CASE STUDY

Peterborough County Council enjoy benefits of footway Retread

Retread is a cold in-situ recycling process which reconstructs the entire carriageway or footway surface to a depth of 75mm. With increasing focus on sustainability, Colas' Retread process offers a low CO_2 emission alternative. By reducing the output of energy, emissions and waste, Colas are able to aid clients in significantly lowering their carbon footprint and cost.

Key Facts:	
Client:	Skanska via Peterborough County Council
Date:	April - May 2014
Location:	Peterborough, East of England
Duration:	9 days

Following a number of successful carriageway schemes throughout the year for Peterborough County Council, a decision was made to trial footway Retread on one site.

The council were well aware of the benefits carriageway Retread offers, but were intrigued by benefits footway Retread could offer such as reduced construction time, accessibility of driveways during the works and the excellent environmental benefits.

The works were carried out between the end of March and the beginning of April 2014, where 1,159m^2 of Retread was completed in 9 days. The site identified for the process was along the A15 Paston Parkway and was severely cracked from the bad weather in recent years. The site was very isolated with no access for vehicles and low tree branches. This seemed unsuitable for the Retread process, however, a specialised Fibredec sprayer was mobilised and used on site to spray the emulsion into the footpath. This proved successful, as the site was previously deemed unsuitable because of the no vehicle access.

The local residents appreciated the work carried out and were able to use the footway throughout the process, resulting in no complaints.

A diversion was set up to avoid as much disruption to pedestrians as possible which proved very successful.

Peterborough County Council were impressed with the time period the footways were completed in. With a small successful trial this year, there may be a bigger programme of works in the next financial year.

Savings – Tonnage of Materials

Site	Meterage (m^2)	6mm used (Tonnes)	Binder Retread C (Tonnes)	Wearing Course Laid (Tonnes)	Material removed from site (Tonnes)	Conventional surfacing 25mm (Tonnes) – Base Course	Conventional surfacing 50mm (Tonnes) – Wearing Course
1. A15 Paston Parkway, Peterborough PE4 7BT	1,159	10.22	2.0	104.62	120	136.35	68.18
Total	1,159	10.22	2.0	104.62	120	136.35	68.18

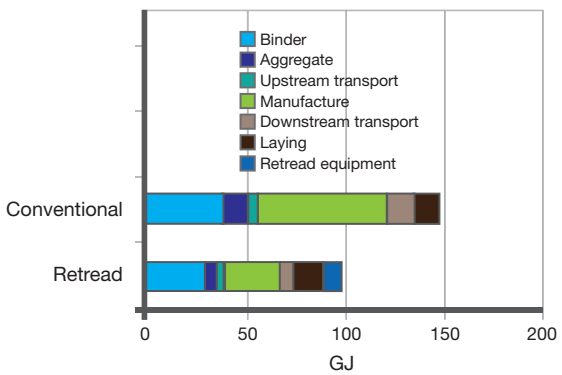
With conventional surfacing techniques, **68.18** tonnes would have been removed and then reintroduced back onto site. This would be **7** lorry movements/loads, using **20** tonne lorries.

Total Energy Consumption & Green House Gases

Conventional – Plane out 75mm & replace with DBM binder course and surface course
Retread – Plane out 40mm, retread & replace with 40mm surface course
Area – 1,159m^2

Structure	Binder	Aggregates	Upstream transport	Manufacture	Downstream transport	Laying	Retread equipment	Total
Conventional	37.2	11.4	4.7	65.9	13.4	13.7	0.0	146.2
Retread	26.8	6.5	2.6	33.9	9.8	11.7	7.4	98.8

Comparison of Energy Consumption

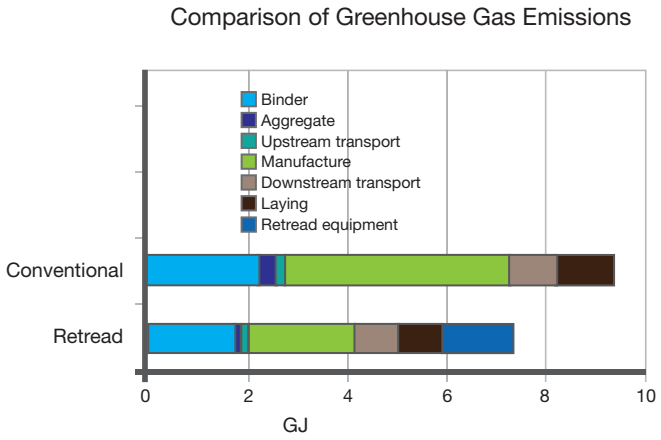


Before & after – path 1

Before & after – path 2

GHG Emission in Equivalent CO_2, tonnes

Structure	Binder	Aggregates	Upstream transport	Manufacture	Downstream transport	Laying	Retread equipment	Total
Conventional	2.2	0.4	0.3	4.3	1.0	1.0	0.0	9.2
Retread	1.6	0.2	0.2	2.2	0.7	0.9	1.4	7.2



The footway Retread process in action in Peterborough

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