



WATERLOO RAIL REALIGNMENT

SURVEYING CASE STUDY

Network Rail

Network Rail is responsible for the enhancement and maintenance of the UK's entire rail network. The company is one of the country's largest employers with a 35,000 strong workforce. As the use of the UK's railway system expands, Network Rail continues to manage the network to ensure that it is safe and suitable for more and more traffic.

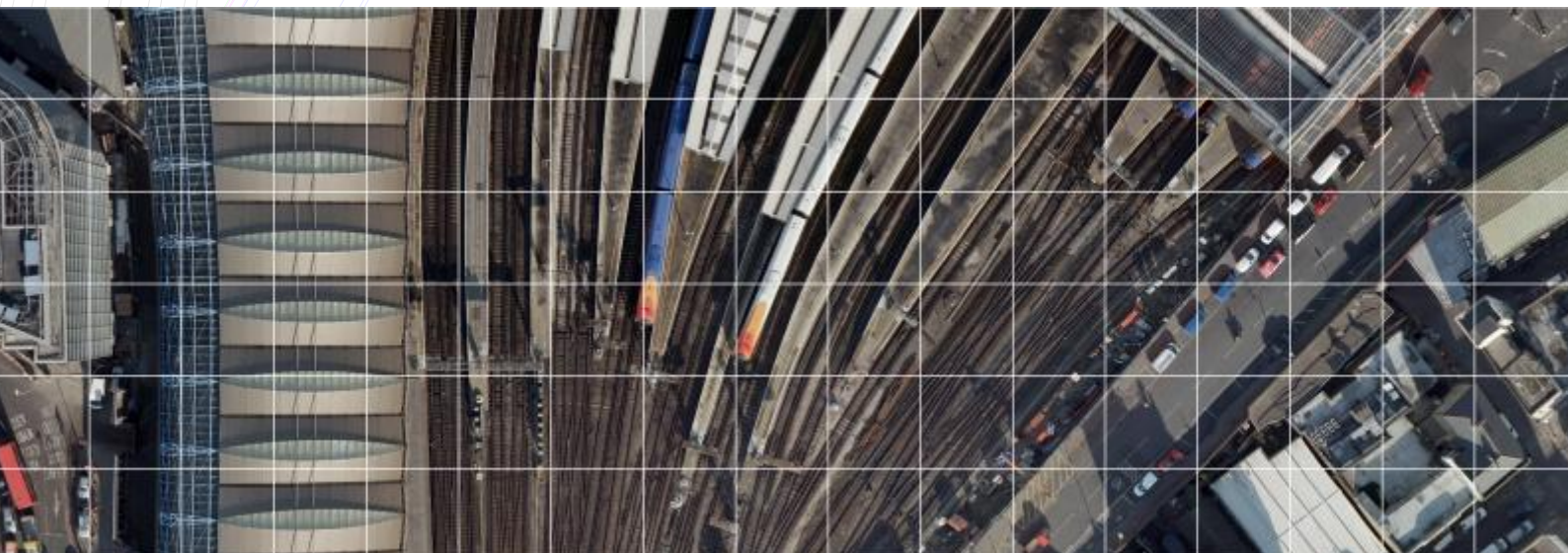
Eurostar Terminus comes to an end

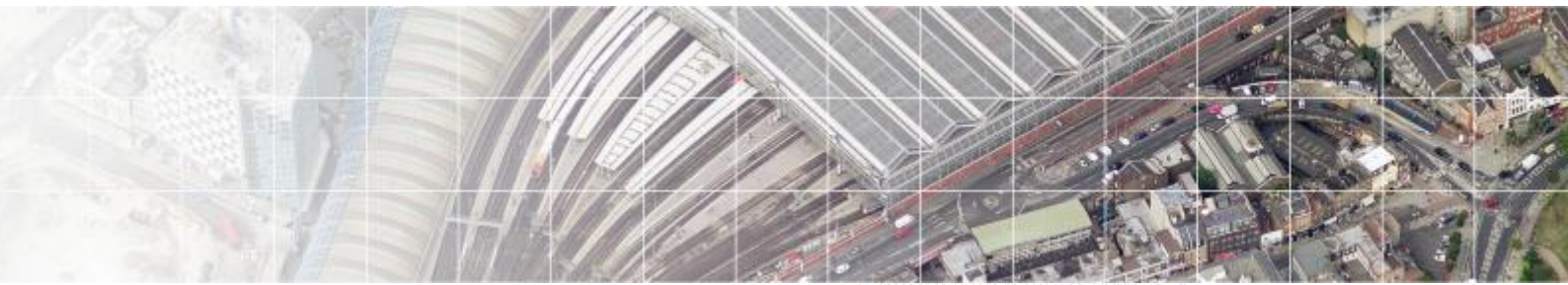
In 2008 the completion of the Eurostar terminus at St Pancras International Station presented Network Rail with a problem. Waterloo International Station had been home to the five platform terminus since 1994 and in order to avoid these platforms becoming redundant, Network Rail needed to re-engineer and integrate them into the national network.

Project difficulties

Network Rail required 1:500 mapping of a 2km section of the track on the approaches to Waterloo Station to enable the initial stages of this project. However, not only was this section of track part of one of the country's busiest routes but a large proportion of it was situated on a viaduct rendering traditional ground survey methods dangerous and also very expensive.

Network Rail approached Blom to devise a mapping solution with no disruption to the rail network and no risks associated with track access.





BLOM SURVEY SERVICES

SOLUTION AND BENEFITS

Customer:

Network Rail

Challenge:

The survey area covered 2km's of some of the UK's busiest rail track and line possession would prove very costly.

Much of the area was situated on viaduct and rendered traditional ground survey methods too dangerous.

Solution:

Having acquired a full dataset of 4cm resolution digital imagery of London in 2007, Blom proposed to use this off-the-shelf data to map the required area using photogrammetric mapping techniques.

Benefits:

The success of this solution was confirmed when, soon after delivery, Network Rail commissioned an extension to the original survey to include a further 3.8km of the tracks approaching Waterloo.

Technique:

Control - 24 off-track ground control points.

Data capture - Photogrammetric mapping from digital photography.

Delivery:

4cm resolution digital imagery.

Photogrammetric 1:500 mapping supplied in Network Rail's preferred file format.

Quicker

Photogrammetric mapping is faster than traditional ground survey.

Safer

No track access required, reducing danger and costs relating to safety.

Cheaper

Off the shelf imagery reduces delays in aerial data capture and requesting flight permissions.

