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United States Army Transport Corps S160 2-8-0 Locomotives Stored In South Wales 1943-1944

Introduction and Background

Between late November 1942 and June 1945 a total of 840 United States Army Transportation Corps (USATC) S160 class 2-8-0 steam locomotives were brought to Britain from the USA. However, not all of them were ever in Britain at the same time.. The figure of 840 is the official UK War Office Directorate of Transportation's figure for S160s sent from Britain to the Continent between July 1944 and late June 1945 inclusive. This figure was updated regularly in the Directorate's records through to late June 1945. Thereafter, although further entries were made up to late July 1945, there were no further changes in the overall total. All of the S160s that had arrived in Britain were sent to continental North West Europe during 1944 and 1945. This process, as indicated, continued for more than a month after VE Day (8/9 May 1945). By late June 1945, none are thought to have still been in Britain (the single example on the Longmoor Military Railway was a postwar acquisition). Given that all, including No 1688 which was used for spares following a serious accident, were sent to the Continent and none are known to have been formally written off and/or scrapped whilst in Britain, the War Office total is significant.. Other sources have given different totals but, unless it can be shown to be in error, the War Office figure could be as near a all-time definitive figure as it is possible to establish given that a lot of uncertainty surrounds the S160s in Britain. Circumstances at the time and the numbers involved mean that this is to be expected. Other large classes of locomotives built under war conditions for military purposes present similar challenges. The data that follows is as accurate as can be currently (January 2023) established although there is no guarantee that it is 100% correct.

In addition to the 840 S160s received in Britain, a further 18 were lost at sea in March and April 1943 whilst they were en route from the USA. These losses were due to both enemy action (12) and maritime accident (six). In contrast, there is no confirmed record of any of the 840 shipped from Britain in 1944-1945 to the Continent were lost at sea whilst in transit. Although significant numbers of S160s were landed at Cardiff and Swansea from late November 1942 onwards, none of the 18 lost are thought to have been destined for either these or any other Bristol Channel ports. Contrary to statements that can be found online, no reliable evidence has being found to date of S160s being unloaded at Newport although the Great Western Railway's (GWR) Newport Ebbw Junction motive power depot's collocated workshops did play an important part in the s160 story. This, in turn, may help explain the origins of that myth. Nevertheless, it should be borne in mind that shipping details for the S160s are, for now at least, far from complete. In addition, schedules in the North Atlantic convoy system could be, and were, changed for many reasons often late in the day. Consequently, what was scheduled might be heavily amended even if the enemy, primarily German U=boats, was totally absent.

The USATC S160 wartime story in Britain can be divided three main categories. Fortunately, each is fairly self-contained with comparatively few exceptions. Inevitably, it is some of the exceptions that present the problems. Summary details of the three categories are given below.

Firstly, 403 examples were placed in loan service follows:

- Great Western Railway (GWR): 174

- London, Midland & Scottish Railway (LMS): 50
- London & North Eastern Railway (LNER): 168
- Southern Railway (SR): 6
- War Department (WD): 5 (for use on its private, home railways but overseas use)

There were some subsequent reallocations during the loans programme but, in general, once a decision on allocation to either a railway company or the WD was made it was generally adhered to for the remainder of the loan period. In the case of GWR loans, the fitting of 'fore-and-aft' lamp irons to 'their' S160s would have inhibited their immediate use on other railways. The loans phase of the S160 story really began in terms of the first examples reaching Britain during the last week of November 1942 with the loans phase having ended, for all practical purposes, by early November 1944. Although, the start of the loans in a practical sense occurred on 27 November 1942 at the Queen Alexandra Dock, Cardiff when the first examples were disembarked, it was really April 1943 before S160s began to have a significant impact in terms of the numbers in service. By November 1944, all loaned locomotives, including what remained of No 1688 previously mentioned above,, had been returned to the USATC with one exception. This was No 1707 which lingered on under repair before it was returned by the LNER in February 1945. Even then No 1707 did not arrive on the Continent until after VE Day.

The figure of 403 loans can be corroborated from multiple sources including contemporary documents and official histories occasionally, small variations can will found in secondary sources with the figure 400 loans being most commonly cited. Originally, and in accordance with the planned target, 400 loans were made including two allocated to the UK War Department (UK). Later, in January 1944 and at least four months after the main programme had been completed,, the WD was then assigned a further three. S160s. This trio were probably selected by the USATC at Ebbw Junction, Newport, from those at hand there prior to them being placed in store in South Wales (see below for details). Their inclusion therefore raised the final total for loans to 403. The five WD loans tend to get overlooked as the figure of 398 (i.e. the total assigned to the four main railway companies) has also been given as the total number of loans. In fact, 398 was the book total for railway companies loans although, in reality No 1688 was no longer in use by January 1944 at the latest. So the actual total of loaned S160s in service returned to the USATC was really 402 (397 railway companies loans plus the five WD loans). However, the GWR managed to formally 'return' No 1688 or, rather, that was left of it. As far as the respective GWR and US Army book keepers seem to have been concerned, No 1688 was taken on loan and then duly returned in accordance with the Anglo-US agreements thereby making it 398 loaned to the railway companies and the same number returned upon recall from August 1944 onwards.

It should be stressed that formal termination of the main loans programme phase in the late summer of 1943 did not mean that all of the original 400 were in service by then. Prior to entering traffic, various modifications, often referred to at the time in the railway press as adjustments, had to be made before they could be used on the British system. The work was undertaken by the four main railway companies in their own workshops using their own labour. Therefore, the process of getting the loans S160s into service therefore continued well into 1944 right up to the period immediately prior to D-Day. This can in part be explained by the many other demands being placed on the companies workshops at the time. It can also be important from a historical perspective as the records of numbers loaned, and to whom, might not necessarily be totally in accordance with the numbers actually in service at a given date due to the inevitable time lapses in compiling figures and forwarding them for the central records etc. As so often in this story, context can be all-important.

According to the relevant volume in the US Army official WW2 history series (page 125, see bibliography), such was the short notice given for the return of the loans S160s in 1944 that they had to be overhauled and reconditioned by the US Army due to the levels of work already facing the companies workshops. An additional factor, alluded to in the same source, was the continual shortages, in a relative sense, of labour in the railways workshops. This was an issue that was never really solved during WW2. Whilst largely true this statement does require some qualification. An unknown but significant number of recalled S160s were dealt with at Eastleigh on the Southern Railway (SR) at either its works or the nearby engine shed. Others were dealt with either in railway workshops elsewhere or on shed before being sent for embarkation. The levels of preparation needed varied greatly with anecdotal evidence suggesting that, in some cases, little more than an inspection and approval for being good-to-go was needed whilst in other cases serious work was needed to bring them up to pre-embarkation standards.

A probable further 355 S160s were stored at three sites in South Wales namely Cadoxton, Penrhos and Treherbert (the last named was referred to as Tonteg to the USATC the two districts being adjacent). Prior to being placed in store, all of these S160s underwent running trials before preparations for storage were undertaken by the USATC 756 Railway Shop Battalion's (756 RSB) Detachment E at Ebbw Junction, Newport.

The trials involved putting the locomotives into traffic hauling GWR goods and mineral trains.. On the trials, they were manned by GWR locomotive crews. Ideally, a total of 300 miles out and back from Ebbw Junction was specified although in practice this would have varied. For storage the cab windows and open rear were again boarded up as had been the case with all S160s when they had crossed the North Atlantic mainly as deck cargo and thus exposed to the elements. However, for storage the connecting rods and motion seemingly, on the evidence of the relatively few known photos, were left in place although on the Atlantic crossing these had been removed and carried in the empty tender coal bunker which was also boarded over for the voyage. This was probably done as a weight reduction measure to bring them within the capacity of cranes at British ports which might otherwise have been a problem. An S160 without its tender weighed 105 tons but, for example, the GWR's floating crane *Samson III* used to transfer them from ship to shore at both Cardiff and Swansea had a theoretical capacity of 100 tons. All stored S160s also had their coal bunkers left uncovered when at the storage sites. This can be confirmed from photos which show the tenders were left partially filled, perhaps 20 to 30% with coal. As the stored locomotives were towed dead to their ports of embarkation, this was presumably to give them a 'starter' when first steamed on the Continent and may have been whatever was left at the end of their running trials.

During their trials the S160s were still based at Ebbw shops. They were not officially allocated to either adjacent Newport Ebbw Junction running sheds or any other GWR motive power depot. However, it is of interest that contemporary observers reports seem to have mentioned sightings of S160s on trials at the relatively close Severn Tunnel Junction depot with some frequency. Whether this had any significance, was down to a regular correspondent in place, use of that site as an overflow or holding area, or some other factor is not clear. Severn Tunnel Junction could have been a bust location in its own right anyway at that time not least for coal trains heading along the GWR main line in the London direction on which S160s figured regularly. It also had its own quota of loaned S160s during 1942-1943 so observers submissions, however well intentioned, need to be treated with care.

The figure of 355 for S160s stored in South Wales is believed to be the correct although some of the details concerning individual locomotives are uncertain, This figure was subsequently noted by the GWR, who owned the tracks at all three sites, in its own records. The same total was also later

given in the relevant volume of the US Army's official WW2 (on page 125, see bibliography below) published in 1957 so, as with the figure of 840 discussed above, it has good credentials. There is a minor issue in that there is also the possibility that an error was made in the US record for the Penrhos site which placed there an S160 (see below) which otherwise cannot be accounted for in Britain. In short, whilst the figure of 355 is thought to be correct, the possibility of potential slight variations should not be overlooked. The 355 figure appears to have comprised 353 S160s at the three sites plus two more stored for a relatively short period at Ebbw shops (see below). The exact number stated to have been in store may well depend on the exact criteria applied in relation to the question not least the relevant date given that this was a process that continued literally up to the eve of D-Day. Two S160s, Nos 2638 and 2640 were possibly either removed from the Penrhos site at an earlier date or else they only got as far as Ebbw shops before being re-routed. These two, together with No 2639, were the three assigned on loan to the WD in January 1944. Quite how the figure of 355 given to GWR was arrived at is not known but, one way or another, 355 appears to have been the right total. Alternatively, bearing in mind that the possible two early removals from Penrhos can be offset against the two late arrivals retained at Ebbw shops during spring 1944, then either 355 or 357 could both be considered the correct total (these matters are considered in more detail below). It is difficult to pin down an exact date for the maximum number in store as some were removed from Penrhos as early as the first week of May 1944, probably in anticipation of the D-Day landings, whilst others were still being sent to the Cadoxton site.

The US official history is slightly more problematic when talks of the 355 S160s being 'assembled at Ebbw Junction by March 1944 (sic)'. It may be that 'assembled' should be read as 'prepared' but even this is ambiguous as deliveries to the sites from Ebbw shops were still ongoing at the time of D-Day. Or should 'assembled' be taken to mean assembled at the sites being used at the time. In fairness, the confusion may have crept in through the original source material, a series of US Army internal memos, which is referred to in the footnotes.

Cadoxton, Penrhos and Treforest were the only recognised places in Britain where the S160s locomotives were put into formal storage after appropriate preparations at Ebbw shops. Later, when they were being called forward for shipment to the Continent from Cardiff and Southampton, as well as latterly Dover, other locations were used as holding points but these were all temporary arrangements and should not be categorised as storage sites proper. Temporary layovers, or holding areas, also applied to later arrivals from the spring of 1944 onwards which, after being landed in Britain, were taken directly to the Channel ports (this is the third category, see below). It is also thought that the Cadoxton site **possibly** also served as a holding area for those despatched from elsewhere awaiting shipment from Cardiff Docks. However, this has not been confirmed to date. In addition, there are numerous contemporary reports of S160s, both loans and others, seen out of steam and unmanned in sidings. These reports can be attributed to various causes but were temporary expedients of the sort that routinely occurred on the railways in both peace and war.

There was, understandably, considerable confusion in wartime observers reports that appeared in the railway press as they assumed, in good faith, that the S160s they saw on trials on the GWR had been loaned to that Company. Similar errors also characterised reports concerning loaned locomotives on trials during their 'adjustments' at a particular railway workshop not least as the locomotive might well then be assigned to any company. Their reports should always, if possible, be cross-checked with other sources. What observers thought they saw was not necessarily what they actually saw in an age when access to information was far more restricted even in peacetime.

On occasions, correspondents even gave loaned S160S and those on the GWR undergoing prestorage trials, spurious shed allocations. This was particularly so on the GWR where, of course,

all those destined for storage were given their running trials. It should be borne in mind that there was no readily visible external difference between those S160s loaned to the GWR and those on running trials other than the GWR shed code stencilled on the front buffer beam of the former which, assuming it had been applied, was only visible at close quarters. Editors stressed the need to corroborate details before submitting reports of supposed shed allocations.

All S160s dealt with by 756 RSB at Ebbw shops and/or the three sites were taken to, and removed, from the four locations under tow. The only time the stored S160s were in steam in Britain was during their pre-storage acceptance tests and running trials. As S160s on loan to the GWR were sometimes used to move them to the three sites, from Ebbw shops, this caused further confusion for local lineside observers.

In respect of those S160 locomotives landed at Swansea, be they destined for either loan or storage, Danygraig shed yard was regularly used as an assembly point and/or holding area before they were taken to places elsewhere. A single source statement, by a former senior GWR official who witnessed many of the S160s being landed at Cardiff Docks implies that Cardiff East Dock shed possibly had a similar function although this has not been corroborated. Swansea was just one of at least 12 British ports where S160s were landed from the USA between 1942 and 1945. To date the full list of confirmed ports comprises Avonmouth, Birkenhead, Cardiff, Glasgow, Hull, Leith, Liverpool, London, Manchester, Newcastle, Southampton and Swansea.

The third category of S160s in Britain comprised at least 79, and possibly as many as 82 that were only in Britain for a relatively short time during the 1944-1945 period. These were the 'transients' already referred to above. They were off-loaded at British ports and then towed dead to the Channel ports where they were embarked again for the Continent. This process continued into June 1945 before it ended. For convenience, they can be referred to as transients although this description was not used at the time. This is, unfortunately, the least documented of the three main categories. These locomotives seem to have begun to arrive in Britain in the spring of 1944 and, whilst never formally placed in storage, they were held at various locations pending their onward moves towards the Channel ports. To date, 79 S160s in this category have been identified. If the figures cited above are correct (i.e. 403 loans, 353 stored at the three sites, two at Ebbw shops plus 79 confirmed in transit) that brings the total to 837 (the issue of the potentially missing three is discussed below). Transients, with two possible exceptions (see below), did not go to the Ebbw shops, Instead they were towed dead directly to the Channel ports. Presumably, still in their North Atlantic crossing condition i.e. cabs barded up, side rods removed etc. which can be confirmed from such photos as are available. Final preparations prior to entering service i.e. removal of the boards etc. must therefore have been made after their arrival on the Continent,

Finally a fourth, albeit minor in the British context, category can be briefly mentioned though relevant data, such as it exists, is both very fragmentary and elusive. Some S160s being sent elsewhere from the USA may have been transhipped in British ports either by direct transfers between ships or by being briefly landed and then re-embarked without leaving the confines of a port. The evidence is very thin and, so far, no instances of this relating to any of the Bristol Channel ports have been found.

Research has identified 837 of the stated 840 S160s in Britain. This is a substantial figure in its own right but it should be emphasised that only a minority of the class ever came to Britain. Cancellations and other factors make an accurate count difficult, perhaps impossible, but somewhere between 2100 and 2200 were constructed with one leading expert putting the total at

about 2120 though he could not be more exact. So regardless as to the exact figures, less than 50% off those constructed were ever in Britain at any stage during WW2,.

Then there is the question of accounting for the seemingly missing three needed to bring the total up to 840. It is possible that they might fall within the 'transient' category given that it seems less than perfectly documented. Alternatively, they have been transhipped in a British port whilst en route from the USA direct to the Continent but possibly somehow been included in the official War Office total. Then of course, the War Office record might have been wrong. WW2 era documentation can be as prone to errors as that of any other period, if not more so, despite the efforts of those involved. Finally, there the three later loans to the WD, Might they, at some stage have been double-counted. Unfortunately without access to the data used to compile the War Office running total, assuming that it has even survived and is accessible, then it is very unlikely that the case will be proven one way or another.

Stored At Treforest/Tonteg 11 October 1943 To 7 September 1944

2154	2155	2156	2157	2158	2160	2161	2162	2163	2166
2168	2169	2170	2171	2172	2173	2174	2175	2176	2177
2178	2179	2180	2181	2182	2183	2184	2185	2186	2187
2188	2191	2192	2193	2195	2196	2197	2198	2199	2232
2233	2234	2235	2236	2237	2240	2256	2262	2268	2271
2272	2275	2276	2278	2281	2320	2372	2376	2449	2451
2452	2453	2454	2455	2456	2457	2458	2459	2500	2572
2574	2578	2579	2581	2683	2584	2585	2591	2593	2594
2595	2596	2597	2598	2599	2600	2601	2602	2603	2604
2605	2606	2607	2608	2609	2610	2611	2612	2613	2614
2618	2604	2806	2807	2808	2809	2810	2812	2813	2814
2815	2816	2817	2818	2819	2820	2821	2827	2828	
Total = 119									

This site utilised the up (i.e. northbound) running line of this one time Barry Railway main line in the Pontypridd area. The GWR had withdrawn regular passenger services even before WW2. However, it still used the line for coal traffic as it gave an alternative access to the Rhondda coal mines that avoided the major junction of Pontypridd. Hence, for the duration of the USATC presence, single line working was in force using the down line with the up line between Tondeg and Treforest occupied by a continuous line of closely spaced S160s.

The Treforest site was generally referred to as Tondeg by the USATC, This was quite logical from the US perspective given that it came within both local districts with Tondeg been south of, but close to, Treforest. In addition, the site was probably predominantly, if not entirely, filled from the south i.e. the Tondeg end which could also explain why this name was used by the USATC.

S160s Nos 2606, 2807 and 2599 were first to arrive there on 11 October 1943 whilst Nos 2193, 2804 and 2574 were last arrivals on 8 December 1943 a day before the Penrhos site was activated on 9 December 1943. The arrival of the first three, S160s marked, in a practical sense the start of the storage programme although negotiations on the use of this, and presumably the other sites (as opposed to the groups of sidings at and around the Ebbw Junction facility used as short term accommodation and/or for the diesels when they began to arrive at the end of 1943) between the GWR and the military authorities would have preceded its activation. Two of the other sites, at

Penrhos and Cadoxton respectively, likewise only held S160s whilst a fourth, at Duffryn Isaf (formerly Barry Junction, north of Caerphilly) was reserved for USATC S100 class 0-6-0Ts.

No 2160 was the only S160 at Treforest to be placed facing with its front facing southwards, all the others in the long single line faced northwards on the up track. This further suggests that the site was predominantly, if not entirely filled from the southwards direction.

Mountford (see bibliography) stated that the site was 'cleared' between 28 August and 7 September 1944. By this he seems to have meant 'of those that remained' but there is some ambiguity in his statement as some of the S160s were removed seemingly prior to 28 August 1944. Many of those taken from this site were unloaded at Cherbourg in during September 1944 which suggests there had been a concerted clearance phase circa August 1944 perhaps running into the first week of September,

Most of the 100 or more S160s that were already waiting for the 756 RSB when that unit took over 10 of the 12 roads in Ebbw shops in September 1943 would probably have been sent to this site as it was the first to be activated. Penrhos was not opened until 9 December 1943 and then only once Treforest had been closed to further additions.

Postwar urban development along the former Tonteg to Treforest line means that there is now little, if anything to identify the site whilst it is likely few of those who live locally today will know of its one-time unusual role in the build-up to D-Day.

Stored At Penrhos 9 December 1943 To 21 August 1944

1625	1626	1629	1630	1631	1633	1634	1635	1636	1637
1638	1640	1652	1653	1666	1677	1678	1679	1690	1691
1701	1781	1790	1793	1794	1796	1797	1804	1805	1806
1807	1808	1906	2071	2072	2194	2200	2201	2203	2204
2205	2208	2209	2211	2213	2214	2218	2230	2231	2241
2254	2255	2257	2258	2260	2261	2266	2277	2336	2341
2342	2347	2501	2502	2503	2504	2505	2507	2508	2509
2512	2526	2538	2539	2540	2541	2542	2543	2544	2445
2560	2561	2562	2563	2564	2565	2566	2567	2569	2570
2573	2575	2580	2582	2586	2588	2589	2592	2615	2616
2617	2620	2622	2623	2625	2632	2634	2636	2637	2638
2640	2641	2642	2643	2644	2805	2811	2822	2823	2824
2825	2829	2831	2832	2833	2635	2837	2838	2839	2840
2841	2842	2843	2844	2845	2862	2863	2866	2868	2869
2870	2871	2872	2882	2893	2901	2908	2909	2917	2924
2928	2929								

Total = 152 (but see notes below as Nos 2638 and 2640 are doubtful thereby reducing the total to 150)

The site comprised four lengthy loop sidings on either side of a double track running line. The latter was kept clear for coal traffic trains whilst all stored locomotives in the loop sidings were probably placed facing westwards on the evidence of the limited number of known photographs taken at the site. The former Barry Company's 'Brecon & Methyr Extension' line, which served the sidings had never had a regular, scheduled passenger services. Its upper section had been totally closed by the GWR as early as the mid-1920s and subsequently dismantled. However, coal traffic kept the lower

section of the line open into the 1940s, and beyond, even though the Grouping had largely made these and other coal traffic exchange sidings redundant.

The table above includes Nos 2638 and 2640, which became two of the three WD later loans in January 1944. According to Mountford, who was a witness with good contacts at Ebbw shops, both were at Penrhos for at least up until January 19/44, although the third of the trio, No 2639 was never there. All three were assigned to the WD in January 1944 some four months or so after the main loans programme had ceased. It was these three later loans that raised the final total to 403. Cox did not record any of the three at Penrhos or at either Treforest or Penrhos (Cadoxton had not been opened as at January 1944).. Both Cox and Mountford agreed that that the three went to the WD from Ebbw shops, It is possible therefore that Nos 2636 and 2640 were at Penrhos prior to being removed at an early date or that they only got to Ebbw Junction although intended for Penrhos, If these two are discounted then the Penrhos total would be reduced from 152 to 150. Cox appears to have visited the Penrhos site but not, unfortunately until February 1944 i.e. a month or so after the WD loans had been despatched to their respective user destinations. If he did not visit Penrhos in person , he must have been able to access a site list or notes valid as at early or mid-February 1944.

Nos 2257. 2805, 2811 and 2838 were the first arrivals on site on 9 December 1943 (i.e. the day it was activated) and No 2258 was the last to arrive on 26 February 1944 which was a Saturday. The Cadoxton site (see below) was then in turn brought into use with effect Wednesday 1 March 1944 (this was was a leap year).

Cox and Turret debated whether No 2836 was ever at Penrhos. The context of their exchange suggests that that the supposed 'No 2836' may have been identical with No 2866 which was at Penrhos. Turret suggested, but did not categorically state, that No 2836 could have been recorded in error for No 2866 by the USATC. It may be significant that no record of No 2836 being in Britain has been found to date.

Mountford stated that Nos 1640, 1804, 2204. 2565, 2588/9, 2643/4 and 2868 were removed from the site during the period 2 May to 5 May 1944 probably in anticipation of D-Day as they were sent in the direction of Southampton via Bath and Westbury. He also noted that the 'remainder' (no further details)) of the site was 'cleared' between 9 August and 21 August 1944. Again, his exact meaning was not entirely clear. He probably meant, cleared of all that remained there as at 5 May 1944 which would have been the majority of those stored there.

At the time of WW2, Penrhos was a separate community from nearby, and much larger, Caerphilly a mile or two further to the east, Post-1945 urban development means that Penrhos is now de facto on the western edge of Caerphilly. However, unlike the other two sites, it is still possible to both visit it and get a sense of the past as the location is now (2023) used for general recreational purposes thereby giving public access. Signs of the former railway presence are still evident. In particular, the site of the former exchange sidings that once held 152, or so, S160s can still be identified.

Stored At Cadoxton 1 March 1944 To 2 September 1944

1627	1680	1685	1686	1756	1789	1791	1795	1798	2202
2206	2207	2210	2215	2259	2263	2265	2330	2331	2333
2334	2335	2337	2340	2343	2344	2345	2346	2506	2510
2511	2513	2514	2515	2516	2517	2518	2519	2533	2534
2535	2536	2537	2546	2547	2548	2549	2568	2571	2576

2577	2587	2619	2624	2633	2635	2645	2778	2779	2780
2781	2830	2834	2847	2868	2894	2895	2896	2897	2900
2902	2903	2904	2905	2906	2907	2910	2911	2912	2913
2920	2923	2926	2927						

Total probably 84 or 83 if No 2671 is excluded (see below)

The Cadoxton site comprised two sets of dead end sidings immediately to the east of Cadoxton Junction laid out on either side of the former Taff Vale Railway, by then GWR, Penarth Line. The sidings terminated at the embankment for the Palmerston Road bridge.

No 2571 may not have reached the site or have been removed at an early date (see below) but its inclusion tallies with the official GWR and US Army figure of 355 that were placed in store.

Mountford states that the site was 'cleared' between 26/8/44 and 2/9/44. However, as already discussed, there is some uncertainty at all three sites about exactly what he meant by the term cleared. Here as elsewhere, the possibility of earlier departures should not be ignored.

Closure of the Cadoxton to Penarth line has led to the site being reclaimed for other purpose but Palmerston Road is still there and serves as a point for orientation should anyone want to visit the the former site.

Held At Ebbw Junction. Newport Circa Spring 1944

2264 2858
Total: 2

Nos 2264 and 2858 were delivered at a relatively late stage andm after preparations for sending to the Continent had been carried out at Ebbw shops, they seem to have been retained at, or near to, the Ebbw Junction shops.. Nevertheless, there is uncertainty about the exact movements of both until they both arrived at Cherbourg in August 1944 having probably been shipped from Southampton Docks. It could be argued that both might be classed as 'transients' but given that preparatory work on both was carried out at Ebbw shops and they were held there for a time, they seem to fit more easily into the 'stored' category although this would raise total to 357 or, perhaps more accurately, 355 at the three sites plus two at Ebbw Junction. However, it two of the three later WD loans i.e., Nos 2636 and 2640 that may have been either diverted or removed from Penrhos (see above) are deducted then the overall total is reduced to 355. Thus figure agrees, of course, with that recorded by the GWR and the US Army.

No 2571 might also have been retained at Ebbw Junction, as was previously explained above under the Cadoxton heading. It is reported too have left Ebbw Junction as early as 2 May 1944 for probably eventual delivery to Southampton Docks. Given that this was over a month before D-Day and over two months before the first S160s were landed on the Continent, it must have been held somewhere in the interim. The exact whereabouts if No 2571 i.e. Cadoxton and/or Ebbw shops when under the control of 756 RSB does not affect the figure of 355 or 357 if the two January 1944 loans that may have been premature departures from Penrhos are included.

Summary And General Matters

Other permutations of the storage total figure of 355 might be possible but, presently, the details as presented here appear to be most plausible. It should be appreciated that, whilst 355, adjusted from

357 is the probable overall total for S160s stored at the three sites and at Ebbw shops (355 plus 2 respectively), the first confirmed departures were made in early May 1944 i.e. a month or so before D-Day even whilst later arrivals were being sent to the Cadoxton site. Thus 355 is a 'book total' rather than the real figure on a specific date. The first S160s to reach the Continent were landed at Cherbourg in July 1944 having been embarked at Southampton.

New evidence may yet emerge that could help tie up the 'loose ends' that inevitably arise in the history of any locomotive class even in peacetime let alone under war conditions. In the case of the stored S160s what is encouraging is the levels of information that can be found not least as they were static for most of the time. This means that perhaps 98% of identities and locations can be confirmed with a good deal of certainty.

It is unlikely that a universally accepted definitive breakdown will ever be possible unless new evidence is found possibly in the US National Archives. If this ever happens, and the figures for the numbers of S160s in Britain need to be adjusted, changes will likely be minimal.

Initially the S160 story in Britain had been entirely centred on the loans. From September 1943 onwards, newly arrived locomotives, less those already designated for loan but not yet in traffic, were, with the later WD three exceptions, placed in store. When the time came to send the locomotives abroad, this procedure was reversed with the stored locomotives called forward first, and at short notice probably due to the rapid Allied breakout from Normandy, followed by those that had been on loan. Simultaneously, as has been shown, others were still arriving from the USA and being sent directly mainly, if not entirely, to the Southampton to be re-embarked a process that continued into June 1945.

Treforest was the first site opened. Once it was filled Penrhos was activated and finally, when Penrhos was full, then Cadoxton was opened. Hence the sites were activated and filled in sequence. No record of any S160s being moved between sites has been found. According to the 756 RSB history, a USATC diesel was employed at Penrhos for a few days. This was unlikely to have been earlier than the end of 1943 when USATC diesel electric Bo-Bo locomotives began to arrive at Ebbw shops with Penrhos itself, of course, not being opened until 9 December 1943. Mounford alluded to there being a small USATC owned or otherwise controlled diesel locomotive at Ebbw shops used for moving locomotives around the site at an earlier date but, to date, it has not been identified. The diesels were usually stored at or close to Ebbw shops and, possibly with local yard work for trials purposes excepted, were not normally to be seen in service. To date, no other details have been confirmed in relation to this intriguing reference although it is known that a GWR driver was trained up to operate them and. On that occasion, doubtless 756 RSB personnel would have been present as well. Nevertheless, pre-war diesel railcar workings aside, this could well have been the first occasion when a diesel locomotive was used on the lines of the former Barry Railway.

Armed guard detachments at all three sites were provided by the Newport Ebbw Junction based Detachment E of 756 RSB. Battalion Headquarters and the main body were at Hainault, Essex at that time and stayed there until the unit deployed to southern France in the autumn of 1944 after its detachments had returned to it.

No evidence has been found of any attempts to camouflage the sites. Such was Allied air dominance over the UK by 1943-1944 that Luftwaffe air reconnaissance was increasingly rare and even then mainly confined to the Channel coast of southern England. At Penrhos and, to a lesser extent, at Treforest, the configuration of the local local terrain would have helped. The former was essentially a wide shallow cutting in a northwards sloping hillside surrounded by fields, copses and hedges

whilst the latter had been built on a shelf along a hillside above the River Taff. The Cadoxton site, in contrast, was in what even at that date was really a Cardiff suburb. The S160s themselves were painted in what was generally agreed to have been a dull, medium grey colour (sometimes described as 'navy grey') with 'silvery white' markings although in retrospect memories on the issue of colours, as is often the case, can be fallible whilst variations were not unknown.

The categories 'stored' and 'transient' used in these notes as historical conveniences. At the time the only distinction made was between those locomotives placed on loan and those that were not. Once the loans programme had been terminated, even that difference disappeared. To the USATC in the summer of 1944 an S160 was an S160 regardless of its previous history in Britain or whether it had been delivered direct from the USA to France as many were after D-Day.

S160s taken from all three sites went directly to either Cardiff Docks or Southampton Docks for embarkation without returning to Ebbw Junction. Later towards the end of 1944, the Dover to Calais train ferry route was reinstated as a British-run military operation. Some S160s very probably were taken to the Continent by that route. However, by then all those from the three Welsh sites would, or should, have reached the Continent other than if a major defect had been discovered when en route to either Cardiff or Southampton. Those sent through Dover were probably mainly, perhaps entirely, drawn from the 'transient' category.

Final preparations, as already noted, needed to bring the previously stored S160s back into service were probably undertaken on arrival on the Continent i.e. removal of the boards covering cab windows etc. 756 RSB had parties at both Cardiff and Southampton to assist with loading, deal with mechanical issues etc. of both the S160s and other UK and US railway stock. However, the very comprehensive unit history compiled just after the end of WW2 made no specific reference to such tasking at either port although in the Eastleigh/Southampton context brief mention was made of 'lifting' of 'main rods' probably during pre-embarkation maintenance and repairs.

The tables in this paper are mainly based on Cox's unpublished records and correspondence together with Mountford's and Turret's books although they have been supplemented from other sources. All of the three main sources inevitably, differ in some details but they are in agreement on most things.

Lastly, it is worth remembering that the US Army disposed of its S160s in Europe locally rather than returning them to the USA. Many of those that had been stored in South Wales had a second life of decades of service ahead of them for various European railways. So hundreds of US built, and owned, locomotives, many of which had once stood in silent lines at Treforest, Penrhos and Cadoxton later worked daily in some perhaps even more unexpected locations such as Austria, Poland and Hungary.

Other Locations And Sites In South Wales Used By The USATC

In addition to the sites used to store S160s some mention can be made of the following locations which were used to store other types of USATC locomotives.

A major storage site for USATC S100 0-6-0Ts at Duffryn Isaf formerly known as Barry Junction where the former Barry Railway's one time Brecon and Merthyr Extension Line had made its junction with the main line of the then Brecon & Merthyr Railway. Both companies had been absorbed into the GWR at the Grouping whilst the upper part of the Extension Line was closed and lifted before 1939. The GWR retained the former Barry Railway exchange sidings situated

immediately to the south west of the former junction and these were accessed from it. This would have meant a reversal into the sidings for S100s brought from the Newport direction after post-UK arrivals procedures at Ebbw shops.

The exact number of S100s stored at Duffryn Isaf is uncertain but there were perhaps up to 119 or so there according to Tourret, albeit not all at the same time. Mountford recounted that local residents had stated, presumably years later, that between 60 and 80 had 'usually' been at the site. Nor are its exact opening and closure dates known. However, an activation date sometime between early December 1943 and late January 1944 seems possible given that significant numbers of S100s were landed at Cardiff and then taken to Ebbw shops in late 1943 and early 1944. Closure, probably gradual rather than through a sudden rundown, was probably completed by circa October 1944 at the latest. In common with the three S160 sites, 756 RSB was also responsible for that at Duffryn Isaf. No confirmed photos of the site when in USATC use have been identified to date whilst, in general, any awareness of it is sparse even in comparison with the S160 sites.

There is no evidence to suggest that S100s and S160s were ever stored at the same site or sites although both types could be seen in and around Ebbw shops. Even there the two tended to be kept in separate sidings whilst awaiting to enter the shops and/or being removed to a storage site. 756 RSB did retain one or two S100s at Ebbw shops for moving dead locomotives etc but this seems to have been an informal, in-house arrangement and possibly involved them being periodically changed.

There were far fewer S100s than S160s in Britain but the former's story is much more complex and the surviving historical record varies greatly. War Office figures state that 181 were sent to the Continent through to the summer of 1945 inclusive though this figure needs further investigation. Whatever its exact accuracy, it is likely to have included many of those that had been at Duffryn Isaf. However, unlike the S160s, a significant number stayed in Britain where they were either sold or scrapped in the immediate postwar years although some of may, or may not, have been on the Continent one stage. In short, much more research is needed on the S100 in Britain story.

Three different types of USATC centre cab 0+4+4+0 diesels were sent to South Wales from the USA from late 1943 onwards. In the main they were stored, after local area running trials, at sidings and yards in the Ebbw Junction area although six are known to have been put into storage as far away as Llanelly. Given that diesels, possibly the GWR railcars aside, were a hitherto largely unknown quantity in South Wales, a single GWR driver based at the Ebbw Junction depot was trained up to drive them on their test runs. A probable 65 USATC diesels in South Wales were listed by Mountford although some may have been sent elsewhere after receiving their post arrival checks and trials. All were subsequently shipped to the Continent from the summer of 1944 onwards. Six of those stored in South Wales were placed at Llanelly shed for unknown reasons which was a considerable distance from the Newport shops whilsy. As mentioned, the rest were accommodated locally in sidings and yards.

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