

ADEPT President's Awards 2023

Entry form

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Award category	Delivering Clean Growth
Project Title	Hampshire Highways Carbon Strategy
Local authority entrant	Hampshire County Council
Partner/s if applicable	Milestone Infrastructure

Headline summary (150 characters max.)

Delivery of the industry leading Hampshire Highways Carbon Strategy continues to drive clean growth in pursuit of carbon net zero by 2050.

Video - please paste links to any video evidence here. (Leave blank if not relevant.)

<https://www.youtube.com/watch?v=D2QcrojWxVI>

Delivering clean growth: How is this project delivering clean growth, not just now but into the future – demonstrating ambition and vision, anticipating future challenges and future proofing growth including developing the workforce for the future? (150 words max)

Working collaboratively, Hampshire County Council (HCC) and Milestone Infrastructure (MI) have set a bold ambition to reduce carbon over the life of the existing highway services contract. Together they have committed to a Hampshire Highways Carbon Strategy that aligns the service with HCC's target for Hampshire to be carbon neutral by 2050.

The Strategy focuses on delivery of the highway service and identifies a clear pathway to reducing carbon, committing both parties to significant investment that will bring a lasting change in service delivery. It identifies where innovative approaches to reducing carbon will be trialled to meet the carbon neutral objective.

Working together the parties have established a Carbon Innovation Group (CIG) and provided carbon reduction training to their staff. HCC have also amended the highway specifications and standard details, so the use of low carbon alternative materials is promoted in 3rd party works including developers and utility sponsored works.

Delivering clean growth: How is this project working across boundaries and with different partners to achieve long lasting clean growth? (150 words max)

In line with the Carbon Strategy, the Micheldever Road Materials Recycling Facility (MRMRF) opened in June 2021.

Designed and constructed in collaboration with OCL Regeneration, the facility reduces disposal of asphalt waste containing coal tar, turning it into a sustainable and commercially viable highway specification product. Produced at lower temperatures it provides a 40% energy saving compared to conventional hot asphalt products.

The initial target was to process 15,000t of material, save 230t of carbon and produce £300k in financial benefits in the first year. The facility has gone on to process over 35,500t of recycled materials, save 700t of carbon, produce a £4m saving in waste disposal cost and earn £150k in direct income.

We have demonstrated the facility and its benefits to other highway authorities who are working on replicating the approach. Through promotion to developers and utility companies the products are being more widely used across Hampshire.

Delivering clean growth: How is this project proactively engaging with business to tackle problems and find solutions, stimulating the clean growth sector at the same time? (150 words max.)

Through the CIG, we have hosted 2 carbon workshops with attendees from across the service and companies who work with us or who are interested in working with us.

We promoted best practice and invited the development of carbon reduction solutions from staff and supply chain companies. Some companies have joined the CIG to continue the collaborative development of new products and techniques. The CIG meets monthly to drive carbon reduction and assist in ongoing research and development of carbon reduction initiatives.

An example of this was a collaboration between HCC, MI and TMP Solutions (a traffic product manufacturer). Jointly we designed a bio-polymer bollard that replaces concrete or cast iron bollards and are now being used in Hampshire. The bio-polymer bollard has a negative -1.0 kgCO₂e/kg based on Scope 1 carbon, compared to 8.6kgCO₂e/kg for concrete. They also weigh 86kg less than traditional concrete bollards, reducing manual handling risks.

Delivering clean growth: How is this project going beyond the 3-5 year budget cycle to prepare for future challenges including the use or consideration of innovative funding solutions? (150 words max.)

Through investment in the permanent MRMRF we have a solution that is reducing costs and carbon for the long term. The facility is able to continually trial new products, such as in 2022 we have developed a recycled ancillary concrete that meets the highway specification requirements. Trials are ongoing with cement, however a low carbon alternative to cement has also been trialled for future use.

The products use less of the traditional materials present in highway construction and aren't as susceptible to price increases driven by the market. This provides a long term sustainable source of high quality highway construction products at a lower cost that goes well beyond the 3-5 year budget cycle.

The MRMRF delivers income into HCC through 3rd party sales. This income is increasing, as the demand for recycled and low carbon products grows. This is helping to support the future service as budget pressures increase.

All categories: please add anything else that supports your award entry

The Hampshire Highways Carbon Strategy is available to view at:

<https://documents.hants.gov.uk/highways/HampshireHighwaysCarbonReport2021.pdf>

Through delivery of the Hampshire Highways Carbon Strategy, we have already rolled out improvements in many areas. Notable initiatives include:

- Switched to warm mix asphalt rather than hot, which looks set to save 218.14tCO₂e.
- Transitioned our fleet from using diesel to hydrogenated vegetable oil (HVO) fuel, producing an approximate total saving of over 2,907tCO₂e to date.
- A phased adoption of electric vehicles, which has resulted in over 40,380kg of CO₂ savings thus far.
- In certain settings we use Bio Polymer kerbs instead of traditional concrete ones, these save 30.7tCO₂e for every 1000 metres of them installed.

Sustainable development is pivotal for the future of highways services, particularly when staffing and

funding pressures are a challenge. With that in mind, we are developing a new version of our Carbon Strategy which will take us through to 2029. This will set a fresh roadmap for delivering a more resilient and forward-thinking service.