JULY 2010
CONSTRUCTION PROGRESS
THE NEW TYNE CROSSING
INDEX PLAN

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NORTH CUT AND COVER TUNNEL

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SOUTH JUNCTION

NEW TYNE CROSSING – CONSTRUCTION PROGRESS – JULY 2010
NORTHERN APPROACHES

Southbound Toll Plaza

Works undertaken to install drainage within June and highway pavements in mid July

Toll canopy structure in June. Blue cladding to be added mid July

Howdon Plaza Offices structurally complete

Toll Canopy

Toll lanes

Access ladders to canopy for maintenance

Photographs 29th June / 15th July 2010

NEW TYNE CROSSING – CONSTRUCTION PROGRESS – JULY 2010
NORTH APPROACHES
Howdon landfill restoration

Geo-synthetic barrier layer laid throughout June and July to prevent long term water ingress into Howdon landfill and subsequent release of contamination

Photographs 29th June / 05th July 2010
External refurbishment works complete. Internal refit progressing

Photograph 29th June 2010

NEW TYNE CROSSING – CONSTRUCTION PROGRESS – JULY 2010
NORTH TUNNELS
Installation of services

- Racks for communications, electrical supply, lighting and CCTV cables
- Mist system supply
- Fire hydrant
- Mist system delivery pipes

Photographs July 2010
NEW TYNE CROSSING – CONSTRUCTION PROGRESS – JULY 2010
RIVER WORKS

2 July 2010 North and South Tyneside meet beneath the River Tyne
RIVER WORKS
Inside Immersed Tube Units – view north

Reinforced concrete shear keys all completed in base, walls and roof to interlock immersed tube elements to maintain integrity of structure

Relative movement of units is prevented
Base shear key

Emergency escape door and recess for fire hydrant connections

Roadworks ongoing including installation of kerb drainage units

Photographs June / July 2010
NEW TYNE CROSSING – CONSTRUCTION PROGRESS – JULY 2010
EXISTING TUNNEL

Installation of new high voltage cable within existing tunnel void during tunnel closure for Howard Street Bridge demolition (5-6 June 2010)

Existing walkways to be demolished and new escape passage constructed

Proposed works to existing tunnel in 2011 following opening of the southbound tunnel

NEW TYNE CROSSING – CONSTRUCTION PROGRESS – JULY 2010
SOUTH SECTIONS

Aerial Photograph 29th June 2010

NEW TYNE CROSSING – CONSTRUCTION PROGRESS – JULY 2010
1. Service gallery - fitting out with cable trays and mist system pipes
2. Escape corridor – hydrant system and cable tray installation
3. Main tunnel – kerbs, road construction and drainage construction

Photographs June / July 2010

NEW TYNE CROSSING – CONSTRUCTION PROGRESS – JULY 2010
SOUTH TUNNELS
Sprayed concrete lined tunnel section 1

SCL1 Installation of fire protection boarding nearing completion

Photograph 6th July 2010
NEW TYNE CROSSING – CONSTRUCTION PROGRESS – JULY 2010
SOUTH TUNNELS
Sprayed concrete lining section 2 (SCL2)

Installation of fire protection boards around SCL structure ongoing

Disassembly of concrete formwork from final concrete roof pour

Photograph 6th July 2010

NEW TYNE CROSSING – CONSTRUCTION PROGRESS – JULY 2010
Tunnel backfilling operations typically complete to the southern end of south tunnels section
Final roof structure in location of SCL 2 under construction
**Overview**

**Approximate area of expanded polystyrene block formation layer**

**Existing carriageway built on reinforced concrete box structures (to be demolished or refurbished depending on location)**

**Location of original Howard St bridge (now demolished)**

**Loop road and P6 bridge now partly open to traffic (access to Jarrow from A19/A185)**

**South Extract Building**

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Aerial Photograph 29th June 2010

**NEW TYNE CROSSING – CONSTRUCTION PROGRESS – JULY 2010**
SOUTH JUNCTION
South Extract Building

Building structurally complete

Internal fitting out of mechanical (ventilation & mist system) and electrical (substation) equipment ongoing
SOUTH JUNCTION
Demolition of Howard Street Bridge
and existing tunnel retaining wall

Demolition work carried out over the weekend of 5th and 6th of June during tunnel closure.

Go to
http://vimeo.com/groups/bridges/videos/12707468
For time lapse video of bridge demolition

NEW TYNE CROSSING – CONSTRUCTION PROGRESS – JULY 2010
SOUTH JUNCTION
Expanded polystyrene infill

Expanded polystyrene (EPS) blocks built up to make formation layer over poor ground in location of existing south junction roundabout.

EPS encapsulated in water and chemical resistant material to prevent degradation of EPS blocks.

Photographs July 2010
NEW TYNE CROSSING – CONSTRUCTION PROGRESS – JULY 2010
THE TYNE PEDESTRIAN AND CYCLIST TUNNELS

The pedestrian and cyclist tunnels are the oldest of the four Tyne Tunnels

At a peak, twenty thousand journeys were made through the tunnels every day

The tunnels opened in July 1951 and will be sixty years old next year
THE TYNE PEDESTRIAN AND CYCLIST TUNNELS

The buildings and structures which form the pedestrian and cyclist link are tired and need repair.

Escalators, lifts and other equipment are unreliable.

The Pedestrian and Cyclist tunnels are Grade II listed and are being considered for an upgraded listing.
THE TYNE PEDESTRIAN AND CYCLIST TUNNELS

The escalators and lifts are beyond their design life

Three of the four original 59 year old wooden escalators are currently broken down

The small vertical lifts are being modernised at present, with only the north lift currently operational

Fire suppression measures were installed in response to the Kings Cross underground fire of 1987

The wooden escalators are identified as an important part of the listing of the structure

A vehicular shuttle service is currently being provided
THE TYNE PEDESTRIAN AND CYCLIST TUNNELS

The future?

Retain one escalator in situ on either side of the river

Provide a new inclined lift working with the modernised vertical lifts and alongside preserved escalator

Define the tunnels as part of the local transport family and the regional network
PRODUCED BY RICHARD OAKLEY, DAVID SWAINSON & STEPHEN TELFORD
FOR MORE INFORMATION VISIT
www.newtynecrossing.info

NEW CROSSING HOUSE

produced by richard oakley, david swainson &