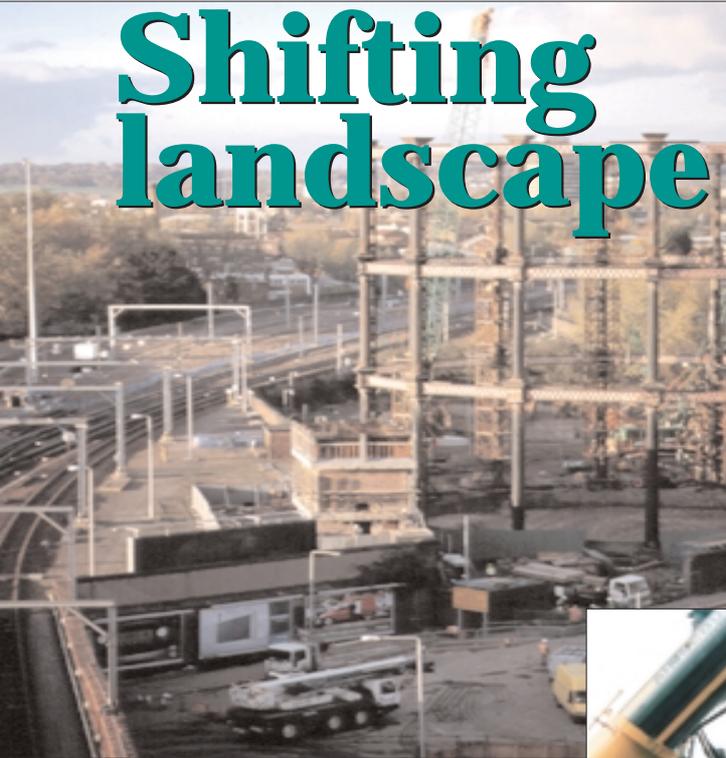


Shifting landscape



The first in a series of features bringing UK landmark projects into focus.



At last, after five years of wrangling, a major obstacle that has prevented work on the Channel Tunnel Rail Link from Kings Cross has been resolved.

A water point stood on ground that would need to be cleared for the new project. Built to supply steam locomotives with water back in the early 1870s, it was no ordinary building, but an exceptional example of Gothic architecture by Sir George Gilbert Scott, made to complement his impressive St Pancras station.

The owners, London and Continental Railways, agreed with English Heritage that there was no question that the building could be demolished and that it should be donated to the Heritage of London Trust Operations Ltd (HOLTOP). It was then HOLTOP's



Preparing for the lift at St Pancras

task to set up a project to move the structure to a safe site, 700 metres away.

The real problem was that, with such intricate stone work, the building could not feasibly be taken apart and rebuilt on a new site. The entire structure would have to be lifted.

Splitting the workload

Specialist contractors were brought in to cut the 5.3 x 8.9 metre tower into thirds. Only the lower section, which was embedded into the embankment, could be recreated, whilst the top two sections would be moved in their entirety to rest upon it.

Abbey Pynford, which has in the past moved a manor house up a hill and res-

cued the Belle Tout lighthouse from a crumbling cliff face, started work in June. Special cutting techniques were employed in the painstaking task of dividing the building. Two wraparound reinforced concrete

lifting beams were built, externally and internally, at first floor ceiling level and below first floor level. Temporary bracing inside the structure ensured that it remained rigid throughout the lift.

A challenging lift

Jim Parkinson Ltd (JPL), which specialises in difficult lifts, hired in two Demag cranes from Ainscough and Sarens UK Ltd. Abbey Pynford and JPL met first when moving the Cardiff Bay Customs House some years ago and have worked on some interesting projects together since. For this one, again, new challenges were posed.

To lift the water tower from its original

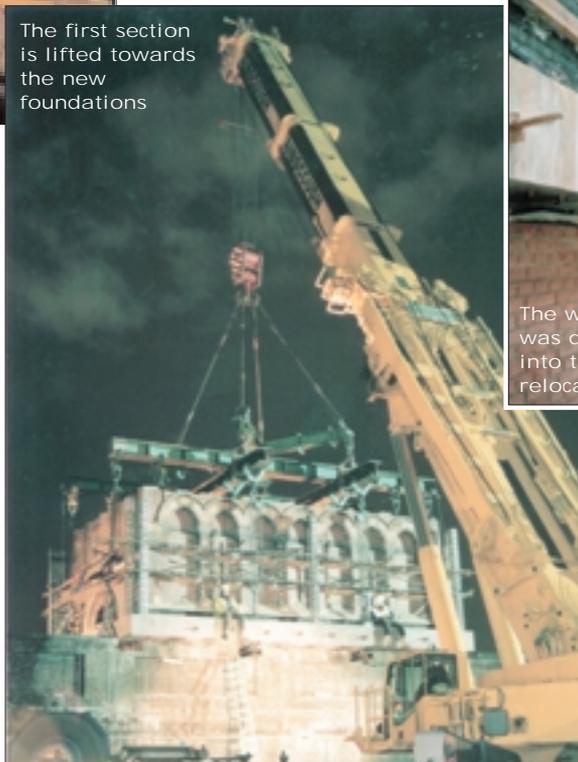


UK LANDMARK



Loading up a section for transportation

The first section is lifted towards the new foundations



The water point was divided into thirds for relocation

work area. The added obstacle of a nearby cottage meant that the job was further complicated, but the operators at work were highly trained and experienced, so managed to successfully

complete their brief.

The water point is now on a viaduct overlooking the St Pancras Yacht Basin. It will be used as a viewing area for the public and serve as an information resource. ■



position and load to a transporter, a Demag AC650 was employed, with 140 tonnes of counterweight and a boom length of 25.7 metres. The boom was kept short to avoid the risk of blocking the adjacent railway lines in the event of an accident. Space was too tight for load spreading mats, so Abbey Pynford drove in piles to support the crane's outriggers.

Moving the 130 year old building without damaging it was made easier for JPL by Abbey Pynford's 'concrete girdle' – but still, the girdle had to be uniformly lifted at 16 points. "This is the clever bit", says Jim Parkinson. "We (JPL) designed a combination of six lifting beams, with 16 chain blocks to provide infinitely adjustable sling length. Sixteen 'load link' tension cells monitored the load imposed at each lifting point."

Resting place

To place the building into its final

position, a Demag TC3200 with 148 tonnes of counterweight and a 30 metre main boom was used – but again there was a major problem with space. To deal with the restrictions, the superlift ballast and front near-side outrigger beam had to be in place before the crane was driven into the