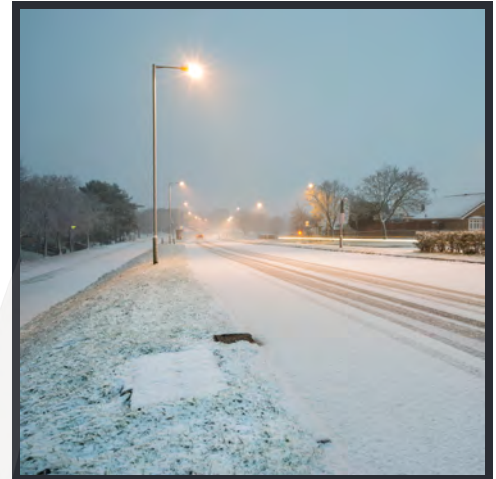


GRITTING ROUTES REDUCED BY ROUTE OPTIMISATION

THE PROBLEM

Walsall Council was looking to maximise its winter maintenance budget by reducing the number of winter gritting routes. It approached KaarbonTech to replan its routes for greatest productivity.



THE APPROACH

Using GIS data, KaarbonTech analysed the routes driven on each gritting run across the borough. With each route taking just two and a half hours, this provided sufficient man hours to increase the time on each run and remove one gritter and driver from the operational plan. Polygon shapefiles were created for all roads of importance across the borough displaying the topography to ensure all priority and high-risk roads were included in the schedule. Consideration was given to any network constraints such as one-way and narrow roads and turning restrictions using OS data.

The client requested that some additional, previously excluded routes were added to the new route plan. Finally, we advised where the drivers should gritting and where further cost savings could be achieved by pausing gritting when travelling over low-risk roads or on route overlaps. A new route was proposed for each gritter – each route operating over an additional hour and a half.

THE RESULT

The gritting routes were optimised for maximum performance and associated cost savings realised. As a result of the new improved plan, one route was deleted, meaning one fewer gritter in use with a significant saving in labour and vehicle maintenance.

