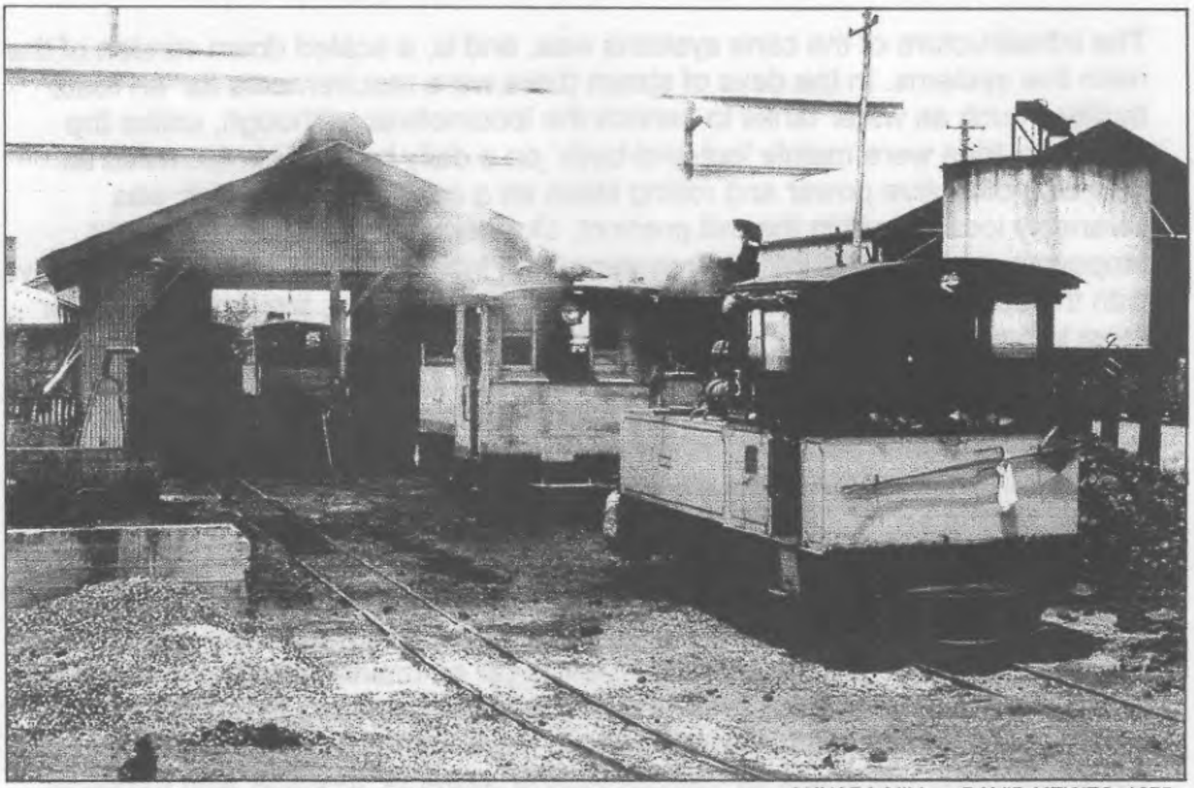
# QUEENSLAND'S SUGAR MILL TRAMWAYS

## AN ELEMENTARY APPROACH TO MODELLING NARROW GAUGE LOCOMOTIVE DEPOTS by JIM HUTCHINSON



QUNABA MILL - DAVID MEWES 1975

## INTRODUCTION

Currently there are some 4,500 kilometres of privately owned track in Queensland, representing seventeen tramway systems that serve twenty-three sugar mills. With the exception of one system, the Pioneer Mill at Brandon which uses 1067mm track, the remainder is narrow gauge 610mm (2'-0"). Materially these systems are scaled down versions of 'full size' state rail systems, yet their standards of civil and mechanical engineering are often equal to, if not better than their larger counterparts. On a power/weight ratio, and proportional size of 'trains', cane tramways often compare quite favourably with the government systems.

What, then, is the difference between a railway and a tramway? The immediate answer is that a railway, by definition, is authorised by an Act of (State) Parliament, whereas a tramway can be created by less stringent legislation.

The terminology therefore seemingly relates to statutory prerequisites rather than physical infrastructure. The former *tramways* of the Aramac and Beaudesert Shires, for example, were physically connected to the state network, utilising 1067mm (3'-6") track and rolling stock similar to and sometimes leased from QR. On the other hand the 2'-0" Innisfail tramway was part and parcel of the Queensland *Railway* system for many years, and consequently it was operated under the aegis of appropriate main line procedures.

The infrastructure of the cane systems was, and is, a scaled down version of the main line systems. In the days of steam there were requirements for 'en route' facilities such as water tanks to service the locomotives, although, unlike the main line, trips were mainly 'out-and-back' on a daily basis. This focussed all servicing of motive power and rolling stock on a central depot, which was invariably located within the mill precinct. Out-depots catering for overnight stopovers were located on a few systems that incorporated long runs. Nowadays, with the advent of dieselisation and more efficient running, the requirement for most intermediate facilities has largely disappeared.

Isolation of the tramway systems from each other has resulted in interestingly varied types of motive power, rolling stock and operational procedures being employed over the years. Steam locomotives were obtained from both overseas and local sources, and at least a dozen builders were represented during the steam era. As internal combustion locos supplanted the steam fleets a range of new manufacturers appeared on the narrow gauge scene. Earlier rigid framed diesels were later complemented (and often superceded) by bogie locos. Motive power at several mills now includes even larger ex-mainline locos, QR's DH and NSW 73 classes, that have been modified and re-gauged to 610 mm. This diversity of locomotive types is made even more interesting by the use of corporate colour schemes for various mills or systems, together with in-house modifications. For the modeller there is obviously a marvellous range of prototypes from which to draw inspiration.

Similarly a selection of rolling stock is available, from earlier simple four wheeled whole-stick trucks through to bins capable of carrying 10 tonnes of chopped cane. As with any railway system there are also numerous 'non-revenue' wagons, including track maintenance machines and navvy wagons, to add further variety to the operations.

From the modeller's point of view the areas of most intense activity occur within the mill's environs. **The mill yard**, comprising a number of sidings that cater for the arrival of full bins, discharge of cane loads and departure of empties, can provide lots of operational possibilities, but it also requires a reasonably large amount of layout space if even small prototype train lengths are to be used. **The weighbridge / rotary tipper / crusher** sequence is an interesting but somewhat complicated procedure, and some excellently detailed models of these operations have been produced in the past. Modelling **the maintenance**

**facilities for locomotives and rolling stock** forms the basis for this presentation, mainly because of the relative simplicity of the scratchbuilt structures together with the fact that trackwork and activities can be compressed into a reasonably compact area on the layout.

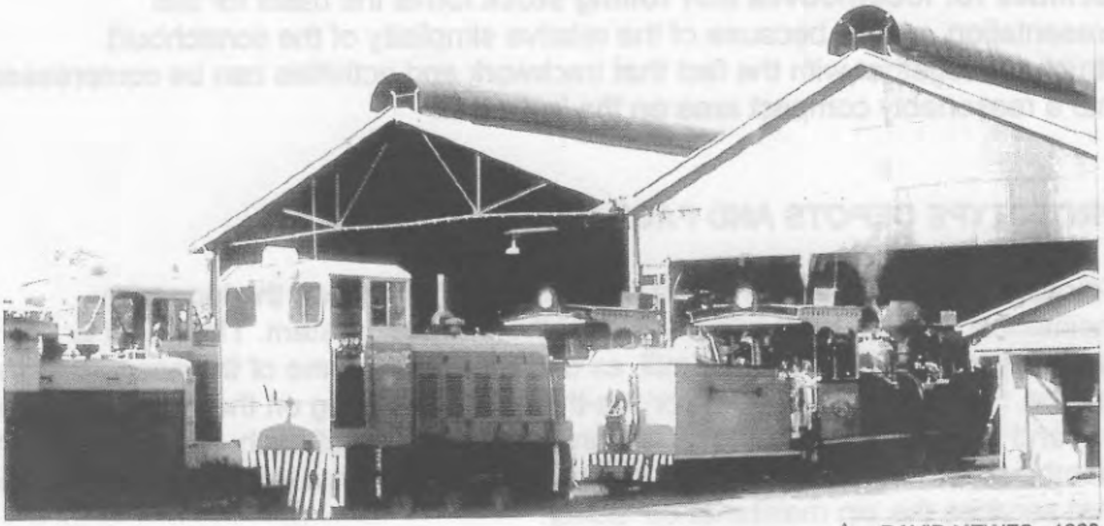
## PROTOTYPE DEPOTS AND FACILITIES

To cater for the daily running and maintenance of the fleet, the loco cum maintenance depot is an integral part of the tramway system. The depot is generally situated close to the mill, as can be seen in some of the accompanying photos. Sheds can be terminal or run-through, depending on the planning of the mill and its operations. Some sheds are a combination of each – Moreton mill at Nambour, for example, has two terminal loco roads with a third continuous track that services the bin maintenance facility.

Larger sheds are equipped to carry out major repair work and overhauls as well as routine servicing. Typical facilities will include inspection pits, an overhead gantry and large maintenance machinery. Workbenches and smaller items of machinery, welding and metalworking equipment will be found in or adjacent to any shed. Bin and miscellaneous wagon repairs may be carried out adjacent to the loco facility or in a separate area, depending on the size and organization of the tramway's fleet of rolling stock. In addition, to save duplication of workshop facilities, there could also be provision to service the mill's road vehicles.

Historically a loco shed would have been a comparatively basic structure, maybe of typically 'timber and tin' construction with a packed earth floor. With the passage of time the plethora of small local sugar enterprises were replaced by fewer and larger, more efficient centralized mills, with consequent extensions to the tramway systems and upgrading of locomotives and rolling stock. Substantial timber or steel sheds with concrete floors and suitable pits became an integral feature of the mill complex. But adaptation and improvisation were always features of the narrow gauge tradition. Maintenance buildings would inevitably undergo small or large modifications from time to time to accommodate the changing requirements of the mill, and engineering and functional needs took precedence over architectural aesthetics. Records of additions and alterations, however, are difficult to trace (if in fact they exist at all) and interpretation of the forms of such structures relies almost totally on photographs, contemporary written material and/or personal observation.

The material in this presentation, therefore, is based on photographs and enthusiast's lore rather than on construction drawings or on-site measurements, and references to materials and building techniques follow presumed conventional practice and not established data. For accurate information, the historian or modeller would need to undertake a comprehensive research study based around a particular mill.



▲ DAVID MEWES - 1968

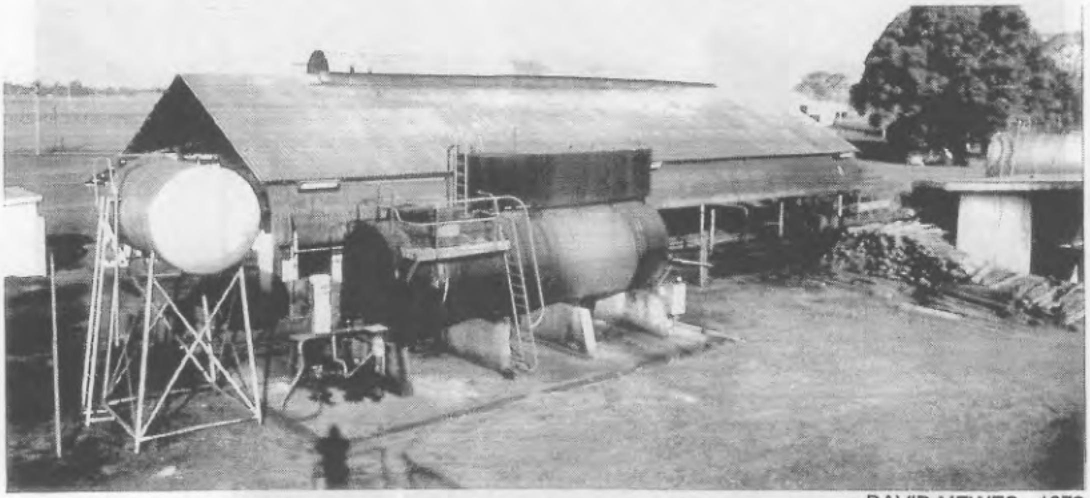
DAVID MEWES - 1973 ▼

**Top:** Victoria Mill's 2-road run-through loco shed is on the right-hand side of the photo, with the 3-road bin shed to the left.
**Above**: The other end of the Victoria shed.
**Below:** A recent photo of Moreton Mill, Nambour, showing the 2-road terminal loco facility and the single run-through bin road to its right.

JIM HUTCHINSON - 1998

GREG STEPHENSON – 1995

**Above:** The former Goondi 'triple-fronted' steam shed serves now as an out-depot of Mourilyan Mill. The central bay accommodates the two-road loco shed, with the left and right hand bays housing workshop, storage and navvy facilities.

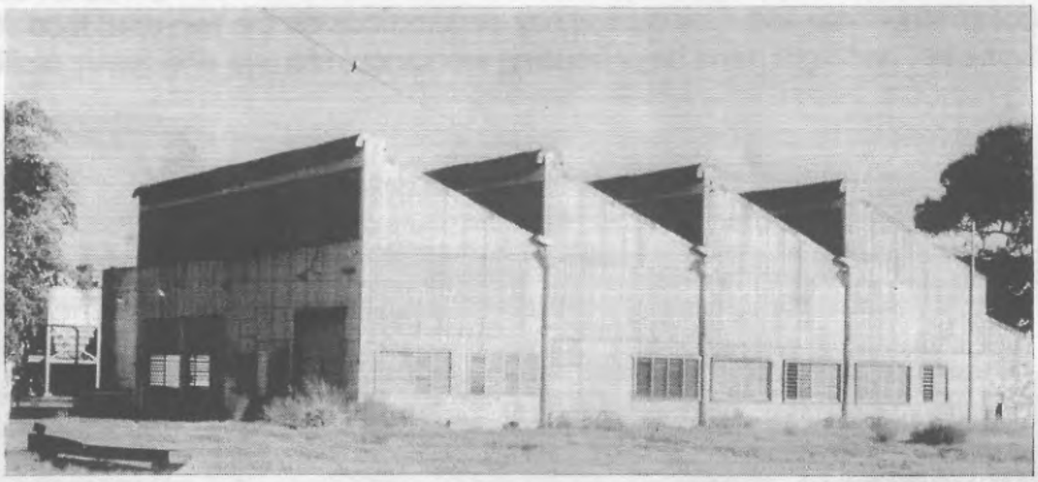


DAVID MEWES - 1972

DAVID MEWES - 1972

**Centre and bottom:** The Macknade shed, being an open structure, would be an interesting modelling challenge, particularly the very visible but fine roof trusses. Of interest is the variety of supporting structures for the fuel oil tanks. The large black tank to the right serviced the oil-burning Hudswell Clarkes, including those posing in the lower photo.

DAVID MEWES – 1969



DAVID MEWES – 1975

DAVID MEWES – 1984

One interesting facet of locomotive sheds is their variety of size, shape and construction. The **Huxley** depot of Isis Mill (top photograph) typified the rudimentary fabric of some older installations. Note the way in which taller steam locomotives were accommodated by simply cutting out a section of the gable end. The old shed at **Kalamia** (centre) was a large conventional saw-tooth roof industrial structure. The new shed at **Mourilyan** (bottom) is a tall and spacious portal framed extension of the mill building, and contrasts markedly with this mill's former locomotive facility illustrated later as a modelling exercise.

DAVID MEWES - c 1969

DAVID MEWES 1978

GREG STEPHENSON – 1995

**Top, centre and bottom:** The Silkwood out-depot of the South Johnstone system is one example of a small loco facility located some distance from the mill itself. These three photos show how the shed has been enlarged, interestingly since the cessation of steam operations. Note the sand drying facility in the two earlier photos, including the cranked flue (centre photo) where this equipment has been roofed over. Modelling the structure should be a straightforward exercise, useful for a layout where a mill complex is not to be included.

Some older sheds are characterized by a variety of roof shapes and wall construction, a legacy of alterations undertaken as mentioned above. From the modelling point of view, such complexes are often more appealing than their modern counterparts because of their 'romantic' or historic imagery. Newer sheds are characterized by the simple lines of modern-day industrial architecture. They are spacious with wide, clear roof spans covering several tracks. Roofs are high to accommodate overhead gantries and the engineering facilities can compare favourably with those of many main line systems.

As with other railways, arguably the most interesting period is the transition from steam to diesel. With the changeover some mills built new sheds, while others modified existing structures to accommodate the newer technology. A number of buildings retained features of their steam era origins, such as vented ridges and watering facilities. During these transition years infrastructure for both forms of locomotion could have been in evidence (e.g. coaling bins, loco water supplies, diesel refuelling points and oil storage tanks).

Apart from the central facility, out-depots could be found at locations remote from the mill. Such installations played a particularly important role in the days of steam, when locos working on lines some distance from the mill required watering and fuelling facilities, and maybe overnight stabling. Currently, with the greater endurance of internal combustion traction, the importance of these remote facilities has declined, although some may still be found on a few systems that run for comparatively long distances. For modelling purposes these smaller sheds, independent of the mill complex, may provide an appropriate subject.

## CONSTRUCTION AND MATERIALS

Many older sheds would have consisted of a basic structure featuring 'in-the-round' timber posts with complementary rough sawn wall frames, roofed with a simple rafter and tie-beam system in small sheds, or timber trusses over larger spans. Earth floors were not unknown, and corrugated iron was arguably the material most utilised for roofs and walls.

Later and more sophisticated structures would have been of sawn timber construction, sometimes complemented by a roof system of light steel trusses. Steel columns were probably used when the budget permitted. Concrete floors were provided, if not for the whole area then at least in the vicinity of the loco servicing areas. The invention of asbestos-cement provided a useful alternative to corrugated iron, one advantage being its resistance to the corrosive atmosphere that existed around steam sheds in humid tropical and sub-tropical environments.

With the development of steel portal frames, roofs spanning three or more tracks could be economically provided. This type of construction allowed for large uncluttered internal spaces, together with continuous concrete floors laid in conjunction with the concrete footings.

Some, if not all tracks had inspection / servicing pits. These may have been 4'-6" (1 370 mm) or more deep, up to 20'-0" (6 100 mm) long and wide enough to permit comfortable access to the locos. Pit dimensions for the later generations of larger diesels could be even more generous.

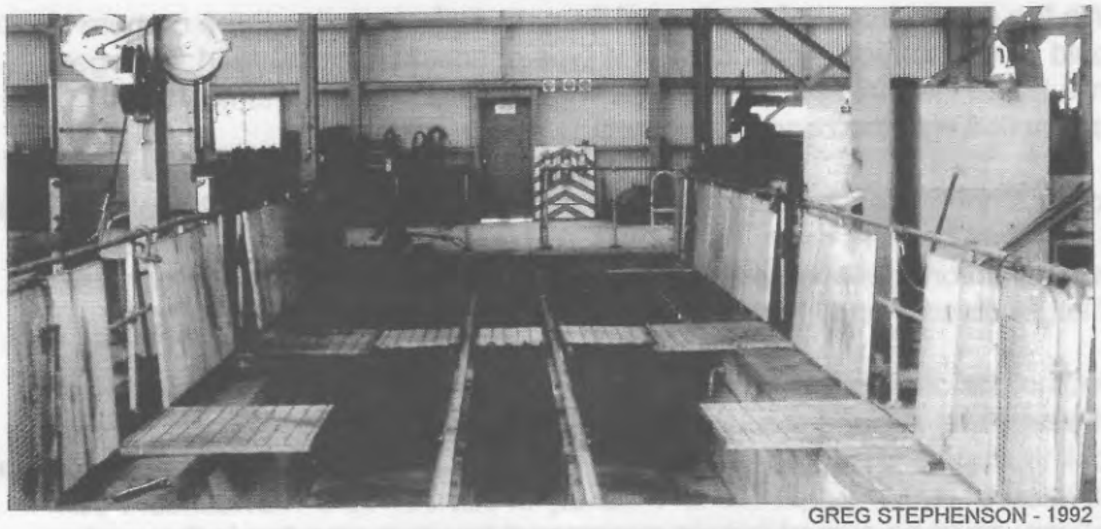
Much of the character of these sheds was generated by the surrounding infrastructure. Around steam sheds watering facilities (tanks and columns), a coaling stage and sand bins would be prerequisite. As diesels entered the scene elevated oil tanks, supported on a variety of stands, were in evidence. Fuel delivery could be carried out via commercial bowsers standing in the yard or located inside the shed. Some steam locos, such as those at Macknade Mill, were oil fired, and this was supplied from a separate tank (painted black).

Maintenance sheds are utilitarian buildings, and as well as the principal facilities mentioned above smaller paraphernalia like oil drums and minor items of equipment and machinery, both useful and 'junk', complement the scene both inside and outside. Within the shed an assortment of benches, machine tools and hoses for air and lubricants may also be found. In the vicinity of bin repair sheds reject frames, wheel-sets and tools add visual interest.

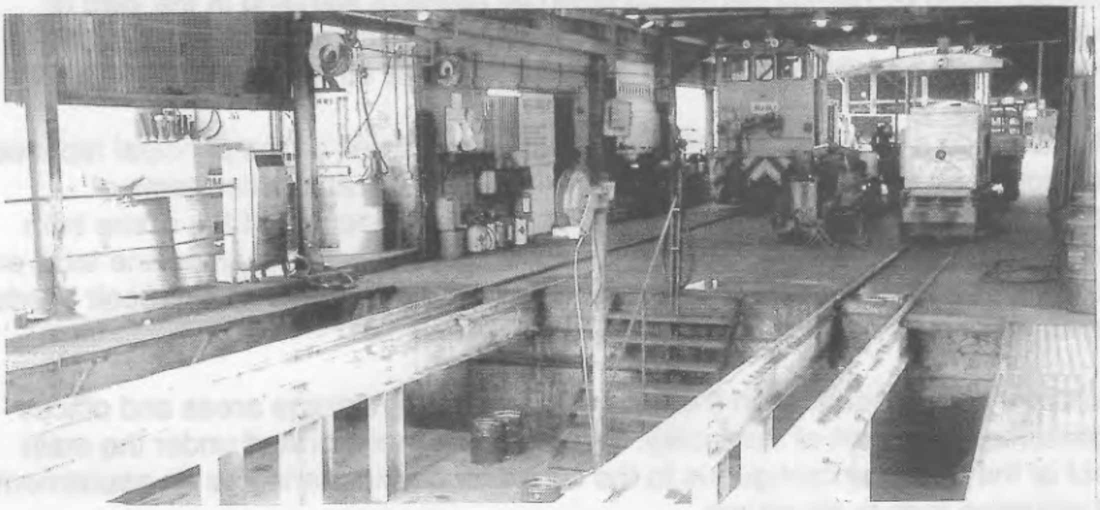
Auxiliary accommodation in the form of crew rooms, storage areas and offices sometimes form part of the facility. These can be incorporated under the main roof or they may be contiguous to the central shed, appearing as an assortment of adjoining lean-to structures.

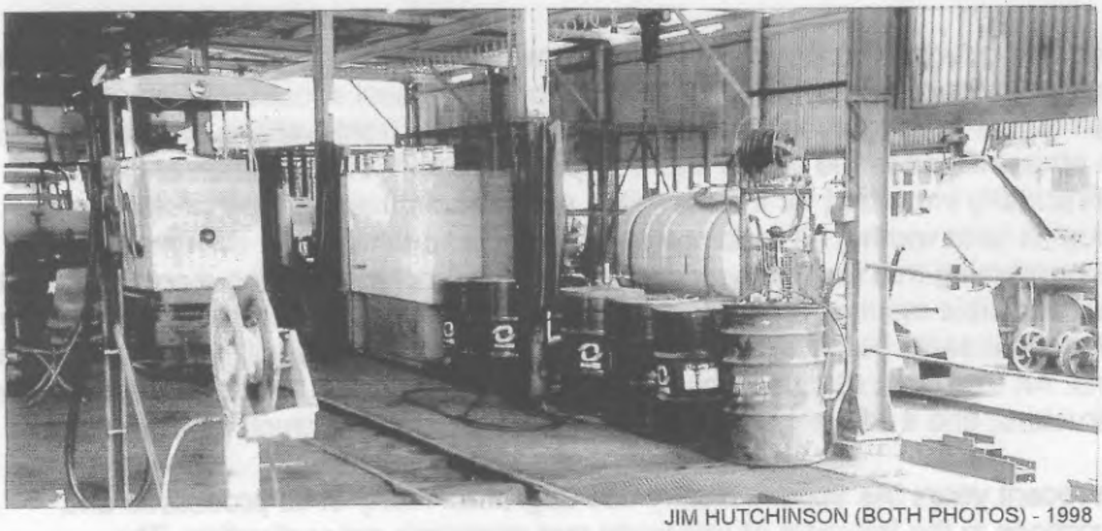
Loading gauge is another issue to be considered. The openings for some sheds designed for steam power were too low for their diesel successors, and consequently surgery had to be undertaken on the front walls to facilitate access. In other instances the facility was completely rebuilt. The question of clearance is particularly important for the modeller, and irrespective of actual prototype heights (and widths) all buildings must be tailored to suit your own models, remembering that locomotive dimensions at this scale are often a compromise to suit available mechanisms. My experience suggests that the *absolute minimum clearance* scale height should be 12'-0", and some models will require more than this. An extra foot (305 mm) or so should not detract from the appearance of the structure, and it will certainly make modelling operations much less stressful.

In recent years the sugar industry has upgraded many of its processes and functions in the interests of efficiency and economic rationalization. The importance of comprehensive maintenance programmes for tramway systems has been recognized as an essential facet of a mill's overall efficiency, and unlike



GREG STEPHENSON - 1992





JIM HUTCHINSON (BOTH PHOTOS) - 1998

Many sheds are open on one or more sides, affording views of the interior. These photos of Isis mill (top) and Moreton mill (centre and bottom) give some indication of typical equipment and facilities. A bench with heavy duty tools, water and air hoses, oil drums, oxy-acetylene bottles and various cables, containers, etc. can be useful accessories to include in a model.

some earlier structures new loco and rolling stock sheds are substantial, spacious structures equipped with first class facilities.

## THE MODELS

In introducing this aspect of the presentation it must be pointed out that none of the sheds modelled pretends to be an exact representation of the prototype. Lack of detailed information (and lack of time for comprehensive research) has resulted in drawings and models that are ***based on*** dimensions derived (guesstimated) from photographs and discussions with enthusiasts who have a much more intimate knowledge of cane tramway workings than I have. Further discussion has indicated that in many instances accurate data is probably not available in any case, with records of building activities being lost over time, or if in fact such information ever existed. The *based on* method can therefore produce a credible but *approximate* result when more exact data is otherwise unavailable. All drawings have been reproduced to scale, but **no dimensions have been shown**, lest such information might be misrepresented as being factual.

Assumed dimensions are ascertained by identifying elements and scaleable materials visible in the photograph(s). Building elements include components such as windows, doors and, in the case of railway buildings, the track. With most cane loco sheds there is little visual reference to rely on with respect to windows or doors because, being part of an industrial structure built for a particular function, their size is often specialised and indeterminate. It may be possible to estimate the width of a loco entrance by comparing the track gauge to the total opening, but remember that unless the photo is taken directly facing the wall, perspective recession will distort the relative dimensions and proportions.

A somewhat more tedious but more accurate estimation can be obtained if the corrugations of the roof and/or wall cladding are visible. Standard corrugations on iron and asbestos/fibre-cement (fibro) sheets are at 3" or 76 mm centres, while 'super-six' fibro had a 6" (152 mm) spacing. So if the photo shows enough of this detail, it is simply (??) a matter of counting the corrugations and multiplying by the appropriate factor to arrive at an approximate dimension – not an exercise for the faint-hearted, nor one that should be attempted late at night or after a big party! Corrugated iron water tanks are rolled from the same material (dimensionally) as above, and this may give some guidance as to height, again being mindful of the perspective factor. Sometimes the lines of sheet overlaps are visible, but care should be taken if using this as an estimation module, because overlaps may be one, one-and-a-half or two (or more) corrugations. The dimension between overlaps may therefore not be consistent.

Other materials that may be useful for estimating dimensions are brickwork (usually about four courses to 13" - 13½ " or 330 –343 mm), concrete blocks

(16" x 8" or 407 x 203 mm), and timber weatherboards that generally vary between 5¼" and 6" (133 – 152 mm). These materials would not have been commonly found on older sheds, although they might be seen on associated buildings.

The heights of openings could be determined by comparison against locomotive heights, if locos are adjacent to the opening and if their height is known – a lot of 'ifs'. It is far safer to adopt the minimum modelling height as recommended earlier, remembering that this height is measured from the top of the track, not ground level.

## MODELLING MATERIALS

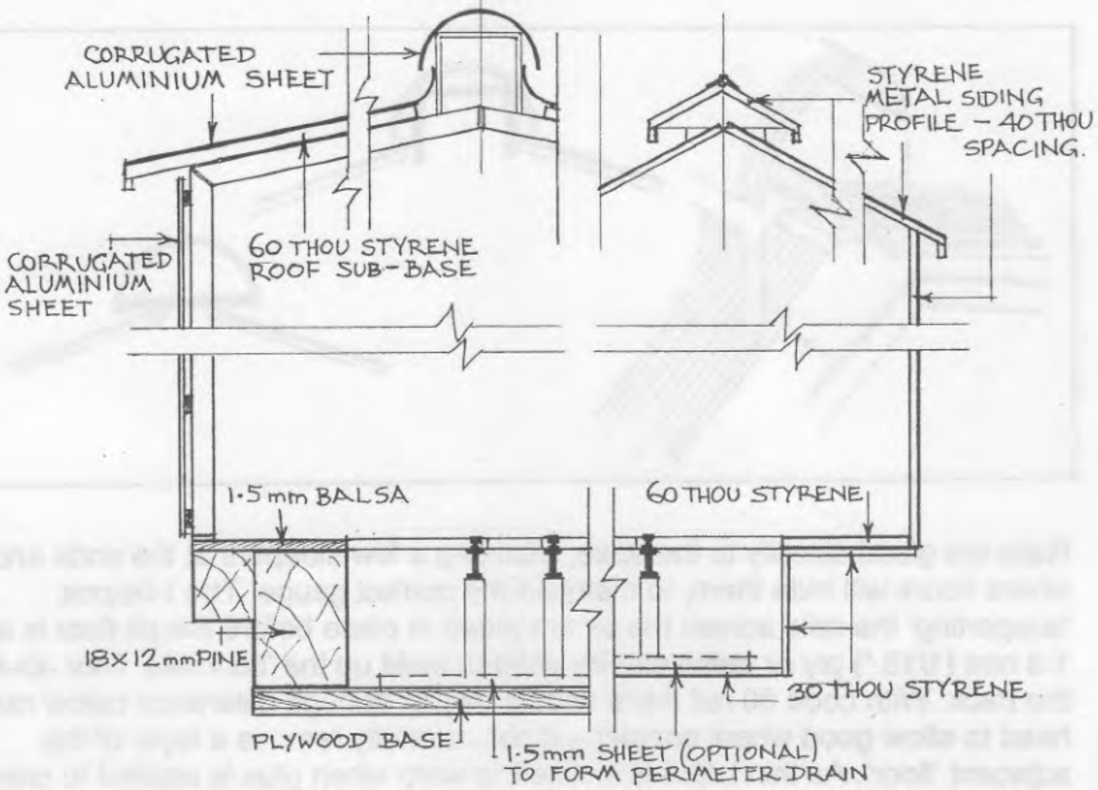
The particular materials used for each model described in the following pages are mentioned in the accompanying text. However a few general comments on methods and materials may be appropriate at this stage.

The models shown were built on plywood, craftwood (MDF), balsa or styrene floors. For the models incorporating pits, the wood bases were fabricated around an 18 x 12mm pine sub-frame, or alternatively the styrene base was built up from 30 or 40 thou sheet, as shown in the accompanying drawing. All of these materials provide a stable base and are easily worked. Sheet balsa is useful for supplementary flooring. Some modellers avoid the use of balsa, mainly because of its open grain and 'furriness'. I find that the texture of balsa is good in representing concrete, particularly the older and/or weathered kind, and the 'fur' can be removed with a light sanding after a coat of paint. Balsa is suitable mainly for bigger units. It is far too weak to be used as thin structural members in HO buildings, although it may be more valid in the larger scales.

Where slender components such as wall and roof frames are modelled, North-Eastern stripwood or Evergreen styrene strips are preferred. When it comes to heftier posts, etc., commonplace (and cheap) materials like matchsticks and kebab skewers should not be overlooked.

Styrene corrugated metal siding (40 thou spacing) is useful to represent roofs and walls, provided all of the surfaces are flat. Where curved iron is required, nothing beats the ribbed aluminium sheets that are marvellously pliable and can be rolled to any desired profile. Be aware, however, that none of these is exactly HO scale – they vary between 2.5 and 3.5 scale inches in rib centres. The moral of this observation is that to maintain visual accuracy one should use the same material throughout in a particular model.

For gluing I prefer PVA (white woodworking glue) for wood, including balsa, and acrylic contact (e.g. Selleys) or five-minute epoxy for joining dissimilar materials (wood, metals and plastics). The various craft glues are fine provided they are tested on scrap materials before commitment to the actual model. Superglue is okay, but it needs to be treated with due caution considering its great affinity for human skin!

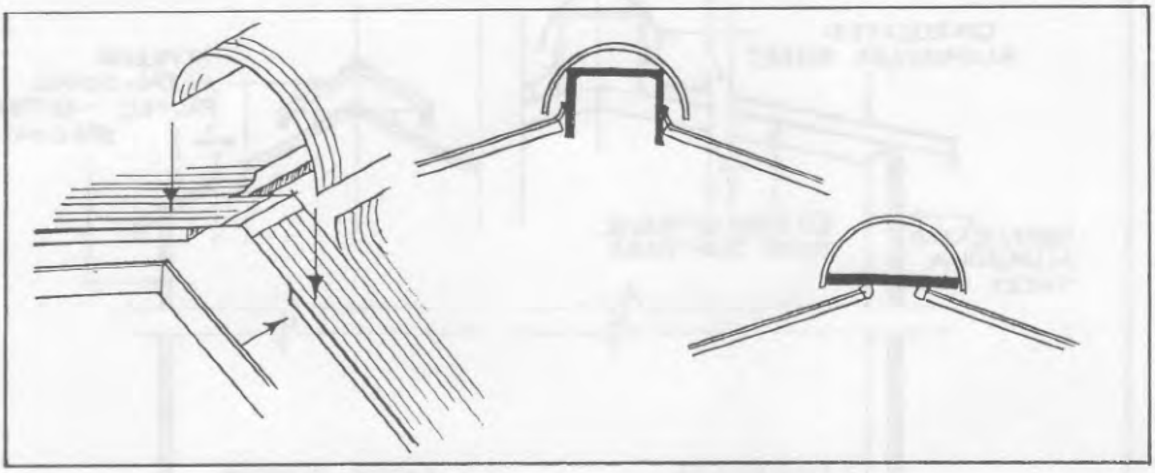



**TYPICAL CONSTRUCTION METHODS**
**SCALE: HO**

## GENERAL CONSTRUCTION POINTS

Detailed wall and roof frames are fabricated where they will be visible on the model – otherwise sheet materials such as styrene, plywood or balsa are used for walls and roofs. Because of the open nature of many of these sheds, aluminium corrugated panels on framed walls present greater realism internally as well as externally, but if the shed is more enclosed then profiled wood or styrene sheets are adequate. In any case it is worthwhile painting the interior a mid to dark grey as assembly proceeds.

A curved vented ridge is a common feature of many sheds. To reproduce this it is useful to cut a trial shape from stiff paper before attempting the final component. The curve can be achieved by rolling the aluminium sheet around a piece of dowel or tube that is a little smaller in diameter than the final profile. Do this slowly and carefully to avoid kinks, because once the sheet is distorted it is difficult to retrieve the desired shape. For weather protection the main roof sheeting is curved up under the ridge vent. Fixing the ridge in position also calls for some ingenuity or improvisation. The sketches below are indicative only and the use of a gap-filling adhesive (e.g. 5 minute epoxy) is recommended.



Rails are glued directly to the base, retaining a few sleepers at the ends and where floors will hide them, to maintain the correct gauge. The I-beams 'supporting' the rails across the pit are glued in place before the pit floor is added. 1.6 mm (1/16 ") ply or balsa can be used to build up the 'concrete' floor abutting the track. With code 80 rail there should be just enough clearance below rail-head to allow good wheel contact – if not, carefully remove a layer of the adjacent 'floor'. As thin balsa is inclined to warp when glue is applied to one face, it should be weighed down until the glue has dried.

Finally, if a number of identical components are required (e.g. portal frames or roof profiles) then a simple jig is invaluable.

## LOCATING THE MODEL

As mentioned before it may be easier to provide a small out-depot shed, located away from the mill proper, to simplify modelling requirements. This type of installation, however, would not have the same amount of supporting infrastructure as a central facility. If space permits it would be visually and functionally satisfying to incorporate a section of the mill itself to complement the depot. But anyone who has been in reasonably close contact with even a modest operation will be aware of the immensity of the mill structures, which require a considerable amount of layout space, even in HO scale. Nonetheless some dedicated hobbyists have produced excellent models that focus on this aspect.

A useful and effective compromise is to represent the main complex in low relief on the backscene, with the loco / bin shed backing on to it. Modelling in this way would allow a run-through shed to be represented, which in turn can simplify operations on the whole layout.

As an alternative the loco depot could be located a short distance away from the mill proper, maybe with an associated rolling stock maintenance facility. This should be less demanding in terms of providing greater realism in the modelling scenario.

## IN CONCLUSION

The cane loco shed models that are the focus of this presentation are all fairly simple structures that can be readily assembled by the average scratch-builder. What gives them their particular character is the detailing of the site, both inside and outside the building. Irrespective of size and location, to achieve the maximum visual impact it is essential to add those extra details to the model. If nothing else, lots of colourful oil and fuel drums will enhance the image. Throw in a sand bin, a few tools, a hose or three, oxy-acetylene bottles, some bits of rusty ironwork, etc, and the scene will really start to live!

The following pages comprise drawings and modelling notes for a few typical sheds. Much of this material was presented at the 4th Australian Narrow Gauge Convention held in Brisbane in April 1999. The sheds were selected mainly because of the diversity of prototype construction, but at the same time it allowed a range of modelling techniques to be explored. The great thing about some of the 'timber and tin' structures is that the prototypes were so rudimentary that you don't have to be a fastidious craftsperson to produce a quite authentic model.

Even if your modelling preferences have not narrowed down to Queensland's cane tramways the approaches and techniques discussed may hopefully be of some interest.

**Acknowledgements:** Without the generous assistance of Greg Stephenson and David Mewes, both of whom provided great photographs and personal information, this presentation would never have happened. I am also indebted to George Hadley, Cane Railway Supervisor at Moreton Mill, Nambour, for providing access to the mill's locomotive facilities.

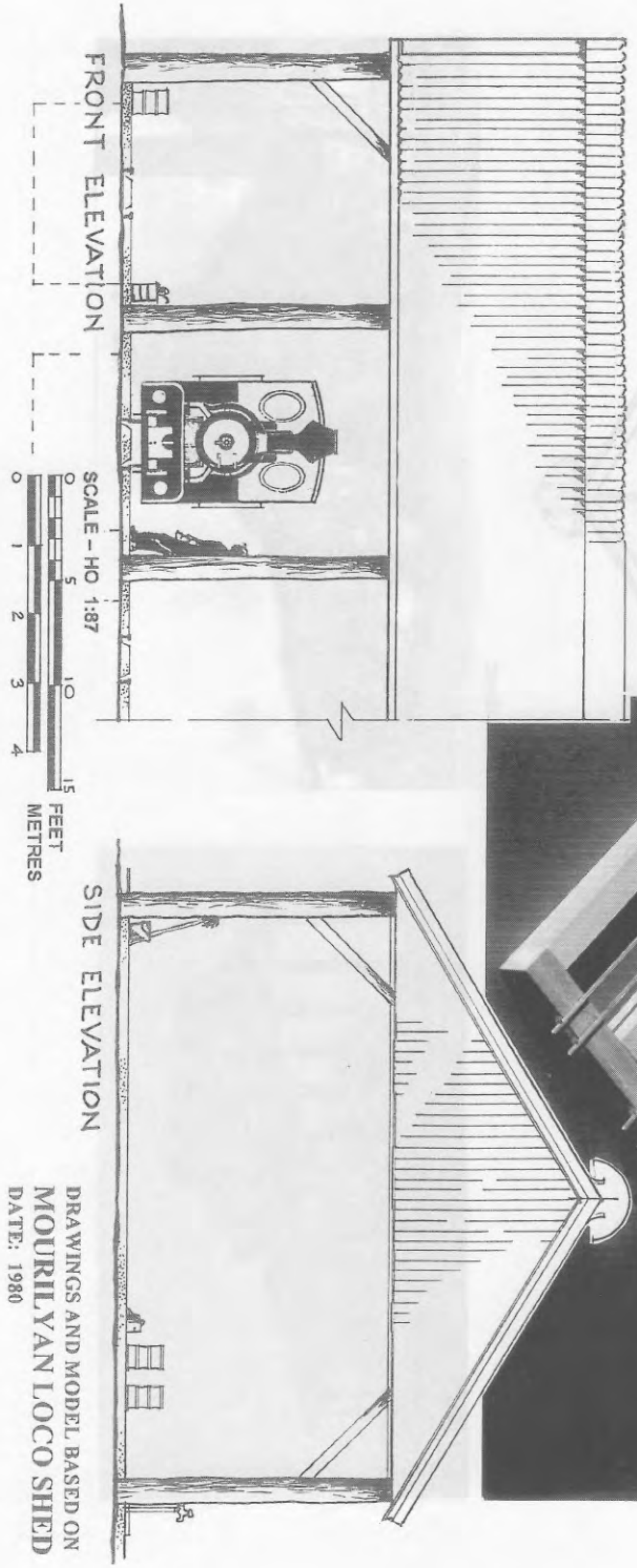
DAVID MEWES - 1980

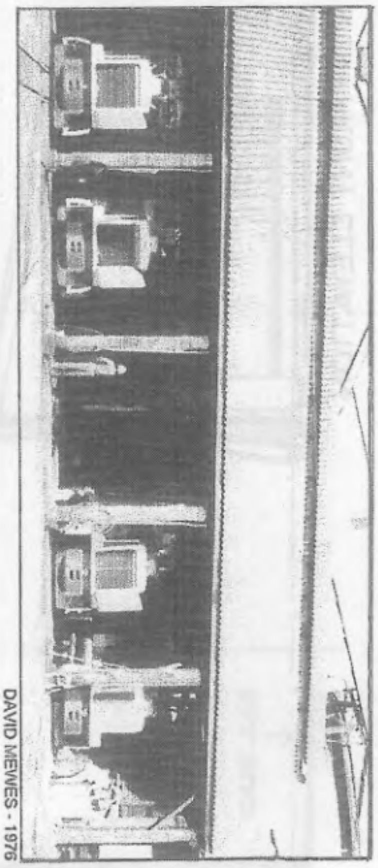
The former shed at **Mourilyan** appears to have been constructed with 'in-the-round' posts, and roofed with large corrugated asbestos-cement. The front views were the only visual reference for the model, and the openings were guesstimated to be at least 12'-0" (3.66m) high. David Mewes recollected that the shed could accommodate just one loco in each bay, so a depth of 30'-0" (9.15m) was arbitrarily selected for the exercise.

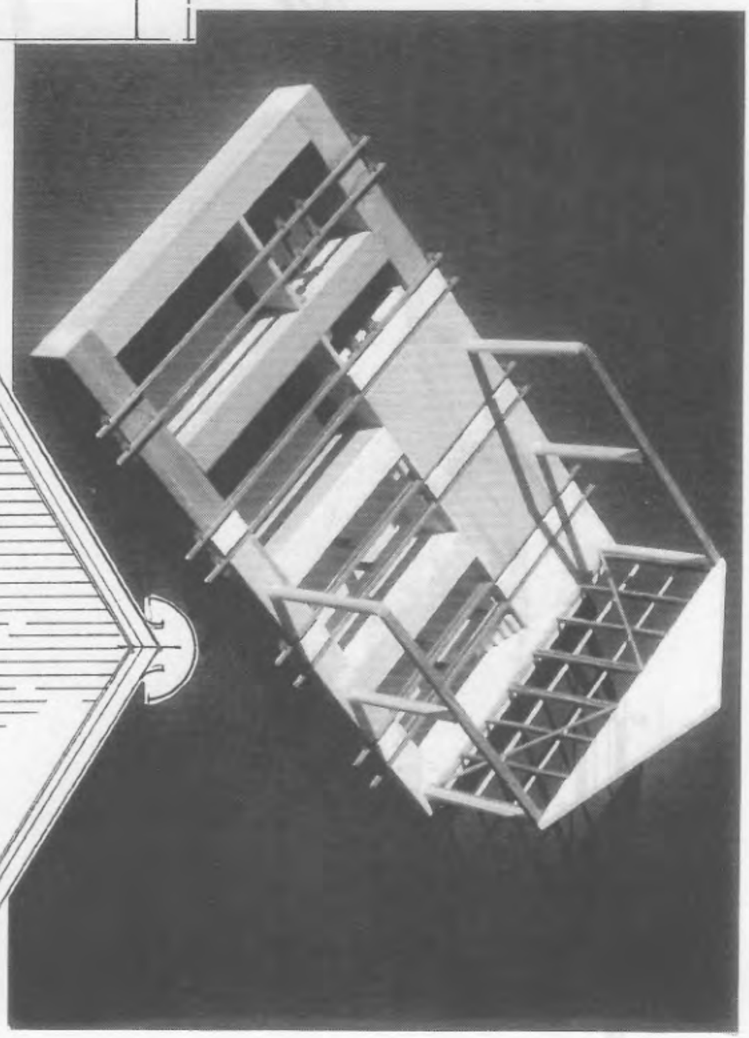
Material used for the model included 4mm kebab skewers for the posts, 2.4mm balsa roof formers and 1.6mm balsa for the floors, glued to the 18 x12mm sub-frame. The steps for assembly are shown in the photograph below, reading from the left. First the rails are glued directly to the sub-frame, leaving a few sleepers in place (except over the pit) to maintain gauge. Next the balsa floor is added and the supporting beams glued under the rails across the pit. Now add the pit floor, steps, beam supports and any other pit details. It is advisable to paint the pits and floor at this stage.

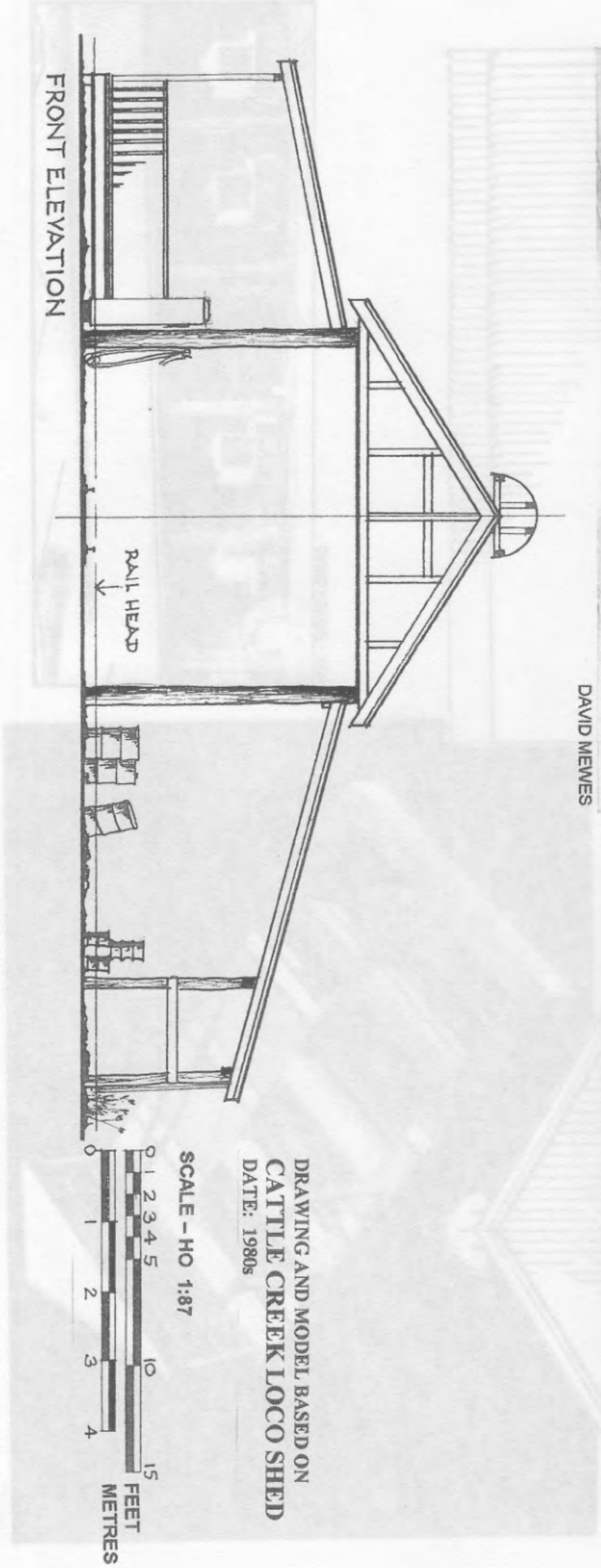
Drill locating holes for the posts 2 or 3mm deep and glue the posts in position – make sure the tops are level! The longitudinal top plates and roof formers are then attached, following which the sub-roof, e.g. 2.4mm balsa, can be glued down to receive the roof sheeting. If the prototype's super-six fibro roof profile is desired, this can be represented by O-scale corrugated iron.

The pits included in this model are pure conjecture, but they add a bit of interest. Also the model comprises four bays only, which would probably cater for the needs of most layouts, and one very useful facet of this design is that the number of bays can be reduced or increased without changing the cross-section – the basic module is simply repeated as often as desired.

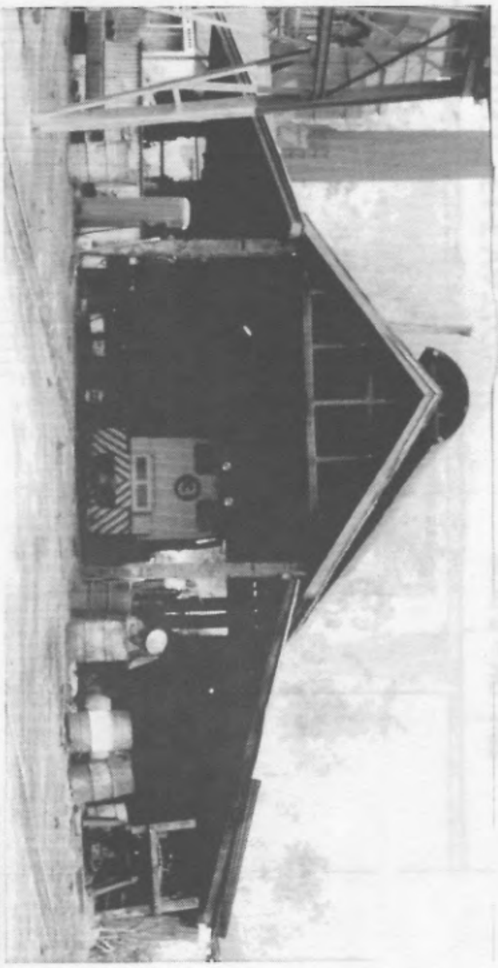

FRONT ELEVATION
SCALE – HO 1:87
0 5 10 15 FEET
0 1 2 3 4 METRES
SIDE ELEVATION
DRAWINGS AND MODEL BASED ON
MOURILYAN LOCO SHED
DATE: 1980


DAVID MEWES - 1976

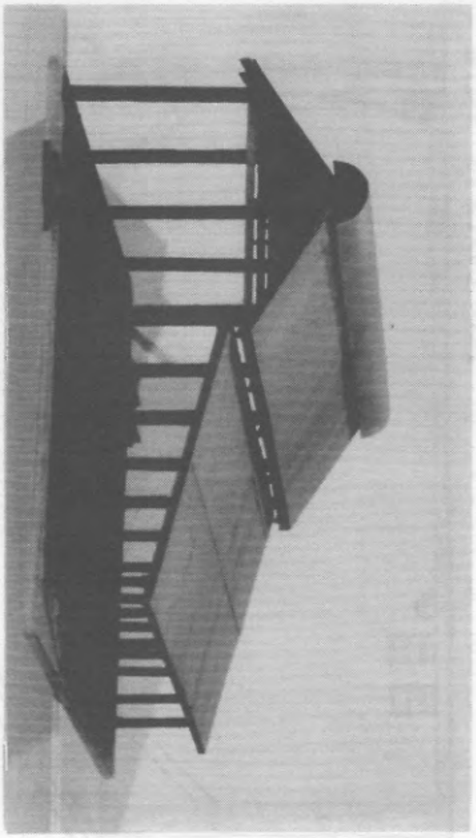





DRAWING AND MODEL BASED ON
CATTLE CREEK LOCO SHED
DATE: 1980s



DAVID MEWES



The mill shed at **Cattle Creek** (above) and the out-depot west of Koumala present typical images of the 'timber-and-tin' tradition, exemplifying the pioneering ethos of earlier structures. Bush carpentry skills are evident in both, using substantial but unsophisticated raw materials.

The single track Cattle Creek shed was capable of holding three locomotives under its roof, which would have made it at least 50'-0" (15.2m) long. The main poles were of squared timber, and the photograph shows very visible roof framing.

The model was assembled as simply as possible on a plywood base with no pit facility. Large matchsticks (Redheads extra long) provided the main supports. These are about 1/8" (3.2mm) square and their rougher finish is in sympathy with the prototype structure. Similarly normal matches were used to support the skillion extension.

The open nature of this shed makes the roof structure very evident, so instead of cheating with solid triangles the trusses were fabricated using scale 6"x6" and 4"x4" stripwood. A simple jig will guarantee that these trusses are all the same profile. Glue the posts and trusses together, again utilising some form of jig, so that when erected on the base everything lines up properly!

In the model illustrated 1.6mm balsa was used as the roof sub-structure, although for greater authenticity scale purlins – say 6"x3" – could be run across the trusses at about 10mm centres.

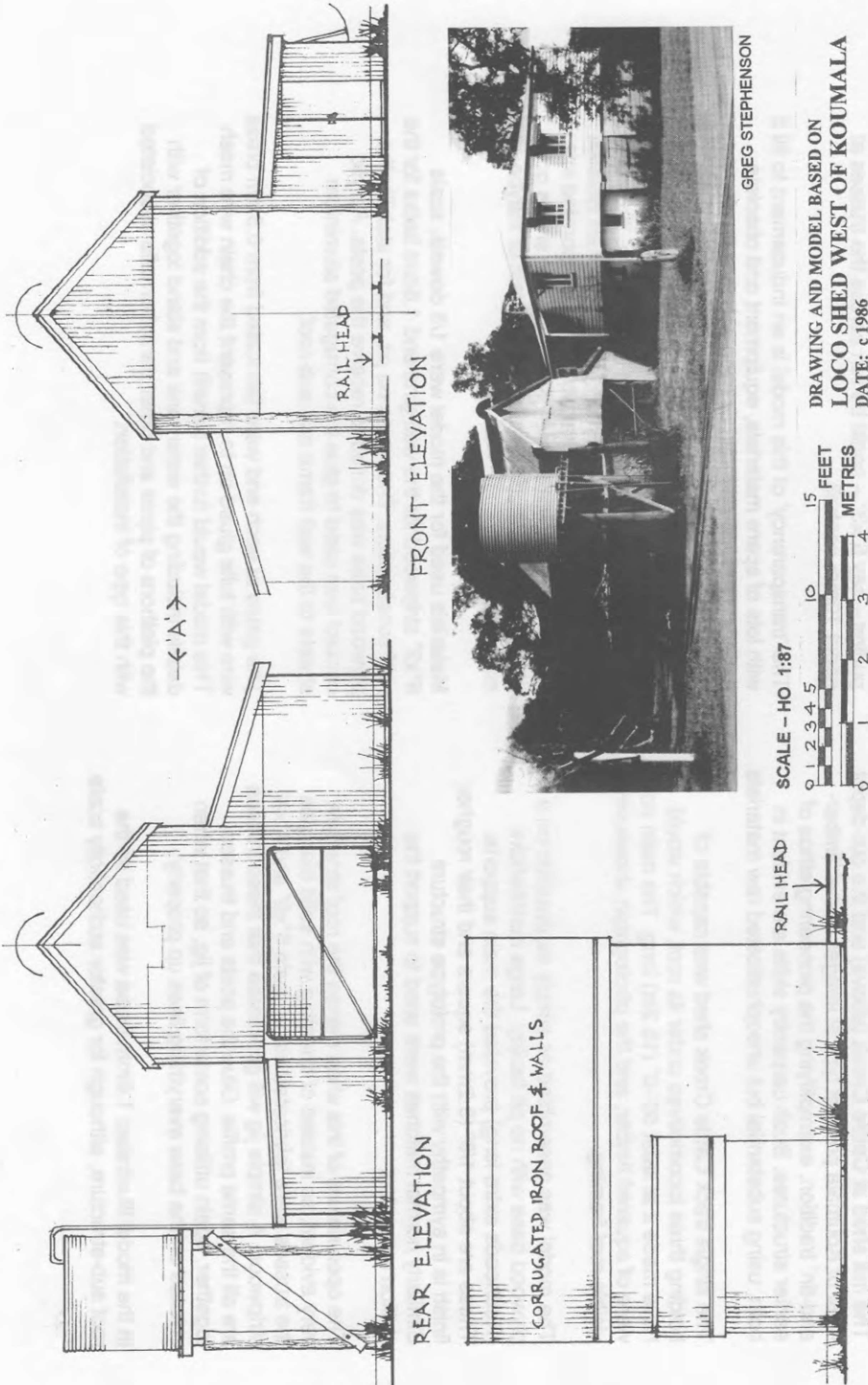
The 'transparency' of this model is an inducement to fill it with lots of spare materials, equipment and obsolete material (junk) to maintain or even enhance its character.

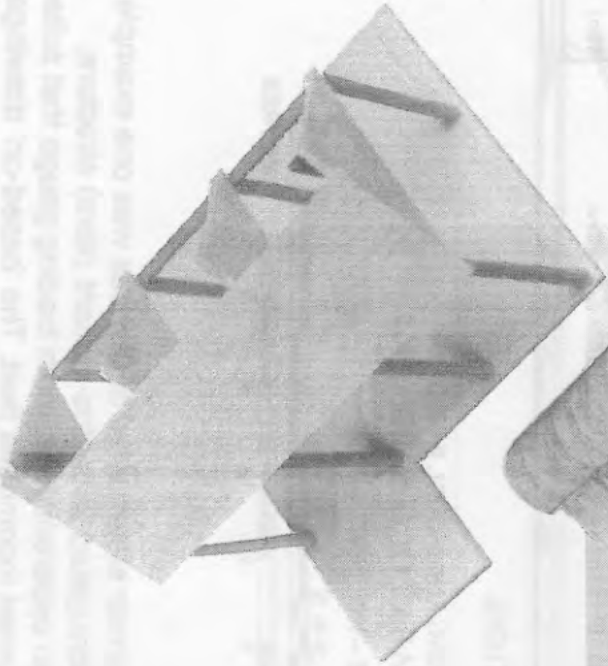
* * * * * * *

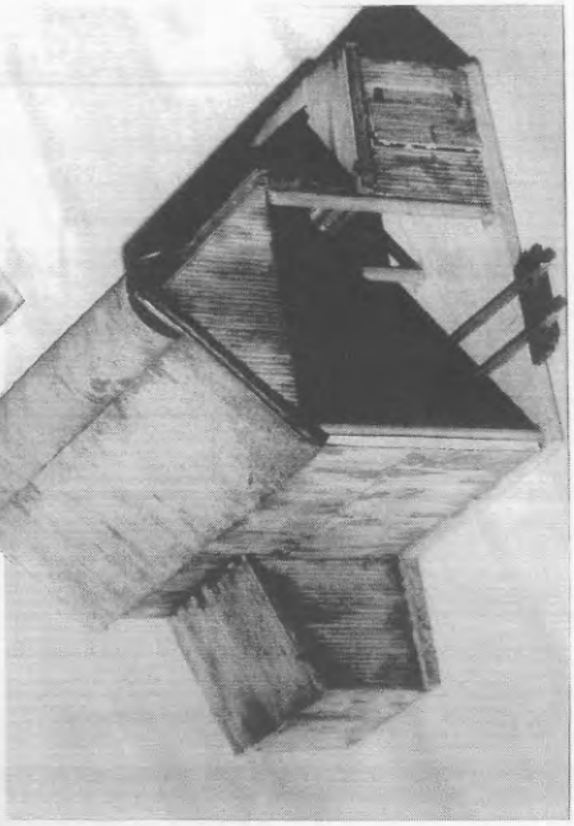
The now demolished shed west of **Koumala,** illustrated in the following pages, was originally part of an isolated narrow gauge tramway that was later incorporated into the Plane Creek Mill system. As far as loco sheds go they don't come much smaller, more basic or maybe more whimsical.

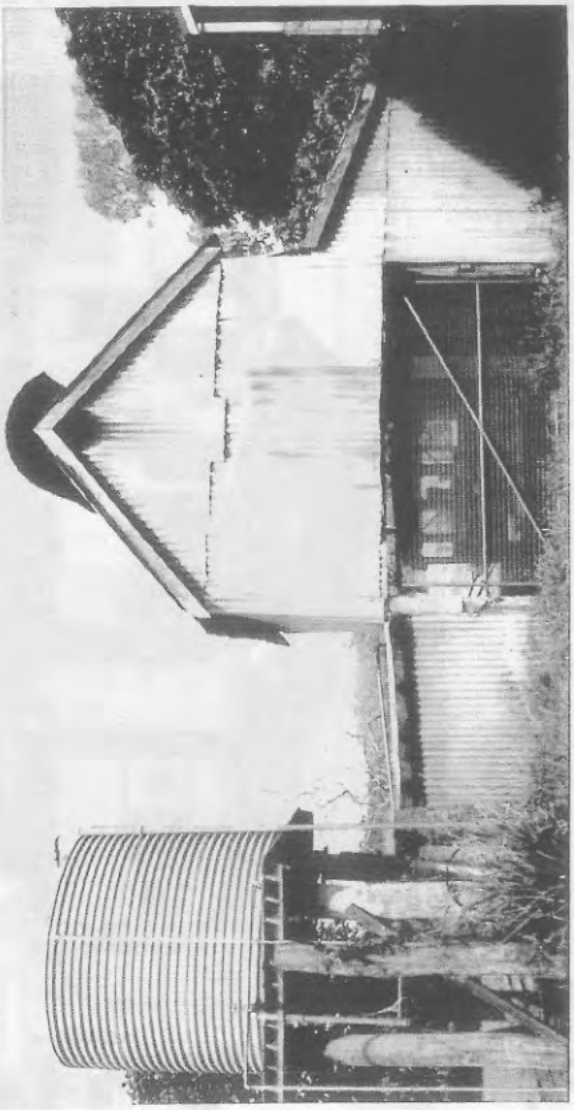
Materials used for the model were 1/8 dowels, scale 6"x2" stripwood for the wall girts and 1.6mm balsa for the roof construction. There was no pit, and for stability the plywood base was drilled to receive the posts. Acrylic contact was used to glue the corrugated aluminium sheets to the wall frame and sub-roof.

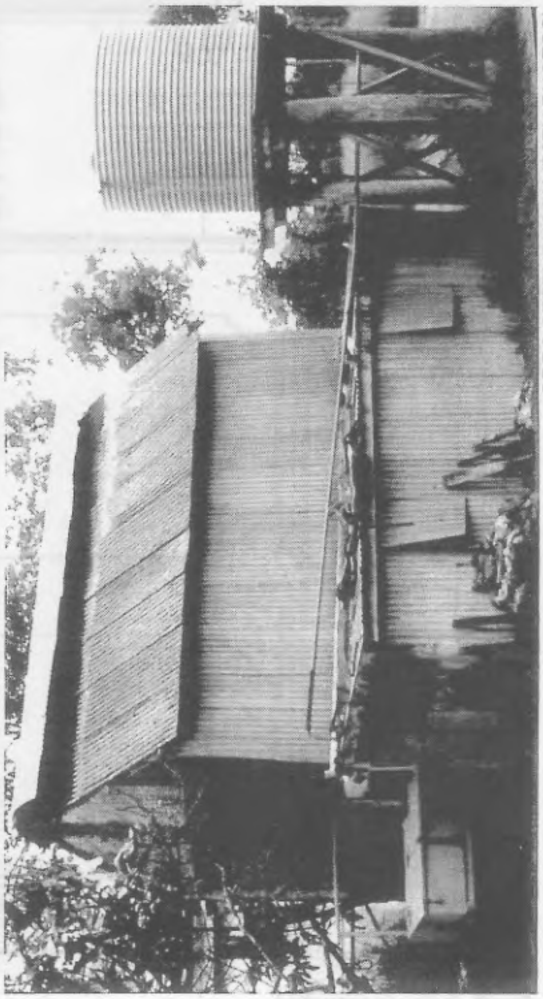
The gates at each end were fabricated from 0.5mm brass wire with tulle glued on to represent the chain wire mesh. This model would further benefit from the addition of details including the water tank and stand together with the plethora of pipes and other paraphernalia associated with this type of installation.


REAR ELEVATION
'A'
FRONT ELEVATION
RAIL HEAD
CORRUGATED IRON ROOF & WALLS
RAIL HEAD
SIDE ELEVATION 'A'
GREG STEPHENSON
SCALE - HO 1:87
0 1 2 3 4 5 10 15 FEET
0 1 2 3 4 METRES
DRAWING AND MODEL BASED ON
LOCO SHED WEST OF KOUMALA
DATE: c 1986

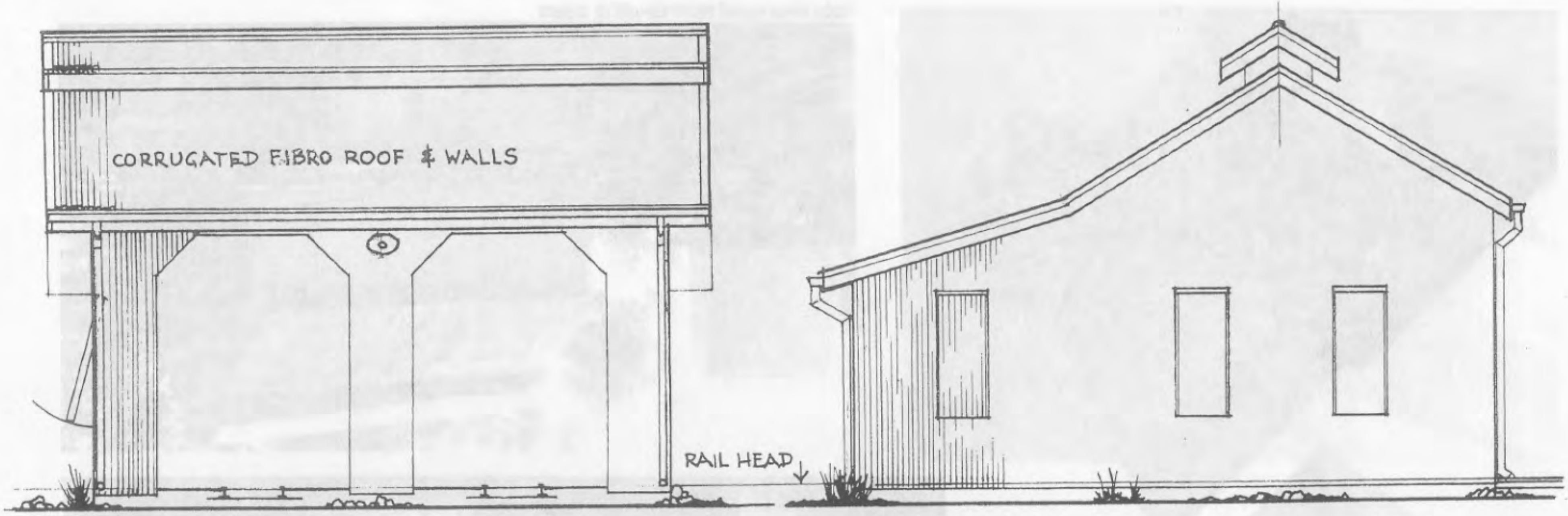






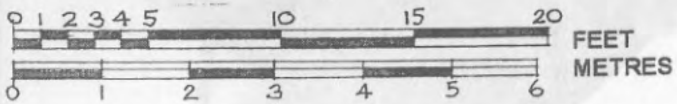


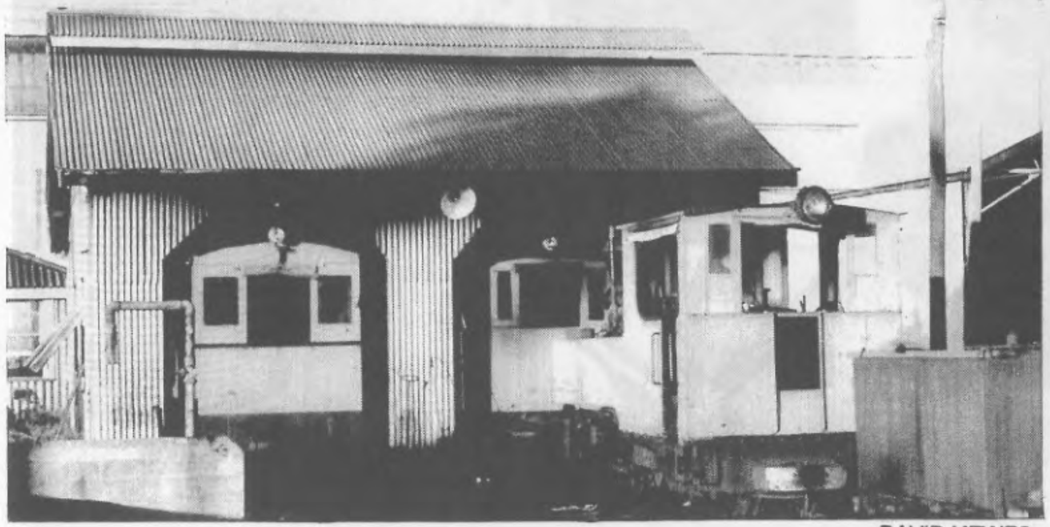
GREG STEPHENSON (B0TH PHOTOS)




DRAWING AND MODEL BASED ON
**QUNABA LOCO SHED - 1968**

SCALE – HO 1:87

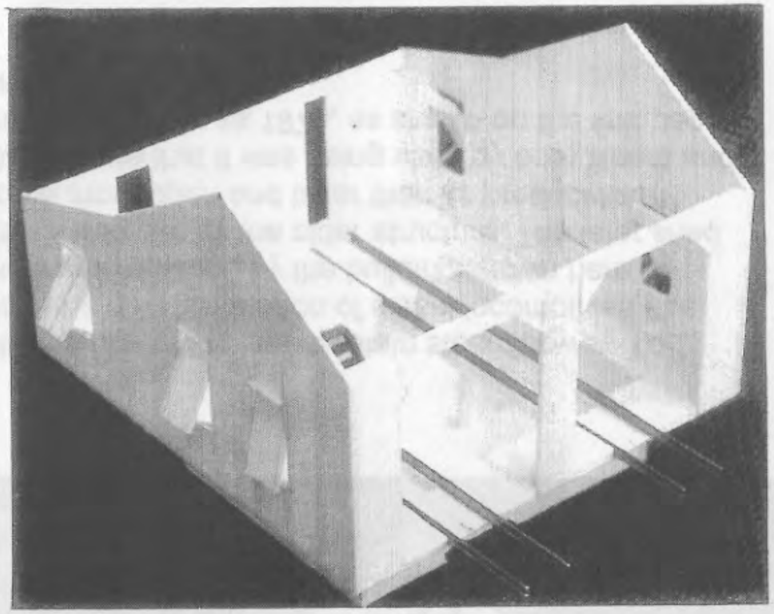


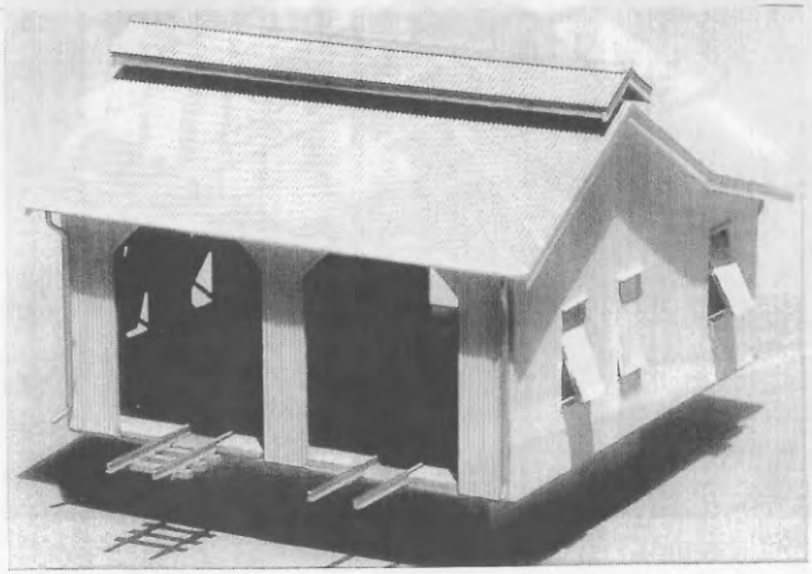



DAVID MEWES

The former steam shed at Qunaba was one example of a corrugated asbestos-cement (fibro) structure, with an apparently minimum loading gauge that suited the current locomotive fleet. The 'based-on' drawings have been distorted by increasing the clearance (and building) height to accommodate diesel loco outlines.

DAVID MEWES

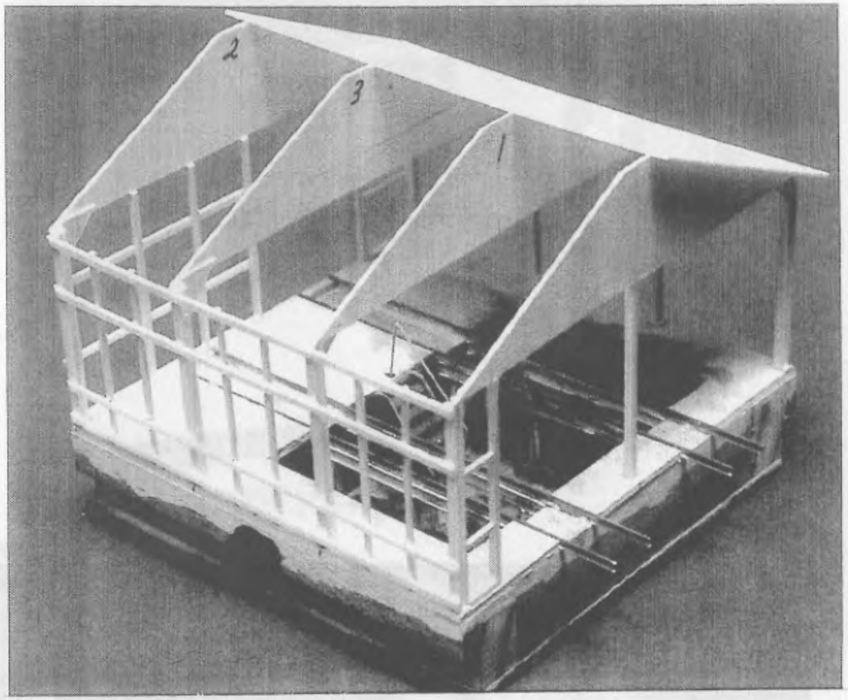


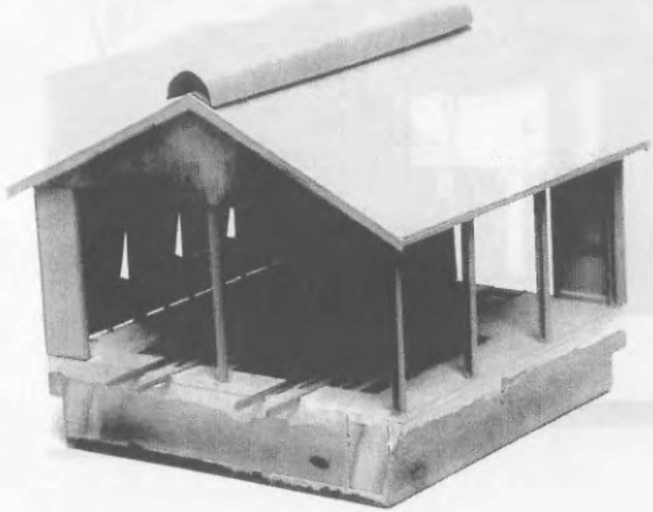


Being a relatively enclosed structure, visibility of the interior is limited, so styrene (metal siding 40 thou spacing) seemed an appropriate modelling medium for the walls and roof. The vented ridge was also formed of flat sheets. 30 thou styrene was used for the pit and floor. Use of this material eliminates the need to fabricate wall and roof frames, so the whole model can be assembled fairly easily and quickly.

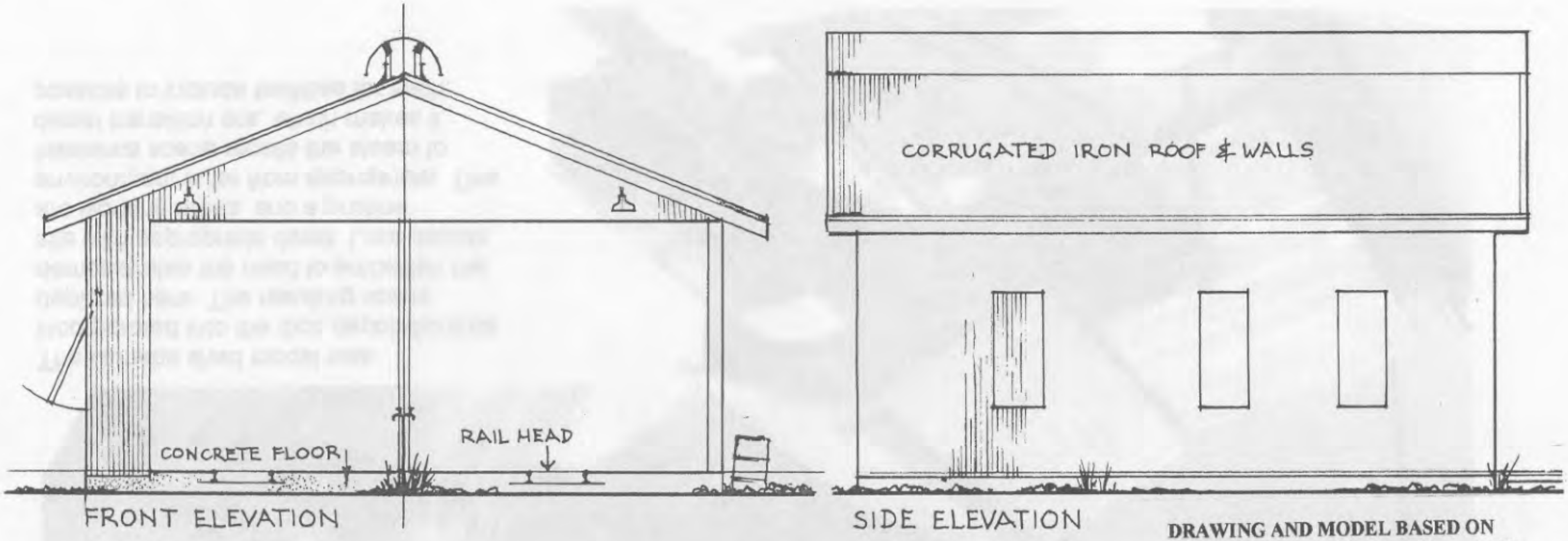
The supporting beams under each rail are 1/8" I or H sections with 3/16" H section used for supporting struts. The stair into the pit is a Plastruct product, although this could have been scratch-built.

GREG STEPHENSON

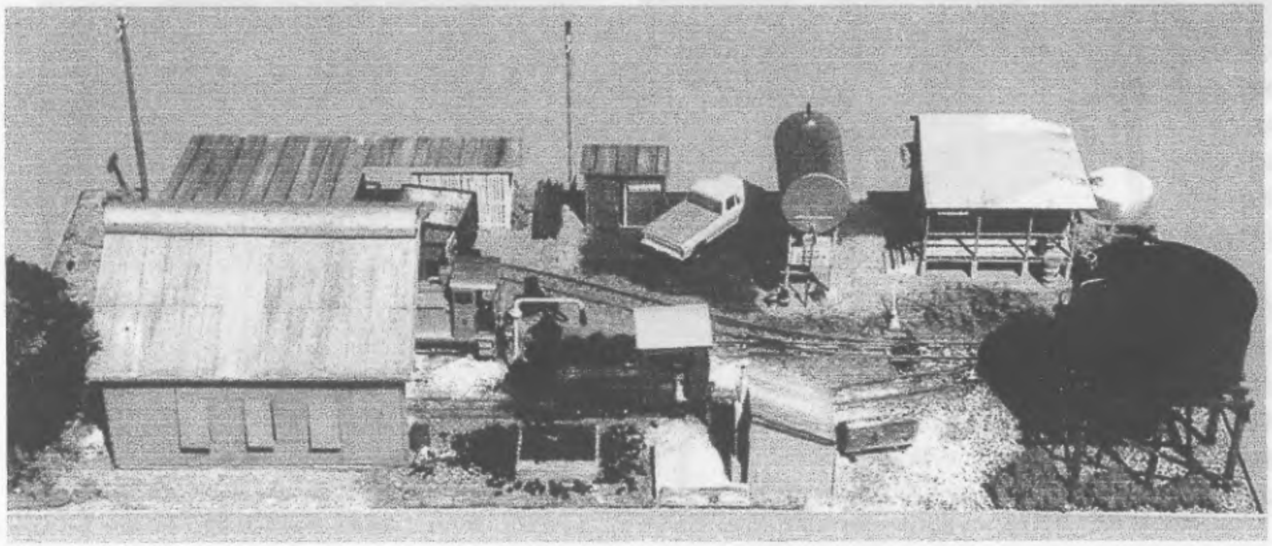




Qunaba Mill was one of the last to retain steam power. To accommodate the new generation of diesel locomotives, the previous shed was replaced by the building shown here, occupying the same site as the older structure. The later shed appeared to be more open and taller than its predecessor. Photographs indicate that it was being used by both steam and diesel locomotives as late as 1975, as shown on the first page of this presentation.

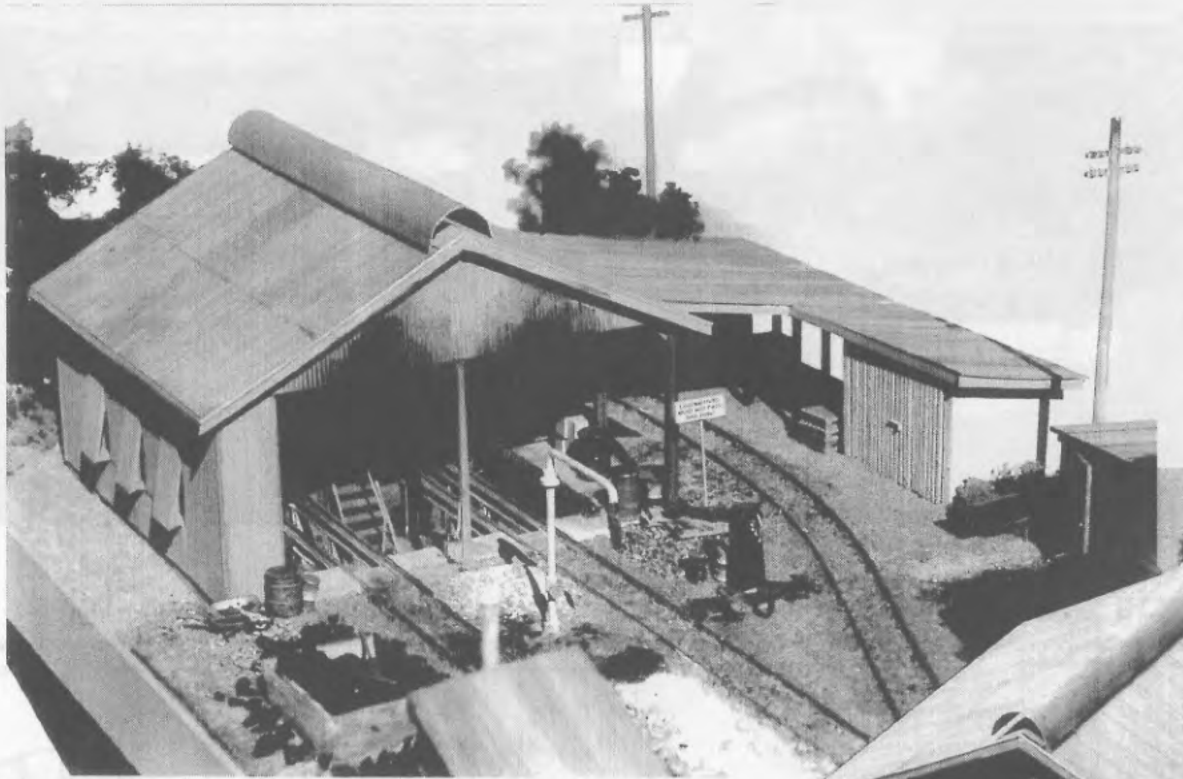



**DRAWING AND MODEL BASED ON**
**QUNABA LOCO SHED - 1980**
**SCALE – HO 1:87**

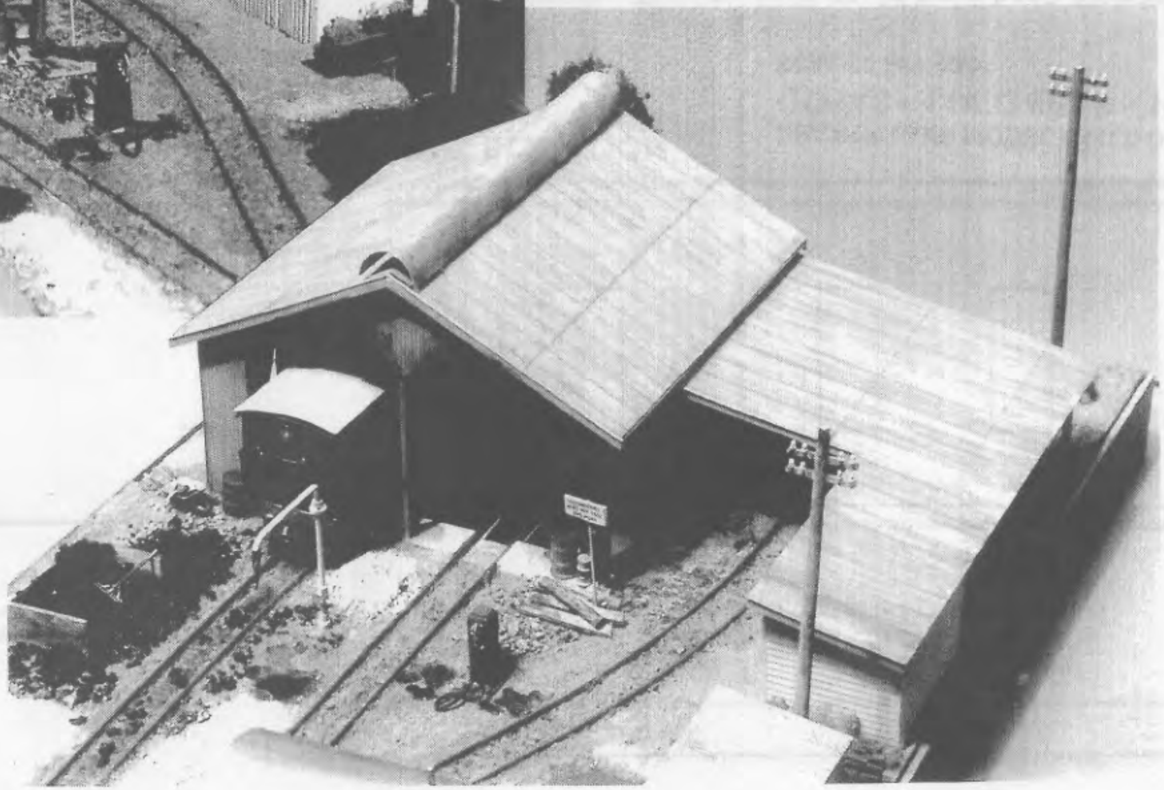


The structure could have been framed with steel members, and for the model 3/32" styrene H sections were used for the columns, together with styrene strips for the wall framing. 30 thou styrene sheet was used for the roof formers and under the roof sheeting. Corrugated aluminium was used for wall cladding and roof. Construction of the base was similar to that used for Mourilyan model.

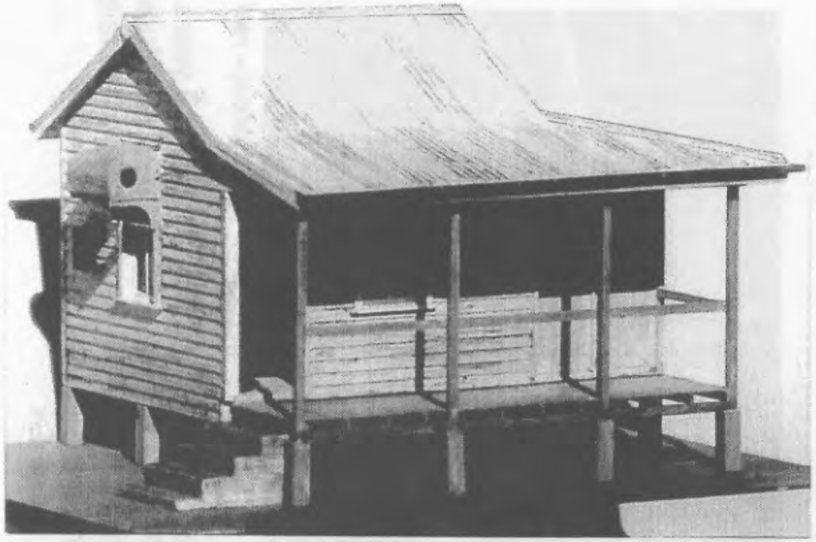
This model forms part of the freelance loco depot diorama shown in the photograph to the left and on the next page.

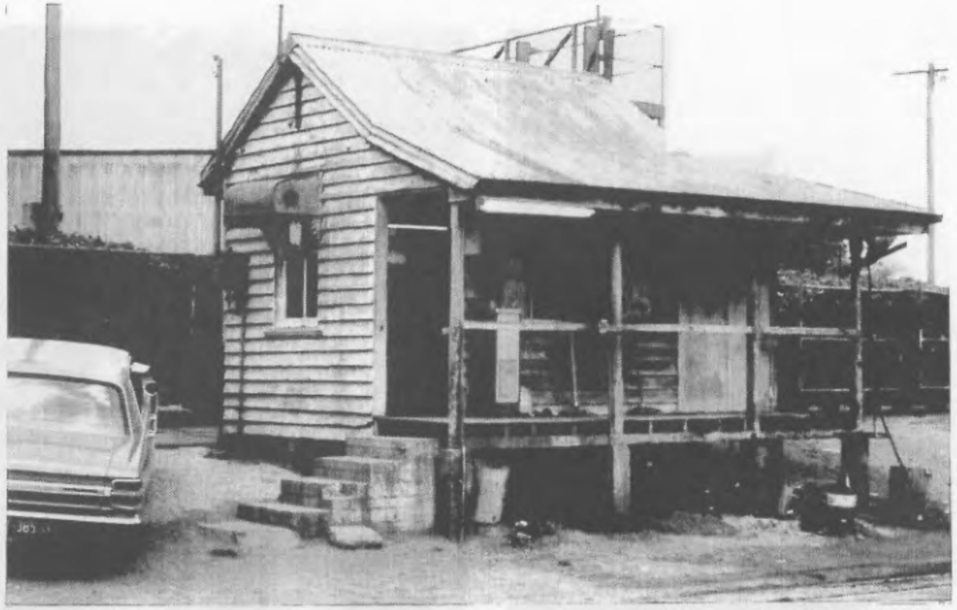


The concurrent use of coaling and watering facilities along with a fuel bowser and associated tanks (without questioning the safety aspect of such a close relationship!) may thus be justified chronologically, at least in modelling terms. In addition, the basic shed structure has been extended with a skillion roof to incorporate a small bin repair road and miscellaneous storage facilities.



The Qunaba shed model was incorporated into the loco depot diorama depicted here. The resulting scene demonstrates the need to embellish the site with appropriate detail. Loco depots are working areas, and a pristine environment is far from appropriate. This freelance scene recalls the steam to diesel transition era, which makes it possible to include facilities for each.





DAVID MEWES

SIDE ELEVATION

SCALE – HO 1:87

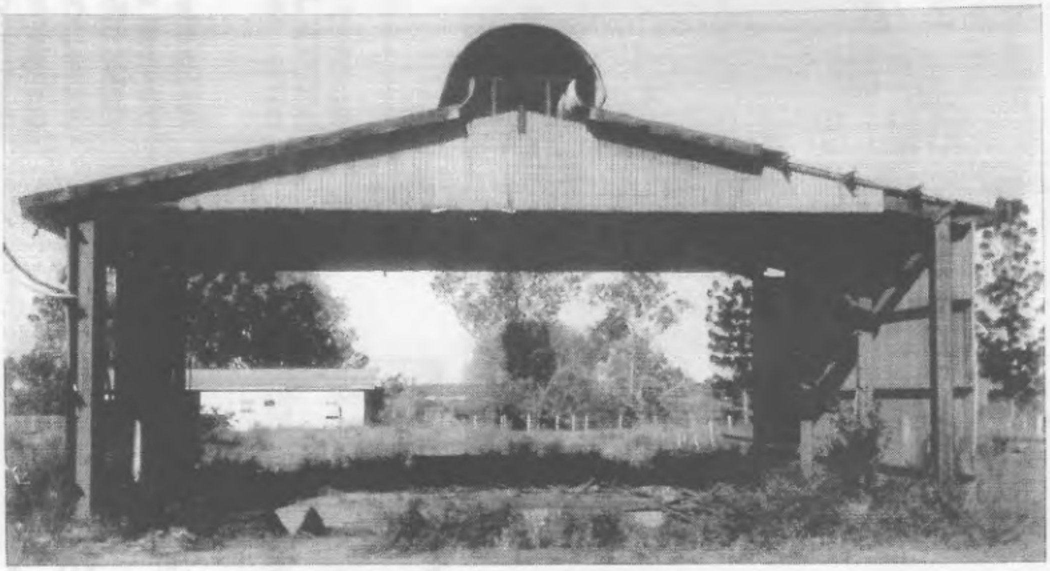
FRONT ELEVATION

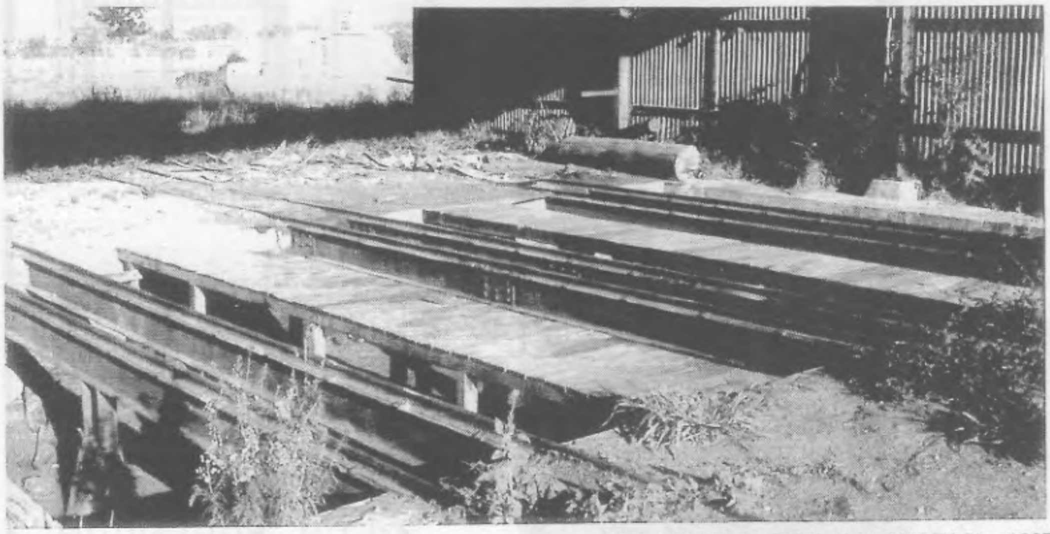
DRAWING AND MODEL BASED ON

**SOUTH JOHNSTONE TRAFFIC OFFICE**

DATE: c 1968

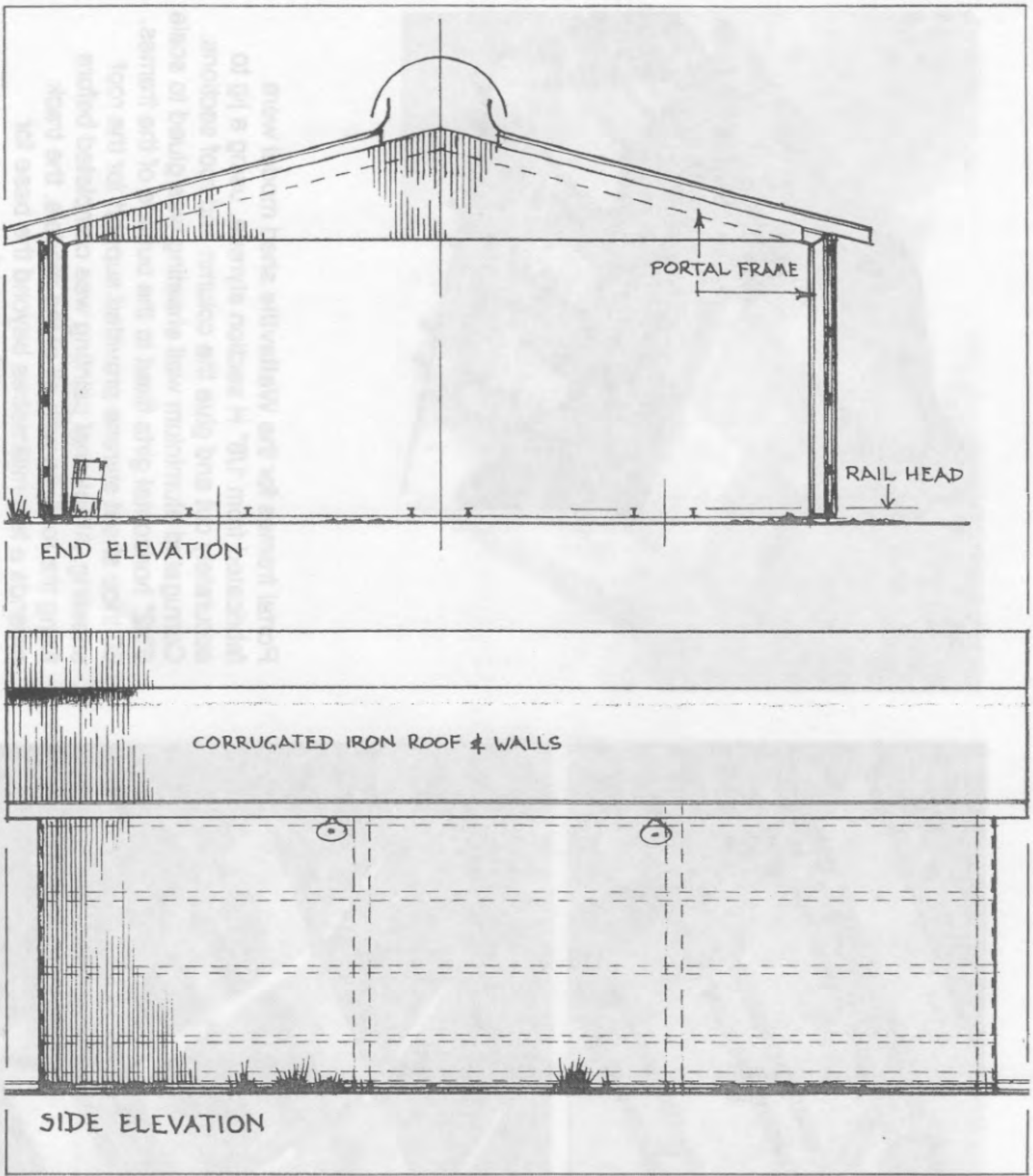
All tramway movements have to be planned and controlled, and the little traffic office (now demolished) at South Johnstone mill was an ideal subject to complement the freelance diorama illustrated previously. The basic model, except for the matchstick stumps, was completely fabricated from styrene.

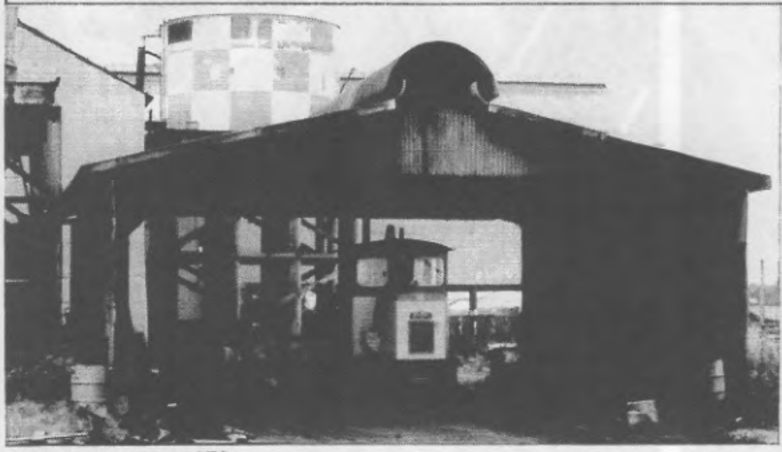




GREG STEPHENSON (ALL PHOTOS) – 1997

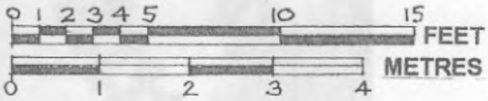
The loco shed at Gin Gin mill, Wallaville, remained standing for several years following the mill's closure. These 1997 photos of the portal-framed structure, in a somewhat derelict state, illustrate its construction, as well as some details of the pit which was continuous under the three roads.



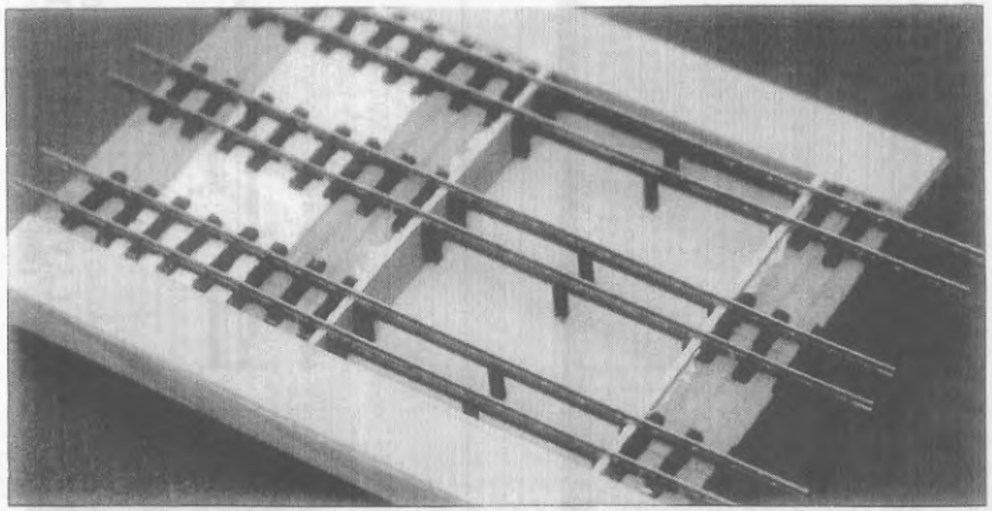



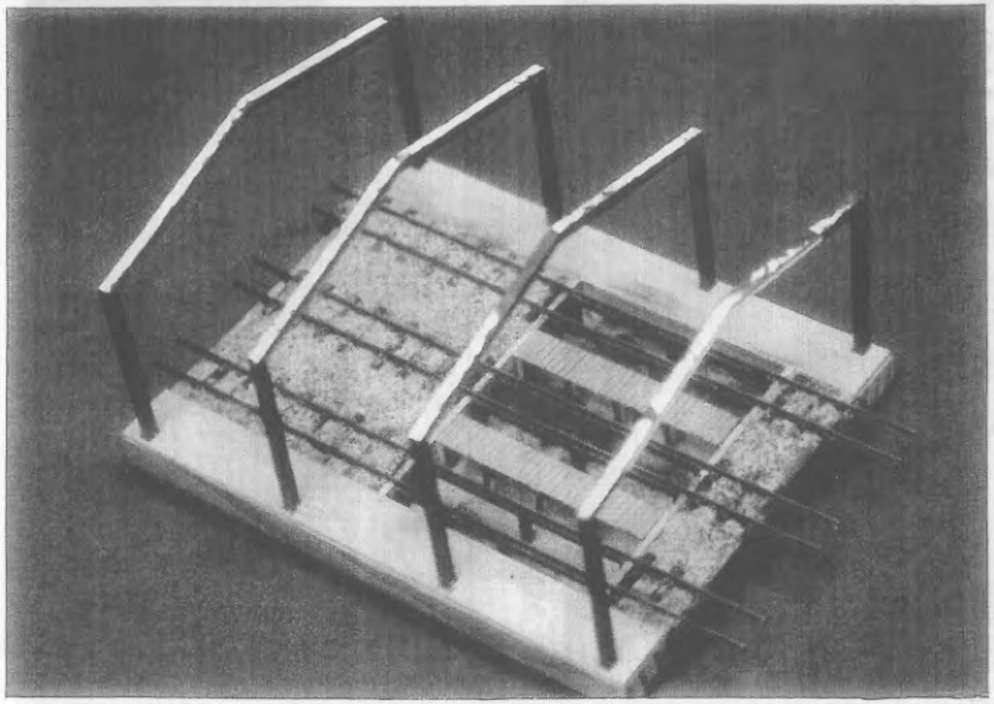
DAVID MEWES - 1970

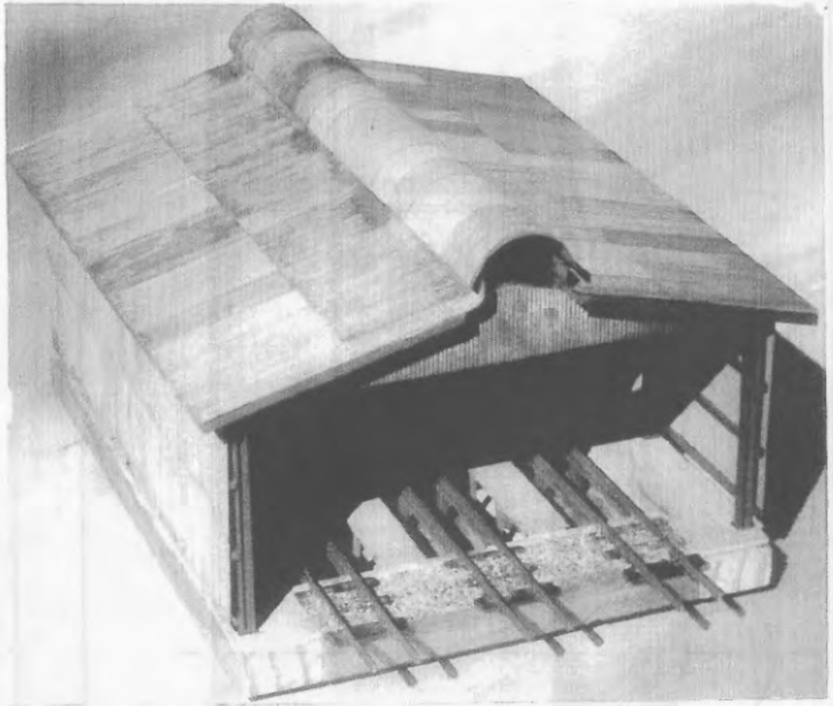
SCALE – HO 1:87




DRAWING AND MODEL BASED ON
**WALLAVILLE LOCO SHED**
DATE: c 1980







Portal frames for the **Wallaville** shed model were fabricated from 1/8" H section styrene, using a jig to accurately cut and glue the column and roof sections. Corrugated aluminium wall sheeting was glued to scale 6"x2" horizontal girts fixed to the outside of the frames. 60 thou sheet styrene provided support for the roof sheeting. All internal painting was completed before fixing the roof. As with all of the models, the track extends a few millimetres beyond the base for connecting to the rest of the layout.