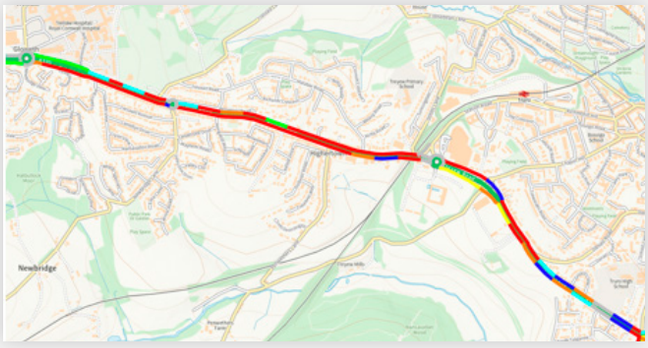
Driving Innovation
in an ever changing world

Carbon Lifecycle

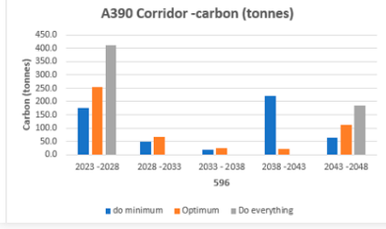
Carbon lifecycle planning is the process of taking a long-term, considered view of the cost, in terms of tonnes of carbon used, of maintaining infrastructure. This may be on a network level, an individual road level or on a smaller section level.

Irrespective of the scale, the approach is predicated on the minimisation of carbon used over time and as such there is an intrinsic link to financial cost which makes the use of existing lifecycle modelling software possible, provided certain input parameters are quantified in terms of carbon or C02.



We are familiar with looking at our roads in terms of their historic financial cost so why shouldn't we also consider the carbon cost too? When setting out to undertake lifecycle modelling of carbon it is important to consider the amount of carbon that is already embodied in the infrastructure. This is not just a legacy cost; it is also a carbon cost that has been paid and therefore needs to be protected.
The management of carbon is not a short-term undertaking. Net zero is a necessity and it will take time, effort and intelligent use of data that we already have to make it a reality.

WDM's data collection vehicles; Deflectograph, SCRIM and RAV (SCANNER) produce a wealth of data that when used intelligently in an asset management system such as WDM's suite of software enables the user to understand the long-term effects of different treatment strategies both in terms of financial cost and carbon costs, including any provision for offsetting.



25 year carbon usage

Do minimum	531T
Optimum	479T
Do everything	596T

The cheapest cost in terms of carbon may not be the cheapest financial cost but if taken as part of an integrated overall lifecycle approach it will enable intelligent funding and treatment decisions to be made which will ensure that we are on the right road to net zero.

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The Data View mapping tool allows multiple datasets to be easily overlaid on Vector and/or Raster maps, which makes scheme identification easy. It is also possible to generate and overlay predicted schemes and these can then be graphically combined together to form realistic schemes using the Scheme Manager module. These schemes are optimised and ranked to produce actual Maintenance programmes.

The reporting and querying tools are very flexible. User defined filters can be applied to almost any attribute in the database to produce specific reports, which are then displayed on the maps, charts, text reports or exported to other applications/GIS if required.

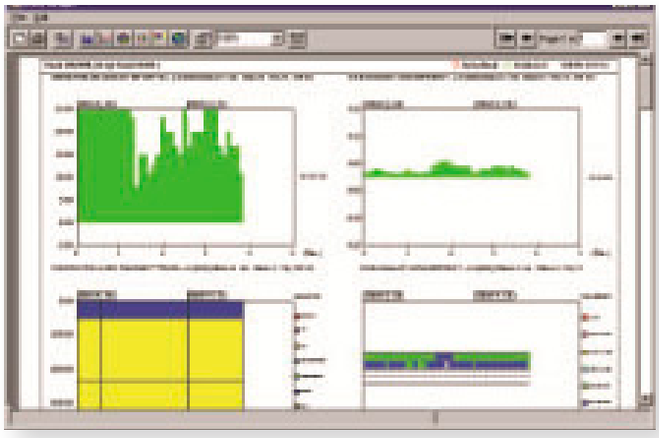
Print preview mode allows the user to see exactly what is to be printed and will represent the page size selected for any installed Windows printer.

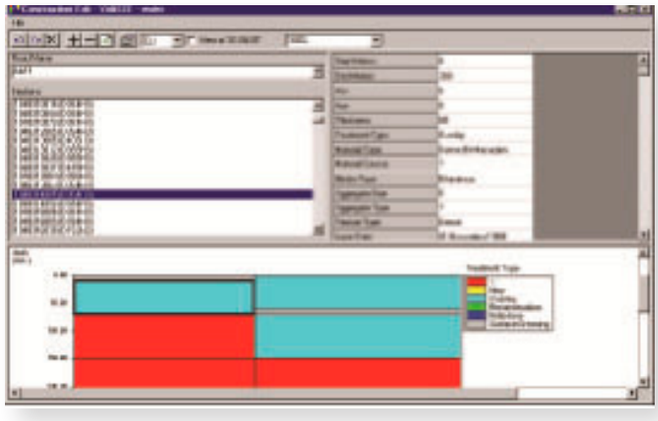
Where appropriate, graphical input and editing tools have been provided to simplify functions such as network editing, route building, construction management etc.

Network editing tools include splitting, joining, reversing and co-ordinating of sections. Creating network shape is carried out by simply drawing on any map type using the mouse.

The Calculation tool supports trending of raw data to any date. Fixed-length or scheme based summarising methods are applied to the raw data and this will take account of repair histories and maintenance policies to produce a ranked list of schemes/costs required to achieve the policy.

The user is then able to use the Budget tool to investigate over a period of up to 10 years, the effects of different cost profiles under the various budget headings. The results can be plotted to demonstrate the effects of underspend.





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