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"TramTrain does it Greener and Cheaper on lightly used railway lines and in the streets"

Tram plan to replace Isle of Wight rail line



The Island Line on the Isle of Wight operates between Ryde Pier head and Shanklin Photo: Paul Alonso Flickr 5 February 2016

Passenger trains on the Island Line are former London Underground stock

Trams could be the answer to saving a dilapidated Isle of Wight rail line, a council-commissioned report has stated.

The Island Line between Ryde and Shanklin, which can only run using old tube trains, could be dug up to be replaced with the "light rail" service.

With passenger numbers falling and annual £3.5m losses, trams would be more "efficient" and "low cost".





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The report comes after the government announced plans to remove the service from the next regional train franchise.

The track and entire 1938 train stock on the Island Line needs replacing, but only London Underground trains can run on the line because of the height of Ryde tunnel.

The next second-hand tube trains small enough to fit through the tunnel will not be available for another decade.

The service, which costs an annual $\pounds 4.5$ m to run for a $\pounds 1$ m return, depends on subsidies from other profitable parts of the rail network.

The Department for Transport (DfT) said bidders for the next South Western rail franchise would be asked to turn the line into a self-sustaining business.

Author of the independent report, Christopher Garnet, a rail expert who lives on the island, was asked by the Isle of Wight Council to come up with cost-effective ways to keep the service running.

He said: "Trams are cheaper to operate than trains, and it might well be a low cost solution going forward."

He said overhead power wires, with simplified signalling, would cost no more than refurbishing the route to mainline standards.

Council leader Jonathan Bacon said the tram option would "significantly reduce costs but still make for an efficient and quick service that provides the link that we need".

The report's findings will be discussed by councillors this month.

The line runs 8.5 miles (13.7km) from Shanklin to Ryde Pier Head, where it connects with passenger ferries to Portsmouth Harbour.

Lake is a thriving community of some 2700 households on the east side of the Isle of Wight, an integral part of the Bay area including Sandown and Shanklin. It is popular with visitors holidaying on the Island, with traditional guest houses, and from 1 February 2016 a new Premier Inn.





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There is some light industry at Spithead Business Park and on the Isle of Wight Airport. Shoppers are catered for by a high street plus one edge-of-town supermarket and another about to be built.

Apart from the interchange platforms with the Isle Of Wight Steam Railway at Smallbrook Junction, Lake Station, opened in 1987, is the newest station on Island Line and benefits from the two trains/hour service in each direction running north to Ryde and Ryde Pierhead, and south to Shanklin. In addition to local travel, the line is an important connecting facility to the Wightlink catamaran service and Hovercraft to Portsmouth, and is the only public transport to run on the 700m Ryde Pier. Many residents of Lake commute daily to the mainland, others use the link to access the shopping facilities in Portsmouth (particularly the Gunwharf Quays centre), and it is of course vital to visitors from the mainland. Lake is the site of Sandown Bay Academy secondary school, whose pupils travel on the train from both north and south.

The school is not on the regular bus network.

Lake to Ryde is a reliable 22 minutes by train, but alternative buses are timetabled to take 41 minutes; this is often exceeded in the summer due to traffic congestion on some of the island's busiest roads. The buses terminate at Ryde Esplanade and cannot access the pier, or connect with Wightlink. The open pier is not suitable for walking for many passengers or in many states of the weather.

Due to changes made to Ryde tunnel at the time of electrification (the base was filled in to reduce flooding risk), Island Line has to be served by special rolling stock as its loading gauge is not fit for main line trains. Since electrification this stock has been second-hand units from the London Underground. The current trains, built in 1938, are the oldest in daily service on the British Rail network. It is a testimony to the small but skilled engineering workforce at Ryde St John's workshop that these continue to operate reliably after 78 years in service, but they are not comfortable due to the Tube-type seating and rudimentary suspension, and will clearly need replacement during the franchise period.

If further London Transport stock is the only short-term option for the future, some spare cars from the Bakerloo Line would seem to be the best solution (about 10 are required). Normal traffic requires two two-car sets. Summer traffic often needs four-car sets, but due to limitations on the line's power supply, only one four-car set can be operated, alongside a two-car set, resulting in overcrowding, particularly along the pier.

Only Shanklin and Ryde Esplanade have ticket offices that are manned for part of the day. Consequently most tickets are purchased from the conductors on the trains, who use Portis machines. These are relatively slow in operation and consequently on busy trains there is often not enough time to get around to every passenger, resulting in missed fares. This is particularly evident on the short hop between Ryde Pierhead and Ryde Esplanade.





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The problem is exacerbated by the recent Health & Safety ruling that prevents conductors from passing between the carriages while the train is moving. All door controls are in one car, where the conductor must be at each station. In short, the revenue taken is much reduced from that which could be obtained if a more efficient and effective fare collection system was in place, and this is reflected in the financial performance of the line.

It is noted that the franchise consultation says that 'the next franchise should develop ideas to turn Island Line into a separate self-sustaining business'. There is no explanation as to why this extraordinary requirement is imposed on Island Line, but not on other loss-making parts of the South West Trains network (e.g. Brockenhurst-Lymington or Romsey-Salisbury).

The original franchising programme had Island Line as a self-standing franchise, but it was soon realised what an anomaly this was for a tiny part of the network, and the line was incorporated in the SWT franchise second-time around. Cross-subsidy is an integral part of the SWT franchise, whether by line, by time of day or time of year, and a requirement to make Island Line self-sustaining on its own, when the franchise as a whole is profitable, is anomalous and unnecessary. It can lead only to candidature for closure, which would be a disaster for the Island economy and its people.

Due to South West Trains being responsible for infrastructure maintenance on the Island, the track has been maintained to a minimum usable state. The ride quality is poor and the maximum speed 45mph. The whole track needs fettling.

The line was opened in 1864, and many structures and civil works require a proper level of maintenance if they are not to fail (e.g. the landslip just north of Sandown which required £2M and a six-week closure to put right).

The line south of Smallbrook junction is single track with a passing loop at Sandown. Unfortunately this means that a regular interval 30-minute headway cannot be provided, instead trains run every 20/40 minutes.

As a result connections with Wightlink's 30-minute catamaran service are uneven, and the slightest disruption (by rail or by sea) can cause them to be missed, which is frustrating for both regular and occasional travellers.

Re-instatement of a passing loop at Brading (where the second platform remains in good condition) would resolve this problem. Responsibility for maintenance needs to be passed to

Network Rail, as with the rest of the SWT network, and the track brought up to standard.





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How to attract more passengers

Create full access for people with disabilities

Create level access to Hovercraft terminal at Ryde Esplanade by extending and bring back into use Platform 2

Arrange acceptance of IW Council concessionary fare passes (as was the case until 2010)

Re-lay the track to improve ride quality

Add luggage racks to trains

Introduce free Wifi

Summary of requirements that need to be incorporated in the franchise

- I Island Line should be operated by the franchisee and maintained by Network Rail (who should be required to source local expertise and resources);
- 2 Arrears of maintenance should be tackled, and the power supply boosted to permit 2 x 4-car trains to be operated;
- 3 During the life of the franchise, the franchisee should expect a passing loop to be installed at Brading so that a regular 30-minute service can be provided, facilitating regular
- 4 connections with the Wightlink catamaran service at Ryde Pierhead;
- 5 The franchisee should be required to urgently address replacement of the current rolling stock;
- 6 The franchisee should devise and efficient and effective fare collection system to ensure all revenue entitled is collected.

Alternative ideas

Replacement of existing rolling stock with more former Underground trains merely postpones a fundamental decision on how the line should be operated. If investment funding for the long-term is available, then conversion to light rail has the potential to reduce operating costs. This would require overhead electrification, with the restricted clearances in the Ryde tunnel dealt with by battery operation and/or super capacitors.





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Paul Clifton - BBC South transport correspondent

The tube trains are almost 80-years-old - twice the age of any other rolling stock in daily use. Spare parts are hard to come by, and these museum pieces really cannot rattle on much longer. The track is rough: the trains bounce around. It wouldn't be acceptable anywhere else. For decades the policy here has been to patch and mend.

Christopher Garnett believes replacing ancient trains with second-hand trams is financially viable.

Overhead power lines would be needed, and fitting them in Ryde tunnel would be a tight squeeze. But trams would be much cheaper to run.

So if the line has to be refurbished anyway, doing it for trams instead of trains makes sense.

New rolling stock similar to the tram-trains being delivered for Sheffield-Rotherham service could be provided.

