APPENDIX B - Treatment Options

The content below aims to provide members with additional background which explains in more detail the range and benefits of the treatment options available and used in Moray.

1   Treatment Options

Carriageway maintenance treatments can be grouped in to 3 broad categories;
• Surface Dressing
• Resurfacing
• Recycling / Reconstruction

Each has a different range of benefits and costs, and some are only appropriate under certain circumstances.

Surface dressing

Surface treatments include surface dressing and thin surfacing such as micro asphalts. These all involve laying a thin layer over the top of the existing road to seal the surface and restore grip, thereby extending the life of the road. They will also rectify surface defects like cracks and potholes, either as part of the treatment process or through pre-patching works done to the more significant defects in advance of the surface treatment.

This treatment is based on preventing damage from water getting into the road layers, and restores surface texture to improve skid resistance.
Surface dressing doesn't add any strength to the road, but it does maintain an already strong road in a strong condition for longer.
Surface dressing treatment costs approximately £3-5 per m2, instead of resurfacing which can be anything from £25-50 per m2.

Resurfacing

Resurfacing usually involves removing and replacing the existing road surface (although it is sometimes possible to lay the new surface on top of the old). Resurfacing differs from a surface treatment by using a thicker layer of material; usually at least 30mm thick and sometimes 100mm or more if several layers of the road are replaced.
Resurfacing restores the road surface to a new condition, removing surface problems and most unevenness.

Reconstruction

Rebuilding works like recycling or reconstruction involve digging down to repair or replace some or all of the foundation layers of the road and then putting a new surface back on top. Limited areas of reconstruction are sometimes used to solve localised problems as part of a resurfacing scheme.

The different treatments offer a different range of benefits. Selecting the right treatment for a particular road will depend on many things including the condition and construction of the road and the amount and type of traffic that use it. Each situation is unique and a number of factors are considered to ensure road needs and treatment are considered on its merits.

The range of treatment options available which are commonly used throughout Moray are highlighted in a series of photographs, see below, which provides a brief summary of what is involved in the works.

Surface Dressing

Before	Cracks are visible in the old road surface – the dressing will fill and seal these.	
After	The same road during the surface dressing process. A layer of hot bitumen list sprayed fist followed by a layer of stone chippings.	

Recycling

During	The recycling process starts by breaking up the old surface	
During	The picture on the right shows the heart of the retread operation; the broken up material is remixed and leveled on site with additional binder to create a suitable base for the new surface.	
After	The same location is shown after the surface dressing stage is complete	

Resurfacing / Reconstruction

Before	The old surface was heavily cracked because it had become old and brittle. Because of the nature of the road and the degree of cracking, the surface needed to be replaced, not just sealed.	
During	The first stage is to remove the old surface, this is carried out by a planing machine. The new surface is laid by a paving machine using hot material delivered in insulated lorries. The paver lays it in an even layer out of the back of the machine.	
After	The completed surface	