

King's Cross St. Pancras Underground station development



Transforming your journey

Development progress 2006/7

Phase one work: 2001-2006

The first phase of work to develop King's Cross St. Pancras Underground station is almost complete. Here, we summarise what has been achieved and look ahead to the second phase of work.

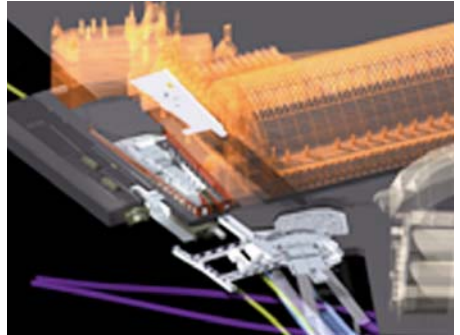
- 6700m² – worksite area
- 75,000 – tonnes of concrete
- 15,000 – tonnes of steel
- 4,000 – tonnes of stainless steel finishes
- 200,000 – 'heritage' bricks
- 25,000 – square metres of floor, wall and ceiling tiles and finishes
- 15 – interim station hoarding arrangements
- 36 – metres of trackside roof sliced off
- 300,000 – metres of cabling

Overview

King's Cross St. Pancras Underground station is being developed to cater for the growing numbers of people using it every day from 250,000 today to 420,000 by 2010. It is one of the oldest and busiest on the network and serves six Underground lines. It also acts as a gateway to London for those using national and, from 2007, international rail services (Eurostar).

The key objectives of the development are to:

- i) create additional capacity;
- ii) provide better interchanges;
- iii) improve facilities;
- iv) upgrade services and systems; and
- v) provide a fully accessible station for passengers.



Phase One drawing

The work is being undertaken in two phases. The first is virtually complete with the Western ticket hall opening to the public in 2006 and the refurbishment of the existing ticket hall complete.

Phase One development work

Overview

The first phase, a five year development began in 2001 to refurbish the existing Tube ticket hall and construct a new Western ticket hall.

The first two years were driven by enabling works – site clearance, utility diversions, excavations and building foundations. The following year saw the main construction get underway with the completion of main steel works below ground level.

In 2005, the two ticket halls commenced mechanical and electrical fit-out to complete this phase of the project by the end of 2006.

Tube ticket hall

Work undertaken 2001-2006:

- Extension of the Tube ticket hall
- Creation of a larger and more open space for passengers
- Construction of a new public subway underneath Euston Road
- Improved accessibility with new new staircases, lifts and escalators
- Improved facilities for staff and passengers with a new ticket office and station operations centre.



Tube ticket hall
Construction image



Tube ticket hall – Temp office design

Challenges

Keeping the station open during refurbishment

This was achieved by creating 15 small worksites, known as interim station arrangements, behind hoarded areas to carry out the work. For each new arrangement, temporary lighting, CCTV and PA systems had to be designed and installed and the passenger circulation routes were tested to ensure safety.

Maintaining customer facilities during refurbishment

Due to the space limitations in the existing Tube ticket hall, the ticket facilities were temporarily moved to street level from 2003-2006, onto the forecourt of King's Cross mainline station.

Upgrading and integrating technological systems

The CCTV, PA system, Help points and Fire Safety systems were upgraded during refurbishment. The integrity of these systems was maintained to ensure the continuous safe operation of station.

Western ticket hall

Work undertaken 2001-2006:

- Construction of a new ticket hall
- Step-free access to the Circle and Metropolitan line platforms
- Construction of link passageways
- Conservation of Victorian brickwork façade
- Improved facilities with a new ticket office and provision for retail outlets
- Refurbished platforms, concourse and access routes to the Circle and Metropolitan lines.

Challenges

Diverting major utilities

During construction a number of utilities, including sewers, gas, water, electricity, and telecommunications mains had to be relocated. The gas mains in particular involved considerable planning to divert pipes up to one metre in diameter.



WTH – Heritage façade



WTH – Gas main diversion

Excavating between two listed heritage structures

There are a number of architecturally significant structures in the King's Cross area, including St. Pancras Chambers, King's Cross station and the Great Northern Hotel. Environmental monitors were placed on all of these structures and 4,500 movement readings taken and analysed every week during construction.

Creating access routes underneath a major highway

A bespoke temporary bridge structure had to be constructed and laid over a 50m stretch of Euston Road to create the access passageway between the Western ticket hall and the Circle and Metropolitan line platforms. In addition, a lack of head height underground meant that 22m of the eastbound Circle and Metropolitan lines tunnel roof had to be sliced off and replaced with a thinner concrete material. This was achieved over a series of weekend station closures in December 2003.

What's new

The benefits from the completed phase one works include:

- 1 – new ticket hall
- 2 – new ticket offices
- 8 – new staircases
- 4 – new lifts
- 6 – new or refurbished access routes
- 5 – new or refurbished link passageways
- 1 – new station control centre
- 160 – CCTV cameras
- 46 – Help points
- 2 – new escalators



WTH – in operation



TTH – in operation

Six month look ahead – November 2006-April 2007

This section gives a brief overview of programmed activities over the next six months as forecast by the Project Team. All dates are based on current progress and therefore are provisional. The timescales shown will reflect November 2006 until April 2007. Some ongoing work will extend beyond the limits of this period. While every effort has been made to inform you of all programmed work over the next six months, from time to time it may be necessary to undertake tasks at short notice which are not covered in the information overleaf. In such cases and where possible, information will be communicated separately about these works and their anticipated impacts.

Phase one work – Tube and Western ticket halls

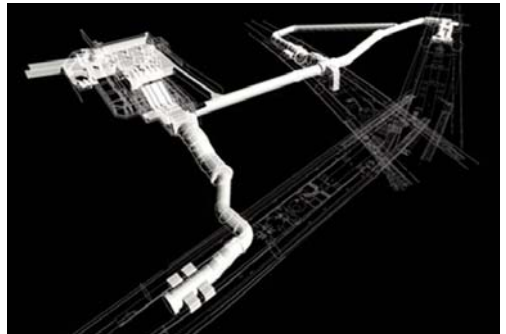
Overview

The first phase of work to refurbish the existing ticket hall and build a new ticket hall is virtually complete with all public areas now open and fully operational. Minor finishing works are taking place at night.

Phase two work – Northern ticket hall

Overview

Phase two of the work will create a new ticket hall to the north of the Underground station between the Great Northern Hotel and King's Cross station. It will improve accessibility and capacity with lifts and tunnels to the Northern, Piccadilly and Victoria line platforms.



Phase Two tunnels drawing

Key areas of work

Northern ticket hall concourse

Excavation of the Northern ticket hall concourse will be ongoing throughout the period. The floor slab for the ticket hall will be created five metres below ground level and access to the Northern, Piccadilly and Victoria lines, will be created 20 metres below ground level.



Northern ticket hall

Link Passageway and staircase

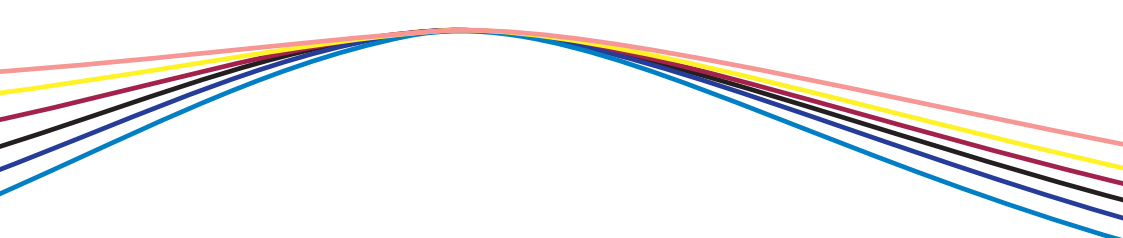
Construction of a new public subway linking the Northern ticket hall with the Tube ticket hall is ongoing. The steelwork structures for the floors, walls and roof are being put in place and encased in concrete to create the final passageway structure.

Pancras Road Traffic

A high volume of lorry traffic will be removing soil from the Underground's worksite in Pancras Road. The footpath directly in front of the Northern ticket hall worksite will temporarily close for safety reasons.

In summary

- Removal of soil to create the Northern ticket hall 20 metres below ground
- Construction of a link passageway from the Northern ticket hall to the Tube ticket hall
- Preparatory work for the link passageway access stairs, including diversion of a gas main
- Preparatory works to create a vent shaft to service the Northern ticket hall
- Construction of pedestrian tunnels from the Northern ticket hall to the Northern and Piccadilly line platforms.



24 hour public helpline

0800 169 5416



Website

tfl.gov.uk



Email

kingscross@cjassociates.co.uk