

## Bo'ness Road Bridge

Chapelhall Junction has a new look after the Bo'ness Road Bridge was demolished earlier this month, 55 years after it was built.

When it was constructed in the late 1950's, Britain had just begun its programme of building motorways and significant 'A' roads after the Second World War.

Now however, the bridge that goes from north to south is too narrow to span the traffic which will flow along the new section of the M8 Motorway.

The old bridge allows only the two carriageways of the existing A8 beneath it. The new bridge will not only span the new section of M8, but also a new dual carriageway each side of the motorway which will be able to carry all types of vehicles.

The bridge was a year in the making. Works included treatment of mineworkings, piling, concrete works and the installation of impressive 140 metre span steel beams – an outstanding engineering operation in its own right.

In addition, a huge co-ordination effort was required to marry different trades, suppliers, utility providers and stakeholders.

Hector Martin, Construction Manager for this section of works explained demolition of the old bridge would take place over

two successive weekends in May as it is simply not possible to close one of Scotland's busiest roads. As a result the work needed to take place while traffic continued to flow underneath.

Mr Martin said: "This was a very challenging engineering project.

"We had to demolish one half of the bridge over the space of 30 hours, starting on a Friday night. Traffic is always lighter on a Friday night and Saturday night so we took the opportunity to do it then to keep disruption to a minimum. By the Sunday morning one half of the bridge was down.

"Then, the next weekend, we took down the other half. Everything was done with safety in mind, so there was no danger to the demolition crew or people using the road."

The second challenge to the road-building team is ensuring that all utilities are switched onto the new bridge on time.

Mr Martin added: "This was the result of a huge co-ordination exercise which could only go ahead with agreement from all of our stakeholders, including Police Scotland."

To watch a video of the demolition please visit the Transport Scotland website.



Southern half of the bridge being demolished



New bridge visible as old bridge is taken down

## Traffic Management Update

Major works are ongoing at Chapelhall and Shawhead Junctions. These included the opening of the new Bo'ness Road overbridge and the demolition of the old bridge. Contraflows on the A8 will continue at Shawhead over the summer to allow the Shawhead overbridge to be widened. Works will commence over the summer on the Eurocentral Junction with restricted access on link roads to allow the construction of the new M8 motorway between Eurocentral and Newhouse Junctions.

The B7071 Bellshill Road providing access from Raith Junction to Bothwell has reopened, providing direct access to Bothwell and Hamilton from the M74 motorway.

By the end of June, the new Raith roundabout will be in its final alignment while work continues on the excavation of the underpass. From the end of June, construction will begin on the new Bothwellpark Road bridge, on the M74 north of Raith.

New roundabouts are being constructed between Bargeeddie and Baillieston to allow improved local access between the A89 and A8.

For the latest information regarding traffic management, please visit the Transport Scotland website.

## Good Neighbour Fund Summer Bonus

Scottish Roads Partnership's Good Neighbour Fund is announcing a £1,000 summer funding bonus.

We are giving one organisation the chance to double the £500 grant, which is available through the initiative set up to support local communities in close proximity to the M8 M73 M74 Motorway Improvements Project.

Community groups have already started benefitting from the Good Neighbour Fund. Bellshill North Road Playgroup recently received just under £500 through the scheme and plan to create a memory garden as a lasting tribute to its founder.

The playgroup was set up by Margaret Gibb in 1975 and, more than 40 years later, it is still enhancing the pre-school education of local children through a safe and fun playgroup environment. Now the cash will be used to create a memory garden for Margaret, through the purchase of a garden box on castors, with chalk board, soil and tools.

Play Leader Sandra Gibb, who is Margaret's daughter, said: "We hope to create a colourful area with plants, outdoor equipment and areas

for habitat creation. This will be used as a learning tool for the children, as well as a welcome space."

A total of £15,000 has been set aside to offer payments of up to £500 to local groups and organisations through the Good Neighbour Fund.

The initiative was set up by Scottish Roads Partnership (SRP), Ferroviol Lagan Joint Venture and Amey.

Applicants must meet one of the following criteria: provide education and skills development; support a community initiative, group or charitable organisation; or benefit the local environment. Each application will be assessed by the Good Neighbour Fund panel.

Applications for the Good Neighbour Fund's £1,000 Summer bonus must be received no later than **31st August 2016**.

For more information regarding funding criteria and an application form, please email [info@scotroadspartnership.co.uk](mailto:info@scotroadspartnership.co.uk) or call us on **0800 042 0188**.



Bellshill North Road Playgroup with their cheque



### Contact the SRP team:

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### Stay informed:

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[www.transport.gov.scot/m8m73m74](http://www.transport.gov.scot/m8m73m74)  
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# Project update

Issue 7



## Beam Lift Complete at North Calder Bridge



UK's largest crawler crane helps deliver construction milestone on project's widest bridge - read more on page 3.

### Construction Progress



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Scottish Roads Partnership



Scottish Roads Partnership

## Construction Progress

A staggering 1,400,000 cubic metres of soil has been recycled at Chapelhall to allow work to continue on what is one of Scotland's largest roads projects of recent years.

Hector Martin, Construction Manager, for this section, described the junction as "one of the most important" in the entire M8 M73 M74 project. He said: "To fashion the new junction at Chapelhall we have had to move 1.4 million cubic metres of earth under all kinds of weather conditions."

The challenge faced at this section is considerable. Designers and construction crews have had to replace a 1960's junction with one fit to grace a modern 21st Century motorway. New approach roads, roundabouts, slip roads and a new bridge have been constructed.

By Spring, the majority of 'online' works had been completed at the junction. This refers to any section where existing traffic uses the road and where traffic management measures need to be in place.

McNeil Drive will enjoy a major role in the approach to the new motorway. Work here will continue to progress over the summer.

Spring was also the period when all of the extensive mineworking treatment was completed along the A8 corridor.

Land edging the existing A8 between Baillieston and Newhouse has been mined for coal for over 200 years, leaving a legacy of deep mine workings. Many of these pits and shafts lie in the path of the new M8, which has resulted in massive injections of material to fill in the voids.

The section around Chapelhall had the greatest number of mine workings of any part of the new road.

By early summer, completion of the Chapelhall Junction will allow the construction team to move on to the junction at Eurocentral, one of Scotland's key commercial centres.

It provides major distribution facilities for famous high street names including Morrisons, Next and Argos. News UK's printing plant and the Dakota Hotel are also situated there. Thousands of newspapers are produced each day at News UK's printing plant at Eurocentral, which also hosts the Dakota Hotel.

Section manager Hector Martin added: "We chose to work on the junction at a time which would minimise the disruption to drivers and businesses.

"We realise how important it is to keep traders up-to-date with news on road works or anything that could have an impact on their business.

"Another challenge we have is the volume of services which lie beneath the ground, for example, gas pipes, phone cables, internet fibre lines and water services.

"It goes without saying that we need to know where they all are so that we can either work around them or, in some cases, arrange to have them re-directed.

"Completion of Chapelhall Junction has required a huge effort by the team, resulting in long hours.

"We had to manage the works on site, a great exercise of co-ordination with utility providers and stakeholders – all this on top of complicated civil engineering operations."

A few miles to the west, the landscape is being transformed on the edge of the River Clyde between Bothwell and Bellshill.

A new three-level junction will replace the old two-level one at Raith, a major crossroads linking north to south and east to west.

The Raith Junction, one of Scotland's busiest junctions, is due for completion in Spring 2017.

A new road bridge on the south side of Raith roundabout has provided traffic with a new access route to Bothwell, Hamilton and Bellshill.

This has allowed full excavation to take place below the bridge, where the new road will link the A725 East Kilbride Expressway with the Bellshill Bypass.

Raith manager Julio Sancho said: "I think people can now see things taking shape. Progress has been good and the feedback we are getting from the community is really positive."



The underpass at Raith Junction taking shape

## North Calder Bridge Beam Lift Complete

The construction of North Calder Bridge is part of major works to upgrade Shawhead Junction. The new bridge will carry traffic on the new M8 over the North Calder Water to the south of the existing A8.

As one of the widest structures of the project at 77.25m, the bridge will carry three lanes of traffic in each direction, alongside new on and off-slip roads, linking the M8 to the A725 both north and southbound.

Construction involved nine pairs of 3m high steel beams, approximately 77m in length and weighing almost 2,000 tonnes, being lowered into position over the North Calder Water, near Bellshill in North Lanarkshire.

The placement of the beams marks a significant milestone in the progress of the project and signifies the culmination of months of planning between Scottish Roads Partnership (SRP), the contractor responsible for delivering the project, and its construction joint venture, Ferrovia Lagan.

Humza Yousaf, Minister for Transport and the Islands, said: "This challenging feat of engineering is evidence of the Scottish Government's substantial commitment to invest in Scotland's trunk road infrastructure and upgrade the existing A8 to motorway standard.

"I am enthused to see substantial progress being made on this major project, particularly, on the new alignment of the M8. This complex project presents its own unique challenge to up-grade Scotland's busiest trunk roads, whilst minimising disruption to the 100,000 vehicles using these routes every day.

"Once complete, The M8 M73 M74 Motorway Improvements Project will significantly reduce congestion across the central Scotland motorway network, and improve travel time reliability on the main route between Glasgow and Edinburgh."

Articulated lorries brought the beams to site in three sections to comply with weight and length restrictions during transportation. Once safely delivered to site, the sections were welded together before the beams were paired for lifting, each weighing approximately 200 tonnes.

Before any lifting could begin, a massive 1350 tonne crane – the largest crawler crane in the UK and one of the biggest in Europe – was delivered to site by a fleet of 33 HGVs and assembled on site over five days.



Final beam being installed



First beam being lifted into place

When fully assembled the massive crane stood 90 metres in height, towering over the Lanarkshire skyline, and required two smaller cranes – a 750 tonne and a 200 tonne crane to build it – such is the size and scale of this machine.

With a maximum lifting capacity of 1350 tonnes, the operator had to perfectly balance the crane with counterbalance weights ahead of every lift - a slow and meticulous process to ensure a precise and safe operation. The crane operator sat 5.5m above ground level in a fully air conditioned cabin, protected by bullet-proof grade glass.

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Dario Saavedra, construction manager for Ferrovia Lagan Joint Venture, said: "This is a significant milestone for the project and a successful operation which we are very proud of. The beam installation took nine days to complete, lifting the giant beams onto the two new bridge abutments, each of which contain over 6000 tonnes of reinforced concrete. The beam lift was a complex piece of engineering and an important step towards completion of this impressive project."

Graeme Reid, project sponsor for Transport Scotland, said: "The M8 M73 M74 Motorway Improvements Project is one of the biggest transport infrastructure projects currently underway in Scotland and has already generated £226million worth of investment in the economy through sub-contracts, providing employment to over 1,000 people. Significant progress has been made on the construction of the new M8 and with major structures such as the North Calder Bridge and Braehead Rail Bridge at Bargeddie now in place, the new route is clearly visible to regular commuters."

Gabriel Valtueña-Ramos, General Manager for SRP, said: "North Calder Bridge is just one example of the great engineering taking place on the M8 M73 M74 Motorway Improvements Project.

The new section of the M8, which the bridge will be part of, will save approximately 20 minutes when travelling between Glasgow and Edinburgh at peak periods - as well as easing congestion significantly on existing routes."

To watch the time lapse video of the beam lift visit the Transport Scotland website.

## Strathclyde University Students Visit Project

Scottish Roads Partnership (SRP), along with its main contractors Ferrovia Lagan and Amey, welcomed University of Strathclyde first year civil engineering students to the project as part of their initiative to support and develop young people in the local community.

The visit gave the students an excellent opportunity to apply the knowledge they have gained to the practical and relevant environment, creating a unique experience on a project of this size. At the end of the visit the students gained a huge amount of knowledge about a construction site and the challenges they will have to face in the future.

To date, the project has offered 21 site based placements to graduates undertaking professional engineering training allowing young people to gain experience and learn new skills. This provides a link between theory and practice, giving the students the opportunity to see how things work in the real world.

Gillian Smith, who opted for a summer placement on the project, has secured a full time position working on the improvements to Raith Junction after completing her Master's Degree with University of Strathclyde.

She said: "Engineering brings something new every day. Working on this project has given me a valuable insight into the construction industry and provided me with practical skills which I can continue to develop and put to use in my future career."

The construction team face a complex engineering challenge in creating the new Raith Junction in Lanarkshire. Not only are they building a new elevated roundabout above the old one, they are also forging an underpass beneath it. As part of their site tour the first year students and their lecturer Dr Michael Murray visited Raith.

He said: "The site visit gave the students an insight into the technical challenges faced in civil engineering in the built environment. This is key as it allowed the students to see the theory they are learning being applied in the real world whilst understanding other roles on site, in particular the importance of health and safety when managing and co-ordinating activities. Understanding all of these aspects will be vital in their future careers as engineers."

The M8 M73 M74 Motorway Improvements Project aims to tackle congestion problems on the A8/M8, M73, M74 and at key junctions including Raith (M74) and Shawhead (A725/A8).

When complete, congestion across the central Scotland motorway network will be significantly reduced, with travel time reliability between the main route of Glasgow and Edinburgh improved.

Road users travelling on the new M8 between the two cities will benefit by shaving almost 20 minutes off the daily commute, while 15 minutes will be saved travelling through the new Raith Junction.



Students visiting Raith