

Blackpool Hosts Flexity 2 Launch

By Piers Connor

Blackpool's faith in trams and their persistence in securing their system for the future was repaid handsomely on 8th September when the city hosted the world launch of Bombardier's new Flexity 2 tram. The tram's debut marks a big step in Blackpool's £100million project to refurbish and revitalise the city's 125-year old system, famous for its unique beachfront route and the variety and heritage of its tramcars.

Blackpool operates the UK's longest running tram operation, which last year celebrated its 125th in operation. With Blackpool being a popular tourist destination, up to 3 million passengers use the tram annually, 75% of these travelling during the busy summer period.

Refurbishment

By the late 1990s, it was evident that the condition of the system's infrastructure was deteriorating and that major refurbishment was necessary if the system was to be kept going. Another important issue was that, while the heritage trams operating the service are a popular attraction for visitors, the new accessibility regulations that come into effect in 2019, have forced Blackpool and their partners, Lancashire County Council, to upgrade the tramcars used on their regular services.

Consideration of options for the system ranged from complete closure and replacement with buses, "own build" new vehicles and rebuilds of the existing vehicles but, for the long term, new vehicles supplied by an experienced manufacturer have proved to be the best option.

The £100million upgrade is divided into roughly £33million for the 16 new trams and £67million for the infrastructure and other works. The project is funded jointly by Blackpool Council, Lancashire County Council and the Department for Transport. When the work is complete, and the new service is opened on Good Friday, 6th April 2012, there will be substantial improvements in journey times, with regular 10-minute services and up to 30 minutes knocked off the existing 70 minute trip time. This has been achieved largely by reducing the number of stops from 64 to 37 and by providing floor level platforms to speed up access.

All the best bits

The Flexity 2 tram isn't really new. As a Bombardier engineer put it to me, the vehicle's design incorporates "all the best bits" developed since their original Flexity brand appeared in Kassel in Germany in 1999. It's an evolution of previous designs, incorporating successful features from the 3,500 light rail vehicles that Bombardier and its absorbed companies have supplied to 100 cities in 209 countries. There have been many variations since Kassel, appearing under names such as Flexity Classic, Swift and Outlook. There are 70% low floor and 100% low floor versions and there is an optional range of body widths and lengths. The Flexity 2 is a 100% low floor version with a 5-section body offering 74 seats and 148 standing spaces.

The tram is 2.65m wide and 32.2m long. It has three bogies, the two end ones with motors. The bogie frame is lowered between the wheels to allow the car floor to remain at the low level.

Blackpool Tram Factoids

The tram system was electrified in 1885 and has continued in operation ever since, apart from the recent winter upgrade closures.

The infrastructure and trams are owned by Blackpool Council.

The city's trams and buses are operated under contract by Blackpool Transport Services Ltd., which is a company wholly owned by the council.

The council will retain 16 of the older vehicles, including those with illuminations. Some of the double-deck "Balloon" cars will have new doors fitted to allow meet accessibility requirements.

The upgrade of the system includes:

- Trackwork replacement;
- Overhead supply renewal;
- Power voltage increase from 550 volts to 600 volts;
- New substation equipment;
- Raised platforms at stations;
- Tram priority signals at road crossings;
- New depot;
- 16 New trams.

To get the low level walkway through the whole tram without steps can only be done with gentle ramps over the bogie areas but these are hardly noticeable. The wheels are covered with boxes and have seats mounted on them.

The origins of some of designs incorporated in the Flexity range go back to the GT6 tramcars of the 1970s. The bogie layout with an external motor drive arrangement is one example. The new bogie is marketed as the FLEXX Urban 3000 design. Each motored axle is driven through a flexible coupling and gearbox by a 120kW, liquid-cooled induction motor mounted on the outside of the bogie frame. The frame itself is a masterpiece of modern steel technology, with a complex, computer generated structure, cast in one piece and designed to allow torsional flexing of the transom.

The body structure is largely welded steel but with special coatings in vulnerable locations to prevent salt water corrosion from the hostile seafront environment. The car interior displays an excellent finish with a predominately blue, grey and yellow colour scheme. The exterior has a modern and (for Blackpool, long used to its traditional green and cream) radical purple, black and white livery.

The trams are being assembled at Bautzen in Germany, with significant input from Bombardier's plant in Vienna, Austria. The electric traction system is manufactured in the company's German Mannheim facility.

Starr Gate

The first Flexity 2 arrived in Blackpool in the early hours of 29th August. It was brought to the newly built Starr Gate Depot on a low loader from Hull Docks. The new depot has been built in a very prominent position on the sea front at the southern end of the route. It presents a surprisingly effective modern exterior design for what is "basically a steel shed", as one of the project engineers called it. Actually, the design is very successful visually. Being on the seafront, the depot structures have marine-grade protective finishes and an aluminium roof to minimise corrosion. The trams will be kept inside when not in service. Outside the main buildings, there is a tram washer capable of cleaning double or single deck trams, the type being indicated by the tram's on-board identity transmitter as it approaches the washing machine.

So far, only one tram has been delivered and it is currently undergoing commissioning and acceptance tests. The guests for the launch got to see the new car and were offered a trip up to the Pleasure Beach and back. The ride on the trip was superb – showing off both the new track and the new vehicle at its best.

The Launch

Bombardier's Flexity 2 was launched with the usual musical accompaniment, flashing lights and clouds of dry ice but it was well done and mercifully quick in the teeth of an Irish Sea gale which blew for most of the morning. At the event, Paul Grocott, Programme Manager for Blackpool Council told how they travelled to every part of Europe to visit vehicle manufacturers and tram operations. "We were keen to look at everything the market had to offer and thereby ensure that we got the most competitive and best solution available. Ultimately we narrowed our search and selected Bombardier with the *FLEXITY* 2 tram.

"In the end the technical message from Bombardier was extremely strong," Mr Grocott added. "The company has a lot of experience, particularly in the UK and whilst this is a new vehicle type it is a derivative of what is best in the *FLEXITY* family." Bombardier Transportation's president, André Navarri agreed, explaining how the new tram "combined proven technology with continuous innovation".

Cllr Simon Blackburn, Leader of Blackpool Council commented: "Providing a modern tram service that operates as an effective transport system while still offering visitors and residents the opportunity to enjoy uninterrupted views of our coastline is something unique to Blackpool.

The new *FLEXITY 2* model will help us improve access for people with prams or with wheel chairs for example and will run alongside our heritage trams.

“Today marks a significant milestone in modernising our tramway and I am delighted that Bombardier chose the new tram depot on our Promenade as a fitting backdrop for an international launch of their new model.”

This event, and the Blackpool project as a whole, is a desperately needed boost for the light rail business in Britain and it does much to counter the negative perception generated by the fiasco in Edinburgh. Blackpool can now look forward to the introduction of the new trams into service over Easter 2012.

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Photos:

All by Author



The first Bombardier Flexity 2 tram is launched to the world’s press at Blackpool’s new Starr Gate Depot to music, lights and dry ice. Sixteen trams are on order for the upgraded services starting in April 2012.



The cab end of the new tram opposite the Pleasure Park at Blackpool. The Flexity 2 design allows customers to choose the cab shape from a number of options. The tram is standing on refurbished track using the CDM Q(quiet) Track embedded rail system.



Interior of Flexity 2 tram looking towards the cab and showing the pleasant colour scheme. The seats nearest the camera are cantilevered off the car structure while those behind are mounted on wheel boxes.