

project update

Issue 4

Aberdeen
roads limited

Message from Aberdeen Roads Limited



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At ARL, we put safety at the heart of everything we do, from initial design through construction, into operation and maintenance and ultimately, for the road user.

On site, daily briefings, training and toolbox talks are a constant reminder to our workforce, which help them to carry out activities safely. No one is asked to undertake any duty that they are not suitably qualified to carry out. More details on some of our project wide on-site safety procedures are included in this issue.

We are aware of the potential hazards of a construction site, but to some young people it can look exciting. A guide is available on the project website which explains the dangers of construction sites, such as construction machinery and unstable land, and how the local community can 'Stay Safe'. As we move into the summer months, many of us will have started working on our gardens. Similarly, our Operation & Maintenance team will be cutting grass along the Balmedie-Tipperty section of the A90. Prior to this, however, litter will need to be picked from the verges and central reserve. This involves our workers having to work close to the live carriageway and fast moving traffic. Last year, the team collected enough litter from 18km of road to fill 400 domestic wheelie bins. Picking litter risks roadworkers' lives – please help us to reduce this risk by disposing of your litter responsibly.



BLACKDOG JUNCTION

Works are now well underway on a significant section of the AWPR – the new Blackdog Junction.

Blackdog Junction will become the main junction to the north of Aberdeen connecting the new AWPR with the existing A90.

The junction also links Potterton, Belhelvie, Blackdog and Blackdog Industrial Estate with the A90 and the AWPR. The substantial works required to build the new junction will include the construction of two new bridges over the existing A90, a grade separated roundabout, new on/off slip roads and the re-routing of side roads.

The construction works will be undertaken in the following phases:

Phase 1: March 2016 to Autumn 2016

Utility diversions to enable the construction of the bridge abutments for the two new bridges, the new slip roads and the new side roads.

Phase 2: Autumn 2016 to Winter 2016

Installation of the bridge beams to the two Blackdog bridges and completion of culverts and drainage works.

Phase 3: Winter 2016 to Winter 2017

Completion of Blackdog Junction.

The new junction is scheduled to be open to traffic in Winter 2017.

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continued overleaf...

The AWPR/B-T Project



North Kingswells Junction Underbridge

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 Drive 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.

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WORKS ARE NOW WELL UNDERWAY ON A SIGNIFICANT SECTION OF THE AWPR – THE NEW BLACKDOG JUNCTION.

We are working closely with Transport Scotland, the local authorities and Police Scotland to reduce the impact on motorists during the construction of this important junction. In order to achieve this we will be operating periodic overnight (from 8pm to 6am) and weekend (Friday 8pm to Monday 6am) works. This is also the safest option for the workforce and will allow the works to be completed with the least impact on road users.

Further details and information on traffic management measures to be implemented over the period March 2016 to Winter 2017 are provided on the Blackdog Junction flyer which can be found at the project website www.transport.gov.scot/awpr-bt.

Any questions about this or any other parts of the project can be raised by calling the project enquiries line on 0800 058 8350 or emailing enquiries@aberdeenroads.com.

PROGRESS OVERVIEW



Culvert 41 North Section

North Section

With the onset of improved weather, the earthworks have ramped up across the whole of the North Section, with excavation and filling taking place in many locations.

Culvert installations are progressing well and the North Section set a milestone with the first fully operational culvert on the project. All diverted water courses are now running through Culvert 41, which allows the AWPR to pass over Red Moss Burn. This is referred to as the “turn of flows”.

The roadworks team is concentrating on the construction of the side roads and service diversions as well as commencing with drainage works.

The landscape continues to change as piers and abutments spring up around the site.



The long haul begins in the Central Section

Central Section

Piling is complete at the River Dee Crossing which allows works to begin on the construction of the piers and abutments.

The A93 temporary diversion has opened which is allowing Scottish Water to complete diversion of its aqueduct.

Blasting work is complete at Kirkhill/Bogenjoss. The materials generated have been delivered to the site's processing areas.

Construction of the new Craibstone Junction and Dyce Drive Roundabout is progressing well. Work on this has been carried out mostly at night and off peak at the weekends. This is due to open in Autumn 2016.



Kingcausie rock processing South Section

South Section

Earthworks and structures are making headway throughout the section and the remaining utilities diversions are almost complete.

Drainage works have started on side roads and this will enable us to implement and begin local traffic diversions. The embankment at Haremoos has reached the level required for the installation of carriage way drainage.

At Fishermyre, excavation of the peat and filling up of the embankment has begun.

Rock blasting continues, which provides a supply of rock for the production of aggregates.

AWPR EARTHWORKS: A MAM

The AWPR/B-T project will re-use materials excavated on site as much as possible to cut back on waste and reduce the need to transport materials to the site.

To ensure the full use of site materials, large volumes of soil and rock need to be extracted, processed and replaced as part of the works. There are approximately 10 million cubic metres of earthworks to be moved: enough materials to fill Pittodrie Football Stadium more than 30 times.

To understand the scale and scope of the earthworks challenge, in just two years the AWPR/B-T construction team will move more than four times the estimated 2.25 million cubic metres of granite which was excavated from Rubislaw Quarry over a 200 year period.

Managing earthworks is a complex process as it involves revealing, removing or despositing materials to form either the surface on which the road will be built, or bunds and other features which are designed to integrate the road into the landscape and provide environmental mitigation. On a project the size of AWPR/B-T, this is a significant logistics challenge requiring careful planning.

Machinery and Equipment

Across the project, and visible from the roadside, various types of heavy machinery and equipment, known as 'plant' are in operation. The key types are:

- Dozer – a heavy driver-operated machine for clearing and grading land. It has a vertical faced blade at the front end for moving, for example earth, tree stumps, and rocks.
- Dumper Truck – a truck used for transporting loose materials such as sand and gravel. This machine is typically equipped with an open-top box bed, hinged at the rear and equipped with hydraulic systems that are operated by the driver. These allow the loose materials to be deposited on the ground behind the truck.
- Excavator – these large pieces of plant consist of a boom, dipper or stick, bucket and a cab sitting on a rotating platform. The cab sits on an undercarriage of tracks or wheels.
- Grader – this is a wheeled machine used for levelling ground.
- Roller – these are slow-moving and used to flatten the surfaces of roads during construction.

Types of heavy plant	Number operating on site
Dozers	65
Dumpers	231
Excavators	143
Graders	11
Rollers	44



Operating Safely

All plant operators on site hold a Construction Plant Competence Scheme card which is coloured depending on their mastery of any one or many of the vehicles they are qualified to use on a construction site after years of training and development.

Along with ongoing thorough training, plant operatives receive daily task briefings, attend toolbox talks, have visibility of plant/people exclusion zone posters and booklets, and participate in Safety Stand-down Days.

All construction sites are dangerous and you should not enter at any time without prior permission, induction and the appropriate personal protective equipment. Whilst construction sites and the visibility of large machines may prove tempting, particularly for young people, it is not possible to ensure your safety if we are unaware you are on site.

The project team thanks you for your consideration of this matter and by staying clear of the site, you will assist in keeping yourself, as well as our workforce safe.

There is a 'Stay Safe' leaflet on the project website and we would be grateful if you could share this with anyone who you think may be tempted to enter our site, such as young people. Alternatively, a copy can be obtained from the Community Liaison Team by calling **0800 058 8350** or by emailing enquiries@aberdeenroads.com. You can also pick up a copy from the Contact and Education Space.

IMOTH FEAT



Re-using Rock

We all know that Aberdeen is known as the 'Granite City' and on the AWPR/B-T we are making the most out of our natural resources. Along the 58km route, we are re-using all materials that have been excavated to build the road. This involves the reuse of some 3 million cubic metres (7 million tonnes) of hard rock. The nature of some of the rock requires drilling and blasting techniques to be used to enable it to be excavated.

There are rock processing plants at Rothnick, Cranfield, Kepplestone, Kingcausie and Coneyhatch. At these locations, the excavated rock is crushed into aggregate. The aggregate is then used in a variety of ways, such as for working platforms, as a base drainage layer during the construction of the road and in the concrete batching. In addition to the sustainability benefits of reusing materials excavated on site, this also reduces the number of trucks required to transport materials on the road network.

Rock samples from the project are available for viewing in the Contact and Education Space which is based at the main project office at Mains of Ury, Stonehaven. It is open six days a week, Monday to Friday 9am to 5.30pm and Saturday 10am to 4pm.

Road Cleaning



As a responsible contractor, ARL takes its duties seriously and makes every effort to minimise disruption to the local communities and road users in and around our construction sites.

Project wide, we currently have on average 4,000 vehicle movements a day moving 100,000 cubic metres of earth.

Our main interface with the public roads is adjacent to our plant crossings. These crossings can be identified by a reinforced concrete slab across the carriageway, temporary traffic lights, advance signage and our heavy vehicles crossing.

In order to keep the roads adjacent to these crossings safe and clean we use a number of cleaning methods:

- Wheel wash
- Road sweeper
- Tractor with brush attachment
- Manual sweeping

In high volume areas we have a number of road sweepers working along complete stretches of roads on a full time basis, such as in the Burnhead area at plant crossings.

The above picture shows one of our large vehicle wheel washers in operation. The structure of the wheel wash scrapes and shakes off the loose pieces of mud whilst the spray washes off additional debris. These are in operation across the majority of our sites and are part of our investment and commitment to keeping the local roads safe and clear.

New Aberdeen-Inverness Railway Bridge nearing completion



The team in the Central Section has been hard at work on the new Aberdeen-Inverness railway bridge, just north of Dyce Drive.

Over the last 12 months, the walls of the structure have been poured using a gantry system, precast concrete beams have been installed, the structure has been backfilled and the deck of the structure poured.

Much of the work was undertaken overnight in order to protect the workforce and to ensure passenger and goods rail services between Aberdeen and Inverness could continue as normal.

A video of the beam installations at this structure can be viewed on Transport Scotland's YouTube account (<https://www.youtube.com/watch?v=UiIrozl4zrM>).

Average speed cameras for A90 Blackdog to Balmedie



Average speed cameras have been installed on the A90 between Blackdog and Balmedie to enhance safety for construction workers and road users.

An average speed camera system is an automatic digital camera system that determines the average speed of vehicles between fixed points. It detects vehicles through automatic number plate recognition and calculates their average speed by measuring the time taken to travel between points of a known distance. Highly visible signs are used to inform drivers that they are entering an average speed control area.

The national speed limit was reduced to the current speed limit of 50mph in January this year and the installation of average speed cameras is intended to encourage compliance with this speed restriction. As works progress, the speed restriction will be reduced further to 40mph on the A90 between Blackdog and Balmedie to allow road users to safely negotiate the lanes while driving through a contraflow. The average speed cameras will be reconfigured to take account of this change in the speed limit at the appropriate time.

The average speed cameras are expected to stay in place until the reduced temporary speed limit is removed from this section of the A90.



Extended Working Hours

We recently undertook public consultation as part of our proposals to the local authorities to extend our working hours. This request was to enable us to take advantage of improving weather conditions. Following a review of consultation responses and discussions with the local authorities, permission has been granted by Aberdeen City Council and Aberdeenshire Council for the extension of Saturday working hours for general construction works. Instead of finishing at 1pm on a Saturday, work can now proceed until 7pm, with some exceptions.

Extended hours have also been approved for Sunday working in the following areas:

- A944 to River Don, for general construction works, from 7am to 7pm
- Balmedie to Tipperty, for earthworks only, from 8am to 4.30pm

The general construction works undertaken during the extended hours will be very similar to the works undertaken during the standard working week. We will continue to monitor our noise levels at various locations around the works to comply with the required noise restrictions.

There will be times when we will have to apply for additional limited works at the weekends or at night. In these cases, specific applications to work out with the agreed hours will be made and nearby residents will be informed of the planned works.

Upcoming Works



Over the summer months we will be working hard on the final phases of earthworks to form the new road.

In the North Section of the project (River Don to Tipperty) works will continue on Goval, Blackdog and Balmedie junctions. Some roads are planned to be completed including the new B977/Newmachar Church Road link road, the new U19C road and the B997.

In the Central Section (River Don to River Dee), major works will progress at Craibstone Junction. Arrangements for the diversion of the existing A944 onto newly completed sections of the South Kingswells Junction will also continue. Works will be nearing completion at Dyce Drive to provide another lane in each direction for a short section. Significant excavation works will continue on either side of the A93 as the Milltimber Junction bridge is built and the AWPR follows a route underneath the A93.

In the South Section (River Dee to Charleston and the Fastlink) works will continue on the construction of junctions, including the new Charleston Junction and a new alignment for the junction around the Burnhead area. Works will continue at the new bridge carrying the Hillside-Batchart road over the AWPR, installing the beams. Once traffic is diverted over this bridge we will be able to continue earthworks in the direction of Charleston. Once the excavations are complete for the cutting nearest Stonehaven and the cutting nearest the Cleanhill Junction, the South Section will be joined up from Stonehaven and Charleston to the River Dee.



Contact Us

Should you wish to know more about the project please visit our project website at www.transport.gov.scot/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.