This is an article that I originally wrote for “Southern Pacific”, the magazine of Southern Locomotives Ltd. I make no claims for this article’s merit, as it is only a simple precis of the two fascinating books listed. It is also meant to be impartial.

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CONDENSED BULLEID

The story of Bulleid’s controversial Pacifics has often been told, and is generally assumed to be the pinnacle of his career, but Bulleid’s time with the Southern Railway was really only eleven years out of an incredible *fifty-seven* year railway career.

The two most comprehensive biographies are:- “Bulleid, Last Giant of Steam” by Sean Day-Lewis, published in 1964 and written with the assistance of Oliver Bulleid himself, and “Bulleid of the Southern” written by his son Hugh in 1976, some six years after his father’s death. These two books together contain over 500 pages, and this article is perhaps an over ambitious attempt to condense them, but with the emphasis on the lesser known events of Bulleid’s life.

Oliver Bulleid’s father emigrated to New Zealand from Devon in 1875, where he became a successful import agent. He met and married his wife on a visit to Britain in 1878, and they returned to New Zealand where their eldest son Oliver was born on 19th September 1882. The Bulleid family had a contented time in New Zealand, with Oliver showing an adventurous and independent spirit, until his father became ill and died when Oliver was only seven years old. Mrs Bulleid and her three children apparently had no other option but to return to her family in mid-Wales.

Oliver soon outgrew the local elementary school and it was arranged by a rather strong-willed aunt living at Accrington that he should go with his cousin to boarding prep school in Scotland and, when he was 13 years old, to Accrington Technical School. Always at, or near, the top of his class in every subject Oliver left school with no clear sense of vocation, and his aunt arranged for him to return to New Zealand to become a lawyer.

While actually en route to Tilbury Docks and staying with other relatives at Doncaster, it was arranged at the last minute that Oliver should have an interview for a “premium apprenticeship” with H.A Ivatt; the Locomotive Superintendent of the Great Northern Railway. The four year apprenticeship provided experience in all types of engineering practice, and this period was later described by Bulleid as the best training any mechanical engineer could have. Thus, almost by chance, Bulleid started his long railway career at “The Plant” in January 1901, on the day before Queen Victoria died.

After Bullied had completed his apprenticeship at Doncaster he made steady but slow progress, becoming Assistant to the Works Manger in 1907. During this time he had become friendly with the Ivatt family and wished to marry their youngest daughter, Marjorie. Even after seven years with the GNR his salary was considered inadequate to support a wife, and they encountered great opposition from both families. The opportunity of a job as Assistant Works Manager and Chief Draughtsman at the French branch of the Westinghouse Company near Paris solved this problem and he and Marjorie were married in 1908.

After a couple of years at Westinghouse, working on brakes, signaling and compressors, Bulleid was asked to become the mechanical and electrical engineer for the British Board of Trade's exhibitions in Brussels and Turin. This experience enhanced Bulleid's diplomatic skill in dealing with government bureaucracy and entrenched opinions, and his success was helped by his willingness to learn conversational French and Italian. When this temporary appointment ended in 1912 Bulleid, now 29 years old, returned to Doncaster and the Great Northern Railway where 35 year old Nigel Gresley had now taken over as Locomotive Superintendent. Gresley offered Bulleid the job of his Personal Assistant and this was the start of a working rapport that was to last for the next 26 years.

Hardly had the Bulleids settled back in at Doncaster, when the First World War started. Bulleid volunteered in January 1915 and was soon back in France as a Railway Transport Officer. Although his duties were administrative, they were not without personal danger because of the proximity of the front line, and he was often in range of German artillery. The railway was still being run by French civilians, but Bulleid's knowledge of railways, diplomacy and colloquial French was notably successful. Bulleid was promoted to Major in 1916, and Deputy Assistant Director of Railway Transportation for the Fifth Army in 1918. One consequence of witnessing the horror of the war at first hand was that Bullied converted to being a staunch Catholic.

Bulleid wanted to do his duty in France to the end of the War, but in August 1918 the General Manger of the GNR wanted him to become Chief Mechanical Engineer of the Sao Paulo Railway and he used his influence to have Bulleid given a home-posting at Richborough, much to Bulleid's dismay. Fortunately for Britain and Ireland's railways the Brazil plan fell through and by early 1919 Bulleid had returned to Doncaster to resume his work with Gresley.

The Gresley-Bulleid working partnership over the next eighteen years was going to be momentous. For the first few years, Bulleid was Assistant Carriage and Wagon Superintendent at Doncaster, in addition to being Gresley's Personal Assistant. This gave him the opportunity to act as Gresley's troubleshooter on awkward locomotive design problems and the authority to develop new ideas and styles for carriages, particularly sleeping cars and restaurant cars.

The railway Grouping of 1923 found Gresley appointed as Chief Mechanical Engineer of the new London and North Eastern Railway and setting up his small head office at Kings Cross. Now the "Great White Chief" was in charge of 103,000 men, 7,400 locomotives, 21,000 carriages and 300,000 wagons with his empire stretching from London to Inverness. Of course Bulleid went too, and while the overall strategy and responsibility was Gresley's, much of the day to day administration and design approvals were Bulleid's. Even though both Gresley and Bulleid were "hands-on" designers, the political problems of merging the engineering traditions of six disparate railway companies into the giant LNER must have taken up the major part of Bulleid's daily job.

Gresley, with the enthusiastic support of Bulleid, had started on his "big engine policy" in the latter days of the GNR, and over the next decade there followed a whole series of ever larger and more powerful engines culminating in the magnificent A4's of 1935. Bulleid was involved to a greater or lesser extent with the technical development of these locomotives. One in particular, which Bulleid was closely involved with and had a special affection for, was the 2-8-2 express passenger locomotive *Cock 'o the North* completed in 1934. Bulleid accompanied the locomotive to France for testing in the Locomotive Testing Plant at Vitry sur Seine:- Britain having nothing comparable for another 14 years. *Cock 'o the North* was

shown to be efficient, but really needed continuous runs and long, heavy trains that were too large to be handled by the platforms and sidings of the time.

Both Gresley and Bulleid were avidly interested in American and Continental engineering developments. Bulleid's interest in American locomotive engineering practice had started during his apprenticeship days at Doncaster. Bullied attended the 1925 meeting in London of the International Railway Congress Association, and his involvement with them grew first as a translator, and much later in 1939 as a member of the permanent commission. He and Gresley were members of the exclusive Association of Railway Locomotive Engineers at this time, although Bulleid enjoyed both these organizations far more for the wide network of informal contacts and exchange of ideas than for their official proceedings.

With the sensational introduction of the streamlined high-speed London-Newcastle *Silver Jubilee* service, the six-hour London-Edinburgh *Coronation* service and Mallard's world steam speed record in the 1930's, the public were in no doubt that the most up to date and progressive (steam) railway was the LNER.

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In 1937, at the age of 55, it came as a surprise to Bulleid to be offered the job of Chief Mechanical Engineer of the Southern Railway and he took over from R.E.Maunsell in September of that year. The Southern was the smallest of the Big Four railway companies, but Bulleid still found himself in charge of 10,000 staff, 1800 locomotives, 36,000 wagons and 34 depots. In the 1920's and 30's the Southern Railway had invested enormous sums of money in electrification, electric light signaling and suburban stations, to the exclusion of steam locomotives. Now with war looming again and no chance of further large scale capital investment in electrification, the Southern was in urgent need of new and much more powerful steam locomotives. Out of this requirement was born the Merchant Navy Class express locomotives in 1941 and the small, powerful, "Q1" 0-6-0 freight locomotives in 1942.

The Bullied family had moved to Box Hill, near Dorking, in 1937 but soon after, their youngest son was killed aged 13 when his bicycle collided with a car. This affected Bulleid deeply and is said to have been the greatest personal tragedy in his life.

The introduction of brand new designs of engines in wartime was an remarkable achievement, but more vital would have been Bulleid's part in putting the Southern Railway on a War footing. Little is said in the accounts of Bulleid's personal activities, but the Southern was in the front line of enemy air attack and his Department would have been responsible for keep the rolling stock operational in the face of shortages, reduced maintenance, staff being called-up and the major handicap of the Blackout. There were enemy attacks on workshops and rolling stock, and many of the Railway's offices were relocated to reduce their risk from air attack.

On top of this, the workshops also took on an enormous amount of extra war work, such as the manufacture of munitions, landing craft and gliders. In 1941, an urgent call was made to the railways for spare wagons to be sent to Persia to carry supplies to Russia. Bulleid realized from his time as a Railway Transport Officer in France that a miscellaneous collection of worn-out wagons would be a disaster and offered to manufacture 1000 new wagons. The prefabricated wagons were completed in only 10 weeks using only 130 workers, and all wagons fitted together perfectly on arrival.

When it was all over in 1945, the "lightweight" West Country and Battle of Britain Class Pacifics were introduced as a go-anywhere version of the Merchant Navy Class. Bulleid then turned his attention to a totally new concept of steam locomotive which was known as the *Leader*, and described as a "passenger tank engine". Although this locomotive was ultimately a total disaster and never went into service, the building of this highly experimental engine was awe-inspiring in it's attempt to break free from of a century of conservative steam locomotive tradition. In spite of the furore surrounding *Leader*, some Bulleid features of the bogies were later quietly adopted by British Railways.

Faced with a dramatic increase in commuter numbers after the war which resulted in bad overcrowding, the Southern reluctantly considered the huge capital cost required to lengthen platforms to take longer trains. Bulleid's potentially more economic suggestion was a "double-decker" coach multiple unit:- two trains of which were introduced in 1948 just after Bullied had left the Southern. Station staff complained that the double-deckers took too long to load up during station stops and the stations were modified after all, although the Double Decker units remained in service until 1971.

The 1940's were the pinnacle of Bulleid's career. Some of the honours awarded to him at this time include:- President of the Institution of Locomotive Engineers (1939-44), President of the Institution of Mechanical Engineers (1946), Freedom of the City of London (1946), President of the Association of Railway Locomotive Engineers (1949), President of the Institute of Welding (1949), Honorary Member of the American Society of Mechanical Engineers (1949), and CBE (1949).

Bullied was not in favour of the Railway Nationalisation of 1948, and he understood the reasons why the "safe" R A Riddles got the new top job rather than himself. But rather than well-earned retirement at the age of 66, the ever active Bulleid resigned from British Railways and took on the job of CME of the Irish Railways for the next decade.

Although the number of locomotives, carriages and wagons in Eire were only one quarter that of the Southern, the investment arrears were far worse than Bulleid had faced when he joined the Southern in 1937. His first task was to modernise the workshops and re-motivate the workforce. Instead of the feared redundancies, there would be work for everyone in a major carriage and wagon renewal programme. Although Bulleid would have preferred to modernise the steam locomotive fleet as well, the tide was against him and in 1953 the Irish government took the decision for full dieselisation. Bulleid appreciated the irony that he, as a steam advocate, was required to undertake the changeover to diesels. This was pioneering work when there were still many unknowns with diesel traction and the capital cost of a diesel locomotive was five times that of a steam locomotive.

200 new diesels of six different types, from shunters to express passenger locomotives, could not just be "bought off the shelf" and there were many possible combinations of diesel engines, transmissions and control systems for Bulleid to consider. Then there was the question of providing new workshops, servicing facilities and fuel dumps, plus retraining the entire workforce. Bulleid was rightly proud of this enormous and successful project, a full decade before British Railways attempted the same task.

Bulleid still found time for his last steam experiment while all this was going on. Ireland has no natural coal, or oil, but plentiful supplies of peat or "turf" and several unsuccessful attempts had been made to convert existing locomotives to burn turf. Bulleid's prototype "turf burner" was a development of "Leader" and was quietly successful, but by 1958 his diesels were themselves so successful that there was no real ambition or need to use it.

Bulleid retired in 1958, aged 76, to North Devon but soon moved south to Exmouth where the climate was milder. He was as fit and active as ever and traveled frequently to London and the Continent, keeping up to date with technical developments. One of his hobbies was planning and carrying out modernisation of the several houses that he lived in during his retirement. He increasingly felt the cold, and by 1967 he and his wife had decided to move to Malta, but with the intention of returning to England during the summers.

Oliver Bullied died on 25th April 1970 aged 87 and was buried in Paola Cemetery, Malta but had thankfully lived to see the great resurgence of interest in steam locomotives, steam preservation and his own work.