

# The Shields Ferries



TYNE AND WEAR PASSENGER TRANSPORT EXECUTIVE

# Introduction

There are currently two boats available for service between North and South Shields, the Shieldsman which began working in 1976 and the Freda Cunningham which has been in service since 1972. A half hourly service is maintained from each quay daily with a 20 minute service at peak times. The average crossing time is 7 minutes.

The day to day operations are controlled and supervised by the Ferry Manager at South Shields Ferry landing.

The vessels are always in radio contact with other Tyne shipping, the Port of Tyne harbour master and the Metro Control Centre at South Gosforth.

The ferry crew are all fully trained and qualified 'masters' and their composite duties include all aspects of the ferry's operation. There are three 'ferry operators' on board for each sailing.

The Ferry service forms part of the Tyne and Wear Metro operations and as such Transfares, Traveltickets and Concessionary Travel Permits can be used on the ferry service. The river crossing is classed as a one zone fare and the single fare currently costs 30p. Tickets can be purchased from the Ferry operators on the Ferry.

Besides operating the regular Ferry service the two Ferries are also available for Private Hire and during the Summer season special evening sailings are arranged which include a disco, live music, bar and catering facilities. On Summer Sunday afternoons there are also cruises from North and South Shields to Newcastle and return. Full details regarding the hire of the Ferry and the special sailings can be obtained from the Ferry Manager by telephoning (091) 454 8183 or Central Travelsales Administration on (091) 261 0431 or call into any PTE Local Travelcentre.

## A Brief History of the Tyne Ferries

The area's rivers have an important role to play in the life of the community — and have had for a very long time. Historical documents indicate that as far back as 1377 there was a ferry service operating between North and South Shields. As long ago as 1816, a steam packet was operating between Newcastle and South Shields, and from 1862 until 1908 the paddle steamers of the Tyne General Ferry Company provided a passenger service between Elswick and South Shields. This service stopped no fewer than twenty-one times in as many miles. River steamers could not compete with the faster electric trams and the company went into liquidation. But it was not until 1828 when the North Shields Ferry Co. obtained a charter to operate a ferry service across the Tyne that there was a service as we now know it.



1911 South Shields

To begin with there were three ferry boats: *Baron Newcastle, Durham, Northumberland*; eventually the *Baron Newcastle* was replaced by *Tyne*. The North Shields Ferry Co. were not the only ferry company to operate a ferry service: The Tyne Direct Ferry Co. began a ferry service in 1847 with a ferry called *Percy*; the Whitehill Point Ferry followed in 1856 with a ferry called *Favourite*. In 1863 the Tyne Improvement Commission purchased the three ferry companies mentioned above and took over the ferry boats. In all the Tyne Improvement Commission had thirteen ferries built to its specification: *Shields* (1868), *Tyne* (1869), *Tynemouth* (1883), *J. B. Proctor* (1890), *Northumberland* and *Collingwood* (both 1896), *George Armstrong* (1904), *Thomas Richardson* (1906), *U. A. Ritson* (1906), *South Shields* (1911), *Durham* and *Tynemouth* (both 1925), *Northumberland* (1929).



1925 Tynemouth

With no bridge downstream of Newcastle this ferry service was very busy. Before the Tyne Tunnel was opened, the three ferry boats then in operation — *South Shields, Tynemouth, and Northumbrian* — carried about 400,000 cars each year as well as countless pedestrians. The opening of the Tyne Tunnel in 1967 brought about a tremendous drop in ferry traffic — after all, the tunnel can carry far more traffic than a ferry can. The opening of the tunnel also caused the ferry between Jarrow and Howdon to be discontinued.

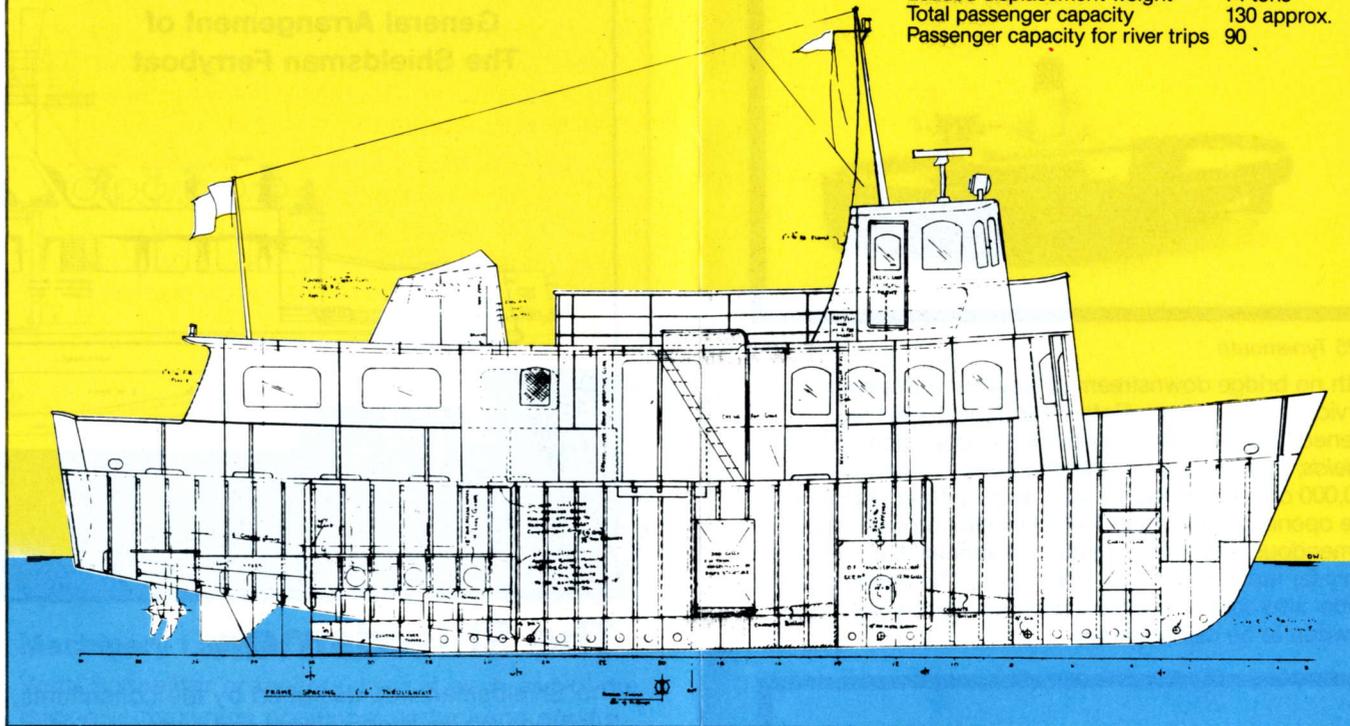


1929 Northumbrian

Sunderland also had a ferry which crossed the river at a point between the bridges and the river mouth. This small passenger ferry ran until 1957 when it was closed to allow expansion of the shipyard on the north bank. There is one other ferry still in operation today and that is the service from Hebburn to Wallsend and Walker which is operated by Mid-Tyne Ferries Limited. On May 1, 1972, the ferry boat service was taken over by Tyne and Wear Passenger Transport Executive. The ferry boats built to their order were: *Freda Cunningham* (1972), and *Shieldsman* (1976) which are passenger-only diesel ferries.

## The Freda Cunningham

Breadth	21 feet
Length	65 feet
Loaded displacement weight	74 tons
Total passenger capacity	130 approx.
Passenger capacity for river trips	90



## The Freda Cunningham

The vessel is of a slightly older design to that of the Shieldsman with a more conventional "bow" and "stern" shape. She was built by Ryton Marine and like the Shieldsman is diesel powered.

### Machinery Layout

The Freda Cunningham is a twin screw vessel, each propeller being driven by a Gardner 6 LXB engine, developing 142 BHP at 1700 RPM.

The steering is through 2 SCHOTTEL SRP 100 Steering units. Each propeller can be rotated through 360° thus eliminating the need for rudders or a reverse gearbox for going astern. The propellers have a fixed pitch and are unidirectional.

### Electrical Power

The electrical system for the vessel comprises 4 engine driven 24 volt alternators (2 per engine) 2 alternators charge up the engine starting batteries, the other 2 charge up a general purpose set of batteries and maintain a power supply to all other electrical systems e.g. lighting, heating, radar, etc.,

### The Subdivision of the Hull

The hull is divided into 5 watertight compartments. The bilges in each compartment can be pumped by an engine driven pump or in an emergency by a hand operated pump.

In the event of a fire in the engine room the whole of the machinery space can be flooded with Co<sup>2</sup> gas operated manually from the Wheelhouse. As with the Shieldsman all other fire fighting equipment complies with the Department of Transport requirements, and is surveyed on an annual basis.

### Ramps

One ramp is located on either side of the vessel to provide access and egress for passengers, both are operated manually by balanced weights.

### Wheelhouse

The ferry is controlled by the Master from the Wheelhouse.

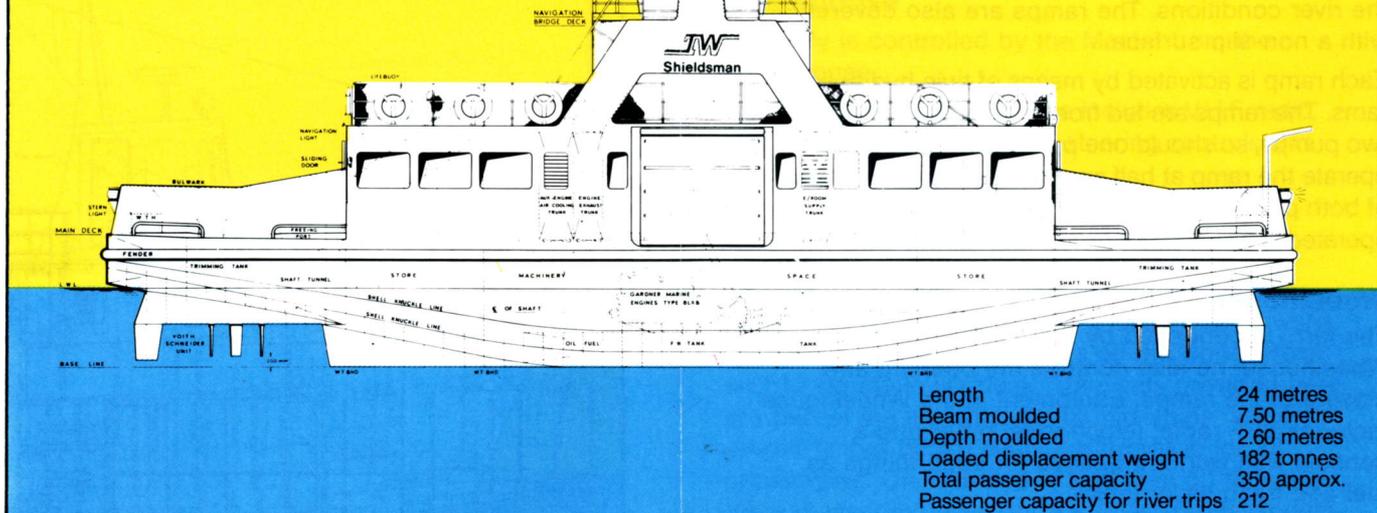
Equipment in the Wheelhouse includes V.H.F. radio, radar, all machinery controls, steering controls and warning gauges etc.

### Passenger Facilities

The Freda Cunningham can accommodate 30 persons seated on "bus type" seats in the forward saloon, 24 seated passengers on the Upper Deck and 12 on the lower deck. The seats provided here are part of the life rafts. In the mid-ships saloon slatted timber bench seats are provided for 28 passengers. On journeys of less than 30 minutes there is standing room for a further 70 passengers. All floor coverings in the passenger accommodation is of a non-slip variety for passenger safety.

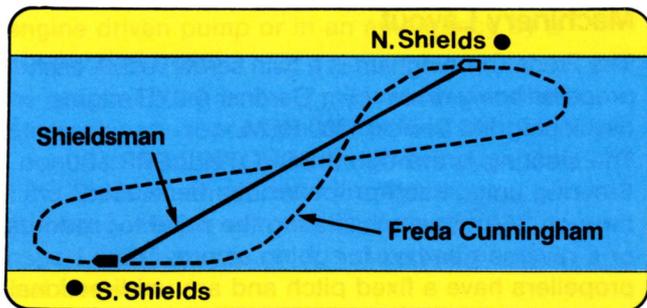
All internal passenger accommodation and the Wheelhouse can be heated when necessary by 3 Eberspacher hot air, diesel fired, combustion units.

## General Arrangement of The Shieldsman Ferryboat



## The Shieldsman

The Shieldsman was designed by the consultants, Sir Bruce White, Wolfe, Barry and partners, Tyne and Wear Passenger Transport Executive and the Ship Builders Hancock of Pembroke, South Wales. Both ends of the Hull are identical, i.e. neither have a conventional "bow" and "stern", to make the best use of deck space for carrying passengers. The relatively large water plane created by the double-ended arrangement gives increased stability to the vessel. The double ended ferry operates diagonally across the river without the need for turning, this saves time, so the speed of the ferry can be reduced saving wear and tear on the machinery and fuel without reducing frequency of the service.



## Machinery Layout

Voith Schneider propellers sited at each end of the ferry give maximum positional control and good manoeuvrability. The propeller serves to steer as well as to propel the boat, but unlike the conventional arrangement of a ship with a rudder, the magnitude of the steering force is independent of the speed of the vessel. The thrust can be adjusted almost instantaneously from maximum to zero at constant revolutions of the engine. The pitch of the propellers can be adjusted to give maximum power absorption depending on the water flow to the propellers. Each propeller is driven by a Gardner 8 LXB marine engine developing 160 BHP at 1360 RPM via a Voith turbocoupling and a David Brown gearbox. The freshwater coolant for the engines is provided through a raw water heat exchanger. The general service pump can take the place of the engine raw water pump in the event of failure.

## Electrical Power

Electrical power for the Ferry boat is generated by two Lister generating sets 415 volt 3 phase AC, each set capable of supplying the whole electrical demand — one will automatically cut-in should the other fail.

(The Shieldsman continued)

## **Boarding Ramps**

The Ramps were specially designed by MacGregor's of Whitley Bay. They are 2 metres wide and fitted with "finger flaps" to make it easy and safe for passengers to embark regardless of the river conditions. The ramps are also covered with a non-slip surface.

Each ramp is activated by means of twin hydraulic rams. The ramps are fed from a pump station with two pumps, so should one pump fail, the other can operate the ramp at half speed. In the unlikely event of both pumps failing the ramps can be manually operated.

## **Wheelhouse**

The ferry is controlled by the Master from the Wheelhouse, he also controls the opening and closing of the ramps. Equipment in the Wheelhouse includes VHF radio, telephones, radar and a console with warning gauges for such things as fuel and fresh water tanks.

## **The Subdivision of the Hull**

The Ferry boat is divided into 5 compartments, should any become flooded the boat will remain afloat and a bilge pump driven by one of the main engines can pump water from one or all of the 5 compartments.

## **Passenger Facilities**

The Shieldsman has a passenger saloon 14.5 metres long by 7.5 metres wide which can accommodate 64 seated persons. The seats are slatted timber painted with ceramic paint to resist abrasion. For safety the deck is covered with Pirelli studded tiles. The Upper-deck can accommodate 56 seated persons, these seats are part of the life rafts.

All accommodation spaces are heated by a thermostatically controlled hot air ventilation system which will maintain a comfortable temperature inside even when the outside temperature is below freezing.