



## Milestone Society - Policy Note 2

### Appropriate levels of Conservation for Milestones

The full conservation of milestones is a major task and the re-instatement and painting of a milestone to the highest standards requires considerable labour and use of expensive materials. Adopting a universal, high standard for all milestones can deter the beneficial treatment of lower status markers. This Policy Note provides some criteria and guidance on the proportionate use of resources that might be applied in particular circumstances.

#### ***1. The need to conserve milestones***

Old milestones are now of limited value to the Highways Authorities who are their nominal owners, but milestones have an important historical and leisure function, contributing to local distinctiveness. In order to satisfy this need, milestones need to be visible, stabilised against erosion or damage and located where they do not create a hazard to road users. Some milestones have particular value as ancient monuments and so must be conserved to the founding principles of the Society for the Protection of Ancient Buildings (see Milestone Society Policy Note 1).

The effort needed to conserve and maintain milestones is divided into two categories; firstly mechanical work around or on the milestone and secondly surface coating (such as painting) of the milestone. This policy is directed towards stone waymarkers but the principles will also apply to metal markers.

#### **Mechanical work**

The most important requirement is that the stones are kept free from vegetation to make them visible to passers by and to those involved in highways maintenance. This does not involve the stone itself, though may help to prevent deterioration of existing coatings

Raising a milestone that has sunk, been engulfed by tree-growth or been buried by build up of soil, may be justified to improve visibility. In general this process is “reversible” and can be achieved without damaging the stone. However, the excavation around the base to allow the lifting of an intact stone may pose health and safety issues (heavy lifting, risk to/from buried services, traffic risk) and some expense. In general lifting stones (vertically) should have no impact on the stone itself.

The issue of whether stones may be re-positioned for safety reasons or to make them more accessible and appreciated by travellers is dealt with in Milestone Society Policy Note 1. Lifting and moving an intact stone will pose health and safety issues (heavy lifting, risk to/from buried services, traffic risk) and considerable expense. In general moving or repositioning stones (horizontally) should have no impact on the stone itself.

Milestone Society Policy Note 1 considers the issue of whether damage to the milestone might be repaired.



## Surface coating

Milestones were normally painted and lettered by the turnpike trusts who initially erected them. Where the stone was light coloured the black letters may have been painted directly onto the bare stone. However, in many areas it was common practice to use limewash as a white background for the black painted letters. During the 20<sup>th</sup> century Highway Authorities used a variety of modern white paints, many of them oil based, as a more durable background coating.

Most of the milestones that have survived need surface coating if they continue to be used beside the highway. In such an aggressive environment, with considerable risk from impact, coating is may be needed to;

- stabilise the stone against erosion (both chemical and mechanical)
- make the whole stone more visible
- provide a foil against which lettering stands out
- allow lost parts of the inscribed legend to be reinstated in paint
- cover faults and imperfections in the stone where water ingress may cause damage.

## 2. Treatment Options

The surface treatments options available for milestones include, in a hierarchy of decreasing conservation value;

- **Highlighting the inscribed legend** with black paint (leaving the majority of the stone bare). This has the minimum impact on the stone, is simple and inexpensive. However, it fails to protect the main stone and may not improve visibility
- **Limewashing** the whole stone and painting letters in black. This is reversible and a traditional method. However, it is expensive, hazardous to perform and since the coating is sacrificial will require repeat treatment every 2 to 5 years.
- Treating the whole stone with white/cream **microporous silicate paints** and painting letters in black. This stabilises the surface both chemically and mechanically and will last many decades (though it can be removed mechanically if necessary). It allows the stone to “breath”, imperfections can be treated with silicate paste and the colour can be varied. However, it is only available from a specialist supplier, is relatively expensive and time consuming to use, and requires a period of good weather to apply the multiple layers of water-soluble paint.
- Painting the whole stone white/cream with **normal masonry paint** and painting letters in black. The materials are easy to obtain at moderate cost from DIY stores and can be applied quickly. Though nominally porous, it is technically less good than silicate, may fill-in some details and is not easily reversed. Since it is a surface film, it may not last as long as silicate.
- **Cleaning** away residues. Where the stone itself carries no engraving, cleaning way old residues and leaving the surface bare may be sufficient. However, this gives no protection from frost damage and delamination.

Under no circumstances use paints designed for internal use or with oil-based paints such as gloss paint. The latter will cause irreparable damage to stone, by forming a water-repellent barrier which will eventually lift away with the surface.



It is important to remember that all these treatment methods require a similar amount of pre-treatment of the stone (clearing vegetation, removing old paint, cleaning the surface). This pre-treatment is vital if the conservation is to last and may take at least as long as the most complex painting tasks.

### **3. Factors in selecting the treatment**

Choosing the appropriate treatment for a particular milestone depends on several factors.

#### **The status of the monument; *Is it listed/legally protected or not listed?***

Work on Listed milestones will require consent from a Conservation Officer who may have professional objections to some simple treatments. Since Listed stones by definition have historic importance, it may be appropriate to only use the treatments at the higher end of the hierarchy.

#### **The type of mineral; *Is it made from a stable stone?***

Many of the best stones for engraving are not resistant to acidic environments and can be damaged by mechanical impact or freezing pore water. Exposed limestones and other sedimentary rocks with a calcareous content erode at a significant rate in the poor air-quality beside a modern road (acidic gases from internal combustion engines are the main contributors). Painting these stones with a resistant surface coating is essential to preserve the engraving as well as the facing surface. Igneous rocks such as granite are more resistant to chemical and physical damage; hence surface coatings are less necessary for these. Slates are chemically resistant but are vulnerable to mechanical impact and to frost induced delamination and so may require some surface protection. Modern materials such as concrete are very stable and so inexpensive treatment at the lower end of the hierarchy may be appropriate.

#### **Position of the stone; *Is it physically exposed?***

Milestones that are very close to the carriageway not only received mechanical impacts but are also quickly coated by mud and dirt from the carriageway. Thus any surface treatment will be quickly obscured. Unless further mechanical protection such as a crash barrier is provided, treatment of such stones may be a wasted effort (and is likely to be hazardous). Moving these stones is generally a better option than treating them in place. Stones that are used as exhibits may be less vulnerable and are easier to reach for regular recoating, so more complex methods at the higher end of the hierarchy might be preferred.

#### **Function of the stone; *Does it carry valuable information?***

The older milestones carrying pre-19<sup>th</sup> century engravings are probably Listed so are better treated with the higher grade methods. Where the engraving is shallow, this is often evidence of serious erosion and full coating with a durable finish may be essential. Where the engraving is deeply incised, the stone is probably stable in its present environment and simple painted lettering may be sufficient. If the stone only provides support for another engraving such as a mileplate, then inexpensive painting and filling to prevent frost damage may be adequate. If the support stone is stable and has no previous coating at all, simple cleaning may be the best option.



### **Aesthetics; *What looks right?***

Some milestones show clear evidence that the surface has been painted white over a considerable period. In general, if a stone has been fully painted before, it should be conserved by painting the exposed stone. Stones that have been neglected for many decades may show no evidence of white background paint and some people feel this is their natural state. However, where visibility and stabilisation against erosion are required, these should take precedence over any arguments regarding the perceived aesthetics of bare stone.

Ordnance Survey Benchmarks have often been painted black, though there is no technical justification for this. Where a benchmark is cut across the milestone legend, painting it would normally spoil the aesthetics.

## **4. Example Cases**

The treatment of each milestone needs to be judged on the particular circumstances, against the criteria listed above. Below, by way of example, some generic cases are considered for each type of treatment.

**Simple black lettering;** This is the best option for light coloured, well-dressed granites and slates that provide a good colour contrast and have a stable surface with sharp engraved legend. The main stone will need cleaning to provide a stable surface for the lettering. Stones in clean environments may be adequately dealt with in this way also. Where stones have previously been painted white, this may need to be continued for aesthetic reasons even where lettering alone may have sufficed.

**Limewash and lettering;** This the most expensive overall approach. It may be obligatory for old stones of special historic interest or otherwise unique listed monuments when they are in benign environments with good access. Given the hazards associated with this coating and the need to re-apply it regularly, it is not proportionate to use this routinely at the roadside or on a long series of roadside stones.

**Microporous silicate paint and lettering;** This is the preferred option for valuable roadside milestones made from sedimentary rock (The Milestone Society “Guidance on Conservation of Milestones & Other Waymark Features” is based on this method). It is likely to satisfy the needs of Conservation Officers for Listed monuments and gives both visibility and surface protection. It is quite expensive and where a stone is not visibly eroding, is not listed and is thought to be post-turnpike era (e.g. erected by County Councils), the expense may not be justified for routine use.

**Masonry Paint (including with lettering);** Where a support stone for a mileplate has to be painted for aesthetic reasons or to stabilise it against delamination, the type of masonry paint available through DIY stores is suitable. This would also be appropriate for milestones or supports that have been fabricated or cast with materials such as concrete or simulated stone. Where cost considerations and speed of work are important factors, masonry paint might be considered for late 19<sup>th</sup> century and all 20<sup>th</sup> century milestones (e.g. those erected by County Councils). If the carved legend has been lost and new lettering must be painted on the surface, the use of masonry paint may be an appropriate and proportionate to the residual value of the stone.



**Cleaning;** Support stones that have not previously been painted may just require cleaning to remove vegetative growth and dirt.

## **5. General Principles**

The general principles of site working and cleaning of the stone before surface treatment are applicable to all these examples and are outlined in the Milestone Society “Guidance on Conservation of Milestones & Other Waymark Features”.

## **6. Milestone Society General Policy on Painting of Milestones**

Based on the considerations above the overall principles that should guide policy on surface coating and painting of milestones are;

- Milestones should be conserved taking account of their exposure to harsh environment by the roadside, the uniqueness and age of the individual marker and the stability of the stone.
- This will normally involve cleaning and painting the stone white before highlighting the letters in black (except where the stone is light coloured and very stable).
- The cost and sophistication of the surface treatment, including painting, should be proportionate to the value, uniqueness and age of the marker.

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prepared by Alan Rosevear; 8<sup>th</sup> Dec 2009.