Some Notes on Colours for VR Structures

The Search for Authentic Colour

Anyone involved in "historical modeling" will sooner or later encounter a problem of prototype practice that needs to be verified. In fact it is the solving of such problems that presents much of the interest when attempting to reconstruct any aspect of our past in model form. A perennial subject in the correspondence columns in the model railway press is the question of colour.

Photographs

Since the 1950s colour transparencies and, later, colour prints have made some aspects of the recording of colours and colour schemes reasonably easy. However the variation in colour between two prints from the same negative is enough to illustrate the pitfalls here. This is without even taking into account the degree to which the negative itself fails to record the true colours of the subject. Further, colour slides, prints and films all undergo change over time and cannot be regarded as faithful and permanent records. Nowadays we are firmly rooted in digital technology and the photographer needs to understand a lot more about white balance and other technical matters in order to obtain a result that can be relied on. For information about colour before the era of popular colour photography, interpretation of monochrome photographs can yield information at times. This is especially so if information already exists about the particular subject. If you know what colours were used on a building or loco a monochrome photograph may confirm the parts of the subject that received each colour.

Colour Samples

We can probably get pretty close if we have the specification of the paint or a "chip" from a surviving example of the prototype. Even so we need to allow for variation in the actual paint. A century ago it is unlikely that every sample of a particular colour always turned out the same!

We also need to take into account the chemical changes that take place over time. Exposed paintwork on buildings or rolling stock becomes weathered and can fade very quickly. Further, all outdoor paintwork receives very rapidly a coating of material to alter its appearance. This will vary according to the climate and other environmental factors. The result is that a variety of shades can be seen in, for example, a rake of wagons that are quite new.

Official colour samples would seem to be a foolproof resource. They should give us some idea of how an engine or car might have looked as it rolled out of the paint shops. This does not allow for the deterioration of the sample in storage, although this probably would not be so great if the sample was stored away from the light.

A sample of the VR "Canadian Red" was obtained from an engine that had long since been over-painted in black by the time of its scrapping. Apparently the plate had been fastened to the cab side while the loco carried red livery and had not been removed since. (The piece of cab side was promptly cut out and has been preserved.) If we assume that the number plate was fastened not long after the loco had been painted and assume that no significant changes took place since, we have a reasonable idea of one aspect of the VR red paint scheme when locos were fairly new.

What Can We Do?

In the absence of photographs or paint samples one has to rely on whatever written information exists or else that widely available resource, memory. It does not need to be laboured here how unreliable memory is, particularly when it comes to colours. What should be said however is that despite the most accurate records from official sources we are still unable to say just exactly how a wagon, engine or building looked when in use.

Notwithstanding all of the uncertainty, however, we have to make some attempt to finish our models in the correct colours. If the model is of a prototype that we have seen and is finished in according to the best information available it must still stand up to the "memory test". Does it look right? If it is of a prototype that we haven't seen then the exercise is a little academic but it is still subject to the "memory test" if someone else sees it. In such a case the modeler will of course, have done the necessary research and be able to justify his or her choice of finish!

None of this takes into account the much-argued issue of "model colour". The proponents of this point of view attempt to account for the distance from which models are viewed and suggest that to achieve a correct appearance in a model the paint should be let down with a quantity of white or some neutral colour. The basis of this seems to be that the further away an object is the less intense its colour appears. It should go without saying that no model should be painted with a gloss finish.

The following notes attempt to make available to modelers some information relating to the colours in which structures on the Victorian Railways would have appeared in the late 1940s and early 1950s.

Colour Schemes for Victorian Railways Structures

These notes were paraphrased from the Way and Works Branch instructions for painters, dated 16 July 1947. The instructions are prefaced by the following.

"The following instructions relating to the painting of structures are to be observed. In certain cases some departure may be desirable or necessary from the instructions laid down and discretion must be exercised."

Wooden Structures

These include departmental residences ('DR's), station buildings, yard offices, and "sundry buildings of a similar nature". This last category includes van goods sheds, some goods sheds, some lamp rooms. Many goods sheds and lamp sheds (located on station platforms) were in galvanised iron with wooden trim.

Exterior Finish

Light buff to be used for:

Timber walls, architrave and sills, window frames and sashes, louvres, down and vent pipes, fence pickets, timber purlins to verandahs (station buildings), curtains to cantilever verandahs (station buildings).

Mid brown to be used for:

Doors with frames and architrave, barge and fascia boards and angle stops, barge caps and bed moulds, plinths, spouting, dressed fence posts, plinths and gates, verandah posts, tubular steel gates, down and vent pipes.

White to be used for:

Guard fences

Structural grey to be used for:

Mild steel purlins and rafters, corrugated iron walls, galvanised iron ridging etc.

Red oxide to be used for:

Roofs ("if previously painted with red oxide"). See also note 1.

Interior Finish

Off-white to be used for:

Ceilings and drops, enamel walls and ceilings (refreshment room kitchens)

Biscuit (3:1 white UC and light buff) to be used for:

Walls (bedroom) from drop to skirting

Light buff to be used for:

Walls (living room, kitchen, passage etc.) between drop and skirting, window frames, sashes doors architrave, skirting (bedrooms), walls of offices (station buildings).

Deep buff to be used for:

Window frames, sashes, doors, architrave, skirting (station buildings also living room, kitchen of DRs). Walls of offices to dado height (four feet above floor).

Eau-de-nil (a light green) to be used for:

Walls, doors, trim generally in signal boxes.

Black to be used for:

Area around fireplace, lock area of door stiles, levers and footplate, all referring to signal boxes.

Structural Iron and Steel Work

After suitable treatment and red lead priming, the top coat was described as consisting of 75% red lead and 25% red oxide. This was mixed with linseed oil, 50% raw and 50% boiled. Structures of interest to modellers to which such a finish was applied included bridges and water tanks. See also Note 2.

Water Cranes

Columns

The bottom six feet was black and the remainder was white. The lettering to show delivery rate (in gallons per minute) was in 2" black figures, 6" below the top on the rail side.

Combined tanks and spouts.

The tank and stand were to be red oxide or structural grey. The jib (spout) was to be white. The lettering to show delivery rate (in gallons per minute) was in 2" black figures, in the centre of the jib and facing the rail side when hooked back.

Overhead Bridges

Footbridges

Rolled steel joists and or timber beams over the track were grey. Beams not over track were deep buff, as were picket or rail fences. Top rails serving as guard rails were white as were hand rails to steps.

Timber Road Bridges

Fences were white and the remainder of the structure was unpainted.

Stockyards

Tumblers and gates at loading front of yards: white outside and light buff inside. Fences were unpainted.

Signals

Masts

Black was to be used for motor mechanisms, light signal cases, light signal masts outside the electrified area and all equipment fitted to them, strip footings to a height to 1 foot or a strip to a height of 1 foot above the foundation of a mast.

White was to be used for all signal masts.

Structural grey was to be used for signal bridges carrying signal masts.

Arms

Arms were generally vitreous enamel and no details appear in the painting notes but reference is made to the use of Signal Red and Brilliant Green for discs and point indicators. Signal Red, Brilliant Green and Traffic Blue are given for signalling equipment.

Levers

In signal boxes

Levers working signals	red
Levers working points or gates	black
Levers working lockbars	light blue (traffic blue)
Levers working cross locks	light blue (traffic blue)
Levers working overhead section switches	brilliant green
Levers working tramway signals and derails	red with black bars
Levers working platform indicators	top half red, bottom black
Pilot levers and closing levers	top half white, bottom black
Spare levers	black
Footplate	black

Quadrant levers on station platforms and levers operating signals at plunger locked points

Red with black handles

Other levers in yards

White with black handles

Interlocked gates

White to the woodwork, black to the ironwork.

Various Other Structures

Letter boxes	Post Office red
Indicator boards (parcels, mens, etc)	Standard white letters on black ground
Clocks (platform and inside)	Stained and varnished
Lamp posts and other standards	Mid brown
Station name boards	Aluminium letters and figures, black ground white posts

Urinal stalls	Black or red acid-resisting paint
Platform seats	Black
Lamp, battery and relay boxes	Structural Grey
Hoardings	Light cream and mid brown
Buffer stops	White
Station yard wooden entrance gates	White
Wooden occupation gates	White
Metal gates and iron posts	Aluminium
Crossing and crib wicket gates and guard rails at pit crossings	White

Notes

1. As (unpainted) galvanised iron roofs began to show signs of aging it was customary to paint them. If the roof was not used to collect water for domestic purposes they were painted red oxide. If the roof was used for collecting rainwater for human consumption then, up until the mid 1950s, a concoction of cement and linseed oil was used. This showed as a greenish grey colour.
2. After 1960 the finish for steelwork on bridges and overhead structures such as signal gantries was micaceous iron oxide. This was a metallic grey colour, Because it contains mica flakes, this finish had to be laid off in one direction only otherwise streaks would show as the paint dried.
3. In later years a number of structures such as combined tanks and spouts were finished in aluminium paint for the tank and white for the spout.

Other Colour Schemes

At some earlier stage a green and cream colour scheme was in vogue and a number of buildings survived sporting this livery into the 1950s and later. More information about this would be welcome.

In the early 1950s, after a tour by the VR Commissioners, it was decided that the colour-scheme as specified in the 1947 instructions (and which gloried in a less than polite nickname) was a little "lurid". As buildings came up for re-painting, the old colours were to be let down with white paint at a certain ratio. This resulted in somewhat muted tonings for a few years.

At some stage in the late 1950s, with the advent of new paint technology, a number of new colour combinations were introduced. There were certain "base" colours with specified "trim" colours. There was such a variety of combinations that the painters had difficulty with the large number of tins of different coloured paint needed compared with the old standard, one colour for everyone, scheme. Very soon this lead to a rationalization to about four different colour combinations, generally of pastel shades and white.

The Colours

The Heritage Standards Manual issued and used by the Puffing Billy Preservation Society includes the following comment.

"The brown (BS 412) and light buff (BS 358) scheme used on the Puffing Billy Railway in recent years relates to a Victorian Railways colour scheme not introduced until the early 1940s. This scheme was described as "dark brown and light stone."

This would seem to define the two main exterior colours specified in the 1947 painting instructions. (The BS number refers to the "British Standard Colour" one of the systems that accurately define paint colours.)

For modeling purposes, I would use Humbrol 63 (Sand) for the Light Buff and any dark brown (e.g., Floquil Roof Brown) for the older colour scheme. Anyone with access to standard colour chips could do a more accurate job of matching the BS colours listed above.

On the VMRS model of Korumburra station, Humbrol 121 (Matt Pale Stone) and Humbrol 186 (Matt Brown) were used to represent the toned down colours of the 1960s.

Acknowledgements

These notes (including the information from the 1947 painting instructions) come mainly from discussions with fellow Victorian Model Railway Society member, the late Bob Dunn. Bob was a Way and Works foreman with the Victorian Railways.

Information from the Puffing Billy Preservation Society was provided by the late Geoff Tasker.

Additional advice about colour was provided by Fraser Brown.