

Carbon Neutral Case Study

Mander Centre Car Park, Wolverhampton

1,350 Tonnes of IKO Permapark, Mastic Asphalt incorporating IKO Permascreed

Project Description

Part of the redevelopment programme of the Mander Centre, involved remodelling the shopping centre and resurfacing the entire roof top car park to create the necessary parking spaces to accommodate the additional large retail units. IKO Permapark and IKO Permascreed were integral in providing the Mander Centre roof top level of the car park a refurbished, waterproof surface covering for over 500 parking spaces.

The removal and subsequent reinstatement of approx. 1350 tonnes of mastic asphalt waterproofing was required as reports of a leaking roof were disrupting the shopping centre situated below. The existing mastic asphalt surfacing from the early 1970's had been overlaid and patched with a liquid applied system and was becoming a potential trip hazard to shoppers, further degradation was leaving the structure vulnerable to future water ingress.

The new IKO Permapark Mastic Asphalt Waterproofing and Surfacing provided a new even, level surface protecting the structure against water ingress. IKO Permascreed was used as both a temporary waterproofing layer and a levelling screeding solution that assisted the speed of the entire installation (normally trafficable within the same day).

Keeping the car park open to shoppers was integral with phased work implemented (60 parking spaces per renovation). Work was also scheduled so that the majority of hot material was laid between 5am and 8am to avoid peak shopping periods.

Expansion joints were also replaced as part of the resurfacing work coordinated between Radflex Contract Services, Rio Asphalt & Paving Ltd and IKO PLC.

The net carbon footprint of this project is entirely offset using internationally approved carbon credits, which means for every tonne of Mastic Asphalt made, we are helping to fund environmental and humanitarian causes.



Impact Calculator: 1,350 Tonnes Mastic Asphalt = 211.38 Tonnes of CO² Offset

Impact Sector	Impact	Quantitative Data
Environment	Wood Saved	85.14 tonnes
	Clean Water Supplied	131,983 litres
Social	Number of Stoves	33
	Total People Impacted	236
Economic	Working Time Saved	2,192 hours
	Working Days Equivalent	274 days
Health (likely reduced cases from project support)	Respiratory Illness (Lower Chest / Lung)	25
	Asthma	623
	Ear, Nose and Throat Irritation	9
	Total Reduced Instances of Serious Illness Attributed to Indoor Smoke	57

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Location History

Located in the heart of Wolverhampton's bustling City Centre, there is an exceptional mix of stores in the Mander Shopping Centre. From small speciality shops to large high street favourites including; FootAsylum, JD Sports, New Look, H&M, Boots, Clarks, Starbucks, Superdrug, HMV and more.

The redevelopment programme commenced in January 2016, and concluded with the opening of the Debenhams in October 2017. The remodelling of the centre has created 10 new large retail units to complement the anchor store and ensure modern retail spaces appropriate for major multiple retailers are created.



Carbon Zero: <http://www.co2balance.com/>

The data from the Impacts are based on the field work carried out by CO2balance within the project locations in Kenya and Uganda. The data that is gathered is in line with the requirements of the Gold Standard as part of the annual Monitoring. These Monitoring Reports are available on request. Data is then cross comparable against national averages in Kenya to ensure accuracy.

Assumptions and extrapolations have been used where relevant. The Health Data is derived from the following sources R. Perez-Padilla et al, 2010. 'Respiratory health effects of indoor air pollution' in International Journal of Tuberculosis and Lung Disease, vol. 14 no. 9, pp1079-1086. Kenya National Bureau of Statistics. (2008). Kenya Integrated Household Budget Survey.

Ministry of Planning and National Development, p1-300. 3 Wood saved and clean water supply - Calculations based on field measurements conducted by staff contracted to CO2balance and are conducted according to the requirements defined by the Gold Standard. Monitoring data is available on the Gold standard registry.

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