1984)

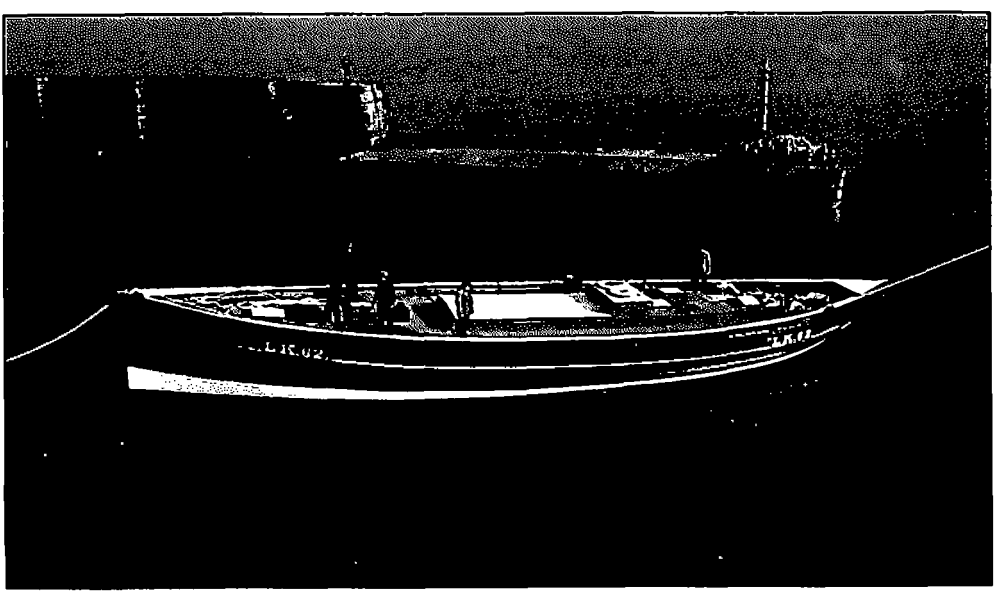
Once *Research* LK62 arrived at Anstruther, fund-raising began. In 1983 the Museum had raised enough to send her to Miller's Boatyard in St Monans, Fife for major repair work to stabilise her hull, including a new keel and several new planks to increase her longitudinal strength. The ultimate aim at this point was to return her to her original form as a sailing drifter.

In 1986 additional restoration work was completed on one of her Kelvin 60HP engines. It was returned to Lerwick and fully restored by Thomas Laurenson. It had lain part submerged in *Research*'s engine room and had completely seized. The engine was dismantled, rebuilt and returned to full working order before returning to the Scottish Fisheries Museum.

After completion of this work, however, avenues for funding dried up and the Scottish Fisheries Museum found it increasingly difficult to finance its two large floating vessels, the other vessel being *Reaper*, a 70 foot sailing Fifie. As much work as possible was carried out by skilled in-house volunteers, and helped to reduce costs. However, seagoing vessels need constant attention and constitute a major expenditure for any museum; the Scottish Fisheries Museum managed to nurse the *Research* through a further 13 years, albeit in less than perfect conditions.

Scottish Fisheries Museum Phase II (1990 - 1999)

By 1990 *Research* had deteriorated and much of her original fabric had been removed, or lost, including the wheel house, the rudder and one of the Kelvin engines. The Scottish Fisheries



Research LK62 being towed back into Anstruther Harbour following her restoration work at Miller's Yard, St. Monans, April 1983. Copyright Scottish Fisheries Museum Trust Ltd.

Museum, recognising her importance as a fast disappearing class of fishing boat, renewed efforts to preserve her. In 1992 a proposal was discussed to remove the vessel from the harbour and place her inside under cover away from the elements, wherein her surrounding environment could be stabilised and controlled to reduce any further deterioration. In the long term this course of action would also reduce the financial burden of restoring and maintaining a vessel afloat. Whilst a suitable site and funding were sought, *Research* still needed some repair work, which included adding a false deck as a safety precaution and to prevent vandalism.

At the same time, the Scottish Fisheries Museum embarked on a major fund-raising drive in the early 1990s to provide covered accommodation for its collection of historic vessels, by purchasing, improving and extending the former adjacent Smith & Hutton boatyard and linking it to the museum. However this area was not suitably large enough for housing and exhibiting the *Research*.

This development did allow the vessel collection to be brought into line with approved international practice, as outlined in the Australian Burra Charter[2] for the conservation of wooden vessels, and was carried out in conjunction with the museum's other ongoing improvements towards gaining "Full Registration" as a national museum.[3] The Historic Boatyard currently contains 10 wooden boats; 2 others are located under cover in other parts of the museum. This project was successfully completed by the spring of 1997, with financial help from many organisations, institutions and individuals, including the newly launched Heritage Lottery Fund.

In the meantime, the previous year's winter storms had been taking their toll on *Research* LK62, the ninety-two year old Zulu suffered considerable damage during the very severe easterly weather conditions which persisted for the whole of the 1995/96 winter. Albeit she was moored in a "soft" berth in what is normally the quietest part of Anstruther harbour. She lost her false deck, her deck and main beams. The Scottish Fisheries Museum was in no doubt that a further one or two weeks of such weather conditions would have broken her up.

Being responsible for an object of national importance and faced with its increasing deterioration, the museum decided at an early stage to approach the Heritage Lottery Fund again, with an application for funding to save the vessel. The museum was fortunate in that the Heritage Lottery Fund recognised the importance and also precarious physical position that the boat was in. It was undisputed that the vessel was an example of outstanding historical importance, the main difficulty lay in finding a suitable location for a new permanent site for *Research*.

The Scottish Museums Council were also advised at that time of the situation i.e. an accessioned artefact of national importance, was in danger of being destroyed. It was feared that the museum might be obliged to cut up the vessel, should that prove necessary to avoid damage by debris to other vessels in the harbour. Public concerns were being vociferously voiced in the local press ("Wreck or Relic!"[4]), as were reactions to the suggestions put forward by the Museum to house the vessel in a new purpose built gallery along the harbour front, on the site of a former boat builder's yard. There was also some public support to have the vessel rebuilt as a sail training vessel. However, the museum had already looked at this possibility and rejected it, on the grounds that the *Research* was not suitable for such a conversion. If the initial finance had been available, the running costs for such a project were still not economically sustainable for the Scottish Fisheries Museum. More importantly, the vessel's historical significance ruled out such a scheme. The aim remained to preserve the hull form in suitable covered accommodation where her long-term survival could be guaranteed.

In October 1996, the Heritage Lottery Fund approved support for the removal of *Research* from Anstruther harbour as a matter of urgency, since it was highly likely that winter gales would finally destroy her if nothing was done. By this time *Research* had again sunk at her berth, resulting in additional damage to her starboard side. To allow her to be re-floated and moved into a lifting cradle, the entire hull had to be effectively wrapped with waterproof sheeting to make her temporarily more water tight. All of this work had to be done according to the different tides, and her removal from Anstruther harbour was successfully accomplished in mid-December 1996. The vessel was placed in a supporting cradle, and the Museum and Board intensified their search for suitable premises to house and display *Research*, this being one of the main conditions of the funding from the Heritage Lottery Fund.

Project Zulu

The museum reviewed the various options locally available, the proposals for a new harbour side building already having been rejected by the Fife Council planning authorities. Given the vessel's size, now safely removed from the water it would have proved incredibly difficult to transport the vessel out of Anstruther by road. The town is based on small, narrow twisting road ways and negotiating a 78 x 20 foot Zulu along such roads would certainly have proved interesting, if not impossible.

A solution was eventually found when premises adjacent to the museum came on the market. The site was being used as a Public House known as the 'Sun Tavern', and had an internal courtyard with an adjacent range of old buildings - including a late eighteenth, early nineteenth century former cooperage and smokehouse.

An application regarding the development of this property was sent to the Heritage Lottery Fund for approval. It was intended to purchase the site and demolish the buildings, some of which were already in a dangerous condition, but preserve the frontage of the Sun Tavern. *Research* would then be manoeuvred into an existing courtyard area. Thereafter the area would be roofed with suitable materials, and the demolished buildings rebuilt, leaving the outward appearance of the buildings unchanged.

The Scottish Fisheries Museum already has a wealth of experience in developing and restoring historical buildings including the Smith & Hutton Boatyard and other work on location at the museum site. None of the buildings concerned in Project Zulu were listed, although they were in a Conservation Area.

The plans for the building were drawn up by the museum's architect to a design brief created in-house, which provides opportunities to view the vessel from below, above, and laterally in a reasonable natural context - with separate displays of the engine, living accommodation,- and considerable introductory material giving the technical, and historical background to the creation of the Zulu.

In March 1998, the Scottish Fisheries Museum received approval from the Heritage Lottery Fund for Project Zulu; the total cost for the project estimated at £750,000. The Heritage Lottery Fund does not fund the total amount, and applicants must show that they are able to raise a percentage of the final cost funds. In the case of the Scottish Fisheries Museum this amounts to

£70,000, although the Museum's Development Committee has set its sights higher and hopes to raise £150,000. To date they have been extremely successful and will continue to raise funds for the Museum until the Project has been completed.

Zulu Exhibition

As previously stated, the vessel's historic value means that the museum aims to preserve the hull in a purpose built gallery. *Research* will be on permanent display with additional material illustrating the history and development of the Zulu fishing vessels from 1878 onwards.

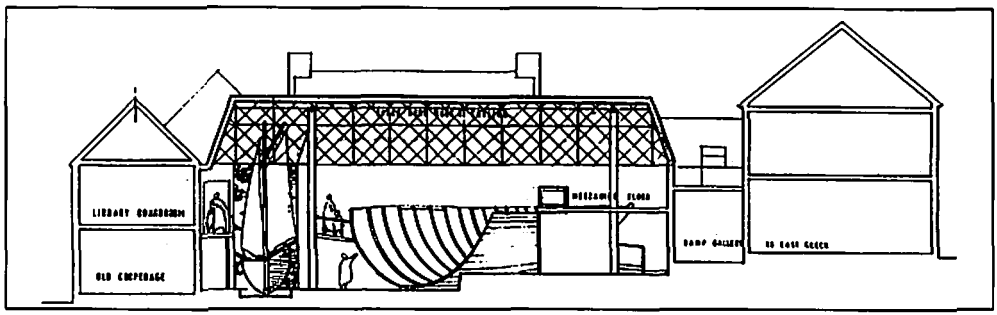
The new exhibition will begin with an audio-visual presentation, ZULU!, incorporating images of Zulu warriors from South Africa and 19th century Scottish fishing vessels. This will be followed by a brief interpretation of the Zulu wars and the naming of the Zulu vessel type. Visitors will have the opportunity to learn of the different types of 19th century fishing vessels by handling custom built, wooden half models. These will have removable sections and show how the lines of a boat are calculated. By combining these sections visitors will be able to invent a new vessel design, or create their own Zulu, Fifie or Scaffie.

They then enter the Boat Gallery from beneath the massive raked stern of *Research*. By viewing the vessel from a number of different levels, they will be able to fully appreciate the sheer size and elegance of a Zulu's lines. The boat will be positioned against a quay side, as if undergoing repairs and supported in the current cradle which will be concealed with shingle. Supplementary information describing her extended working life will be illustrated using three specially commissioned models of the boat.

The final displays on the upper level will allow visitors to observe the interior of the hull and to see how such large wooden vessels were constructed. A reconstruction of the crew's quarters and a display of one of the last engines to be used on *Research* - a Kelvin 60HP will also be featured. A photographic display will depict her Shetland crew and the vessel working at sea with the final image of the new Norwegian built *Research* LK62.

The Scottish Fisheries Museum already has a policy of building ramps to improve physical access to display areas and this will be continued with Project Zulu. In addition, this exhibition will form part of a pilot scheme to improve intellectual access for visitors with visual impairment and learning difficulties. The museum aims to provide "hands on" activities, braille, and large print copies of text, incorporated with sympathetic lighting and colour schemes to ensure that no visitors are disadvantaged.

The building will be suitably insulated and fitted with the same 24 hour radio telemetric environmental monitoring and recording equipment already used throughout the museum. Humidity control equipment will only be introduced to stabilise the Relative Humidity levels when data has been collected to establish the extent and patterns of any fluctuations (probably in 2001). There will be no windows in the part of the building containing the *Research*, allowing the museum to fully control lux and UV levels by the use of artificial lighting.



North-South cross-section of the Project Zulu display area, showing the different levels from which visitors will be able to view the *Research* in her final resting place. The new extension also creates further possibilities for the museum with respect to better library and workshop areas. Scale 1:100. Copyright W. F. Faulds.

Current status of project

At the time of writing (April 1999), the demolition of the buildings has been completed, with archaeologists being on hand to record any interesting historical finds discovered during the work. This included a date stone of 1622 which has been relocated to be incorporated in the new displays. The roof of the new building is nearing completion and the viewing platform on the south side is currently under construction. Reinforced concrete plinths have been laid and the time is drawing close for the actual moving of the *Research* into her final resting place.

Once the boat is safely positioned, it will then permit the external facade of the original building to be reconstructed around the hull of *Research* and the interpretative displays to be installed. Some restoration work has already begun on the hull, although it is planned to retain as much original material as possible. The project is scheduled for completion in the autumn of 1999 and is currently on schedule.

Conclusion

In recent years there have been moves in the UK to rationalise the ever increasing numbers of vessels requesting financial assistance for preservation and restoration projects. In 1993, the National Historic Ships Committee was set up, its aim being to develop a national policy on historic ship preservation in the UK. This will ensure that the resources available for historic ship preservation are directed towards the most deserving and important projects. The initial project work, to compile a database register of historic ships, has been carried out by the Scottish Institute of Maritime Studies at St Andrews University. Almost 2,000 vessels have now been identified for inclusion on the register, the majority of which remain in private ownership. Both the *Research* and *Reaper* from the Scottish Fisheries Museum vessel collection are now included on the register. The work is currently being completed at the Institute, along with an evaluation system for assessing objectively the relative merits of individual vessels [4] and the most appropriate means for their preservation.

As part of the project to save *Research*, an exhaustive search was carried out by the Scottish Fisheries Museum in co-operation with the National Register of Historic Vessels to try and lo-

cate any another 'First Class' Zulus surviving in a condition more suitable for preservation either under cover or afloat. There are smaller and younger versions, but none with the significance of the *Research*'s history and size to make them prospective candidates for financial assistance from the Heritage Lottery Fund. Since the 1990s the Scottish Fisheries Museum has adopted a policy of providing its collection of vernacular craft with covered accommodation where possible, to reduce deterioration from exposure to sun, rain and vandalism. For an independent museum with limited funding this is also the most viable long term solution for vessel preservation, and Project Zulu is an extension of this policy.

There already exist many good examples world-wide of vessel preservation, including preservation through use, restoration, rebuilding, replication, converting to sail training and by bringing vessels inside under cover. Nonetheless, all historic vessel preservation requires major finance and there will never be enough resources to meet the needs of all historic vessel enthusiasts. UK Projects such as the National Register of Historic Vessels will help to improve the allocation of funding, as well as the standards of accommodation, restoration, and conservation of vessels by museums, trusts and private owners.

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Scottish Fisheries Museum, Vessel Collection: Research LK62 & associated archives: ANSFM : 1993/242.

Notes

[1] The term "first class" refers to the size of the vessel and standard of equipment. In the early 1850s vessels larger than 31 feet were classed as "first class"; 1868 redefined first class as 15 tonnes burden; 1894 boats over 45 foot on the keel : Research is 78 feet, with a 60 foot keel. For further information see Tanner, M, "Registration and Control of Fishing Boats in the Nineteenth Century", unpublished M.Phil. Thesis, University of St Andrews, (1993), 56.

[2] Coull, James, "The Sea Fisheries of Scotland: A Historical Geography", (1996), 104
[3] Gray, Malcolm, "The Fishing Industries of Scotland 1790-1914, A Study in Regional Adaptation", (1978), 53
[4] Coull, op. cit. 12
[5] Tanner, Matthew," Scottish Fishing Boats", Shire Publications, (1996), 12
[6] Prescott, Helen, "Scottish "Zulu" Herring Drifters", unpublished M.Litt Thesis, University of St Andrews (1996), 16
[7] Ibid, 7
[8] Anson, Peter, "Scots Fisherfolk", Saltire Society Banff (1950), 106
[9] Prescott, op. cit. 19
[10] Ibid, 26
[11] Ibid, 8
[12] Scottish Fisheries Museum, Archive Collection: ANSFM:1996/207/1-6
[13] Martin, Angus, "Fishing & Whaling", National Museums of Scotland: Edinburgh (1995), 3
[14] For additional details see March, Edgar J., "Sailing Drifters: The Story of the Herring Luggers of England, Scotland, and the Isle of Man", (1969), 254 - 288
[15] Ibid, 283
[16] Ibid, 274
[17] Personal communication with the United Services Museum, Edinburgh Castle, Scotland, 1999
[18] Prescott, op. cit. 40: "East Aberdeenshire Observer, Peterhead, Fraserburgh, and General Advertiser for Aberdeenshire and North of Scotland", 9.5.1879: 3, a
[19] Ibid, 39
[20] Ibid, 46
[21] Anson, op. cit.12
[22] Prescott, op. cit. 48 : Source SRO CE64/11/16
[23] Ibid, p49 EAO 30.8.1881:3, b
[24] Crawford, Mary, "The Zulu", from the Banffshire Journal, Tuesday 28th April 1903, (March 1998), 6
[25] Gray, op. cit. 15
[26] 1903-1910 Alexander Paterson; 1910-1911 William Lyall; 1911-1912 Andrew James Mckay: see history file ANSFM : 1993/242.
[27] Tanner, op. cit. 23
[28] Personal communication with descendants of William Ritchie, 1999
[29] The sources are complicated by the existence of another *Heather Bell* FR970, of the same tonnage, built in the same year, and possibly owned by the same family - Jas Ritchie & others, Rosehearty (1920 Olsen's Almanac) and may be the vessel listed in Dittmar & Colledge, 1972 with the Admiralty number 28646. A *Heather Bell*, no registration number, was reported in the Fraserburgh Herald, as landing a catch during the war years.
[30] Crawford, op. cit.
[31] Receipt for purchase of vessel *Heather Bell* FR 498: see history file ANSFM : 1993/242
[32] Nicolson, James R. "A Tale of Three Herring Boats", Shetland Life, (June 1984), 5
[33] Copies of Settlement papers 1935 & 1936: see history file ANSFM : 1993/242
[34] Transcript of conversation between Gibbie Williamson and Willie Anderson, talking to Drew Ratter about the herring fishing and Research 27/3/1984: see history file ANSFM : 1993/242
[35] Colledge, J. J., "Ships of the Royal Navy", Volume II, (1970), 163
[36] Nicolson,op. cit. 5
[37] Transcript of conversation between Gibbie Williamson and Willie Anderson, talking to Drew Ratter about the herring fishing and Research 27/3/1984: see history file ANSFM : 1993/242
[38] The Australia ICOMOS Charter for the Conservation of Places of Cultural Significance (The Burra Charter 1979), this charter provides a framework with definitions for assessing and implementing conservation of buildings, and is easily adapted for vessel conservation and preservation.
[39] From 1990 to 1999, the Scottish Fisheries Museum has been working towards fulfilling the required standards necessary for a national museum under the Museums and Galleries Registration Scheme. The museum received notification in February 1999 that it had been successful in attaining these standards and as such could retain "Scottish" in its title.
[40] East Fife Mail, 19 February 1997
[41] For further information please contact the National Historic Ships Project, Scottish Institute of Maritime Studies, University of St Andrews, Fife KY16 9AJ. http:/www.st-and.ac.uk/institutes/sims/sims.htm

Oppsummering

Et eksempel på fartøyvern: Bevaring av et nesten hundre år gammelt fiskefartøy av "zulu"- typen ved Scottish Fisheries Museum.

I 1979 fikk Scottish Fisheries Museum i Anstruther, Fife et nytt tilskudd til fartøysamlingen sin. "Research" LK62 av "zulu"- typen er et seilfartøy bygget i tre, 78 fot langt og brukt i drivgarnsfiske etter sild. Den første "zuluen" ble bygget i 1878 og fikk stor betydning for den tekniske utviklingen av skotske fiskefartøy. Navnet "zulu" fikk den på grunn av skottenes beundring for de sør- afrikanske Zulu- krigerne, som kjempet mot britisk kolonisering i Zulu- krigen i 1879.

Mot slutten av 1870 - årene var de skotske sildefiskeriene i sterk vekst, og mange av fiskebåtrederne hadde begynt å eksperimentere med den nye dampskipsteknologien. Men selv om disse seilfartøyene bygget for drivgarnsfiske viste seg å være raskere enn dampskip bygget for det samme formålet, førte overgangen til dampskipsteknologi til at "zulu-ene" gikk ut av produksjon ved begynnelsen av vårt århundre.

"Research" er i dag det eneste gjenværende fartøyet av sin type. Den har en godt dokumentert historie og uvanlig lang fartstid som fiskefartøy. "Research" ble bygget i 1903 og brukt i fiskeriene fram til 1968. I løpet av denne perioden ble fartøyet ombygget flere ganger for å tilpasses ny teknologi. Under andre verdenskrig ble den satt i krigstjeneste som fraktefartøy, blant annet i Scapa Flow på Orknøyene.

I 1970-årene startet en kampanje på Shetland for å bevare "Research." Til slutt ble den overlevert Scottish Fisheries Museum, og ført til Anstruther i 1979. Fartøyets videre skjebne var imidlertid ikke sikret med dette. Det gikk over tyve år med diskusjoner og tilbakeslag for verneplanene, og "Research" sank flere ganger mens hun lå til kai. Fartøyets historiske betydning for den skotske fiskerinæring er imidlertid så stor at museets planer for bevaring til slutt gav resultater. I 1998 fikk museet en finansieringsordning som sikrer varig vern av dette unike fartøyet.

Etter nøye vurdering besluttet museet å bevare skroget intakt, da dette er den mest karakteristiske delen av fartøyet. Denne beslutningen medførte at "Research" ble satt på land, i stedet for å bli restaurert tilbake til seilbar tilstand. Den siste "zuluen" av sin klasse vil i løpet av 1999 bli trygt bevart for framtiden, i en egen spesialbygd båthall ved Scottish Fisheries Museum.