

Out of Hours Working



As with many major road construction projects, it is often necessary to carry out works outside normal working hours. In view of the poorer than expected weather experienced during the summer, permission has recently been given by Aberdeenshire Council to extend working hours on Saturdays and Sundays for general construction works at particular locations. This will help us to take advantage of any periods of better weather before the end of December 2015. The areas concerned are:

- Sections of the Southern Leg between Charleston Junction and the River Dee.
- Sections of the Fastlink between Stonehaven and Cleanhill.
- Sections of the Northern Leg between the River Don and the B999.
- Sections of Balmedie to Tipperty between North Beach Road and the B900.

The extended hours of work which have been approved are 08.00hrs to 16.30hrs on Saturdays and Sundays. All residents who live nearby to these areas will receive notification by letter with further details of any works being carried out in their area before any works commence. At all times best practice methods will be used to keep any disturbance to a minimum. If additional works are required outside these hours, for example overnight works on roads, further updates will be provided.

GET READY FOR WINTER



The contract for the AWPR/B-T project includes operation and maintenance (O&M) of the new trunk road network when complete for a thirty year period. It also involves O&M of a section of the existing A90 between Murcar Roundabout and Ellon South Roundabout until construction works are completed and this section is de-trunked. As well as incident response, routine maintenance, safety patrols and inspections, litter picking and landscape maintenance (to name but a few), another part of these O&M works includes the provision of winter services.

The winter treatment of roads may appear to be a straightforward task, but ensuring that a road is kept safe for our users during the winter months is technically complex as well as a significant responsibility for all those involved.

Proactive planning for managing the road network during the winter season starts almost as soon as the previous winter season ends. Winter Service Plans are reviewed and amended, equipment is maintained and upgraded, and salt (grit) stocks are replenished. Staff and operatives also receive training on the interpretation of weather forecasts, the role and responsibilities of the Winter Service Duty Officer, and use and care of winter maintenance vehicle/plant.

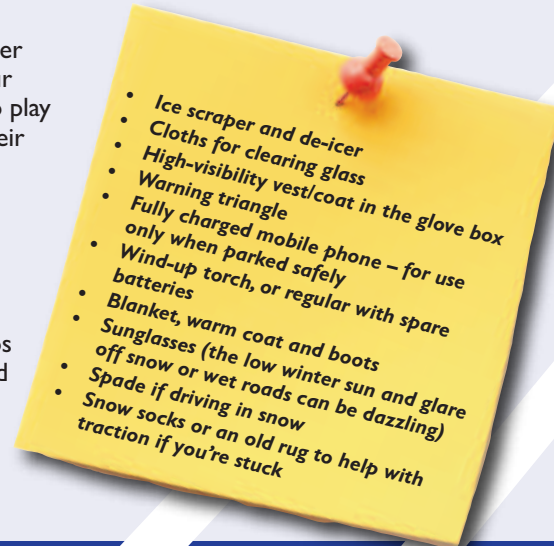
As part of this process we review the winter season, which has just passed, analyse any trends and identify areas that can be improved to ensure a safe network is maintained.

The updated Winter Service Plan is communicated to all interested parties (Transport Scotland, adjacent local authorities and network managers, police and other service providers) in readiness for the start of the next winter season.

With an excellent response to the last winter weather behind us, we are continuing to update and refine our plan for this winter. However, we all have our part to play and road users should ensure they have prepared their vehicles for winter weather.

Opposite are ten items to consider keeping in your vehicle over the winter months in case severe weather occurs.

In addition, when setting out on journeys during the winter season, remember to take food and a thermos with a hot drink with you, as well as a first aid kit and any medication you or other people travelling with you need to take regularly. You can also check the latest reports of current road conditions and severe weather warnings at www.metoffice.gov.uk.



Inspiring Minds through Education



Throughout the year, the AWPR/B-T Project Team actively participate in events that bring the construction industry into the classroom. Recently, this involved James Gray (Aberdeen Roads Ltd) and Scott Ainslie (AWPR CJV) leading a Bridges to Schools event at the Hill of Banchory Primary School.

At a separate event, Sergio Martinez-Gonzalez (CH2M Hill) spoke with students at a STEM Event and afterwards commented: "Young people often model their career aspirations on the pathways taken by parents and family. Here in the north east, the Oil & Gas industry is a well known pathway, but many pupils don't realise that civil engineers are always in demand and can travel the world working on various projects."

We are keen to host educational events in the Contact and Education Space based in the Stonehaven project office. If you would like to take advantage of this opportunity, please call our Community Liaison Team on 0800 058 8350.

The Institution of Civil Engineers provided bridges for the STEM event.



Works coming soon



Over the coming months, works will commence on a number of major junctions on the project, including those planned for the A90 at Stonehaven, Charleston and Balmedie, as well as the A96 at Craibstone. Initial works

in some of these locations will be undertaken with intermittent traffic management during night time periods.

Utility diversions will continue at various locations including the A96, A93, A944, B979 and the A90 at Stonehaven, Charleston, Blackdog, Balmedie and Tipperty. Further details will be provided for each location and will be available to view on the project website at www.transportscotland.gov.uk/awpr-bt.

Earthworks and structures operations will continue across the project, and piling works will continue at the River Dee and the River Don.

Culvert installations will continue and precast beam installations on structures across the route will be progressed.

COMMUNITY LIAISON



Duncan at work

An essential part of our work is to inform and engage with local communities. Our Community Liaison Assistant, Duncan Gardner, covers the south section of the project, running from Stonehaven up to the River Dee. Duncan has played a lead role in the service industry for many years and brings significant customer service experience. His father has had a long career in the construction industry, so Duncan has been familiar with the industry from a very young age. He said, "I've always been interested in construction so I'm really excited to be working on a high profile project such as the AWPR".

The Community Liaison Team can be contacted on the enquiries helpline 0800 058 8350.

Alternatively visit us at the AWPR/B-T project office contact and education space at Mains of Ury, Stonehaven, AB39 3QA. Opening hours are Monday to Friday 09.00hrs to 17.30hrs and Saturday 10.00hrs to 16.00hrs.

Contact Us

Should you wish to know more about the project please visit our project website at www.transportscotland.gov.uk/awpr-bt, where you can sign up for the Ezine, Route Ahead, as well as project-related alerts. Alternatively, call us on 0800 058 8350 or email enquiries@aberdeenroads.com

Aberdeen
roads limited



Malcolm Findlay,
General Manager,
Aberdeen Roads
Limited

Welcome to the second edition of the AWPR/B-T project update.

Since our last issue we have opened a number of our offices around the project. These are located at Stonehaven and Rothnick in the south, Craibstone and Kingswells in the west and at Goval and Balmedie in the north. The offices will house over 500 people who will be involved in the design and construction of this major civil engineering project.

More than 300 utility diversions are required for the project and many of these are well underway, including notable works on the A93, A96 and A944. These will continue to be a feature around the city and arterial routes during the construction of the new road.

It wouldn't be Aberdeen without the mention that we will be encountering granite along the route. In a number of cases we will be able to use modern breaking equipment; however, where the rock is especially hard, we will be using blasting techniques to break it up. Detailed information about the blasting activities taking place across the project, including when, where and how, is provided on the project website.

As the new General Manager for Aberdeen Roads Limited, I would like to take this opportunity to thank the north east community for their ongoing support and patience during the construction period. I would also like to thank Alan Gibson for his dedication and contribution to the project and wish him a long and happy retirement.



MAJOR WORKS ON RIVER DEE CROSSING

Work has recently commenced at the River Dee crossing. In addition to being one of the most environmentally significant locations on the project, these works present the most noteworthy engineering challenges on the project as a whole.

The bridge will have three spans: a central span of approximately 120 metres across the river, designed to avoid works in the river or on the immediate river banks; and two side spans, each of approximately 75 metres. The southern span will pass over the B9077 South Deeside Road. The bridge will include transparent acoustic barriers, which will provide noise mitigation while maximising the availability of open views across the River Dee valley.

The bridge will form the new trunk road crossing of the River Dee. The current trunk road crossing of the River Dee, which will remain in use, is the Bridge of Dee. It dates from 1527 and is too narrow to be used by all traffic.

continued overleaf...



Photo courtesy of Aberdeen City Council

this issue features...

- Project Overview
- Works Progress
- Get ready for Winter
- Community Liaison



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An agency of Buidhnean le
The Scottish Government
Riaghaltas na h-Alba

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The process of constructing the River Dee Crossing involves four main stages of activity:

- Stage 1: Foundations**
 This ensures that the bridge is built on stable foundations and will not settle once complete. The nature of the ground at this location and the weight of the structure means that piles are required as part of the foundations. Each pile is 1.65m in diameter and will be approximately 24m long. A total of 50 piles are required. A trial pile has recently been installed and will be subject to testing to demonstrate that the piles will work as planned. The piles are installed in four groups, two of which provide foundations for abutments at each end of the bridge, where the bridge deck meet the earthworks embankments, with the other two groups supporting intermediate bridge piers on either side of the river.
- Stage 2: Substructure**
 This involves constructing the elements on top of the foundations which will support the bridge deck. There are two piers on the bridge, each of which is approximately 8m by 4m in area, and approximately 6m high. They will be shaped and finished to meet the aesthetic requirements developed for this structure. The abutments at each end of the bridge will largely be covered up by earthworks, meaning that the extent of exposed concrete is kept to a minimum.
- Stage 3: Superstructure**
 This involves constructing the deck of the bridge. The deck for this structure is designed as a hollow box, and will be constructed using a technique known as “balanced cantilever”, when sections are added to each side of the supporting pier in turn, keeping the structure stable while it is constructed. The width of the top surface of each section is constant, but the depth varies from a maximum of approximately 6.5m to a minimum of 3.5m to provide a curved shape to the underside of the deck. The deck will be constructed from each side of the river to meet in the middle.
- Stage 4: Finishes**
 This stage of the work involves completing the works required for the road passing over the deck of the bridge, including installation of bridge parapets and acoustic barriers, waterproofing of the deck, installation of drainage and placing of the road surfacing materials. Finally hard and soft landscaping works will be completed to achieve the aesthetic requirements.

PROGRESS OVERVIEW



The plant crossing at Rothnick

Construction is now well underway across the whole of the 58km long site. Some of the recent works that have been in progress include:

Major Transport Corridors

- Utility diversion works have been undertaken on the A90/B979 Stonehaven.
- Excavation and blasting have been progressed in the A90/A956 Charleston area.
- Utility works and completion of site clearance operations have been undertaken on the A93 at Milltimber, including some preliminary works on the Scottish Water aqueduct, which provides the bulk of Aberdeen’s water supply.
- Construction of north and south underbridges at South Kingswells Junction, to accommodate a new roundabout at this location. A temporary bridge has been placed at this location to enable earthworks operations to continue without interrupting traffic flow on the A944.

- Utility diversion works have been undertaken in the A96 Craibstone/Dyce area. A temporary bridge has now been installed over the A96 at this location.
- Utility diversions, earthworks and structures are being progressed in the A947 Goval and A90 Blackdog to Tipperty area.

Major River Crossings

- Piling works have begun at the River Dee Crossing, together with the formation of the marshalling areas required around a large structure for storage of materials and accommodating large items of construction plant and equipment. Extensive mitigation measures have been put in place in recognition of the importance and status of the River Dee as a Special Area of Conservation. Utility diversion works have been undertaken adjacent to the River Don and piling works have now begun.

Other Activities

- Earthworks are now in progress across many areas of the site. Blasting has commenced at a number of locations, and information has been issued to nearby residents and businesses about these works. Pre-earthworks drainage and SUDs ponds are also being installed to control water run-off. Material processing is also well underway.
- Structures including main carriageway bridges, side road bridges, underpasses and culverts are in progress at many locations on the site, usually “off-line” from existing roads. In some locations, temporary diversions have been put in place to enable construction to continue.
- Plant crossings have been installed to enable earthworks vehicles to cross roads safely, minimising disruption and damage to the existing road. Please take care at these plant crossings and obey the traffic signals.

The AWPR/B-T Project



The AWPR/B-T project is the longest roads construction project currently underway in the UK. It will significantly improve travel in and around Aberdeen and the north east of Scotland.

It consists of four sections:

- Balmedie to Tipperty: 12km from Blackdog to Tipperty.
- Northern Leg: 16.1km from North Kingswells to Blackdog.
- Southern Leg: 18.7km from Charleston to North Kingswells.
- Fastlink: 11.5km from Stonehaven to Cleanhill.

The new roads will bring substantial benefits to the whole of the north east of Scotland by reducing congestion, improving journey times, lowering pollution in Aberdeen city centre, boosting the economy, improving road safety and enhancing public transport.

The AWPR/B-T is expected to be open to traffic in Winter 2017 with the Craibstone and Dyce junctions scheduled to open by Autumn 2016 and the Balmedie to Tipperty section by Spring 2017.

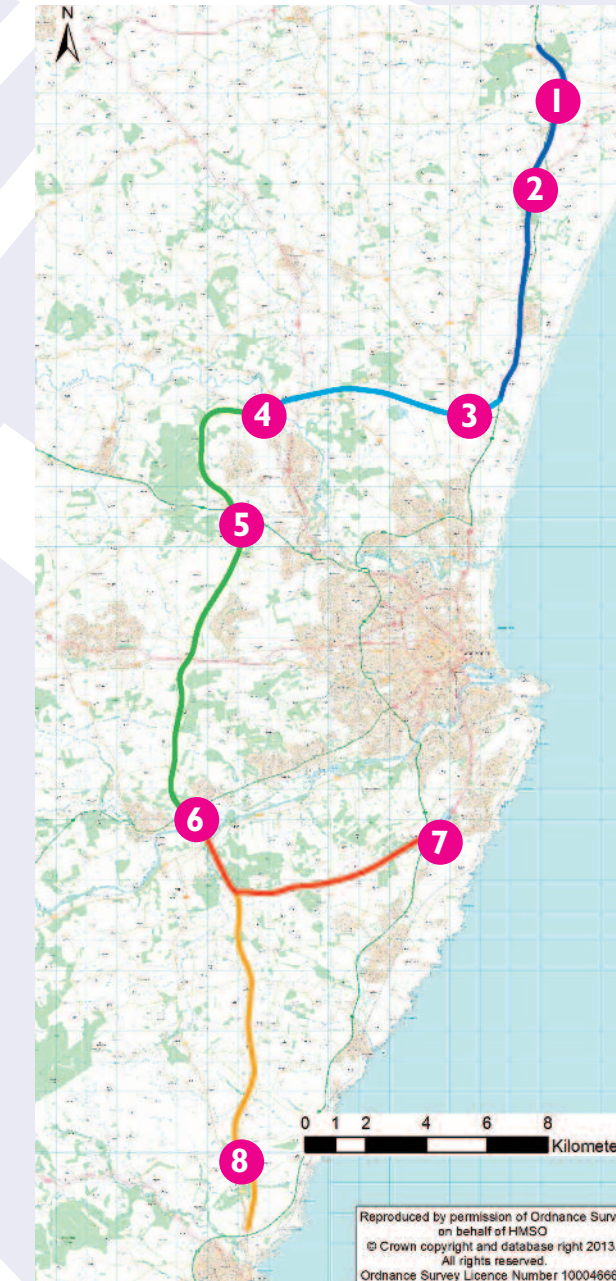
When complete, the new road is expected to carry more than 43,000 vehicles each day through its busiest sections.

WORKS WELL UNDERWAY ON AWPR

Works are now well underway across the whole of the project, from Stonehaven Junction in the south to Tipperty Junction in the north, as illustrated below. Co-ordinating these works over such a large geographical extent takes a significant amount of planning and preparation. This includes construction planners, site engineers, designers, quantity surveyors, commercial buyers, traffic management engineers, temporary works engineers, environmental engineers, landscape specialists, geotechnical specialists, GIS specialists and support teams which include community liaison, communications, HR, sustainability, quality and health and safety.

Implementing these works on site involves a range of skills including: foremen, setting out engineers, steel fixers, plant operators, surveyors, labourers, piling specialists and ground investigation specialists.

This highlights the range of skills and roles involved in delivering a major construction project.



Tipperty Road Junction Underbridge

The underbridge carries the new A90 over the B9000. It has a 32m span made up of 23 No. 1.6m deep precast concrete beams, which are among the biggest on the project. At present we have completed the bridge abutments, and installed the bridge beams, and works are now progressing on preparing the deck for concrete.



Newburgh Road Junction Underbridge

The underbridge carries the new A90 over the A975. It has a 27.8m span made up of 15 No. 1.5m deep precast concrete beams. At present the abutment bases are complete and we are progressing work to the abutment walls, which will then receive the precast beams.



B999 Aberdeen to Tarves Road Overbridge

Earthworks are well advanced and the approach ramps are now taking shape. Operations will continue over the next few weeks to allow the construction of the north and south abutments. Base foundations and structural columns are all poured. Precast bridge beams are due to be placed on the structure during February 2016. By early March, the structure will be complete to allow the removal of all temporary support systems.



Aberdeen to Inverness Railway Underbridge

Construction work to the railway bridge is well underway with both the concrete bases cast either side of the railway and the abutment walls being constructed at present. The works remain on programme for the precast beams to be lifted early in the new year.



A96 Aberdeen to Inverness Trunk Road Underbridge

A bridge will carry the traffic on the AWPR over the A96. Construction on the concrete base foundations to the bridge has started on the south side with north side to follow next month. The new Craibstone roundabout on the A96 is starting to take shape with the earthworks operations progressing well and the drainage commencing in November. A temporary bridge has been installed over the A96.



A93 Milltimber

Utility diversion works are well underway and are expected to be complete in Spring 2016 to allow for the creation of a temporary local diversion and the construction of embankments at A93/B979. Earthworks and drainage works are progressing.



A956 Charleston Junction Overbridge

Abutments and columns for the C5K side road overbridge have been constructed and are now getting ready to receive the precast beams. Rock cuttings for the AWPR and the C5K side road are mostly complete, and widening of the existing rock cutting on the A90 corridor will shortly commence.



SUDS Ponds

SUDS ponds or Sustainable Urban Drainage Systems are in place throughout the entire AWPR project. Their role is to manage water run-off from our construction sites and to prevent pollution of watercourses.

Location shown Burn of Muchalls.

Noise Monitoring in the River Dee



Piling works adjacent to the River Dee

As part of our works, we will be constructing a new crossing over the River Dee, which is designated as a Special Area of Conservation. In line with the Environmental Statement, which can be viewed on-line on the project website, noise and vibration has to be managed in the River Dee channel. We are therefore using 'auger' piles at this site, which are drilled and then filled with concrete, as opposed to driven piles, which are forced into the ground by repetitive hammering. As a consequence, the noise and vibration from piling works are significantly reduced. To monitor the effects of the works on the river channel, an underwater noise meter has been installed, which continuously records noise levels in the channels. A trigger value at which works must stop has been set, and if the trigger level is exceeded, text messages and emails will automatically be sent to key management personnel and the works will be stopped and reviewed. Noise levels were measured in the river channel before works in this area began, to provide a baseline level for comparison with noise levels recorded during construction works.