

Subject:	Road Surfacing Review 2019/20 (Windsor)
Reason for briefing note:	To provide the Windsor Town Forum with a review of the road resurfacing programme for 2019/20 focussing on the surfacing dressing programme, including recommendations for remedial action at sites which have failed.
Responsible officer(s):	Ben Smith Head of Commissioning – Communities
Senior leader sponsor:	Hilary Hall Deputy Director: Strategy & Commissioning
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SUMMARY:

1. As requested by the Chairman of the Windsor Town Forum, this paper offers a review of the resurfacing sites programme and a broader review of the surface dressing element (2019/20).
2. The review identifies sites that have failed; proposed improvement works and programme dates.
3. The broader review explores the adopted Highway Asset Management Plan and policy approach to the use of surface dressing.
4. Recommendations on the future use of this treatment type with its viability within the 'Tool-Kit' of treatment is also covered.
5. The advises the approach which has been adopted, including:
 - that all failed areas be retreated during May 2020.

Surface dressing remains part of the 'Toolkit' of treatment types but is limited in its use:

- only be laid in the spring / summer months in appropriate weather conditions;
- only be laid on rural roads
- in urban and residential areas, surfacing dressing should be laid using a 'lock down' treatment to avoid excess chippings.

1. BACKGROUND

A full review has been undertaken following delivery of the resurfacing programme, focussing on the surface dressing element (2019/20).

In 2019/20 £1.9m was invested in road maintenance. An element of this funding was spent on surface dressing (approximately £340,600), to tackle roads that are identified as part of the annual road assessment programme as structurally sound but with low skid resistance.

An element of the programme (less than 2%) have partially failed due to the problems with the binder. This has been acknowledged and accepted by the contractor and will be rectified during May 2020 when temperatures are optimum (as the treatment is weather dependent). Repair costs will not be incurred by the Royal Borough.

To provide context, approximately 80,700m² of surface dressing has been completed with failures occurring on less than 2% (1540m²).

2. EXISTING POLICY

It is essential that the approved funding is invested in the most advantageous and cost-effective manner to prolong the asset life of the highway network.

Carriageway and footway assets are the most asset that the Royal Borough holds. When valued in 2016/17, the 650km road network was valued at approximately £1.2 billion.

Maintenance, and improvement, are essential in delivering corporate strategic priorities; achieving high levels of customer satisfaction and protecting the community from the risk of injury, loss or damage.

To ensure that funding is invested efficiently and effectively, an asset management approach to road prioritisation has been adopted.

This has been developed and implemented in conjunction with, the Department for Transport incentive fund trial (introduced in 2014) to reward councils who demonstrate they are delivering value for money in carrying out cost effective improvements and good asset management.

As a result of our approach (detailed below); in April 2019 the Royal Borough was awarded Band 3 status (highest level possible), which has secured the maximum level of incentive funding available £2.12m. Band 3 status has secured additional funding of £110,000 which would not be available if awarded Band 1 or Band 2 status.

Treatment Decisions

One of the key factors in good asset management, is to make the right treatment decision.

Data on the boroughs classified roads are developed using vehicle mounted SCRIM and SCANNER surveys (SCRIM relates to skid resistance and SCANNER to conditions such as profile, rutting and cracking). This technical data informs decisions and prioritisation. Surveys are completed annually on all the borough's A, B and C roads.

In addition, all streets are subject to at least an annual visual site inspection - frequency is dependent on their category. All safety defects are recorded and actioned. If the road regularly needs attention and is beyond economic level for revenue repairs, the road will be assessed for major patching or other surface treatment appropriate to the deterioration.

The table (1) below shows the rag status categorises the Boroughs classified roads

Condition	Description
Red	Roads where structural maintenance should be considered
Amber	Roads where preventative maintenance should be considered
Green	Roads in good condition

Table (2) below show the current Scanner & CVI Carriageway current and target condition summary

Condition Band	Current Carriageway Condition			Target Carriageway Condition		
	A Roads	B/C Roads	U Roads	A Roads	B/C Roads	U Roads
Red (PI)	5%	6%	8%	5%	6%	8%
Amber	27%	31%	50%	30%	20%	40%
Green	68%	63%	42%	65%	74%	52%

Current performance indicators (red zone) is very good both regionally and nationally. On this basis, and in accordance with our adopted Asset Management approach, we have set performance indicator targets which represent a 'steady state' situation.

We have targeted improvements in the percentage of the network in the amber zone and adopted a 'prevention is better than cure' proactive approach. This is endorsed by the Highways Maintenance Efficiency Plan (HMEP) and is generally considered to be best practice. The approach prevents roads reaching the red zone and minimises disruption to the road user and the need for reactive maintenance such as pothole repairs.

Deciding what treatment is best value for the carriageway from the suite of treatment options available (Table 3), both in the short and long term, is based on a series of factors.

It should be noted however that it is not the intention of the Royal Borough to deliver a 'gold plated' planned maintenance service that eliminates all roads in the red condition zone. This would be extremely expensive, and the entire available budget would be focused on a very small percentage of the network.

Instead, as per HMEP guidance, we take a balanced approach to addressing deep structural repairs (in the red zone) and applying preventative, thin surfacing treatments (in the amber zone). In this way we can prevent roads in the amber zone become red through early intervention with cheaper treatments. This is often cost effective and minimises disruption.

Table 3: The Royal Borough's current suite of treatment options

Condition	Carriageway treatments	Approx. material cost (£)
Red	Plane and Resurface – full construction on classified roads that have structurally failed and beyond preventative treatment)	£19.00 per m2
	Thin resurfacing – for unclassified roads that have structurally failed.	£16.00 per m2
Amber	Surface Dressing (chipping and binder treatment)	£5.00 per m2
	Surface Dressing plus lock down (in urban and residential areas) – Chipping and binder overlaid with a coating to lock in the chippings.	£7.00 per m2

Surface dressing is a widely used surface treatment that is recognised nationwide and allows effective management and prolonged life of the carriageway, which makes best use of the available funding.

Surface dressing has in the past made up a large proportion of the resurfacing programme as it allows the Borough to tackle large stretches of road that are structurally sound but are skid deficient.

This treatment increases skid resistance and protects the surface course from water infiltration, which is one of the main causes of failure, in turn prolonging asset life.

The advantages of Surface Dressing are	The Disadvantages of Surface Dressing
Quick and economical way of sealing cracks reducing the likelihood of potholes forming.	It does not remove undulations or regulate uneven surfaces or correct structural defects in a road or footpath (rutting or potholes need patching).
It improves grip (chippings provide a new, skid-resistant surface).	There will be a slight initial increase in traffic noise because of increased surface texture although this will reduce over the first few months as the chippings become embedded.
It can be applied to any class of road or footpath.	Roads often appear to be in reasonably good condition when treated and it may not be clear to road users why they are being treated.
It reduces the risk of aquaplaning on roads, thereby helping to reduce the possibility of accidents.	There will be some loose chippings.
It can extend the life of a road by up to 10 years.	There is a need for temporary speed restrictions to remain in place for 2-3 days after completion of surface dressing, due to loose chippings from the new surface before they are properly embedded.
It maximises the use of limited highway maintenance funding (costing only around 1/3 of conventional resurfacing).	Surface dressing is a weather sensitive process and hence works can be delayed by both wet, cold and very hot weather.
It leads to less congestion to road users because of the speed at which the works are carried out.	It is not as pleasing to the eye as a more substantial Plane and resurface.

3. CUSTOMER SATISFACTION

In parallel with technical factors, it is critical to understand customer perceptions and satisfaction to deliver a high-quality service. In addition to our residents' survey, the Royal Borough has participated in the annual National Highways and Transport (NHT) Benchmarking Survey, since 2013. 113 local authorities participate, and detailed questions are asked of approximately 3300 Royal Borough residents. This allows highways authorities to measure and compare service performance on a common and consistent basis and to learn from one another by sharing good and innovative practice. In 2019 RBWM were rated 15th out of 113 local authorities for the condition of our roads.

4. CONCLUSION

A full review has been completed of the surface treatment programme (2019/20) to identify areas requiring remedial works and the reason for the failure. This review has identified that failures in surface dressed areas has occurred:

- (i) Where there are high turning movements (junction) and the treatment has worn.
- (ii) The treatment was laid in late August in sub-optimal weather conditions

The Royal Borough has a statutory duty to make sure high-speed roads have a minimum level of skid resistance. Surface dressing allows an effective response to these road safety issues.

In addition, this treatment allows the Borough to protect long stretches of roads that are structurally sound and do not warrant an intensive treatment but either have poor skid resistance or the surface course is starting to fail.

Large volumes of requests to resurface roads are received. Many of these requests do not technically warrant a full resurface. However, they are aesthetically poor which is recognised as an important factor in terms of customer satisfaction. Surface dressing which is 'locked down' enables areas to be addressed in a cost-effective way.

Surface dressing is a critical part of our maintenance approach. If use of surface dressing was discontinued, overall condition of the road network would deteriorate significantly and more quickly, which in turn could negatively impact on safety and result in an increased liability for claims resulting from skid deficient roads.

5. RECOMMENDATIONS

Details of the failed areas are set out below and recommended that all failed areas be retreated during May 2020.

Location	Failed area	Comments
B376 Horton road, Datchet	250m ² on high stress areas.	Retreat failed areas May 2020
Staines road, Old Windsor	500- 1000m ² stripping in high stress areas	Retreat failed areas May 2020
Winkfield road, Windsor	20m ² LEGOLAND roundabout	Retreat failed areas May 2020
Woodland park road, Maidenhead	50m ² in 2 high stress areas	Retreat failed areas May 2020
Broadmoor road, white Waltham	50m ²	Retreat failed areas May 2020
A4, Maidenhead	By the A404 and further areas by the bridge 150m ²	Retreat failed areas May 2020
Hills lane, Cookham	50m ² on the bend	Retreat failed areas May 2020