# Carbon Neutral Case Study
# St Paul's Cathedral, London

416 Tonnes of IKO Permaphalt Adds Long-Term Durability to Famous Landmark

## Project Description

Sussex Asphalte renewed the asphalt to St Paul's Cathedral Stone Gallery replacing asphalt laid in 1906 (416m²). At 53m the Gallery's exposure to the elements and surface deterioration caused water ingress damaging artwork inside the Dome.

Successful project management and asphalt installation (in accordance with BS 8218:1998) were key to conserving one of the most important architectural structures in the U.K. Works were phased to enable continued public access to Stone Gallery sections.

The height and highly sensitive fabric of the building meant that all materials were transported to the Gallery via three hoists, requiring careful operation and management.

Asphalt was stripped and re-laid in sections to ensure watertightness. Stripping enabled the client to view the condition of the Portland Stone paving beneath the asphalt – this work revealed a disused stairwell that was made safe by operatives.

The Stone Gallery includes a central gutter covered by iron grills that were removed, cleaned and refitted on the new asphalt (122lm). To ensure the correct width of asphalt was applied a gutter template was fabricated and used as a guide by the asphalters, requiring skilled precision work. Other detail asphalt works involved adjustments to rainwater outlets to improve drainage, and vertical upstand into a chase, including a double angle fillet around the Gallery's circumference (286lm).

Through excellent project management, the works were completed ahead of schedule. Given the conservation and architectural significance of St Paul's, Sussex Asphalte hosted a successful site visit by a large group of surveyors to promote the roofing profession and asphalt installation by highly skilled craftsmen.

**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.**



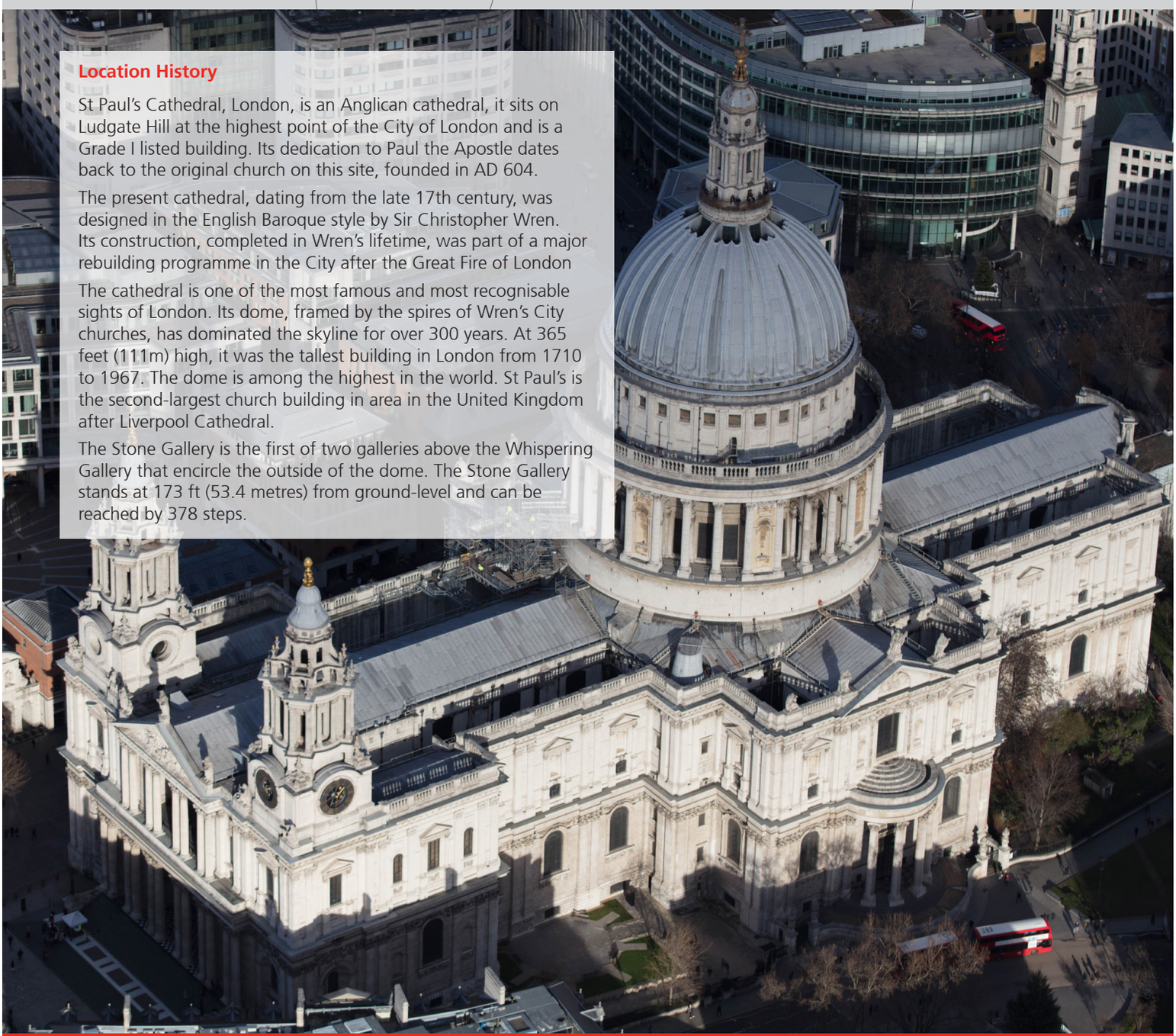

## **Impact Calculator:** 45 Tonnes Mastic Asphalt = 7 Tonnes of $CO^2$ Offset

| Impact Sector | Impact | Quantitative Data |
|---|---|---|
| Environment | Wood Saved | 3 tonnes |
| | Area Protected | 0.02 hectares |
| Social | Number of Stoves | 1 |
| | Total People Impacted | 5 |
| Economic | Working Time Saved | 67 hours |
| | Working Days Equivalent | 8 days |
| Health (likely reduced cases from project support) | Respiratory Illness (Lower Chest / Lung) | 1 |
| | Asthma | 1 |
| | Ear, Nose and Throat Irritation | 0 |
| | Total Reduced Instances of Serious Illness Attributed to Indoor Smoke | 2 |

sales.uk@iko.com t: 01257 255 771 www.ikogroup.co.uk

# Carbon Neutral Case Study
# St Paul's Cathedral, London

## 416 Tonnes of IKO Permaphalt Adds Long-Term Durability to Famous Landmark



### Location History

St Paul's Cathedral, London, is an Anglican cathedral, it sits on Ludgate Hill at the highest point of the City of London and is a Grade I listed building. Its dedication to Paul the Apostle dates back to the original church on this site, founded in AD 604.

The present cathedral, dating from the late 17th century, was designed in the English Baroque style by Sir Christopher Wren. Its construction, completed in Wren's lifetime, was part of a major rebuilding programme in the City after the Great Fire of London

The cathedral is one of the most famous and most recognisable sights of London. Its dome, framed by the spires of Wren's City churches, has dominated the skyline for over 300 years. At 365 feet (111m) high, it was the tallest building in London from 1710 to 1967. The dome is among the highest in the world. St Paul's is the second-largest church building in area in the United Kingdom after Liverpool Cathedral.

The Stone Gallery is the first of two galleries above the Whispering Gallery that encircle the outside of the dome. The Stone Gallery stands at 173 ft (53.4 metres) from ground-level and can be reached by 378 steps.

**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.

sales.uk@iko.com t: 01257 255 771 www.ikogroup.co.uk