BUILDINGS AT RISK

‘Flatpack’ stations were similar to Scandinavians’

In this latest feature in the Buildings at Risk series, Simon Artymiuk of the Isle of Man Natural History and Antiquarian Society looks at how the island’s early railway stations were early examples of Scandi-style flatpacks.

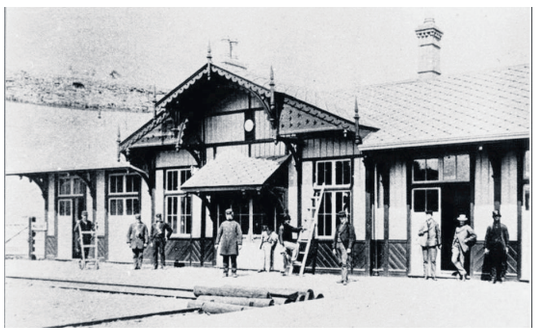
The first public Isle of Man Railway train, hauled by engine No 1 ‘Sutherland’, named after the Duke, prepares to leave Douglas on July 1, 1873, with the wooden station building visible in the background. The open wagon held a military band who played en route. Photo: iMuseum

Generations of island residents and visitors will have learned to associate the Isle of Man Steam Railway system with the rather neat and grand red brick-built station building that stands at the head of Douglas harbour and at the foot of Bank Hill.

However, in fact this range of buildings dates from the railway system’s peak of prosperity when the island’s visitor industry had become well established and the island’s new capital and principal resort was expanding with new promenades and hotels along the length of the bay towards Onchan.

Surviving photographs from the time of the Douglas to Peel line’s opening on July 1, 1873, show quite a different building – one made of wood with overhanging eaves that looked distinctly Nordic, although journalists of the day variously described it as ‘in the New English style’ (by which the writer probably meant New England style ie like east coast American wooden buildings), ‘Gothic’ (due to the finials and fancy wooden lacework of its hanging gable ends and central frontage gable – something Americans call ‘a gingerbread house’), and ‘in the Swiss style’.

Painted stone colour with Indian red framing, and with a zinc-tiled roof layed in diagonal patterns in two shades of red, the building was certainly a contrast to the surrounding Georgian and Regency buildings of Old Douglas. Also unusual was the narrow track and scaled down locomotives with their outside frame leading bogie ‘as commonly used in America’.



A close-up view of the first Douglas station, with its overhanging eaves and decorative front gable. End gables had filigree style decoration Photo: iMuseum

In actual fact, however, the locomotives – though built in by Messrs Beyer Peacock of Gorton in Manchester – were near exact copies of ones first designed for use in Norway during the mid-1860s, and photos of those Scandinavian engines show them standing next to station buildings with similar overhanging eaves and decorative ‘flying gables’ with carved wood filigree ‘gingerbread’ ornament.

As the transport historian P J G Ransom was to write in his 1996 book Narrow Gauge Steam Locomotives, and thinking of the origins of Tynwald and Manx heritage such as its wealth of carved stone crosses: ‘How strange that the Isle of Man, that part of the British Isles where ancient Scandinavian heritage runs strongest, seems to have equipped itself with a little Norwegian railway’.

At the time when the Isle of Man Railway was built, however, those trains in remote and mountainous Norway had grabbed the attention of engineers around the world through the pages of periodicals and newspapers. They were the brainchild of a Norwegian engineer name Carl Abraham Pihl who had spent time working on mainline railways in England with the great Robert Stephenson of Liverpool & Manchester Railway ‘Rocket’ fame and who had even married an Englishwoman from Suffolk. He had gone on to work on building a ‘trunk’ mainline on the English pattern linking Norway to Sweden, but had realised that if the less economically developed parts of his homeland were to be opened up with railways, then a cheaper way had to be found than the heavy engineering of English-type standard gauge lines.

The English, European and American standard gauge of 4ft 8 1/2in had actually been chosen by George and Robert Stephenson in the 1820s, based on the common gauge of colliery lines in the North East.

However, as the railway system spread like wildfire across England the great Isambard Kingdom Brunel had pioneered a broad gauge of 7ft 1/4in for his Great Western Railway from London to Bristol, arguing that this would achieve greater speed, stability and roominess for passengers. But where the two gauges met, and people and goods had to change from one to the other as at Gloucester, complete chaos ensued – so much so that Parliament felt compelled to legislate that all new railways in Britain would have to be built to 4ft 8 1/2in. In Ireland 5ft 3in was the main gauge and in India it was 5ft 6in gauge.

For Pihl’s cost-saving lines in Norway, however, he chose the narrow gauge of 3ft 6in and demonstrated that this meant he could safely use sharper curves, wind through the contours of the rugged terrain rather than build such expensive earthworks as with the European standard gauge, have more lightly constructed bridges and save on the costs of locomotives and rolling. His first narrow gauge line opened in 1862 using small locomotives built by the company Avonside in Bristol, and in 1865 such was the publicity in the engineering journals of the day his ideas were quickly followed on the other side of the world and in the very different warm and tropical climate of Queensland in Australia. While many of Norway’s railways were later converted to standard gauge, Queensland still has most of its rail network built to 3ft 6in gauge – as do Japan, Indonesia, New Zealand and the countries of southern Africa which followed the same lead.

In the Isle of Man, a G W Herman proposed and surveyed a route for a 3ft 6in gauge line from Douglas to Peel as early as 1864 – and although Herman never built his line the same concept was embraced by the Isle of Man Railway Company when in was formed in 1871. Its prospectus specifically stated: ‘The Company is formed for the purpose of connecting the towns of the Isle of Man, Douglas, Peel and Castletown, by a three feet gauge railway, similar to that already in use in Sweden, Norway, Queensland, and elsewhere’.

Adding to the international feel of the enterprise was the fact that the civil engineer appointed was Henry Vignoles, son of the noted engineer Charles Vignoles, who had built at engine to compete against Stephenson’s ‘Rocket’ at the Liverpool & Manchester Railway’s Rainhill Trials of 1829 and then had gone on to build railways and bridges in many parts of the world – including a chain bridge at Kiev in the Ukraine which had won plaudits from the Tsar of Russia. Interestingly son Henry had actually been born in the Isle of Man when Charles Vignoles had been building harbour works in the island. Henry had gone on to build railways in Poland, Russia, Switzerland, Northern Spain and then Poland once again.

The eventual reduction in gauge in the Isle of Man to just 3ft was because of much publicised developments nearby in North Wales, where the Ffestiniog Railway – built as a horse and gravity

Isle of Man Railway locomotive No 8 Fenella, in service today, is built to similar design to the Norwegian Beyer Peacock locomotives developed in the 1860s Photo: M J Richardson

The surviving Kroderen station building in Norway has a similar look to the old Douglas buildings

operated tramway linking the slate mines of Blaenau Ffestiniog with the sea at Porthmadog – had first of all successfully adopted small steam engines in 1863, then had become the first narrow gauge line in Britain to carry passengers in 1864 and then in 1869, with the slate traffic growing to huge volumes, introduced a remarkable double articulated locomotive called 'Little Wonder' to the designs of the Scottish engineer Robert Fairlie.

It was demonstrated to the world's engineers in a series of locomotive trials held on the Ffestiniog in 1870. Leading a large part of visitors including a Russian Imperial delegation, India Office officials and other foreign engineers including Carl Abraham Pihl himself from Norway, was the influential and railway-minded aristocrat George Granville Sutherland-Leverson-Gower, 3rd Duke of Sutherland, who was a hereditary director of the important London & North Western Railway and the Highland Railway and had recently built his own railway to his chateau-like Dunrobin Castle on his huge Scottish estates. He even had his own locomotive and carriage – and in 1872 he was destined to become a director of the Isle of Man Railway Company.

Before that, in 1867-68 he had been involved in the company building the temporary narrow gauge mountain railway crossing the Mont Cenis Pass between France and Italy – an important route used by Britons travelling to India via the Italian port of Brindisi (Jules Verne actually described the line in his novel Around The World in 80 Days) – while an Alpine tunnel was being built. The Mont Cenis line pioneered the Fell rail braking system still used on the Snaefell Mountain Railway, which uses 3ft 6in gauge track.

The Duke of Sutherland and engineers' 1870 visit to Wales was reported in detail in the press and it is clear that Robert Fairlie, designer of the articulated engine, was advocating 3ft gauge as the ideal gauge to use.

His recommendation later that year influenced former American Civil War hero General Jackson Palmer to build lines to 3ft gauge in mountainous Colorado, and Henry Vignoles in his reports wrote that he had chosen 3ft after visiting the Festiniog Railway and consulting engineers.

As well as that memorable trip to North Wales, later in 1870 the Duke of Sutherland took a party of India Office engineers to Norway by chartered royal yacht to view Pihl's pioneering 3ft 6in gauge lines. On his visit to Norway the Duke would no doubt have been struck by the elegant Beyer Peacock tank locomotives – known there as the Tryggve class – with leading outside frame 'Bissel truck' bogie that Pihl had introduced to his lines in 1866. These had

Similar decoration to that found on the gables of this 19th century wooden buildings in Sweden were to be seen on the end gables of Douglas station building

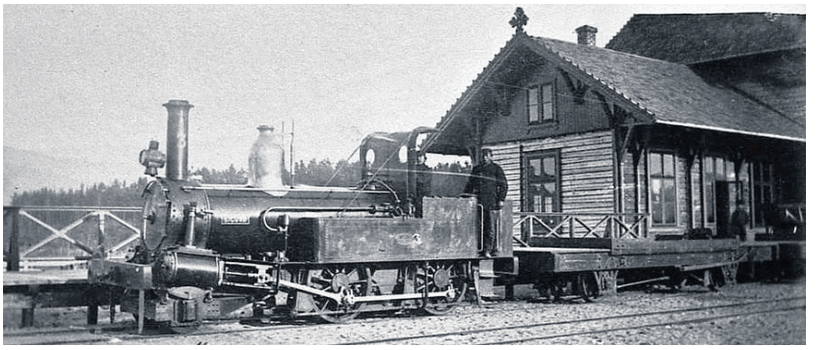
been developed as a narrow gauge version of earlier tank locomotives built both for the first standard gauge London underground lines in 1863, and prior to that for the 5ft 6in gauge Bilbao & Tudela Railway in Spain, a line which Henry Vignoles had helped to build. It was perhaps then hardly surprising that they were copied for the Isle of Man when Sutherland and Vignoles became involved there.

When in Norway, the Duke would also have been struck by the style of wooden station buildings there, with their overhanging eaves and ornamental fretwork 'hanging gable' decoration and finials. While these owed more to a combination of German architectural pattern books and Swiss chalet buildings that Norwegian architects had studied while at college elsewhere in Europe, they had struck a chord with the population of their home country, where people saw in these structures a similarity to the traditional wooden buildings of old Norway.

True, the station buildings were built of milled wooden planks rather than logs, but that was so the sections could be prefabricated and more easily moved to where they were needed. Soon people wanted houses and churches built to similar style, and so a new industry of flat-packed buildings was born. By 1884 the Strommen Traevarefabrik steam sawmill outside Oslo was sending houses, barrack blocks, churches and station buildings built and dismantled with numbered parts to places all over the country – and by 1910 could boast that 1,300 of its buildings could be found from the island of Spitzbergen in the Arctic to the exploration sites in Antarctica.

In his great history of the Isle of Man Railway the late author James Boyd outlined how Henry Vignoles' original plan had been for stone station buildings but that rising costs and lack of capital had in the end meant not only that plans for a Ramsey line had to be dropped but he also had to settle on wooden buildings at all stations apart from Castletown and Port Erin. We are told by Boyd that Vignoles drew up the designs but then when he sought tenders among island firms to build them, only one – Gelling & Kaye of Douglas – came forward. In the end he had to 'send to Liverpool and London' for the buildings to be prefabricated in sections, with Gellings constructing the Douglas building and others the station elsewhere.

Boyd was able to name the supplier of the bricks for the chimney stacks as a firm in Deptford, London, but did not name the supplier of the timber sections. So could those in fact have been 'flat-packed', Ikea style, in Scandinavia to explain their Nordic appearance? My 1881 set of Encyclopaedia Britannica tells me that 'timber from Norway' was one of the Isle of Man's regular imports, so it seems possible – or did the Duke of Sutherland suggest the Scandi style based on his Norwegian expedition of 1870? Today Santon station is the sole survivor of those first flatpacked wooden buildings.



A Norwegian Government Railways Beyer Peacock locomotive of similar design to the Isle of Man Railway engines, No 3 Sigurd, stands at a wayside station in the early days of Carl Abraham Pihl's narrow gauge lines