

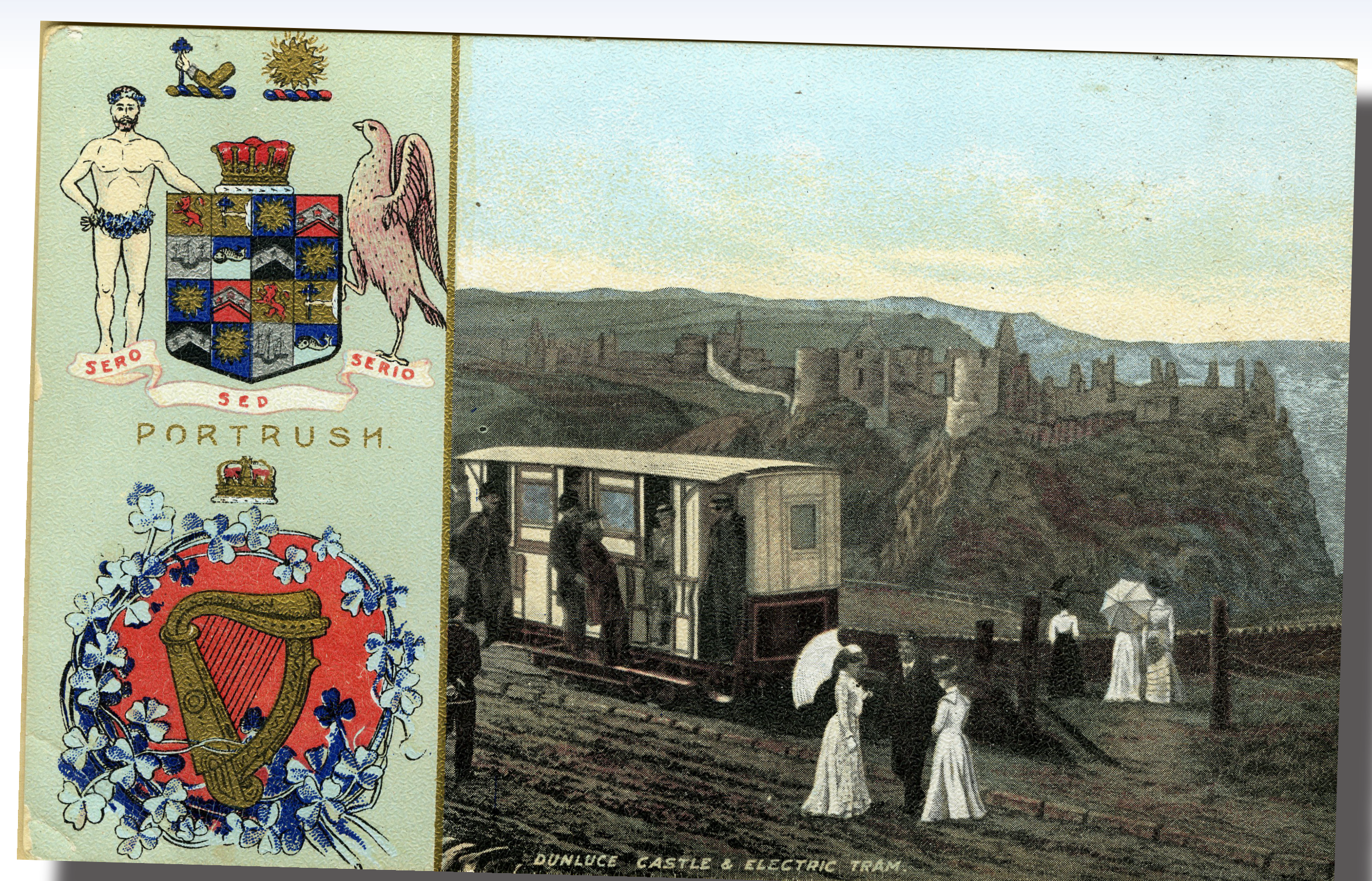
# TRAILS ON RAILS

## The Giant's Causeway, Portrush and Bush Valley Tramway Company

In 1855, the railway connecting Portrush to Coleraine and Belfast was completed. Plans to extend the line to Bushmills were abandoned due to the cost of laying a full-width rail line the extra six miles. Two attempts to connect Portrush to Bushmills with a narrow gauge steam tramway were made in the 1870s, but neither project could attract the necessary investment.

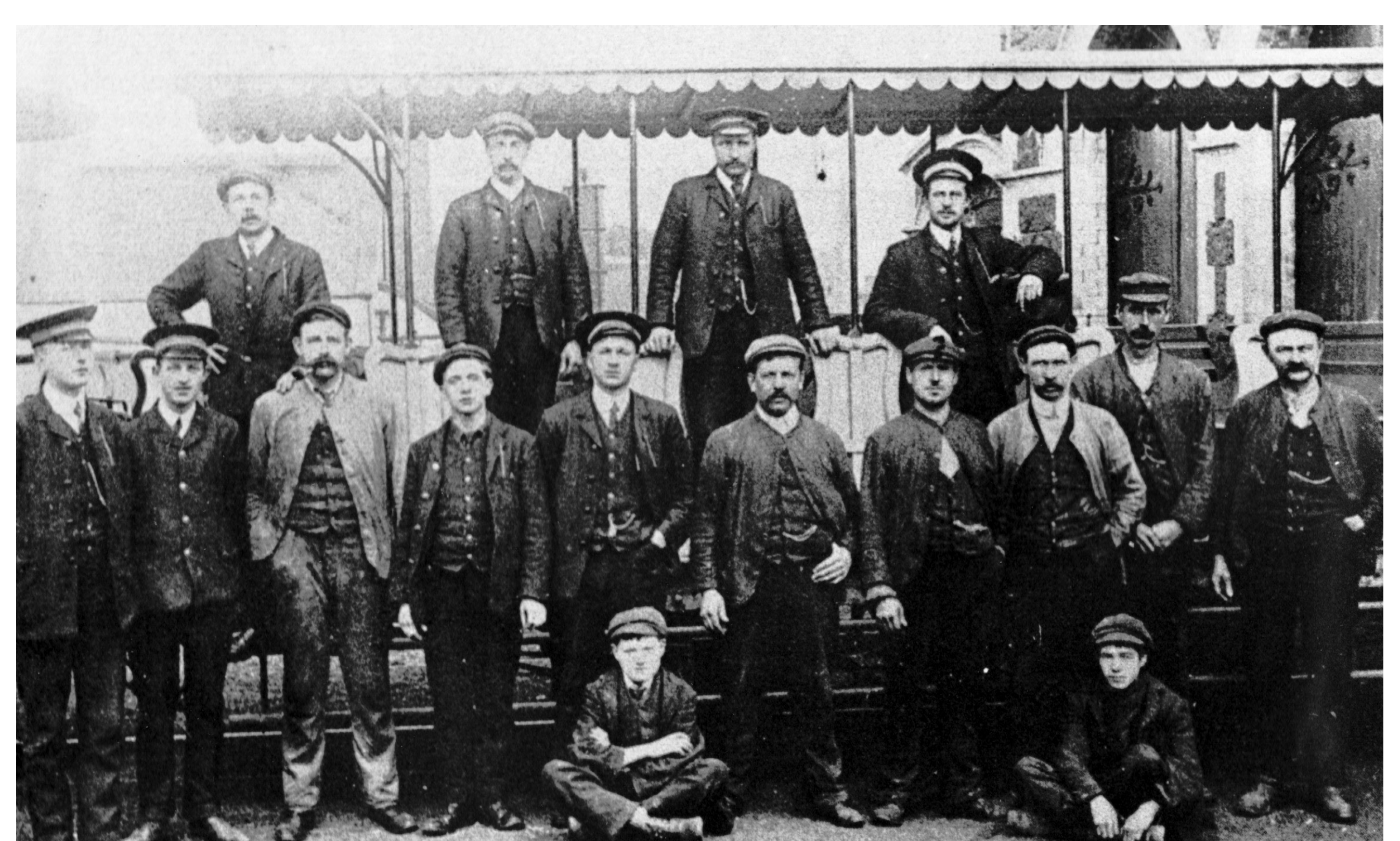
Watching these developments were two brothers from Ballylough House, two miles south of Bushmills. Dr Anthony Traill (1838-1914) had studied mathematics at Trinity College Dublin. He was an influential member of the University Council who would later be made Provost of Trinity and serve as both High Sherriff, and Deputy Lieutenant of Co. Antrim.

William Traill (1844-1933) had studied engineering at Trinity and then spent twelve years working for the Geological Survey of Ireland. Realising the potential of electricity – a science still in its infancy, William – supported by Anthony, started discussions with Siemens Brothers of London and Berlin to power a tramway with electricity generated from turbines in the River Bush.



Postcard showing Dunluce Castle and the Giant's Causeway electric tram from around 1900.

In 1880, the Traill brothers secured an Act of Parliament to run a hydroelectric tramway from Portrush to Bushmills, and then on to the Giant's Causeway. The initial plan also included a narrow gauge train line down the Bush Valley to link Bushmills with Dervock and then to Larne harbour. Although the Bush Valley line was never constructed, The Giant's Causeway, Portrush and Bush Valley Tramway Company was born.



Workers on the Giant's Causeway Tram, around 1900.

Back row: Messrs. Campbell, McKay, Cochraine, Sinclair;  
Middle row: Messrs. Speers, Alexander, McCollum, Maxwell,  
McCurdy, McLaughlin, McKinney, Myth, McMullan, Bacon;  
Seated in front: Apprentices Beverland and Johnston.

*"The Messrs. Traill foreseeing that there was possibly a great future for electricity as a motive power, especially if generated by water power, obtained authority in their Act to use it or any other kind of mechanical power ... Electricity has already been utilised for lighting purposes, for ringing bells and doing other little services. It is the peculiar distinction of the Messrs. Traill to be the first in this or any other country to transform the energy of the electric current into mechanical rotation on a large scale."*

Northern Constitution 29th September 1883



Giant's Gauseway electric tram in Portrush.

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# TRAILS ON RAILS

## Hydroelectricity and the Giant's Causeway Tramway

Controversy surrounded the Traill brothers' plan. There was a legal dispute about the tenancy of Walkmills, the site on the Bush where they wished to build their hydroelectric station. There was also concern about whether the electricity generated in the river would injure the fish, and other local land owners objected to the tramline crossing their property.

The initial track between Portrush and Bushmills opened in January 1883 and used steam engines to pull the tram. By September, William Traill had established the Walkmills hydroelectric power station where two turbines produced 90 horsepower. Even after the completion of the electric service, steam power was still used to pull the tramcars through the villages of Portrush and Bushmills due to safety concerns about the live electric current.



Hydroelectric station at Walkmills on the River Bush.

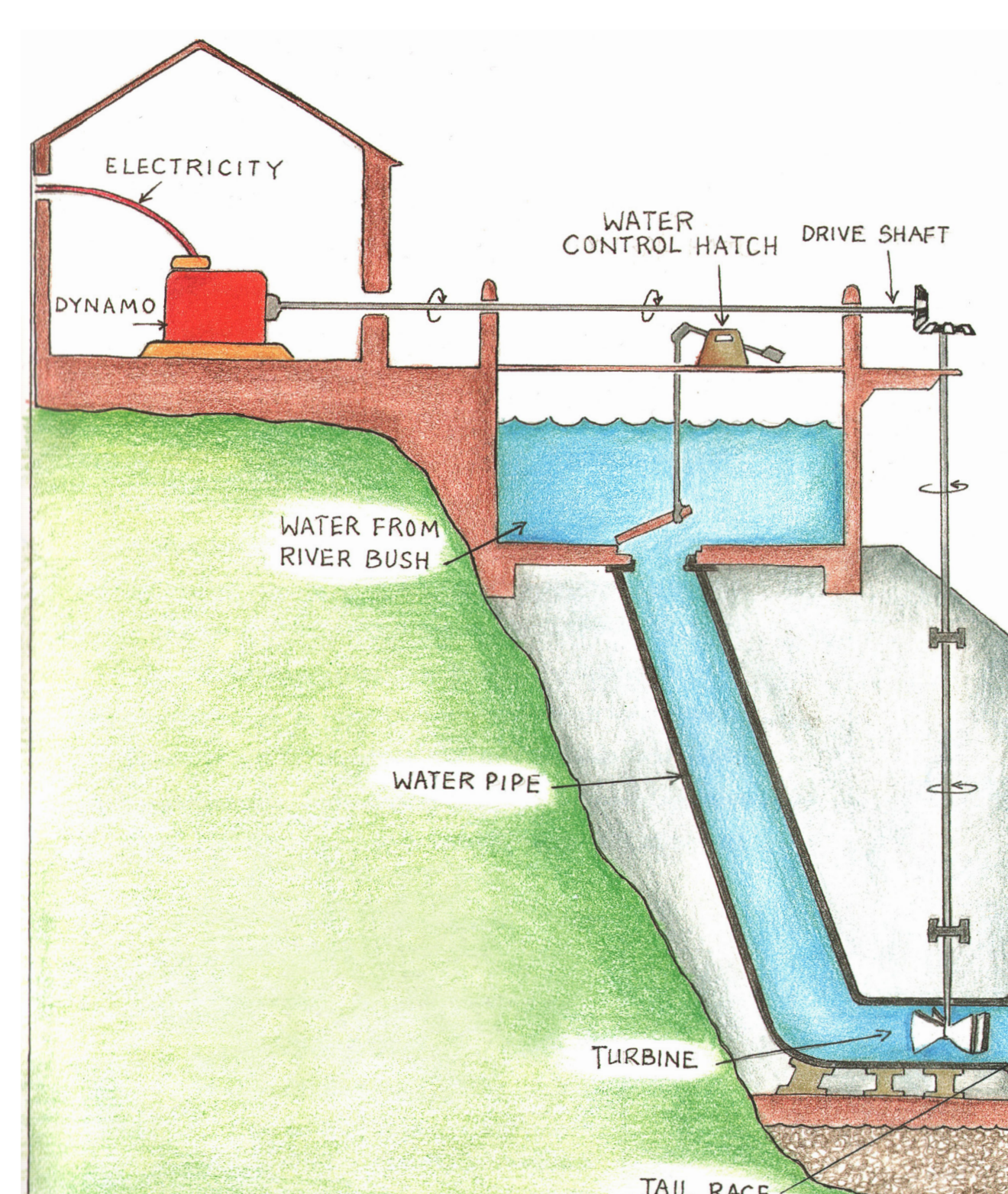


Diagram of Walkmills power station showing how water from the river Bush was diverted to collect in a dam. When the water was released its force activated the turbine as the water returned to the main flow of the river.

From Martin Brown's, *William Traill: 1844-1933*, Blackstaff Primary Science Key Stage 2 (1995), courtesy Blackstaff Press.

The extension of the tramway to the Giant's Causeway was opened in July 1887; the seven-mile journey from Portrush took 45 minutes. The Giant's Causeway station was actually about a mile short of the Causeway itself due to the commercial interests of local hoteliers and operators of horse-drawn carriages.

The tramway was popular with tourists – it reportedly carried 47,000 people in its first seven months. However, it was never very profitable and poor summer weather seriously affected its finances.

The tramway was the only transport available for the American servicemen based near the Causeway from 1942. From then until 1947 there was enough demand to put on winter services as well.

However, by the late 1940s the infrastructure of the tramway was in need of replacement and it was determined that the expense would not bring about a big enough return. On 30th September 1949, the Portrush to Giant's Causeway hydroelectric tramway ran for the last time.

*90 horsepower is the same as 250 volts. For the Traills, that was enough power to run multiple trams simultaneously. Today, it would be enough power to run 30 kettles, 100 lawnmowers or 600 television sets at the same time.*

*“Some of the public have been considerably exercised in their minds about the electricity in this rail, and persons who have been all along opposed to the tramway have played a good deal upon these ignorant fears and tried to get up an artificial excitement on the subject, but all such attempts have hitherto failed and the inhabitants of the district are now quite satisfied that the experiments are in the hands of scientific men who know what they are about...”*  
*Northern Constitution 29th September 1883*



Electric tram at the Causeway Hotel around 1900.

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