THE NORTH STAR CHRONICLES ***– a newsletter primarily for the model railway fraternity***

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Editorial

Last month the comments of Gary Smith on the establishment of a South African museum for model railway layouts and artefacts were featured. It was postulated that such a project would have to be properly founded and structured in order to satisfy all legal and financial requirements*.* A related aspect fundamental to the success of such a venture is who would be responsible for directing the project? I say this against a background of the way that "politics" interferes with every aspect of our lives. Everyone will have experienced the intervention of politics at one level or another, be it at work or in clubs (or at home!)*.* Insofar as clubs are concerned we just have to think about the difficulties experienced in Durban, Cape Town and the Reef with trying to organize a national model railway convention in recent years.

Therefore it might be appropriate to highlight some of the factors which contribute to the success of organisations like clubs.

One of such issues is how formal a 'club' structure needs to be. Many 'clubs', Durban Modular Railroaders being a case in point, functioned successfully for over 20 years as a loose association of 'members' without a constitution. This had to change with the introduction of FICA as a result of which when there were club funds involved, it was bank requirement that a formal structure had to be introduced via a

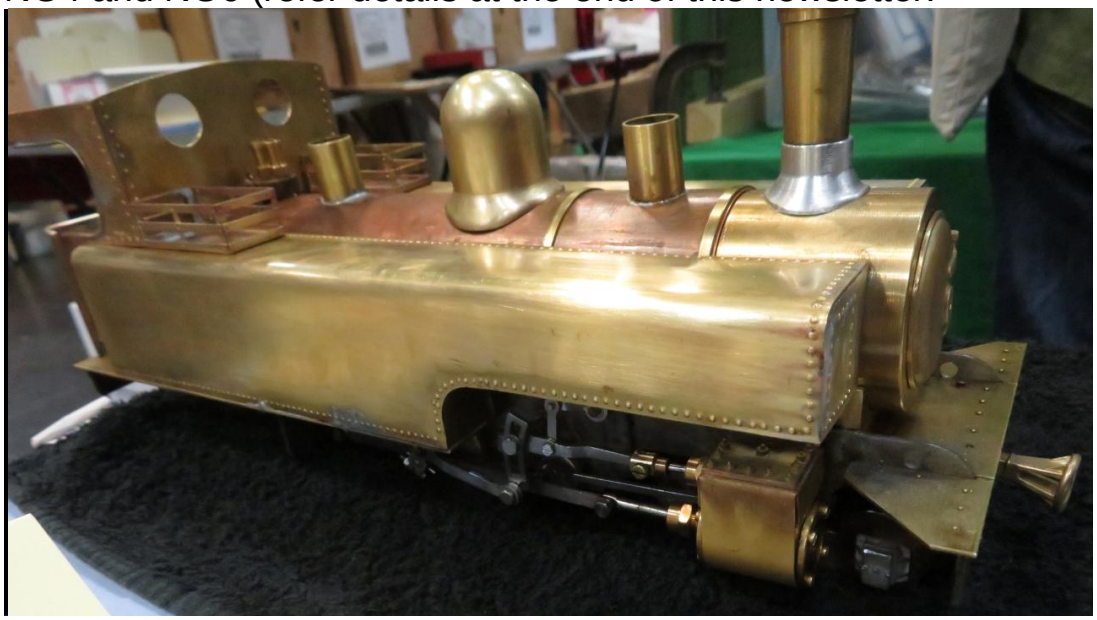
constitution. Officials had to be appointed from the remaining DMR members to manage what were in effect “trust funds”. Some former DMR members found this unacceptable and wanted a say in the disbursement of the funds. Conflict unfortunately ensued.
The ‘new’ club, HMRC, has a formal structure with officials looking after the funds concerned but insofar as the day to day arrangements are concerned has reverted to the informal, decisions by consensus arrangements, (we do as we are told by Danie!) as prevailed with DMR. That works for us. We have a small, happy, harmonious group. Long may it continue.
So this has been a long way around the houses to give Gary some feedback on his museum vision. The response to his outline has been uniformly positive with several offers of assistance with respect to the legal implications. However before getting too excited the key issues are firstly who is going to run the show and how are they going to be elected? After all most people will want to know with whom they are dealing before donating layouts and artefacts to such a project.
Secondly where is it going to be located? If it is the Cape then the likelihood is that is the area from which the greatest support will emanate. To state the obvious, you have to have the right people running the show who are compatible and share the vision/common purpose. Easy to say but not so easy to establish. I keep encountering modelers around the country (and indeed overseas) who will not become involved with clubs because of the politics. It is an imperfect world!
Finally, how is the ‘museum’ going to be financed? Again, through long years of experience with clubs and animal welfare and conservation societies (clubs by another name), the chances of such a project succeeding are slim if it is not backed by some sort of endowment fund producing annuity income. With the small percentage of the population in this country interested in model railways, entrance fees alone are never going to pay the running costs.
So Gary you have provided the community with a skeleton so to speak, time for you now to put some flesh on the bones.
A recent visit to the UK provided a considerable amount of material for the North Star Chronicles. The dilemma is where to start? For various reasons – principally because of Centurion Society of Model Engineers Gauge 1/16mm track project I am starting at the end so to speak – the last railway/model railway associated layouts visited on the trip was at Guildford MES where a Gauge 1 layout is in the process of erection to add to the extensive 7¼”, 5’’, 3½” 2½” 32mm, OO and N gauge layouts already in existence.

But before launching into the lessons to be learned from the Guildford gauge 1 project, there is what I believe to be some great news for large scale (mainly 16mm) live steam narrow gauge modelers in this country. Accucraft UK is bringing to market a model of the so called Lawley SAR NG6 of 1895. For details of the prototype refer: *https://en.wikipedia.org/wiki/South_African_Class_NG6_4-4-0*

Ex Durbanite Gary Lambert behind Nigel Town's Model of the Year competition winning entry – SAR NG6

In addition, following the huge success of the model of the NGG16 Garratt (some 220 were made in different batches) a further run is planned. As if that was not enough a further run of the magnificent NG15 (probably my favourite SAR narrow gauge loco) is planned by Accucraft. 45mm i.e. gauge 1 track is far more popular in South Africa than 16mm scale on 32mm i.e. based on 2 foot track. The good thing about the Accucraft locos is that while the scale suggests they should be run on 32mm track, the wheels are regaugable to 45mm. So if you are not uncomfortable with the track being nearly 50% too wide, these locos

represent the best opportunity to acquire scale models of SA narrow gauge prototypes.
A further 16mm model of a narrow gauge SAR loco is already available. Rob Binnie is offering a model of a Class N loco, the predecessor of the NG4 and NG6 (refer details at the end of this newsletter.



16mm model of a class N

Rolling stock made from Resurgam 16mm SAR narrow gauge kits

But wait, there is more as the advert used to say. Resurgam (no website but the Facebook address is @ResurgamRollingStock and the owner David Williams can be contacted at davidwilliams42@btinternet.com) is

producing (mainly to order) a range of 16mm narrow gauge rolling stock, coaches as well as wagons, in mdf and plywood. This fact could possibly explain why my suitcase was considerably heavier and my wallet a lot lighter than originally planned on my return journey!
Unfortunately it is necessary to issue a health warning about this subject. It is all very well to wax poetic about what is either available now or what will be available later. The problem is what the items are going to cost people who live in a country experiencing currency depreciation. I suspect the price of the next run of NGG16s will be in the region of GBP5000, almost double what the original run cost. The Lawley will be about £3000. Coaches from Resurgam will be in the region of £90 and wagons £50-60. And that is not all. Wheelsets, couplings, vacuum pipes and decals still have to be bought for the rolling stock. It is true that VAT makes up 20% of these costs so if the supplier is prepared to provide a tax free cert and you can fit the item into your hand luggage, that 20% can be saved. I am not sure if this applies to the rolling stock.
From a supply point of view, for those interested in large scale (gauge 1 and 16mm) SAR narrow gauge, truly we have never had it so good!

Guildford Gauge 1 Layout

Guildford MES gauge 1 layout – mark 1

The above photo was taken in April 2015***.*** The material used for the deck was a recycled plastic, sadly a big mistake because it warped and that in Britain, a country not noted for a lot of sun.
There were several other mistakes/design shortcomings: the way the steel poles were supported with the adjustors on the base of the pole rather than being on top gave rise to a considerable amount of corrosion. See photo below.
Thirdly the layout was positioned too close to the hedge making access difficult on that side. Fourthly the track did not have transition curves.

Fifthly for unknown reasons, Cliff Barker code 180 stainless steel rail was used in code 200 sleepers. The result was the track had a tendency to move inside the sleepers. In addition, as Graham White observed "*Aster stainless steel tyres on stainless steel rail lubricated by water and steam oil is not a happy combination!"* So as Monty Python said, "start again*"!*

Mark 1 supports and adjustors

Mark 2 layout incorporates an ingenious steel support system.

Angle iron verticals embedded in quick drying cement and laser levelled. Swing access gate. Photo Graham White

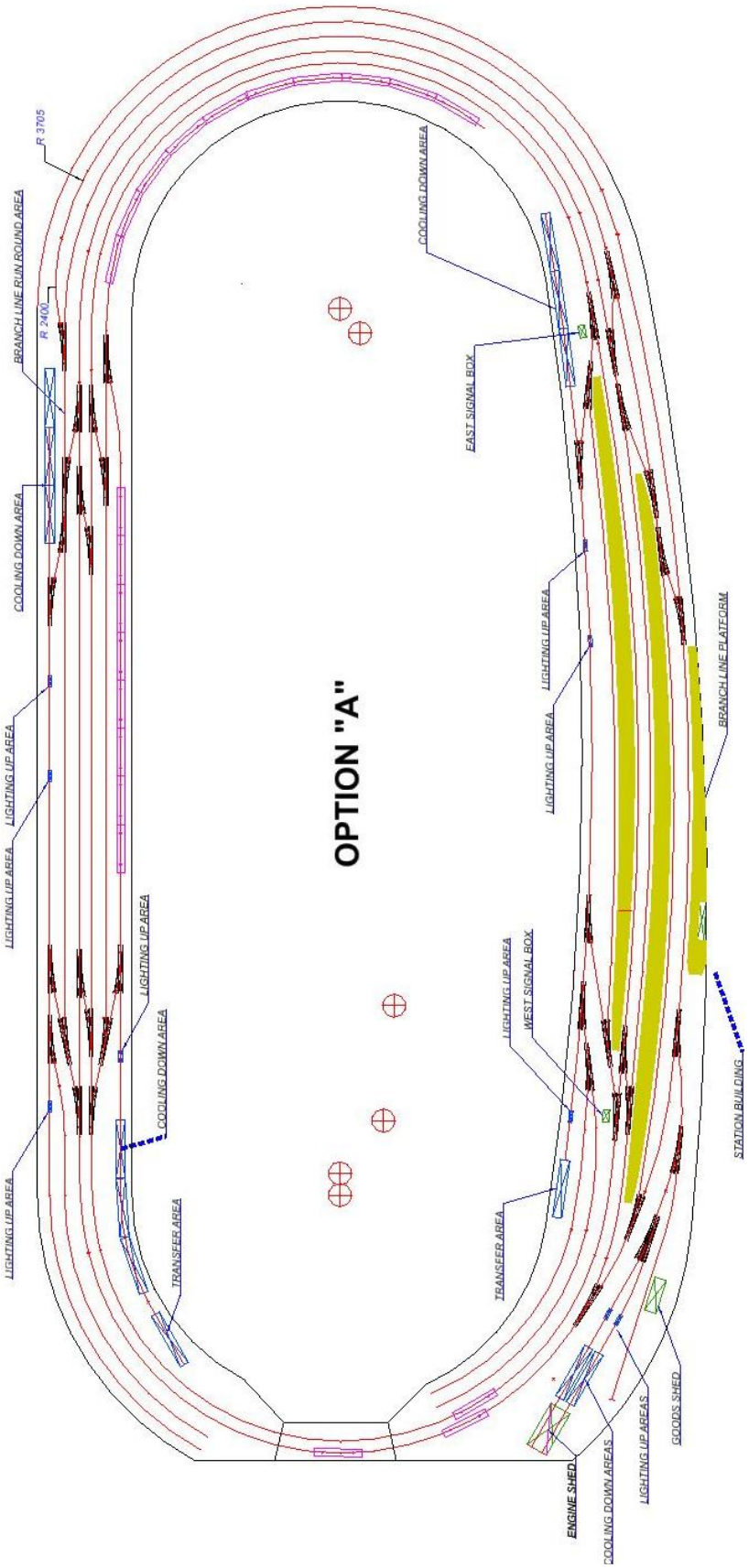
Horizontals (more welded angle iron) added and adjustors fitted. Again all laser levelled. Photo Graham White

Mark 2 supports
Hopefully this is self explanatory. Two 90 degree angles welded together - main deck support. Below the main deck supports is a piece of angle iron to which a nut has been welded. The adjusting bolt goes through another piece of angle iron welded to the top of the verticals
Main height adjustor now lower nut. Top nut is for locking purposes. This whole system benefitted greatly from a GMES member with good welding skills!

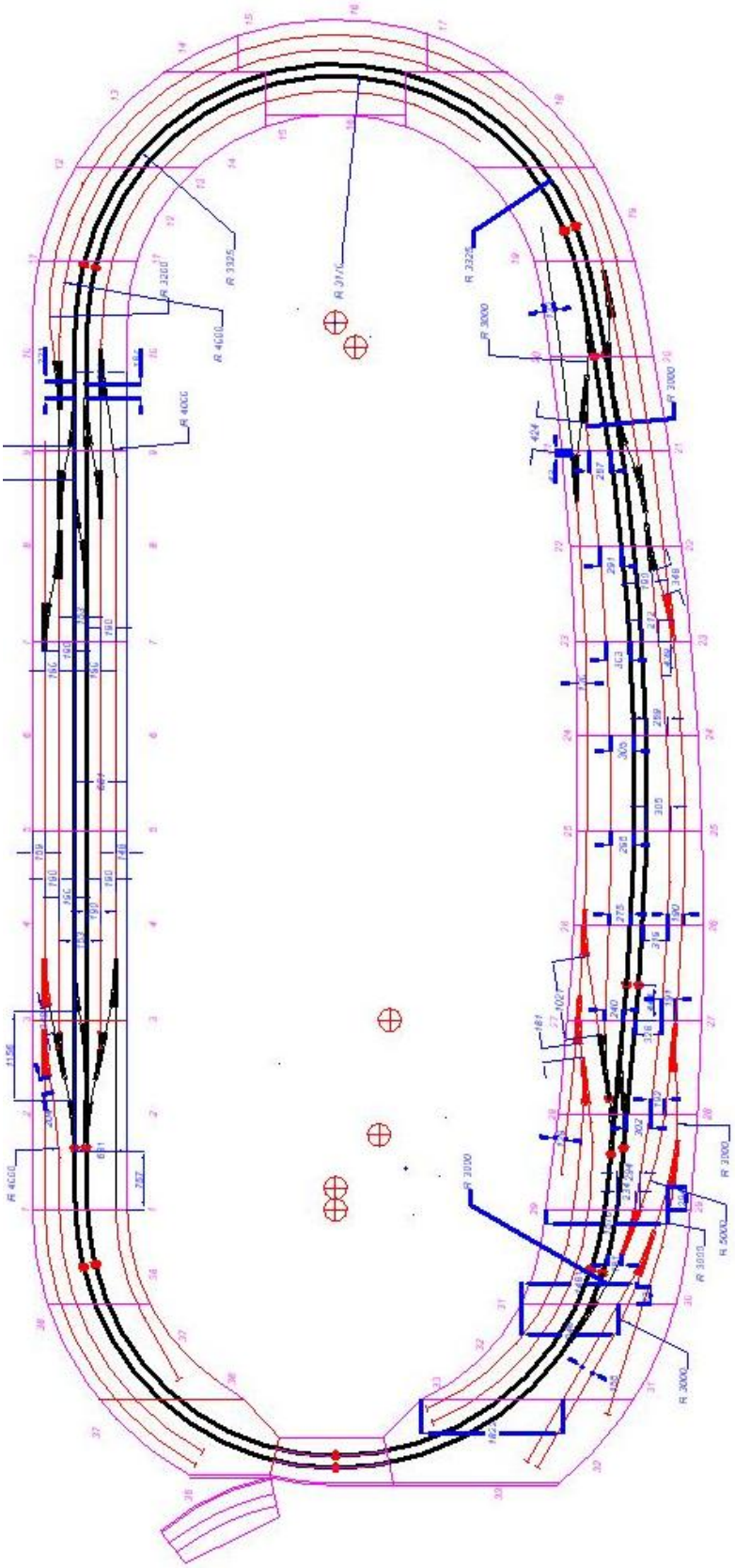
Swing door access

Swing door closed and 3D printed sleepers at the points where the rails join. Rail is code 200 flat bottomed Peco and as can be seen the track is screwed down.

Bearing in mind one of the main problems experienced with the Mark 1 layout was the warping of the recycled plastic decking, it is appropriate to make reference to the material used the second time around. This is called Riga Tex. This is a birch plywood bonded with a tough thermosetting phenolic resin (*http://www.chilterntimber.co.uk/product/plywood-riga-tex-220gm-dark-brown-large-wire-mesh-pattern-phenolic-film-face-2440-x-1220-x-various-thickness-2440-x-1220mm-x-various-thickness/*) and is used amongst other purposes for the decking of trailers. It is like a high quality long lasting shutterboard.



The track plan described as a "discussion tool tool and then developed into the main design file used for setting out the track."

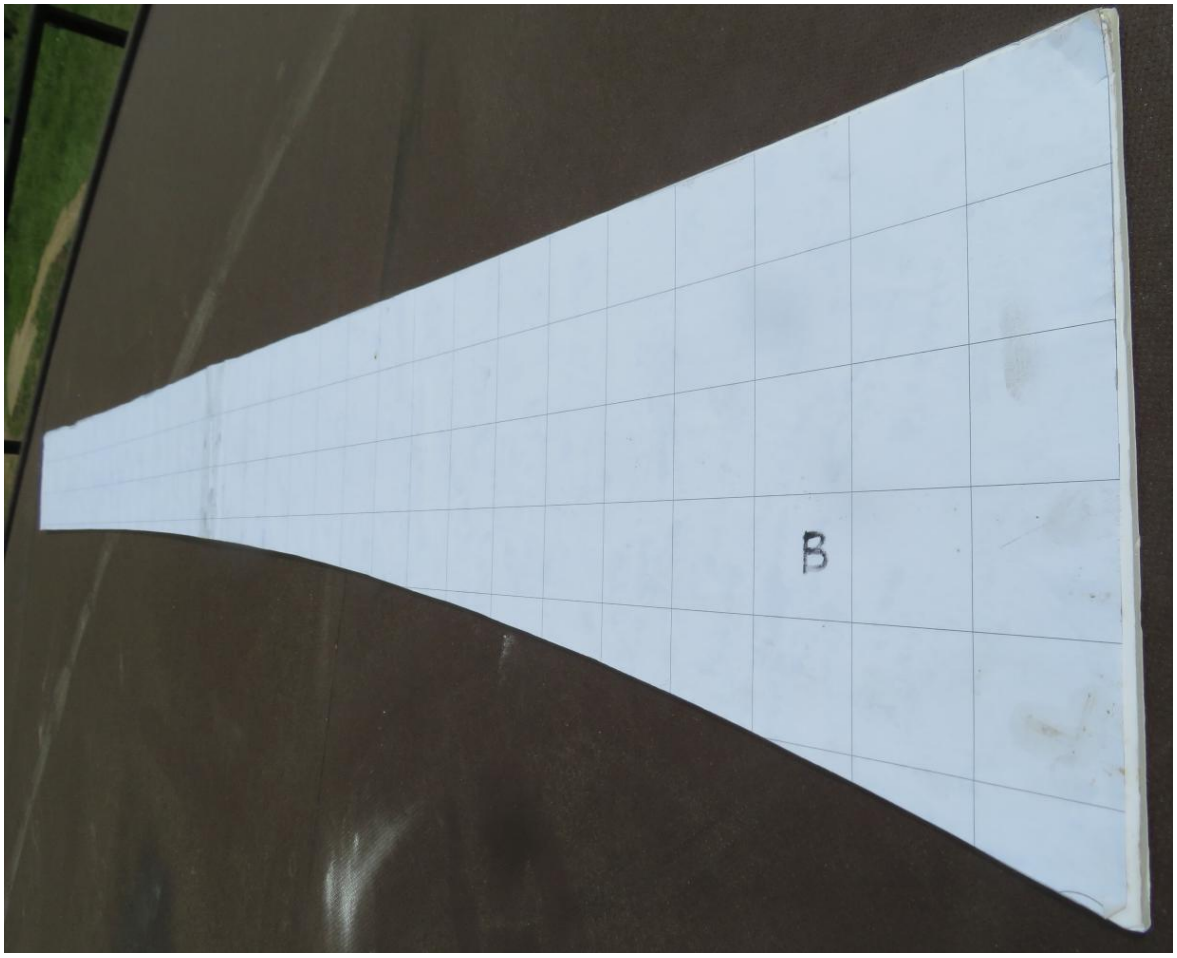


Working setting out plan.

I can do no better than quote Graham on the process:

"*this is a constantly evolving drawing with setting out dimensions that are added or deleted, depending upon which area we are working*

on. There would be too many on the same drawing if they were all active. It would be easier to have levels (or layers) for each Phase, then you could switch them on or off as appropriate.
We used two datum pins to set out the foundations, steelwork, boards and large radii track. The outer sleeper edge position is then marked with chalk on the baseboard to set out the track. The dimensions are taken from the CAD drawing. The Down Fast (outer track) is the datum line. I then use pieces of plywood spacers placed between the sleeper ends to set out the remaining track. The track is held down with small solid brass screws which will blacken with time or we will use some blackening compound to get the required effect."



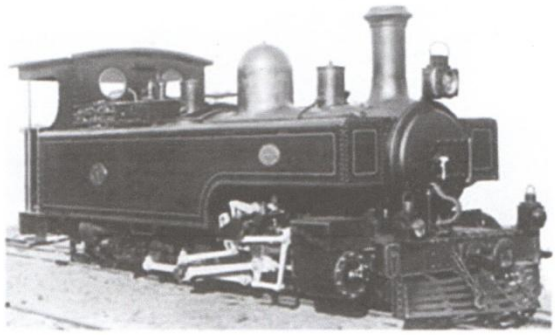
A mathematically calculated template for creating transition curves.
Also refer to the Spring 2019 edition of the Gauge 1 Newsletter and Journal "Of Transitions and Reverses". Interestingly the Bibliography for this article includes the South African Railways Civil Engineers 'Green Book'
As an aside I have to observe that having someone in your team on a project like this who designed full scale railway layouts as a job prior to retirement, as is the case with Graham, is invaluable.

Two mainline tracks with passing loops and sidings.
Graham beavering away in the background.

My thanks to Graham for assistance with compiling this article.

South African Railways/ Natal Government Railway's Class N

A scale model of this Class of 4-6-2Engine from the original drawings in 16mm/ foot Scale for 32mm/ 45mm gauge by Robert Binnie



The Prototype

Designed by D.A.Hendrie, and built by Hunslet in 1906 for Natal Governments Railway's 28 mile long Eastcourt to Weenen line.

These loco's are essentially supersized WHR Russel/ Sierra Leone engines, and were built at the same time.

They were absorbed into the new SAR in 1912, but were sold to the Moçâmedes Railway (Angola) in 1915.

Both SAR NG3 by Hawthorn Leslie, and SAR NG4 by Kerr Stuart (1 is preserved at Sandstone Estates) followed, and were very much based on the original Hunslet design.

The Model

Utilising some parts from both Roundhouse and Accucraft, this model is an accurate scale model built from the original Hunslet Drawings.

Specification

- Spoked machined cast Iron wheels
- Side tank fed boiler feed pump.
- Dogleg Lubricator (avoids burning oil and carbon deposits in superheater).
- 5mm diameter Stainless steel superheater tube for a smooth flow of steam.
- Single flu 2inch boiler, lagged with PTFE cladding so all year running and no burnt fingers, with a Roundhouse poker burner.
- Modified Roundhouse Walschaerts valvegear.
- Roundhouse cylinders.
- Roundhouse gas tank.
- Twin Accucraft poppet safety valves.
- Full rivet detail.
- Proper riveted buffer beams
- Crystal glazed cab portholes.
- Manual or R/C.
- 32mm or 45mm gauge (please specify).

Pricing

Bare metal	£2700
Plain Colour	£2900
professionally fully lined and painted as per photograph (Bronze green)	£3500

Deposit £500, returnable if not completed in 12 months (all monies will be spent on the model)

Contact:

Rob Binnie

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