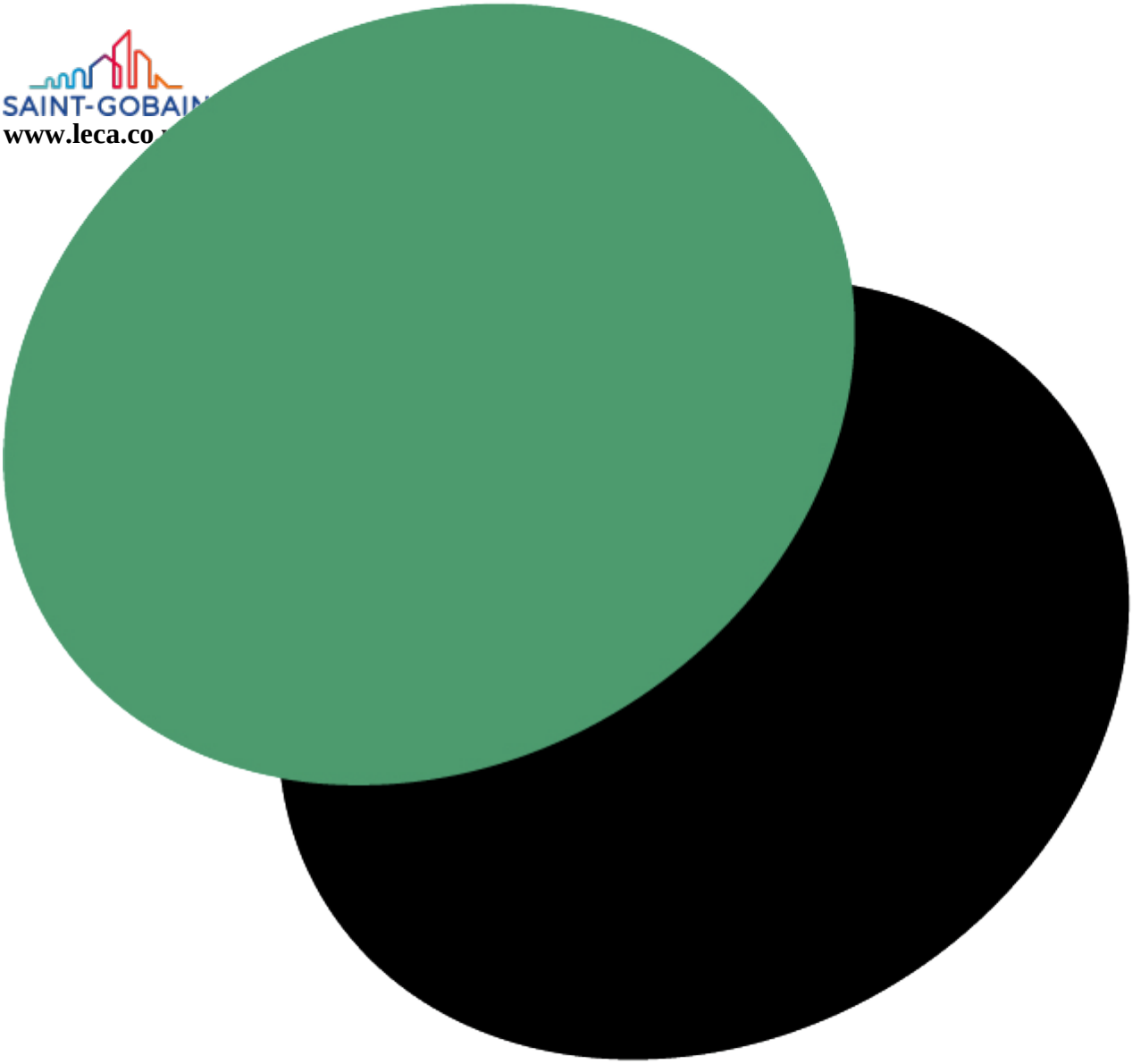

STIRRAT STREET RAIL BRIDGE | PAISLEY

The Stirrat Street Bridge at Paisley was removed and a new, low maintenance permanent-way structure was built to carry the track. As road traffic no longer passed below the bridge, it was determined that the void should be filled to enhance the embankment stability. However, the ground condition survey flagged up that

the foundation material in the area was not up to modern load bearing standards and that using traditional heavy fill would overload the existing ground base. Leca® LWA was selected to provide the void fill without overloading the support substrate.

When a rail bridge requires replacement, construction time is of vital importance. When the ground foundation material is found to be weak a lightweight solution is required. The low weight, high stability and speedy installation attributes of Leca® LWA solved both problems in the replacement of an old, wrought iron bridge structure in Scotland for Network Rail.

A totally natural product, Leca® LWA is formed by heating and firing natural glacial clay in a rotary kiln at temperatures up to 1150°C. This process transforms the clay into lightweight ceramic granules with a hard shell and porous core. With a bulk density of just 0.3 tonnes per cubic metre, Leca® LWA has excellent insulation properties, is free draining, fire resistant, frost resistant and chemically inert with no hazardous properties. Used as a lightweight aggregate fill in many civil engineering and construction applications Leca® LWA reduces the weight on weak substrates and against retaining structures by up to 75% over traditional fill and eliminates expensive settlement delays, is easily handled and quickly installed.

FACTS

Amount of material: 3500m3 of LECA ®LWA (10-20mm)

Interesting Fact: The Stirrat Street Bridge at Paisley was removed and a new, low maintenance permanent-way structure was built to carry the track.

Main Contractor: Network Rail