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4709 Group acquires Thornbury Castle



Currently in storage at the Great Central Railway's Loughbrough facilities, former GWR Castle no. 7027, Thornbury Castle has been acquired by the Great Western Society's (GWS) 4709 Project group. Every one of its components being destined for a significant role in current and future preservation projects at the GWS.

Key amongst these is Thornbury's no.8 boiler.

"The opportunity has arisen for the 4709 Project to acquire Thornbury Castle and with it, its no.8 boiler," commented 47XX' chairman, Richard Croucher. "Thornbury's boiler (no. 7615) was built at Swindon in 1949. It has a copper firebox which we believe was replaced in 1959 - an initial survey shows it to be in a surprisingly good condition. It will need thickness testing, all stays hammer testing and then, the scale cleaned out for a better visual exam."

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Richard says that the expectation is that very little else is needed. There will always be a few surprises which won't be discovered until work starts, but early indications suggest that the boiler will need:

- A repositioning of the boiler supports at the side of the firebox to comply with the 47 and NR Loading Gauge
- All the tubes will need changing
- A new smokebox tube plate
- Solving the likely pitting of the barrel, where rain water might have been getting in around the safety valves
- A possible change of some of the foundation ring rivets
- Some stays are likely to require replacement

“At this stage, we doubt there is any need to remove the foundation ring, or change much of the platework beyond front tube plate,” adds Richard.

The no.8 boiler offers a huge saving for the 4709 Project – not least in time and energy; current estimates suggest that a new 47XX-standard no.7 boiler would cost more than £800,000 to fabricate and take up to five years to complete.

Another issue is building the boiler; “Informally, we’ve spoken to a number of possible contractors who have intimated their preference for a steel firebox, while at the GWS, we’d prefer a copper unit. The downside to steel would be the need for a redesign of the entire firebox with the inevitable delays and re-design approval that would cause. We also know that the life expectancy will be shortened, while its maintenance costs will be proportionally higher.”

“With the opportunity to acquire 7027’s no.8 boiler for 4709, the Project leaps forward to a point where we now have almost all of the major components required to build our Churchward 47XX 2-8-0.”

The history behind the 47XX boiler is a story of form and function.

“A boiler for 4709 has always been a hot topic of conversation” adds Richard. “Initially, class leader, 4700 carried a no.1 boiler for its first year of operation, but it was generally agreed that it didn’t produce sufficient steam for the heavy loads the 47XX were designed to pull. At that time, the no.7 boiler was already under development and 4700’s no.1 was swapped for the no.7 as soon as it was completed at Swindon. It proved to be very successful and henceforth, all ten 47XX carried no.7 boilers.” “So, our intention has always been for 4709 to carry a No. 7 boiler if possible. With lower loadings making a fall back to using the donor no.1 boiler from 2861 as contingency. Our acquisition of Thornbury Castle neatly avoids that necessity.” vRichard emphasises that on 4709, the slightly smaller dimensioned no.8 boiler from the Castle would not be possible to spot, being a matter of a only few inches in the barrel diameter. “It’s hardly a stumbling block and will be indistinguishable from a standard no. 7 boiler. Remember, we would still have had to lower the centreline of the no.7 boiler by a similar amount, to clear the NR loading gauge.”

And what of Thornbury Castle’s other components?

Richard explains; “Back in the early 1920s, the GWR planned to use the no.7 boiler for a number of other classes, including the ‘Saint’ and 28XX, all of which then carried the no.1 boiler. I think we’ll see something similar happening here.”

Following the recent delivery of the two fully machined new cylinder castings together with the new cylinder and valve

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covers to Tyseley, the next stage for 4709 will be the assembly of the the two cylinder castings as a single block - this work is currently underway. With that accomplished, the block will be installed in the the refurbished donor extension frames from 4115.”

The initial plan had been to utilise the 6 cwt centre stay from 4115, but the 4709 team was quickly realised that it was way too light for the 2-8-0. Now, once the extension frames are fitted, it will be possible to accurately measure how much the new 2 ton centre stay will need to be machined and once done, it too can be finally fitted to the loco.

“The plan is then to reassemble the front buffer beam in order to allow the whole front-end assembly to be offered up to the main frames for optical alignment. We can then turn our attention to wheeling 4709, complete the overhaul of the axle boxes and fit the new springs which are already on order. In the interim, the pony truck assembly is being re-assembled and will be ready to be placed under the front end.”

“We hope to inspect the boiler later this year, overhaul it and then see it installed in 4709’s frames before too long.”



Donations

Whilst we appreciate the times we live in at the present, a boiler for 4709 is an extremely important development opportunity which will guarantee the future for for our loco.

Any and everyone keen to see a 47XX 2-8-0 in operation again can help us secure the purchase by making a donation.

All amounts will be gratefully appreciated but we are also hoping that many will be able to give £1000 (or more) either in one amount of in multiples of (8 x £125, 10 x £100, 20 x £50 or 25 x £40).

Yes! I'd like to donate

Once-off donation of £

*Cheques and POs should please be made payable to the Great Western Society Ltd, 4709 project**

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Please complete and return this form to Richard Croucher, 4709 Project, Great Western Society Limited, Didcot Railway Centre, Didcot, Oxon, OX11 7NJ, or by e-mail to richard.croucher@ntlworld.com