



Briefing 11/34 July 2011

Service life of surface treatments – ADEPT / RSTA

To: All contacts in England, Wales, Scotland and Northern Ireland

Key issues:-

Average service life of surface treatments identified

Impact of other factors considered

Important information for asset management plans

1. Introduction

ADEPT (Association of Directors of Environment, Economy, Planning and Transport) and RSTA (Road Surface Treatment Association) have jointly produced a document looking at a number of common surface treatments and provided details of factors which should be taken into consideration when putting asset plans lifecycle plans in place.

The document begins by noting that having an agreed service life for surface treatments is an essential element of lifecycle planning for highways practitioners with regard to asset management depreciation requirements, valuation and Whole of Government Accounts.

2. Methodology and definition

A workshop was held which brought together members of the RSTA and members of ADEPT representing both materials technical specialists and asset managers. Their job was to seek agreement as to the expected service life of the surface treatments under consideration.

The document defines service life of a surface treatment as “its expected lifetime or the acceptable period of use in service. It is the projected life remaining (in years) of a newly installed treatment under normal loading and environmental conditions before replacement or major rehabilitation is expected.”

The surface treatments looked at in the document are surface dressing, microsurfacing; surfacing; and high friction surfacing. The workshop group reached consensus on the service life that each treatment could attain if everything was undertaken in accordance with required practice.

Each surface treatment was considered against the following headings:

- Description/Definition
- Service life
- Guidance to follow to achieve life
- Key compromising factors
- Failure modes
- Notes

Both 'designed' and 'evolved' roads were considered but that for surface treatments this was not deemed to be a differentiator and hence not an issue. It could, however, warrant mention as a compromising factor.

3. Summary of agreed figures

Surface treatment	Service life
Surface dressing <ul style="list-style-type: none"> • Low to medium traffic • Medium to high traffic 	15 years 10 years
Microsurfacing <ul style="list-style-type: none"> • Carraigeway • Footway 	10 years 15 years
Slurry surfacing <ul style="list-style-type: none"> • Carraigeway • Footway 	6 years 10 years
High friction surfacing <ul style="list-style-type: none"> • Hot applied • Cold applied 	4 years 8 years

Recommendation

The recommendation from the report is that all highway authorities should use the service life for surface treatments figures when producing lifecycle plans for asset management and to support WGA financial reporting unless, or until, robust local data is available that demonstrates a different level of performance on their roads.

4. Comment

Asset management is a fundamental area for highway managers and the production of information of this sort is a very valuable tool.

Clearly this work is based on the average service life of a specific treatment and a typical set of circumstances. Highway managers and engineers will know only too well the impacts of severe weather on the highway asset over recent years and how other factors can affect service life such as usage levels, the quality of workmanship when surfaces are laid and the sub-structure. All are difficult to predict or can be unknown to some degree yet can reduce or extend the average life of the asset.

The use which these figures are put to is crucial of course because if they are used purely as a valuation tool, an opportunity will be missed. Those responsible for laying and maintaining

the highway are held accountable for the quality of work they provide and value for money in general. This kind of information must be used to ensure the public pound is spent appropriately and that there are procedures in place if that does not occur. For example if a road is laid with an expected service life of 10 years yet it needs replacing within 5 what does that say about a) the quality of the workmanship in laying and maintaining it and b) other relevant factors such as the materials used, weather conditions predictions about usage, etc.

Figures such as those included in this document provide a template upon which contracts and performance levels should be based. The definitions noted in the document and highlighted above at 2. allied to the service life periods noted in the table provide a specific duration for individual surface treatments although the limitations on such 'average' figures is accepted.

The inclusion of information on other factors and their affect on service life is further useful information such as incorrect preparation of works. These can help to predict service life by combining a number of factors. Of course there will never be a method by which the lifetime of a road can be predicted accurately without foresight of future events or unknown information but if the idea is to manage assets lifecycles as accurately as possible then attempts should be made to consider all factors.

The document draws attention to the importance of having relevant asset data in place and this is an issue which APSE has highlighted regularly in the past. There is a responsibility on councils to collect and maintain data on the state of all of their assets including highways assets and those councils considered good practitioners will have been doing this for a number of years. The current budget restrictions mean it is difficult to get councillors to agree to spend on projects which can be expensive when first commenced and often need a long time to produce results in terms of savings in reactive maintenance. Data collection for highways asset management can fall into this category but it is something which will produce efficiency in service provision over the long term. This will of course be a local decision and one weighed against many other priorities but highways managers will be able to make a sound case for investing in the highway service considering the contribution made by the highway asset to the local economy.

It is important that poor surface performance is not blamed when the real reason for problems emerging might be that the road was poorly laid, may not have been maintained or materials were sub standard. The importance of relevant data is again vital here.

Irrelevant of who provides the highways service, the council is responsible for it and should be collecting relevant data such as that noted in this document or making sure its contractors do the same.

The full document is found at

<http://www.rsta-uk.org/downloads/RSTA-ADEPT-Service-Life-document.pdf>

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