Recent Advances in Reflective Track Markers, Barricades and Signs with a passing comment about cave number tags.

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ABSTRACT

During the course of the 16th. ASF Conference (Sydney) in 1987 I presented a discussion paper entitled "Trail Marking and Area Designation" outlining the development and use of reflective discs made from recycled road signs. The intention was to 'float' several ideas with a view to establishing a standard approach to track marking throughout Australia.

The idea 'floated' at the Sydney Conference was fourfold;

1 - The use of reflective discs as track markers,
2 - as area designation utilising the various colours available,
3 - as information using a suggested numerical system, and
4 - protect the overall cave environment (from visitors).

The presentation, as well as some of the discussion was tongue-in-cheek, given not only the type of material used but how some of that prototype material was obtained. The subject matter itself though, was serious, given that I was advocating a method to minimise damage - a problem that should concern all members of the speleological community. A small committee was set up to further refine the ideas put forward but to the best of my memory, after some initial correspondence it was 'lost' to the passage of time.

Since that time the use of track markers have become (relatively) widespread with some new and interesting innovations. With the upsurge of recreational caving by individuals, social groups, commercial operators, often urged on by tourist-dollar driven governments, both state and local, steps must be taken to protect the cave environment from the descending hordes, which sometimes includes ourselves. This paper outlines methods evolved in Western Australia to protect cave environments from this invasion. While some of the methods are clearly aimed at 'public' recreational cavers, organised groups and individuals, the inference is raised that the speleological community should also take note.

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HISTORY

Track marking in caves in the first instance was employed purely as a means to find one's way into or out of a cave and usually consisted of string, piles of rock or candle/carbide soot on cave walls. Such methods ultimately led to confusion as these marks could only be understood by the people who made them and this led to a proliferation of marks as different parties made their own contributions, thus leading to further confusion and additional marks (in the case of arrows pointing in different directions the word "OUT" was often added).

During the 1960's, some attempt was made to protect sections of cave, usually areas of high decorative value, the most notable being the Chevelier Extn, part of the Jenolan System (NSW) where I believe, flagging tape, artificial carpet, carpet protector and other methods were trialed. Never having been to the section mentioned I am basing my comments on a couple of photographs seen long ago and anecdotal conversation.

Following the entry into the Christmas Star Extension of Crystal Cave (6Wi62) in 1968, a plastic pathway was laid on the flowstone floor throughout the extension and visitors required to remove outer garments on entering the section. However, by 1972, damage had been caused by sand contamination, break-up of parts of the pathway and visitor indifference. (Poulter 1979)

Track/route marking, mainly in the form of survey tape and some reflective material was employed in Tasmania's Kubla Khan Cave during the early 1970's to mark a path through muddy sections of the cave in order to keep visitors to one path and protect adjacent areas from despoilation - to my way of thinking it did not work very well due to the difficulty in seeing the small quantity of material in the prevailing low light conditions.

Track marking seemed to be all but forgotten during the late 1970's to early 1980's and was not resurrected to any great extent until the Northern Caverneers started to restore and track mark parts of Kubla Khan Cave in 1985 (Woolhouse 1985, 1988). This restoration work, before is was stopped by the land manager (Dept. of Parks, Wildlife & Heritage) resulted in the first major appearance of SRGWA's reflective discs manufactured from recycled road signs and led SRG to acquire many more damaged signs from the WA Main Roads Authority, planning to produce discs for 'sale' to all clubs (and cave managers) in Australia while attempting at the same time, to create a standardised system.

The paper presented at the 1987 Conference was a vehicle of ideas and announce to the caving fraternity that reflective markers were now 'readily' available at a modest cost. The idea of coloured 'area designation' and 'numbered keys' has been all but forgotten, probably due to its perceived complexity, in favour of route, track and survey markers. Sales were slow until news of the markers existence became more widely known due mainly to discussion and people encountering them in caves. Principal purchasers were initially confined to Western Australia where even the major government land manager, the Dept. of Conservation and Land Management (CALM) bought them from time to time. However, since 1990, sales have 'boomed' for specific areas. The Cave Exploration Group of South Australia Inc. (CEGSA) purchased 2500 markers for its 1991 Old Homestead Cave Expedition and the Top End Speleological Society (TESS) purchased 200 of the recently developed variation, the 50mm Cave Number Tag after coming across caves tagged by this method (by SRGWA) in the Kununurra region of Western Australia. Cave Number tags have also been used on the WA side of the Nullarbor Plain, sanctioned by CALM for use within the Nuytsland Nature reserve, and at Wanneroo - just north of Perth. (See fig. 1 - more on this later.) Over the last couple of years the Western Australian Speleological Group Inc. (WASG), and individual members of, have purchased at least 1000 track markers.

There are numerous reasons to track mark in a cave but they generally fall within six broad headings; protection of fauna,
decoration,
bone deposits,
special features eg mud pavement (Exit Cave, Tasmania),
OR, maintain a cave or section of cave as near as possible, in its original pristine condition,
OR, minimise further damage by restricting damage caused by human passage to one clearly defined area.

Perhaps I should pause here to relate my definition of route and track marking. I interpret route marking as plotting a basic navigable path through a cave (passage) but not necessarily intend visitors to follow precisely from point to point. An example of this would be the survey route marked through the main passage of Mullamullang Cave. If visitors to the cave have a copy of the 1966 map in their possession they can refer to the numbered survey markers along the way to pinpoint their current location. Track marking on the other hand, would indicate a clearly defined pathway that visitors must not deviate from, an example being the Christmas Star Extension mentioned above. This pathway includes a cement slab path (Fig. 2) through dense sand. On entering the main part of the extension, outer garments and footwear are removed in an area of extensive rock and cement construction that is a containment for a sandbank. Helmets are left in the previous (Helium) chamber. A plastic pathway, laid across an extensive flowstone floor is followed and plastic wash basins are located in the extension to further minimise sand contamination.

REFLECTIVE MARKERS

The use of reflective markers in caves to guide people is not new. In the past, the use of reflective markers has probably been restricted through not enough suitable material being readily available at the 'right price' (preferably free). SRGWA's access to damaged

road signs (reflective material on 2mm marine grade aluminium) changed all that. Reflective material of a uniform colour and size is now readily available through SRG at a moderate cost. See Table 1.

Reflective variations have been developed by other societies. Track marking can be open to interpretation and the method employed is dictated by what is to be protected and the prevailing circumstances, plain rock, decorated areas with rock or earth floor or decorated areas with flowstone floor are but some examples, and the materials available. I believe that the Witchcliffe Area Speleological Sub Group (WASSG) has developed one method in areas of flowstone by suspending reflective material from the ceilings of cave using nylon fishing line. Another consideration is how WIDE a track should be. If Mullamullang Cave's "Coffee and Cream" section had been designated by a marked 300mm wide trail in the late 1960's, it might not be suffering the 1m+ wide 'highway' and peripheral damage that it is today.

Track markers initially manufactured by SRGWA were 25mm in diameter with a 4mm hole in the centre and left to the purchasers as to how they were to be employed within a cave. The most common method was to nail them to rock but this has the disadvantage of setting up an electrolytic action between the two dissimilar metals (a well documented problem) leading to the eventual breakdown of either the aluminium (into a jelly-like substance) or the steel nail rusting away (or both), leaving stains on the rock surfaces. However, in recent times, silicon based adhesives, such as Silastic 732 RTV have been used to glue markers (now increased in size to 30mm diameter with no central hole) onto dry rock and Monier M34 to wet rocks have been used with great success.

COLOURS

There are three basic colours to be gained from road signs, white - red - yellow, followed by blue (information & ring road) and green (freeway & traffic lights) with blue more numerous than green. A lot of the large green freeway signs are made from marine ply, not aluminium.

There are also two technologies of colour involved with the older type being preferable to cave work. The older style of signs consisted of the reflective material (glass beads) mixed into a coloured matrix (white or yellow) and information (red/black) then spray-painted onto the finished surface. The modern method is to have a standard white base background (as before) with the colour and information being screen printed onto a plastic film which is then glued to the signboard, the adhesive being in the form of hexagonal 'cells'. At the 1987 ASF Conference, experience of usage was not available to indicate the best technology that was suitable to the cave environment although by that time we were 'stuck' with the current number and type of signs from the Main Roads Dept. SO, which type of sign is best?

All signs, apart from having to withstand the ravages of the modern motorist, have to survive Australia's harsh environment. Some fare better than others, depending on their position and colour. KEEP LEFT, SPEED and STOP signs are favourite targets of motorists while STOP signs and the red circle of SPEED/NO TURN signs are the preferred target of the sun and its damaging UV rays. The red on the older type of painted sign ultimately fades to a much softer pink and sometimes even disappears altogether while the newer type not only fades but the plastic film becomes brittle with all colours but especially red. How does this effect their adaptation to the cave environment?

With the 30mm disc, we now perform two functions. They are produced as 30mm flat discs and the newer, curved variety (Fig. 3) to fit 25mm endcaps and to a lesser extent, 20mm conduit pipes, see below. Both types of flat disc perform well although it has been found that moisture ultimately works its way into both varieties. While the older variety 'bubbles' occasionally, in the case of the plastic film types, this may ultimately cause the film to fall off, only time will tell.

However, when it comes to curving the discs, the UV bombardment of the film style becomes apparent, especially the red, with cracking of the film often taking place. This is unfortunate as red STOP signs are not available in anything but the plastic film type, thus almost precluding their use as curved markers. As the number of red discs obtainable from the older style of SPEED/NO TURN signs is small, it may take some time to build up a

workable stock of them for curving. Some minor 'crazing' occurs with the reflective material of the older signs when curved but this is hardly noticeable.

COLOUR ADOPTION

As mentioned previously, area designation by colour as speculated in my 1987 paper, has fallen by the wayside. The most commonly used colours at the moment are red, white and yellow in that order. 30mm red and white discs are widely used as track and route marking while yellow seems to be confined to 50mm discs used as survey points and cave number tags. A disadvantage with red is that it is relatively low on the visible spectrum and so may be difficult to see under low light conditions if used in isolation as a 'WAY OUT' disc. That is why SRG recently used yellow as a 'WAY OUT' indicator on route markers in Mullamullang and Thampanna Caves.

SRG has also used yellow 50mm discs as cave number tags (below) although for some rock types, blue would be a more appropriate colour to maintain suitable contrast, an example that springs to mind is the placement of the number tag at the entrance to Abrakurrie Cave.

ROUTE OR TRACK MARKING?

I am not sure what method of track marking CEGSA used during its Old Homestead Expedition of 1991 except that they purchased 1000 - 30mm red, 1000 - 30mm white and 500 - 50mm yellow discs. The yellow discs were to used as survey markers within the cave. I hazard the guess that some of the red and white discs were used as route markers while others defined the width of tracks. Anecdotal comments indicate that white may have been used to signify the way into the cave while red led the way out.

Members of WASG and WASSG have been active in the promotion of the 'highway technique' in defining track width and placement using closely spaced plastic price tags and discs adjacent to each other (Fig. 4) whereby you keep red on your left and white on your right. SRG on the other hand have pursued a similar although somewhat different idea under different circumstances using single posts whereby a visitor passes to the right of a red post but to the left of a white post, thus the width of the 'path' is defined with fewer markers Fig. 5. A disadvantage with both techniques is that they cannot define direction ie which way is out?

A route marker developed by SRGWA for CALM's use in an adventure cave in the Leeuwin-Naturaliste Ridge National Park utilised 50mm stormpipe, modified joining sleeve and a custom made, engraved cap which is glued to the sleeve (Fig. 6). A standard 50mm stormpipe joining sleeve is cut in half (making 2) and the cut ends bored out to a nominal diameter and faced in a lathe. A piece of PVC is machined to fit as a 'cap'. The 'cap' is then placed in a mill's dividing head and directional arrows engraved into the surface and then filled with suitable paint. The cap, sleeve and pipe are glued together and positioned in the cave. As the posts are intended to be placed some distance apart but in line-of-sight, it is desirable to put some reflective material in disc or self adhesive sheet form on it. The posts used by CALM had orange self-adhesive reflective sheet material afixed.

During December 1992 SRG replaced the route/survey markers in Mullamullang Cave using curved white and yellow reflective discs glued to free-standing 25mm PVC endcaps. A sign was placed near the Dune indicating that white led into the cave while yellow led out. So that the concept could be interpreted in low or yellow light conditions, a dot is placed over the white disc using a black felt pen. The method was repeated on markers originally placed in part of Thampanna Cave back in 1981. As the markers in Mullamullang are principally survey points, the new endcap markers have the survey point sign and number marked on the side of the endcap, again using a black felt pen.

POSTS

What happens when there is no convenient rock to attach discs to? The traditional method was to create a rock cairn and either leave it as is or place a marker on top of it, these can still be difficult to see. One method suggested in the 1987 paper was the use of plastic price tags but these are relatively small, fragile and not easy to obtain in

anything but large quantities. Price tags would certainly not stand up to the rough conditions of 'public' indifference.

A track marking method being trialed under CALM's Leeuwin-Naturaliste Cave Permit System is the use of 25mm (Class 18) PVC pipe with curved reflective discs glued to the end caps placed on top. Fig. 5. The posts are 750mm long with about 300mm above soil level. A 20mm hole is drilled laterally near the base with a short section of PVC conduit passed through to 'lock' the post into the ground and stop it from being turned. The post can be kept in the ground either by 'tamping' the soil or cementing it into position, depending on circumstances. Using PVC means that the post does not deteriorate or react electrolytically with the aluminium disc. Anything that is to be installed in a cave for any length of time needs to be resistant to the cave environment and as inert as possible so that it in turn does not harm the cave environment or fauna. Another variation is to use endcaps only. As already mentioned, endcap route or trail markers have the advantage in that they are free-standing but can also be stuck to boulders, walls and rock cairns with Silastic. Endcap markers can be manufactured on site or, if the orientation is known, prefabricated - something to occupy armchair cavers at meetings or in front of the TV. The survey markers in Mullamullang Cave were recently replaced using the prefabricated method. Where a post cannot be sunk into an earth floor it can be placed or cemented inside a rock cairn or, as mentioned above, just the endcap glued or placed on a convenient rock or cairn.

Placing trail posts in a cave for the protection of the cave (principally) and the guidance/convenience of the public users of the cave is one thing, but what about guidance for speleologists, the so-called non-damaging experts? Many would and possibly have objected to such intrusions but sadly, some speleologists are just as thoughtless and uncaring as their public counterparts. However, it would be nice to think that in caves that the public does not have access to, less expensive or robust route/trail making materials could be employed. Price tag markers should be ideal under these circumstances.

A less expensive type of post can be manufactured from 20mm PVC conduit although these cannot have a similar size (conduit) crosspiece passed through it although a "T" can be glued to the end placed in the ground. Its smaller diameter would make it less obtrusive to puritan speleologists in wild caves. A forming die has been made allowing curved 30mm discs to be glued to the pipe but not the endcap although the tighter curvature causes greater cracking of the reflective material. So far, none have been made.

BARRICADES

Another method being trialed under CALM's Permit System in caves open to the public is the use of 50mm PVC storm pipe and PVC chain as passive barriers to cordon off sections of cave. (Poulter 1990) Fig. 7 & 8. The method, co-funded by CALM and SRGWA, stemmed from discussions within CALM's Cave Management Advisory Committee in an effort to arrest erosion damage to the soil cones in an extension of Calgardup Cave (6Wi49) caused by unrestricted and uninformed visitation. The exercise has met with limited success although it must be pointed out that unrestricted visitation to this extension would be countered in thousands per year and despite the damage caused by erosion, tramping on virgin sand/flowstone surfaces, decoration damage has been minimal. Periodic restoration trips help keep the sand shifting problem in check and it is speculated that the number of visitors complying with the spirit of the barricades is relatively high. The barricade method has since been used in two other "public access" caves to protect exposed bone deposits, a significant tree root and to prevent further soil/rock slope erosion.

Storm pipe, although expensive, is used due to its strong 5mm wall thickness, allowing it to be slotted to accept the 6mm PVC chain and resist vandalistic attack better than standard irrigation pipe of similar diameter. The cost of these materials are given in Table 2. It is open to speculation that if the barricades gain acceptance and compliance then less expensive pipe could be used in future works.

WHY USE PLASTIC?

Plastic is one of the few materials that can be used in a cave without being effected by the cave's environment, an environment that is very aggressive to the two most commonly used materials, wood and steel. Conversely, plastic, being inert, has no known adverse

effects on a cave's environment or its faunal food chain. PVC posts and chain or track marking posts, may look "out of place" in that they stand out like the proverbial "sore thumb" in contrast to their surroundings, but then again that is why they would be in a particular place, to designate where to go, not to go, or stop. If a barrier or guide post looks neat and functional, then it stands a better chance of getting the message across, being adhered to and accepted by all concerned. Despite the fact that PVC post and chain is a relative expensive proposition, it is a method that is resistant to vandalism and decay, is lightweight and able to be fabricated in a (home) workshop prior to installation trips, it therefore presents a cost effective alternative to traditional materials.

SIGNS

Signs play an important role in everyday life - in that they give out information where it is impractical for someone to repeatedly do so verbally. A sign is on the job all day, every day. There are numerous occasions where signs can play an important role in protecting caves, sections of caves, their faunal inhabitants or other natural features. In the past, signs have been written on whatever material is available and, left unprotected, rapidly deteriorate. Such signs serve an important first step. However, those signs should be replaced by more permanent and better presented signs at the earliest opportunity.

Professional signs are expensive, take time to produce and more expense is incurred if the sign needs to be replaced or altered due to changed circumstances, vandalism or theft. They are also susceptible to a cave's environment.

SRGWA has produced several inexpensive signs over the last few years (either typed or computer generated) drawn on ordinary A4 paper and then laminated. On completion of a 'master' , copies made from it are trimmed prior to lamination to increase the laminated border area enhancing its resistance to a cave's humidity. After lamination, the sign is usually glued to a stiff backing board (PVC or Laminex) or used 'as is', depending on the circumstances. The completed signs can then be afixed to posts or rock walls using nylon sash cord.

The 'master' is kept in order to produce copies should they be required. If coloured signs are required, the new colour photocopiers produce excellent results.

The oldest SRG laminated sign is a multi-coloured one placed in Calgardup Cave during mid-1990. Despite one attempt to remove it from its backing board, it is still in A1 condition. The reprinted history of Mullamullang's Dome visitation, transcribed by WASG and laminated by SRG, was repositioned outside the Dome in July 1991 while the (laminated) history relating to Mullamullang's 1 Mile Cairn was put in place during December 1992.

Colour A4 photocopies cost $3 per sheet and laminating $1.50 at the University of WA's Media Services Unit. Single colour A4 photocopies cost about 10¢ a sheet. Many poster shops, education units and businesses throughout Australia possess laminating facilities.

CAVE NUMBER TAGS

What does cave number tags have to do with protecting caves from people? Absolutely nothing unless it stops you entering caves you didn't intend to because you didn't know which cave it was. It is mentioned here merely because SRG has become a major source of reflective material and that traditional brass or aluminium foil used with nails in some parts of Australia have proved inappropriate due to electrolysis. SRGWA first speculated the use of reflective cave number tags (Fig 1) in relation to the Nullarbor Plain due to the large entrances encountered although their first use occurred on caves of the Kununurra region in July 1989. The reason was simple - they were easy to see, one merely shone a light across the expanse of a cave entrance until a tag reflected, or, the contrast between the tag and the surrounding rock made them stand out. In areas infrequently visited by the same speleologists, it is important that caves receive only one identifying number. Since 1989 reflective cave number tags have also been used by SRG at Wanneroo, on the Western Australian side of the Nullarbor, being sanctioned for use by CALM in the Nullarbor's Nuytsland Nature Reserve and 200 were recently sold to TESS of the Northern Territory.

The 50mm yellow reflective discs have a 30mm plain aluminium disc glued to them using Silastic. The plain disc has the appropriate ASF cave number stamped on it. The disc is then attached to a prominent place in the cave entrance, suitably protected from the elements using a liberal amount of Silastic. Where there is no suitable site, SRG has glued it to a rock pavement and built a small rock cairn nearby.

Some cave entrances have a rock colour similar to the yellow disc making them difficult to see, despite the fact that they are reflective. In cases such as this, Abrakurrie's entrance for example where the rock is quite yellow, blue discs may be a more appropriate colour contrast. See Table 1 for costs.

CONCLUSION

This then, is the state of play in Western Australia. We have caves, particularly in the Leeuwin-Naturaliste Ridge, south of Perth, where PVC posts with reflective route markers, PVC posts and chain, signs and track markers on price tags have popped up, seemingly overnight sometimes. Is it all necessary? Are we merely trying to lead Australia out of the recession we had to have with a PVC and recycled aluminium led recovery or, as some may argue, engaging in visual pollution? Is a bit of "neatly placed" visual pollution better than a "wrecked" cave? In my view, after other alternative solutions have been exhausted, yes, although I would hasten to add that what is deemed appropriate, neat and maintenance free for track, route marking or barricades in one cave may be considered totally inappropriate in another depending on what is to be protected.

In Western Australia, and no doubt elsewhere, speleologists are very much in the minority. Collectively, there are about 250 members of ASF affiliated speleological societies in Western Australia, ranged against casual cavers numbered in the tens of thousands of cave visits per year. Some of our very friable caves are suffering incredible damage. That damage is not confined to the L-N Ridge. The caves of the Nullarbor Plain are also suffering, Mullamullang in particular. Should we casually pass all that off as "normal wear and tear" as it has by some in the past?

The Leeuwin-Naturaliste National Park Cave Permit System (established in September 1992) is hoping to lower the casual and commercial cave user population through a user pay and visitor limit policy. During the public consultation process, casual and commercial caving may have increased due to publicity, it may still be increasing. A one year monitoring program is underway to find out what is happening and how the public is complying with the permit system. Some of the more dramatic PVC methods of "crowd control" mentioned above are being trialed in three caves available to the public. Other methods mentioned are used in caves (not available to the public) to control speleologists.

Most of the material costs for in-cave protection have been borne by the local speleological fraternity although CALM has helped with some funding. The costs have been high, PVC may be an easy material to work with but is not inexpensive to buy, even with discounts. Surface protection of caves in the L-N Ridge is a separate issue not discussed here that has been borne entirely by the land manager CALM with some voluntary help from speleological societies.

A 25mm endcap has a recommended retail price (RRP) of about 90¢, a 750 x 25mm post works out at about $4.85 without markers while 50mm post and chain is roughly $15/metre. Even though it is possible to buy the material for less than the RRP is it all worth it? If it assists in protecting a cave and all it contains, then I say YES. Otherwise, what are we doing in the speleological business? We need to educate everyone regularly, including ourselves, to have a greater appreciation of caves and their inhabitants. If this also means keeping to narrow trails and track marking whenever possible - so be it.

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TABLE 1

TRACK/ROUTE MARKERS - red, white, yellow, blue

30mm reflective disc - FLAT	2¢ each or $ 2/100
- 20mm curved	4¢ each or $ 4/100
- 25mm curved	4¢ each or $ 4/100
50mm Reflective disc	6¢ each or $ 6/100

CAVE NUMBER TAGS - yellow, white, blue

30mm plain aluminium disc	2¢ each or $ 2/100
30mm pre-numbered aluminium discs	22¢ each or $22/100
50mm reflective disc	6¢ each or $ 6/100
30mm plain + 50mm discs - glued	20¢ each or $20/100
30mm pre-numbered + 50mm discs - glued	40¢ each or $40/100

Prices effective 1992 (subject to change) but does not include postage costs.

TABLE 2

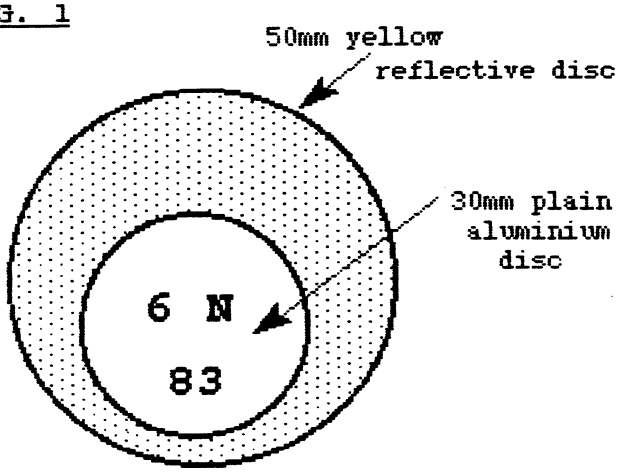
PVC MATERIALS AND COSTS

Material	RRP	Price to SRG
20mm orange conduit, 4m length		$ 7.25*°
20mm orange endcaps		$ .39
20mm grey conduit, 4m length		$ 5.75*°
20mm endcaps		$ .35
25mm, Class 18 pipe, 6m length	$31.56	$ 25.25°
25mm endcaps	$ .90	$ .45°
50mm stormpipe, 6m length	$ 79.80	$ 63.84°
50mm #6 endcaps	$ 1.70	$ 1.70°
6mm PVC chain, yellow or white	$140/40m	$112°
250gm tins of PVC glue		$ 4

* Orange conduit has a heavier wall thickness than grey conduit, hence is more resistant to damage and is thus slightly more expensive.

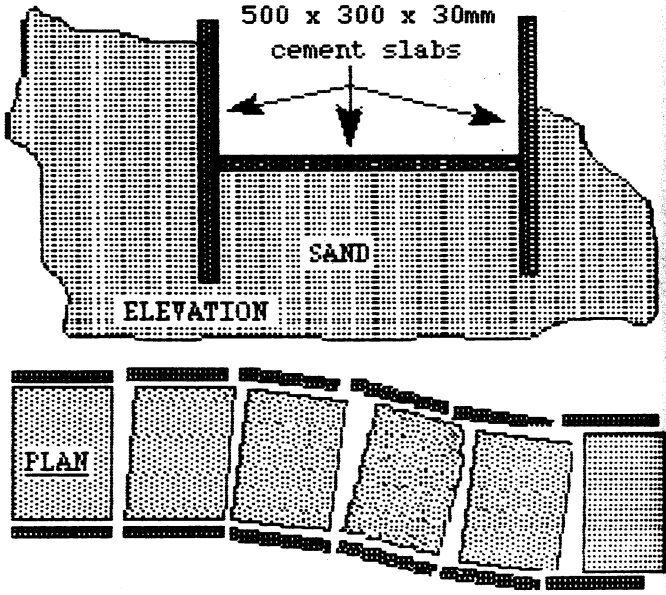
° When purchasing any quantity of PVC material, it pays to 'shop around' for the best price, or, seek sponsorship, donations or grants. It is possible that some materials can be purchased for even less than SRG has recently been paying.

FIG. 1



50mm reflective cave number tag labled for Old Homestead Cave W.A.

FIG. 2



Slab path through sand - Crystal Cave W.A.

FIG. 3

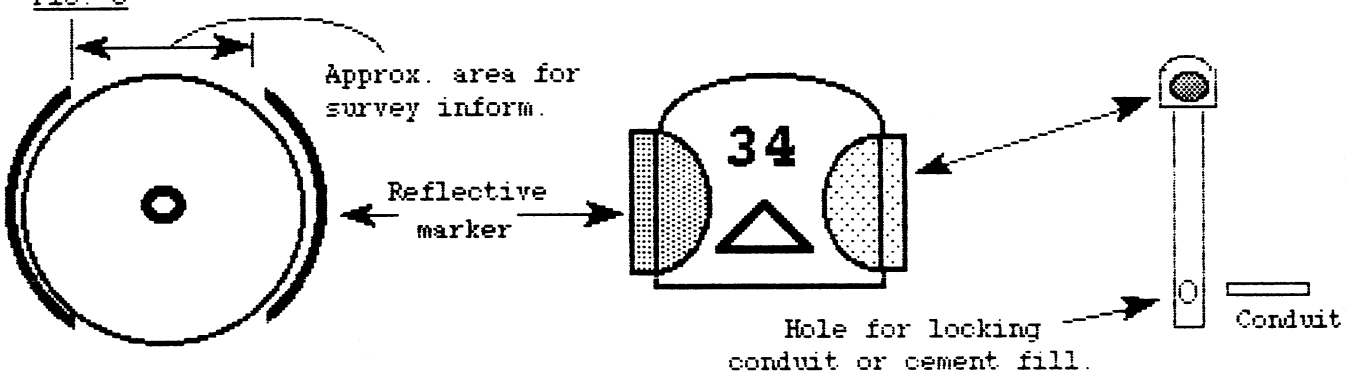
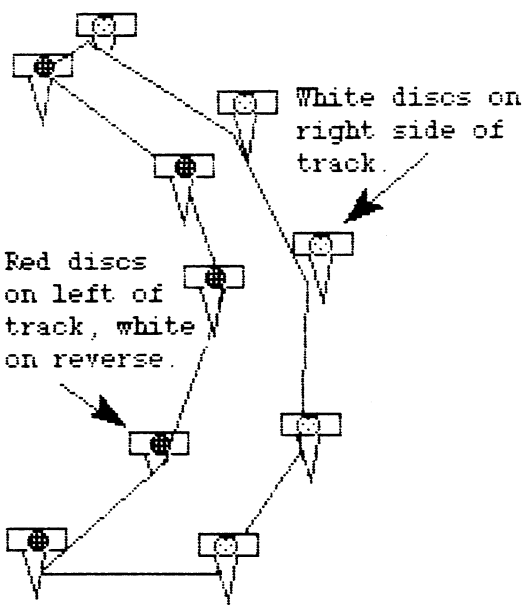
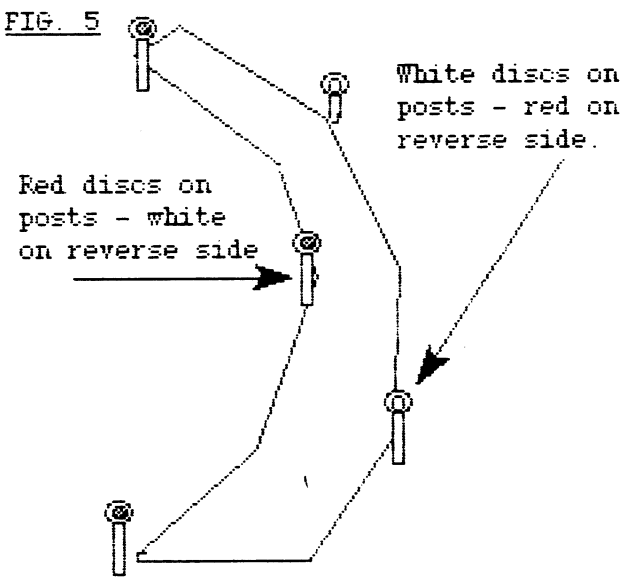


FIG. 4



"Highway Marking" Close spacing of price tags to clearly define track in high value areas. WASSG price tag method.

FIG. 5



Wider spaced definition of track in specific areas. Not necessarily of lower value.
SRGWA post & endcap method

HIGHWAY METHOD OF TRACK MARKING

FIG. 6

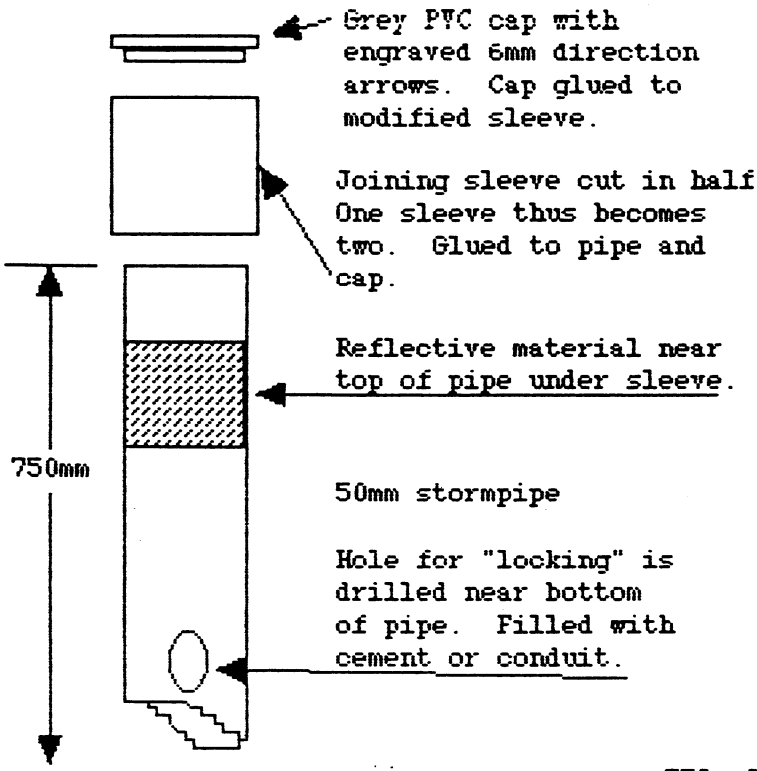
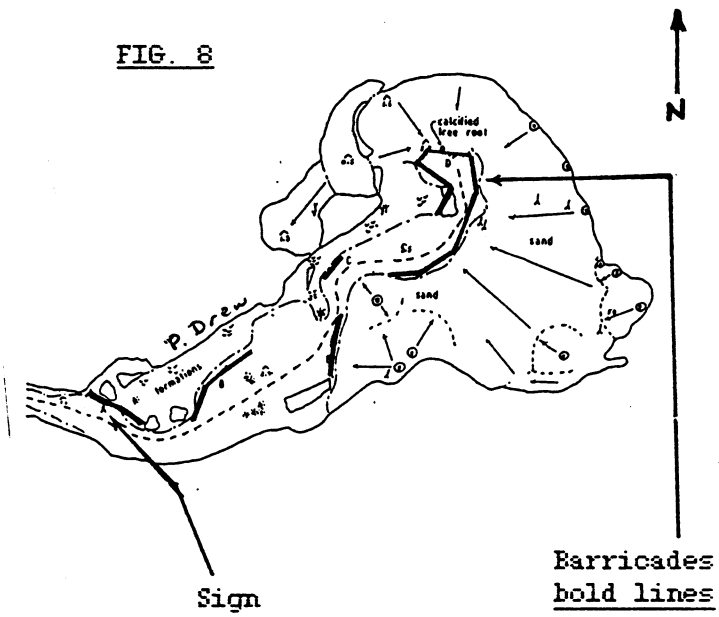


FIG. 8

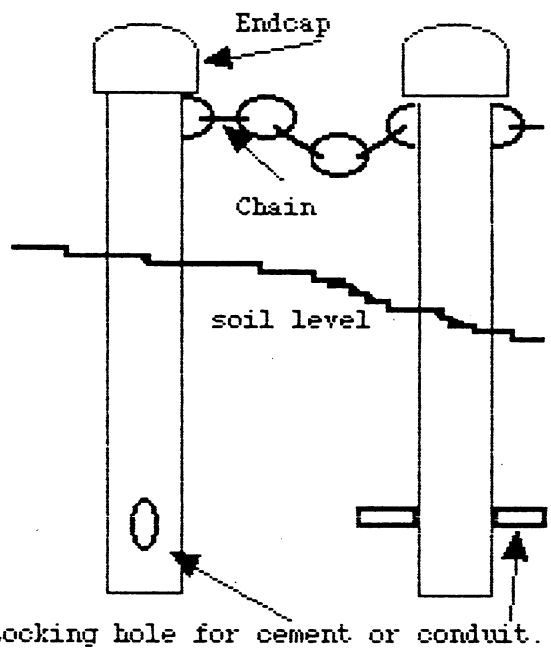


Calcified Tree Root Chamber
Calgardup Cave 6Wi49

Showing location of information sign and barricades

Scale 1:200

FIG. 7



50mm stormpipe & 6mm PVC chain barricade.