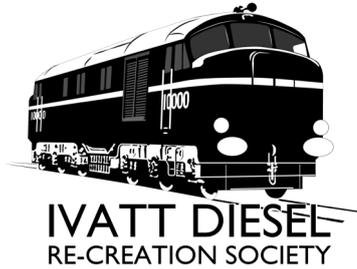


ICON



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Welcome to Issue 12 of ICON.

Safety of volunteers and visitors should and is rightly in our minds at all times and we are glad to have appointed Tony Thompson as volunteer safety officer. His reign began by overseeing the safe mounting of lockers to the wall of the workshop, so that they can not tip over onto anyone.

This spring, Tony has been working with all volunteers to create a safe working environment when working on the inverted locomotive chassis. You will see how that work has progressed in this magazine.



Waiting for the 'off':

The Twins at Euston in 1957—Terry Trainor.

Ivatt Informer

Each month we send out an email to all members and supporters. This gives a brief update about progress during the previous month.

Make sure you get our email

Members are reminded to check their junk mail folder in case emails from us are filed there. We encourage you to add info@lms10000.co.uk to your contact list and 'safe senders' list.

ENGINEERING



In the last edition we told you briefly about newly arrived equipment. Here is the full story.

We had long been on the search for the required secondary equipment, and, in the end, it all became available at the same time, leading to long days and the understanding of 'other halves'.

We had an alternator from 58022, which could be kindly called 'of uncertain health'. Rumour has it that the loco was driven to its initial resting place at Crewe, however inspection showed it to be showing evidence of flashover or worse. It is possible that the alternator was swapped while at Crewe, before it was bought by the scrapyard.

With no equipment available from other class 58s, we turned our attention to class 56. Our main contact was with GBRF who indicated that they could donate an alternator and other equipment, in due time, as part of the class 69 project.

That turned out to be a source of great benefit to us, for which we are very grateful. However, at the time, we did not know how long in the future the class 69 project would bear fruit, if at all. So we were open to other opportunities, of which there appeared to be none, until, within the space of a week or so, we were offered equipment from two sources, Ruddington and UK Rail.

The latter, *pictured right*, came to our attention first. We were able to obtain an overhauled alternator at



reasonable price. It is now in covered storage with our I6SVT power unit.

No sooner had we arranged this than we became aware of the sale of 56097 at Ruddington. This involved not only the locomotive but a wide variety of spare parts, many of which were on our shopping list. Our bid, for a range of parts, was successful and we obtained the following parts:

- ◆ Class 56 power unit & alternator
- ◆ Engine governors (3)
- ◆ Starter motors (2)
- ◆ Rad element gaskets
- ◆ Compressors (2)
- ◆ Traction motor contactors (2)
- ◆ Rectifier components (2 boxes)

In addition we made good contacts at Ruddington and were able to acquire numerous heavy duty lockers, which have been very useful toward tidying and filing our many parts.



Photos:

Emptying a wagon of parts at Ruddington.

Careful extraction of an air compressor at Centenary Works.



Paintings for sale.

Ian Walmsley



I produced this painting to the Society to raise money for the project. We have 24 copies for sale at the AGM. Cost: £50. These can be obtained at the AGM or by the LMS_10000 Ebay account. A link is in our website News section including a link to the timelapse video of the painting being made.

Alternatively, you can contact the secretary to arrange to obtain one.

Email: info@LMS10000.co.uk Tel: 07551 621685

Post: IDRS, 46 Biddick Village Centre, Washington, NE38 7NP.



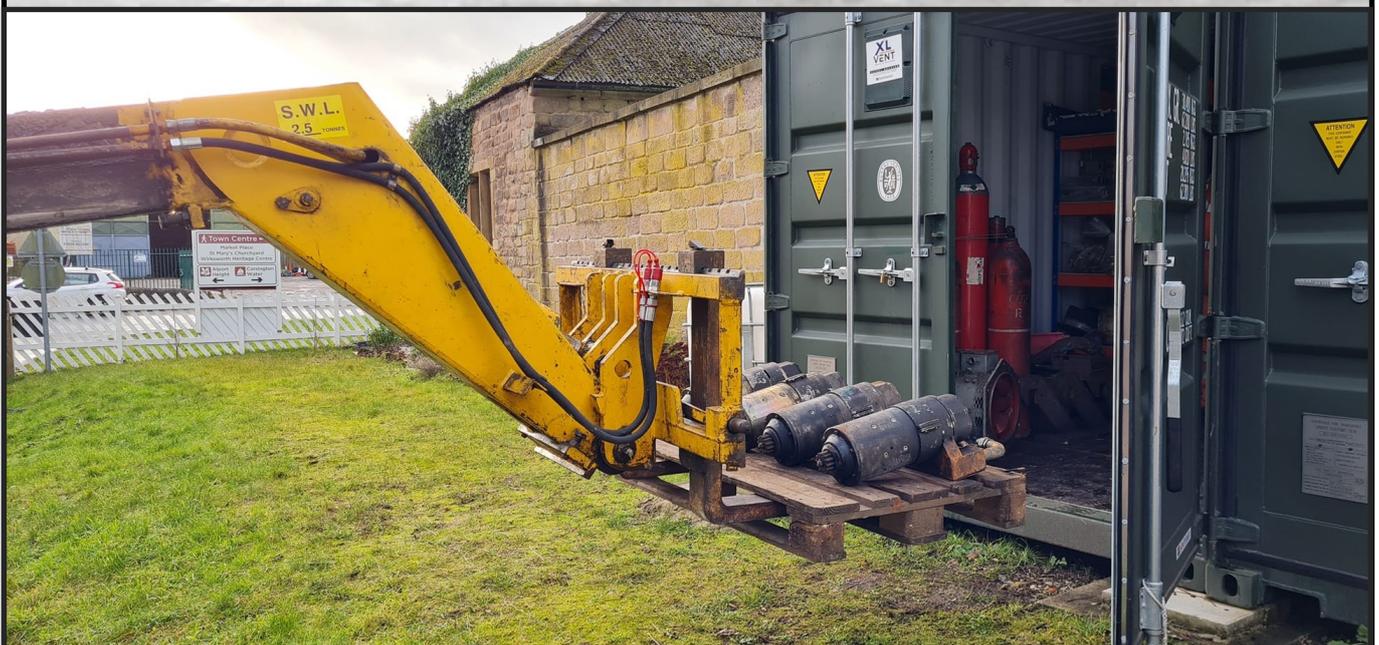
One side benefit to the arrangement with Ruddington, was the offer of a selection of heavy duty lockers. These have proven to be ideal for our needs, enabling us to sort stock methodically. After a few weeks of preparation, one set was emblazoned with LMS10000 across the front and secured to the workshop wall.





Once these items arrived, our workshop was full. We turned our attention to making the most of the space we had. Our two containers were fitted out and filled with items that are deemed to be in long term storage.

One of the containers was fitted with an overhead beam to enable heavier items to be moved with greater ease. It is seen being fitted, left and top, with the rectifier being moved into storage, above. Below we see four starter motors being stored, two ex-58022 and two from Ruddington.





GBRF donate to us

The next delivery was of bulky items donated generously by GBRF, via Progress Rail. The items were spare as a result of their project to convert class 56 locos into class 69s.

We received a power unit including alternator, buffers, an electrical cubicle, rectifier and more. This donation has been invaluable to us, saving both time to completion of the locomotive....and much money. We are very grateful to GBRF for letting us have all the equipment free of charge.

Our original enquiry to GBRF was for an alternator (and anything else they had spare). In the end we were told that we could have the alternator but had to take the power unit attached to it.

The class 56 power unit can be considered the last in a line of developments in power unit design which began with the 16SVT in the Twins. Of course, those units were themselves based on earlier units exported and smaller units fitted in shunters.

The class 56 power unit seen opposite will, minus turbos, perform very similarly to a 16SVT and so it is appropriate to hold it as a reserve power unit.



Photos above of the donor loco 56104

Paul Biggs (left) and Iain Wright (right)

Above, right: two stands made to hold the power unit on the sloped area outside Centenary Works. The unit is seen below during the process of covering it over.





2017



2018



2019



2020



2021



2022



What have we achieved so far? Andrew Hoseason & Bernard Caddy

With almost 6 years of progress since our pivotal AGM at Swanwick Junction in August 2017, it is good to look back and see what we have achieved in that amount of time. It's sometimes easy to forget the large steps made over time by a project of this kind.

The Trustees feel that the greatest single factor is our relationship with the Ecclesbourne Valley Railway. Without that, we could not have achieved a fraction of growth to date.

Only after we took over 'the shed' could we create Centenary Works. Many hours of work were involved to get the building usable. Before that time, our possessions were spread over a number of sites and subject to the good will of third parties. We were unable to work on our own equipment during that time.

Being able to gather such a large variety of heavy parts under one roof is a physical sign of the faith that our donors have in the project. Most of our members donate monthly to the project—and it is on the basis of this regular income that we were able to rent the workshop. So give yourself a pat on the back!



There are many pieces of equipment which we were able to obtain only because we had somewhere to put them. The list includes:

Rectifier, exhausters, alternators, large containers, compressors, electrical cubical, electrical control cards, steam heating boilers and then large lifting frames.

We also had the opportunity to obtain a sleeper carriage for our volunteers to sleep in, on site. This has benefitted the railway's volunteers greatly, providing a cheap, dry and convenient place to sleep.

During the first year we obtained the bogies and so were able to bring them to Wirksworth where we removed a traction motors for evaluation. This completed the set of the three basic large components—power unit, chassis and bogies. With those safely in our possession, we could

confidently move forward.

We had been able to lubricate parts while the bogies were at Swanwick and this was appreciated when the time came to loosen parts. However, we were not able to strip the bogies nor work on the class 58 before transfer to the EVR.

Our base at Wircsworth has also provided a base location for volunteers and supporters to come to raise the positive public profile of IDRS, attract more volunteers, financial supporters, and friends of the project.

Having a place of our own has also enabled us to start refurbishment groups for the electrical cubicle and the chassis. Since then we have moved on, as rapidly as is possible, for a volunteer project in which most volunteers have 'real jobs' during the week. We have been able to build up the volunteer skill base, now having around twenty active skilled volunteers who know what they are doing in their own areas of experience.

Since 2017 we have also developed good working relationships with Porterbrook, IMPS, GBRF, Progress Rail, West Coast Railways, the Deltic Preservation Society, the Heavy Tractor Group and the Werkgroep 1501.

To summarise, a lot has been achieved since 2017 and this is due to our multi-person relationship with the EVR and our strong membership.

Let us look forward confidently to progress made in the next few years. It may be hard times for everyone, but we have confidence that the future is black with silver lines! Each one of us plays a part in that success.

Well done everyone.

Photos:

Left: Air compressors on arrival.

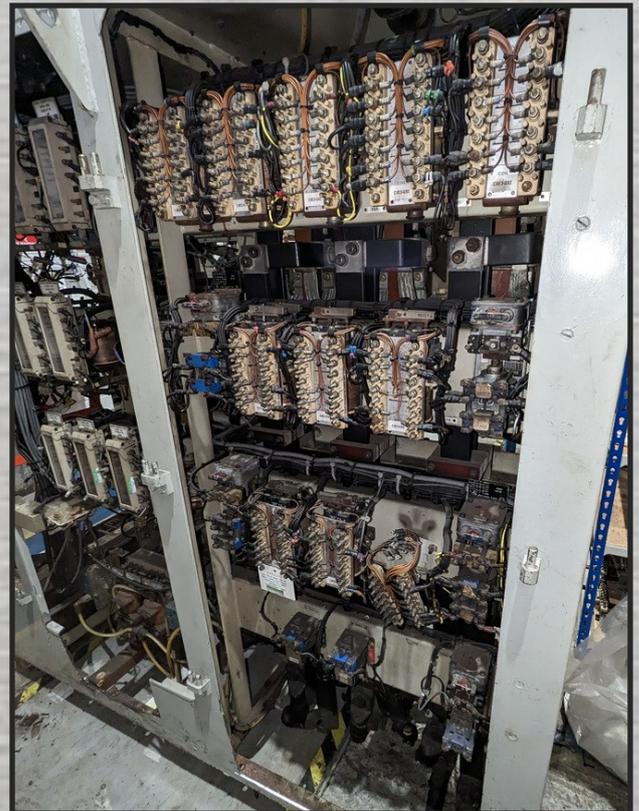
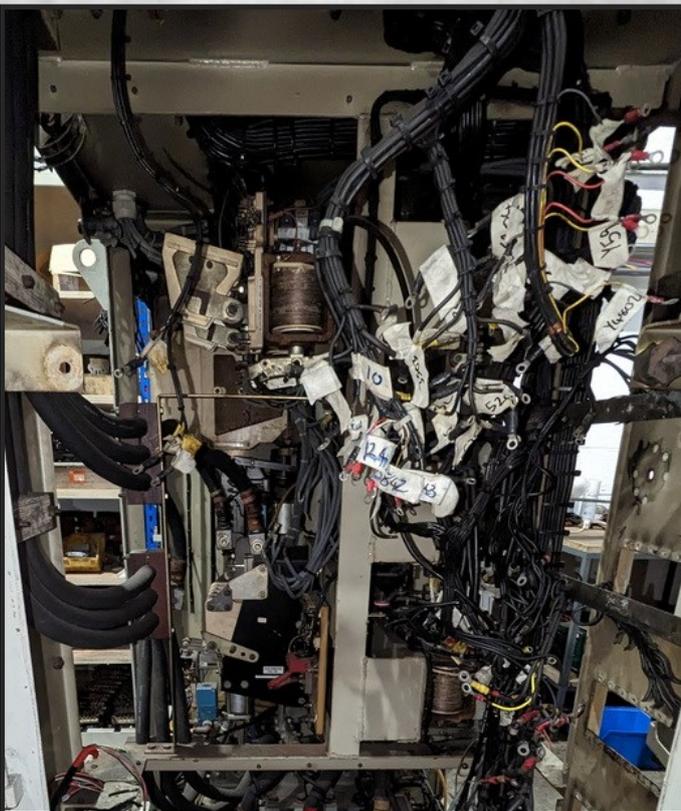
Right: Traction motor gear casings during cleaning.



ELECTRICAL

Last year we received a second electrical control cubicle, from 56104, which is seen in three pictures on this page. We can use many of its parts in the locomotive. However the frame itself can not be used because its shape will not fit inside the locomotive.

However the cubicle from 58022 will fit, seen top right. We are stripping both cubicles to test and refurbish parts.





The battery charger transformer box

Our team of volunteers are continually surprising those of us who are on regularly on site, with unexpected deliveries of work completed off site.

Such was the case with this box, which was returned by Phil in March, in much better condition than it left us last year.



Right: At the end of March the stripped cubicle from the 58 was taken outside for a power wash prior to being repainted





The frame from the 56 will not be wasted, as it has been cut up to make three heavy duty work benches for our volunteers.

Above: Making use of two completed benches.

Left: Welding taking place on one of those benches.





Left: Using a grinder to cut it to shape.

Top: The 56's cubicle partly cut up, with a bench taking shape in the foreground.

Above: A completed bench being used to create bolt holes in the angle iron uprights that were being welded to the ex58 chassis to mount the OSB boards to for our safe working area (shown on pages 22+) The machine in use is a magnetic base drill fitted with a Rota Broach cutter.





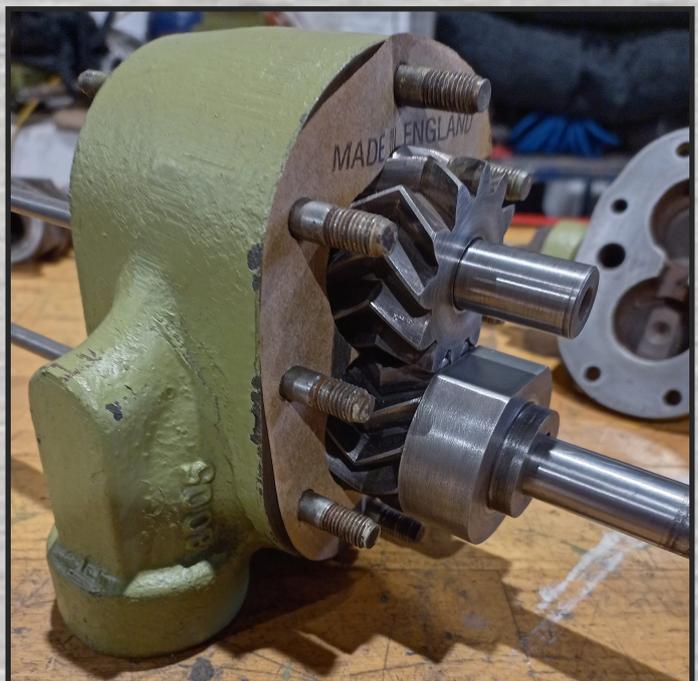
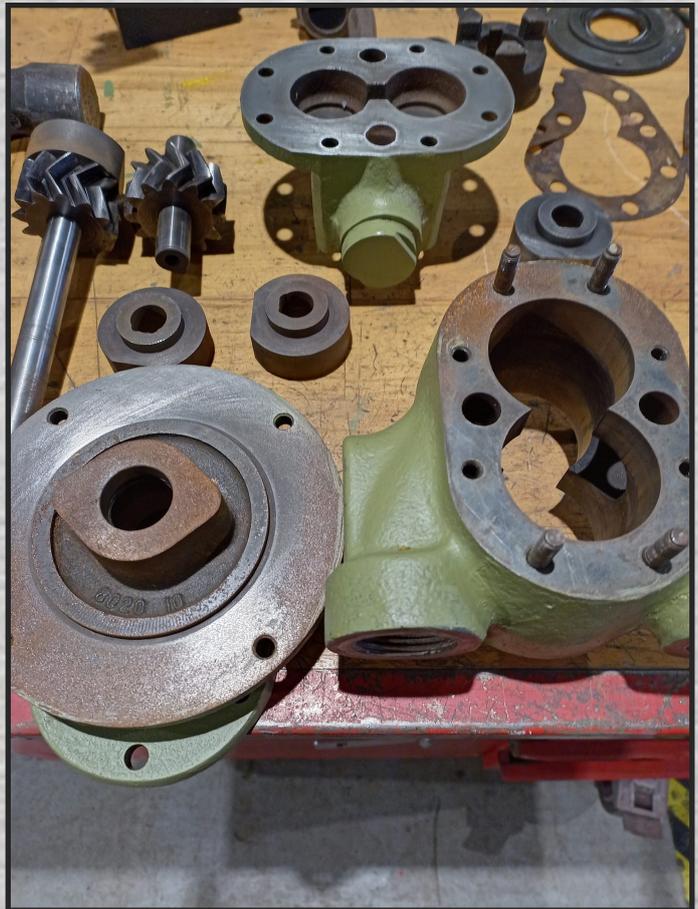
The Fuel Lift Pump Refurbishment.

Mick Clamp

I thought I would break myself in gently and pick up where I left off what seems like forever ago with the ex58 fuel lift pump refurbishment. It had gained a bit of surface rust over the damp winter months so the first task was to remove it with alley oxide paper and scotchbrite. I'd had brought a selection of thin gasket papers off the internet to produce the new gaskets from 0.006" (.015mm) being the correct one.

I made a new pair of gaskets using the tried and trusted technique of laying the gasket paper over the joint face and carefully tapping around the profile with a small ball pen hammer and lightly over the bolt holes to produce the holes, this technique works very well with thin gasket papers with hammer blows just sufficient enough to cut the paper. Wad Bell punches would be used on thicker gasket materials to create the bolt holes.

The pump components were cleaned up and inspected prior to a dry build to check for correct operation. The assembly will now be disassembled and then rebuilt using a thin smear of Hylomar jointing compound on the joint faces to attain a leak proof seal.



Photos opposite:

*Top: interior light holders ex class 37 before and after refurbishment.
Middle and bottom: Traction motor gear casings being refurbished. The blue tint is a covering of cleaning liquid.*

Chassis Progress

Bernard Caddy



After the work of the previous eighteen months to strip it, our chassis was lifted off the bogies last summer, inverted, placed onto our Sturgeon wagon and sheeted over. Photos on this page show that process.

Design and engineering work has been going on away from the tracks, such that we now have a validated approach for mating the 1980s heavy steel chassis from 58022 to the 1950s EM2 power bogies (derived from the 1947 D16/I design).

With other tasks around the works under control, the next steps with the chassis have started. Our friends from EVR shunted the Sturgeon with the chassis back up to the car park area where we can get easy access (and where the chassis lift happened last year). The challenge for the first working day on the chassis was to recover the traction cables and start work on the safety railing.

During the winter the chassis had collected a lot of rain and leaf-fall and debris on the tarpaulins, so the first task was cleaning up and removing those.

The traction cables are the major high-current feeds which took power from the alternator through to the traction motors on the bogies. We'd left them fitted when stripping the chassis as, once disconnected from the traction motors, they didn't impede the lift.



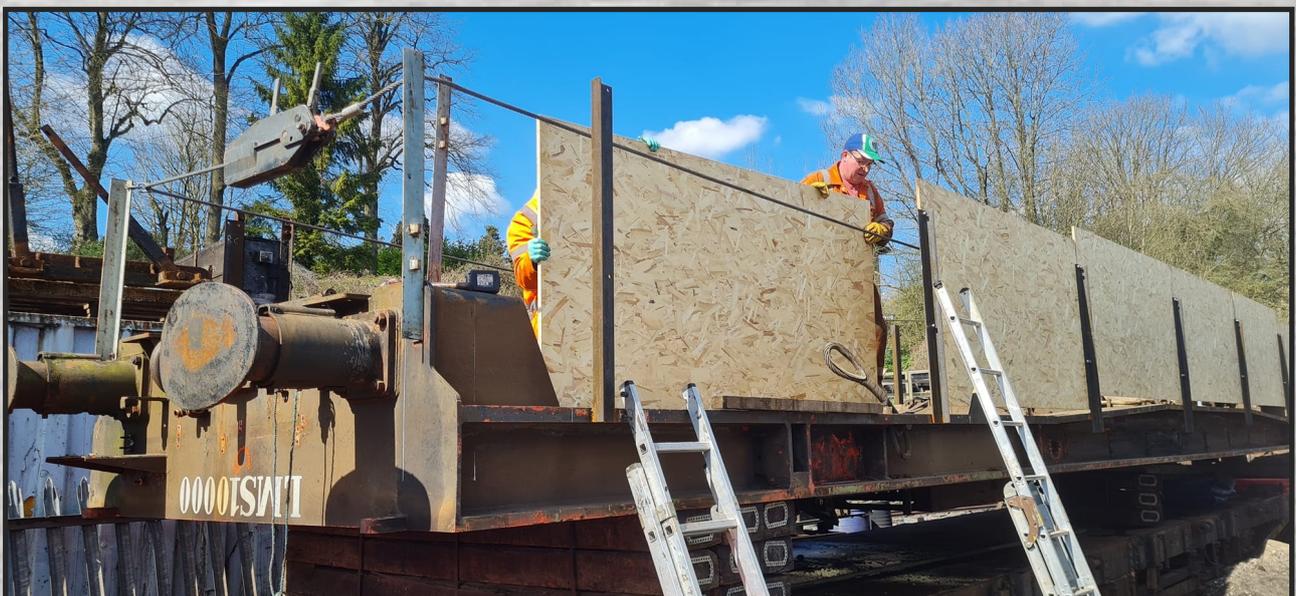
However, we are well aware they are a good weight of valuable non-ferrous material, and wanted to recover them for their value. We needed them out of the way for chassis modifications to start. Needless to say they were well fixed after years of service exposed to the muck splashed up and then even more years of oxidation and decay standing idle, they were challenging to remove. A team of seven dedicated volunteers with a good range of power tools, ably supported by our trusty telehandler, spent a productive day and eventually got them exposed, accessible, freed up, pulled out off the chassis.

The safety railing is absolutely essential to our progress. The IDRS team at Wirksworth has set a high standard for safe working practices, using the expertise of key volunteers. We got a number of very positive comments for the integrated safety management in place and visible when we had the big lift last year.



We have to adopt similar stringent practices to protect our volunteers working at height on the chassis, and protect others around (we sometimes have to work in public spaces). The chassis of 58022 is around 8 feet off the ground, stacked on sleeper packing on the Sturgeon wagon. In addition to the risks of working at height, the inverted chassis was not designed for access this way up. There are trip hazards, sloping surfaces and voids. It is also - inevitably - on a working railway. We need to be able to access the chassis even if there are adjacent running lines in use. In addition to the safety requirements, the inverted chassis when simply covered with tarpaulins is not well protected from the weather. Our plan is for bespoke safety railing fixed to the chassis which also can give improved weatherproofing when we're not at work.

There is a lot more work to be done, but each day of work moves us closer to the next big milestone, that of having a rolling chassis. Everyone can help this progress - all the skilled volunteers at Wirksworth, our experts guiding and advising on the design and other aspects, and willing donors providing the funds that keep the project rolling forward.





Above: Delivery of wood at the end of March enabled a working party to create a robust safety fence around the chassis

Engineering plan for sale

By the time you read this, our newly updated engineering document should be at the printers and be available for purchase via our Ebay, at information stand at events, or at Centenary Works.

Telegram

A new source of information in addition to our website and social media is our telegram channel — www.t.me/LMS10000