A9 Dualling

Luncarty to Pass of Birnam
Project newsletter

ISSUE #08
Summer 2020

A9 DUALLING
PERTH TO INVERNESS
Luncarty to Pass of Birnam

Balfour Beatty

ATKINS
Member of the SNC-Lavalin Group

Jacobs

TRANSPORT SCOTLAND
CÒMHDHAIL ALBA

A ‘new normal’ on site

Construction gradually re-starts with new site operating procedures

New welfare units have been installed at our compound and satellite sites

Offices have been transformed to adhere to physical distancing

As the restrictions slowly and gradually begin to ease across Scotland in line with Scotland’s route map through and out of the crisis, we are all having to adapt our daily routines to a new normal.

The A9 Dualling: Luncarty to Pass of Birnam project is no exception and over the past few months the project team has developed and introduced new ways of working to keep our staff, operatives and supply chain safe, whilst also protecting the communities in which we operate.

At Balfour Beatty, we believe that nothing is so important that we cannot take the time to do it safely. Our values of making sure everyone gets home safe every day have informed the process of ensuring that our teams feel safe coming to work every day.

Our project offices are quieter now than they were before lockdown as we continue to ask staff to work from home if they are able. This creates a safer environment for those whose presence on site is essential to the progress of the project.

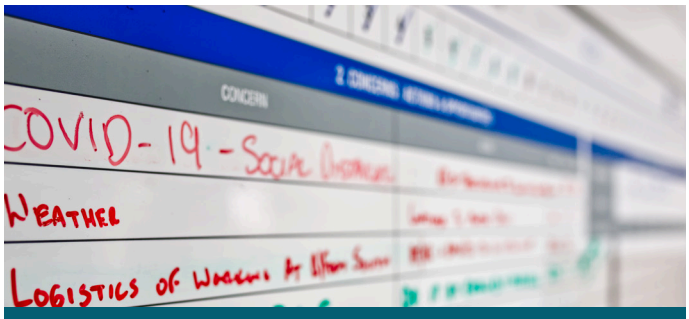
We have provided additional welfare units on site to offer additional space for our workforce to ensure we comply with Scottish Government and Construction Scotland guidance on physical distancing and hygiene. Our offices and satellite compounds have been reconfigured to include more handwashing facilities and sanitising points as well as physical distancing reminders and, where possible, one-way systems.

We have also implemented staggered shift start times to carefully manage the number of people arriving or leaving site at the same time and additional car parking space has been created at various locations across the project to allow colleagues to travel to work alone. Where vehicles are required to move operatives between locations on site, we have installed screens to protect staff. In adhering to these new procedures, our team is helping to play its part in suppressing the spread of the virus.

Our office has been closed to visitors, including our Contact and Education Centre within the main office compound. Essential visitors to the site will only be permitted where absolutely necessary and by prior agreement, in order to limit the risk of the virus being passed on. You can, of course, still get in touch with us via our enquiries line or our dedicated project email address should you have any questions or concerns. Contact details are shown on the back page of this newsletter.

We would like to take this opportunity to thank you for your patience through this unprecedented and challenging time and request that you respect the physical distancing guidelines for our workforce on site, particularly at locations on that are part of the core path network.

Vehicle screens and limits on passenger numbers are in place when travelling on site



The risks associated with Covid-19 are at the forefront of every operation we plan and exectute on site

Covid-19: community response

We have been fortunate to work with a number of very active local community organisations and Community Councils through the delivery of our community benefits programme. Whilst many elements of our community benefits programme are on hold temporarily, we have been in awe of the work carried by these groups in supporting local people through the recent months. We wanted to take the opportunity to celebrate the work being done by some of these many caring volunteers. Although this period has been a difficult and challenging time for many of us, the response shown by people in the community has brought a ray of hope and inspiration to us all.

Stanley Development Trust

Stanley Time Bank teamed up with the Stanley Store and Davidson's the Chemist to help deliver essential food and medicines to vulnerable people living in and around Stanley. The 'Here to Help' service was launched in the middle of March and demand has grown every month. By the end of May 'Here to Help' volunteers had clocked up 200 hours of deliveries. The service is continuing to help as the country eases out of lockdown.

"Having the Time Bank in place already enabled us to organise our 'Here to Help' delivery service very quickly," said Laura Baird, Stanley Development Trust's Project Coordinator. "Thanks to all the wonderful volunteers who came forward to help the older and more vulnerable members of the community. As a result, they haven't had to worry about getting their prescriptions and essential shopping."

In the midst of the pandemic, Stanley Time Bank reached a significant milestone - clocking up 8,000 hours of support to the local community since its launch in 2013. You can find out more about the Stanley Development Trust on the new website: www.stanleydevelopmenttrust.org

Bankfoot Community Council

In March, a group of five local residents from Bankfoot developed a plan to establish a team of community volunteers to provide support with shopping and the collection of prescriptions amongst other things for the local Bankfoot community during lockdown. The group was inundated as more than 40 volunteers responded to 450 requests for help raised via a phone line manned by locals Ali and Ann Johnston in just three months. The group was also able to raise more than £4,000 to support the community.

The group has also been discussing ways it can help the pupils of Bankfoot Primary School with the head teacher and is looking at ways to support home education by improving access to broadband, laptops and tablets for local pupils. Any remaining funds are being allocated to this along with donations of tablet computers.

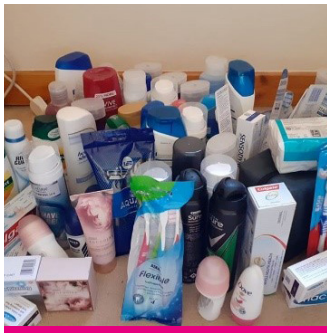
Luncarty Community Council

At the outset of the pandemic, families across the country struggled to get essential supplies as panic buying led to empty shelves in many supermarkets. The Luncarty, Redgorton and Moneydie Community Council responded by installing a 'Give and Take' box in Luncarty. Local people donated essential items to the larder where other members of the community could pick up items they needed. The Community Council was able to utilise the A9 Dualling: Luncarty to Pass of Birnam project noticeboard to mount its larder.

As stores began to recover from the initial challenges they faced, and shopping became easier, local residents continued to donate to the larder with essentials being donated to the local foodbank in Perth to support local families in need.

The Community Council also organised donations of toiletries for older people at the Luncarty Care Home. As visitor access was curtailed to prevent the virus harming these communities, the donations made a big difference to the residents.

Luncarty 'Give and Take' box



Toiletries donated by local residents

Community conference: update

When we met with our community partners and our supply chain in February of this year to discuss how we were going to make a difference to the local community in 2020, none of us could have foreseen the challenges that lay ahead. The Community Benefits Conference was a great opportunity to build new relationships and plan new ventures that will deliver meaningful and measurable change for the communities surrounding the project.

Due to the steps that have been required to suppress transmission of the coronavirus, a significant number of those exciting ideas have been temporarily put on hold. However, we are continuing to plan for the future and are looking forward to what can be achieved when restrictions are eased further – including working with schools, local community organisations and various charities across Perth.

In the meantime, we are taking the opportunity to engage with our supply chain and develop plans to ensure that we are ready and raring to go, to deliver real benefits for local people. Our team is already looking at ways in which we can continue to deliver benefits by harnessing technology or adopting specific safety measures.

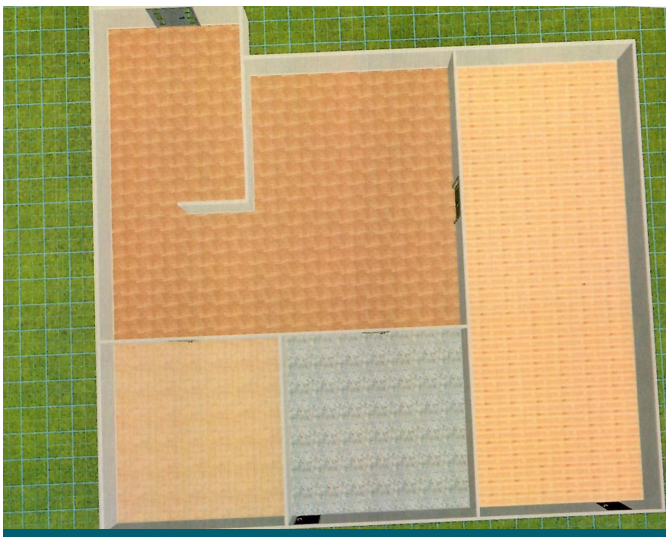
Learning in lockdown

Although 'face-to-face' activities within the local community are temporarily on hold, we continue to apply the same dynamic approach that we have adopted for our site operating procedures to our community benefits programme.

In May, we were delighted to be able to provide local students with an opportunity to take part in a national work experience programme delivered entirely online.

The 'Learning in Lockdown' programme was devised by Scape Procurement, Class of Your Own, the Engineering Development Trust, LearnLive and Heriot Watt University. It gave students the opportunity to learn about design and construction through a syllabus based on a national competition – the Esteem Pavilion Challenge.

The project is based around the success of Team Esteem from Heriot Watt University in the Solar Decathlon Middle East 2020 - an international competition to design an affordable, sustainable building which utilised solar power. The team's design made the final and will be constructed in Dubai as part of an exhibition. The challenge for local students was to design an accessible, sustainable learning space where children living in such a home could learn how to live a greener life.



Floor plan design by the Blairgowrie High school team

Using LearnLive's online platform, students from Perth High and Blairgowrie High School attended a week of online webinars where they learned about design, sustainability, material choices and designing for inclusivity. The students were supported by a wealth of industry professionals, including 35 volunteers from Balfour Beatty. The team from Blairgowrie High School also contacted a group from Kirkintilloch High and formed a cross school team to take on the project.

Students considered several aspects of the design including the challenges and opportunities posed by the location, the accessibility of the building and incorporating sustainable construction techniques and materials into their design. They then made a physical model of their design using card and created a digital 3D design. Free software was available for 3D design however many chose to use the popular videogame 'Minecraft' – a building game which allows players to build structures using a variety of materials. .

Melissa Lawrence, Developing the Young Workforce Project Office at Blairgowrie High, said: "It was a very inspiring week for our team, who agreed that the challenge has increased their interest in working in construction and engineering. It was a well organised programme with excellent resources and a clear timeline for the project work. The students felt they developed their knowledge in areas they were previously unfamiliar with.

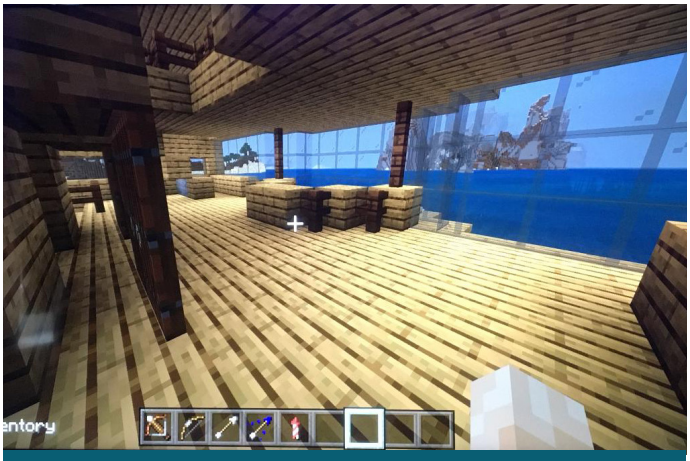
"The challenge presented a 'real life' project, which required consideration of the many different aspects of planning a community build. It also exposed the students to different careers that the students were unaware of."

Amal Martin, Enterprise and Employability Officer from Perth High, added: "The online broadcasts were excellent – clear and informative – and the challenge has been interesting and inspiring. The group felt it gave them a good insight to a wider range of construction roles and careers.

The five students from Perth joined 2000 students from 300 schools across the UK taking part in this ambitious course. All of the participants received silver accreditation from the Engineering Development Trust's Industrial Cadets programme and a letter from Hector MacAulay, Balfour Beatty Scotland and Ireland Managing Director.

"This innovative programme has allowed school pupils from Perth and Kinross to participate in a high quality national programme providing virtual work experience. This is the first programme we have been involved in and the feedback from those taking part is already indicating that we need as much of this type of input as we can get."

John Robertson, Employer Engagement Advisor, Developing the Young Workforce, Perth and Kinross



Internal 3D desing using Minecraft by Blairgowrie High School team

Bridging the Ordie with an innovative structure

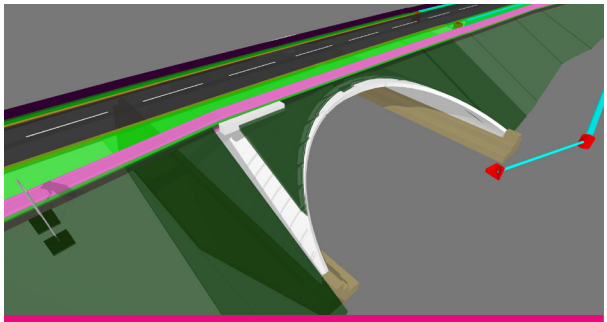
As part of the project, we are replacing an old stone bridge on the U32 road which crosses the Ordie Burn to the west of Newmill Farm. Our design for the new structure uses an arch structure.

We have opted for a proprietary pre-cast concrete arch bridge solution from BEBO® Arch International AG. The product uses large sections of pre-cast concrete arch which can be delivered to site and lifted into place using a crane. The arch sections are then joined together with concrete and backfilled with earth to achieve its strength. Similar structures have been used successfully on a number of projects including two on the Aberdeen Western Peripheral Route (AWPR).

We selected a precast arch solution to bridge the Ordie burn for a number of reasons. Precast structures are quicker to erect as the casting of the concrete can be completed offsite. Once the pre-cast sections are delivered, they can be lifted into place and secured. This limits the risk of contamination to the watercourse by reducing the working time above it. It also reduces the impact on local communities and road users as there is less associated construction traffic such as steel and concrete deliveries with only the crane and the sections needing to be delivered to site. The precast arch also reduces the amount of time people have to work at height, making the site safer, and reduces the amount of temporary works required.

Once the structure is erected, the earthworks operation will begin to backfill the area and create the approach embankments around the bridge. This operation needs to be carefully completed with material compacted equally at either side of the structure in a series of layers. This is to ensure that the load being put on each side of the arch remains balanced. The weight of the earth backfill then works in tandem with the arch structure to give it its strength by compressing the two sides of the arch together.

During the removal of the old bridge, the site team recovered the dated keystone and brought it back safely to the site office for storage. We are looking at ways to incorporate this into the project in order to recognise its historical value.



3D model of the new structure

BEBO® Arch at Limpet Burn, AWPR

The dated keystone from the old bridge

International Women in Engineering Day 2020

International Women in Engineering Day takes place on the 23rd of June each year and celebrates the contribution of all the amazing women working in engineering across all industries. It also shines a light on the gender imbalance within the sector which remains an important challenge in creating a more diverse workforce.

Our Community Liaison Officer, Duncan Gardner, has been working with Margi Vilnay, Lecturer in Structural Engineering and Director of Public Engagement and Outreach for the School of Science and Engineering at Dundee University, to support the development of a mentoring scheme for female students which was unveiled on International Women in Engineering Day 2020. The scheme has attracted mentors from across the engineering spectrum to provide opportunities for women studying all engineering specialisms to learn from a network of mentors.

Women in engineering is a passion for Margi. She said: "According to a study in 2010/11[1], female students accounted for 17% of civil engineering students in the UK. Although female engineering university students shared similar engineering career ambitions to their male counterparts, they were less likely to be in engineering occupations six months after completion of their course. Additionally, the overall retention rate of female engineering graduates is far lower than that of males, 25% compared with 40%."

Mentoring has been shown to be an effective tool to challenge these trends by providing support, solidarity and confidence to young women starting out on their career journey. Balfour Beatty is delighted to support this programme and our project staff are looking forward to it commencing this September for the new semester.

> "At the University of Dundee we are passionate about promoting engineering as a great career choice to women, who currently represent only 6% of professional engineers in the UK[2], with a view to increasing gender balance in the subject area. Exposure to a relevant role model increases career motivation[3] and academic and career aspirations[4, 5]"
> **Margi Vilnay, Dundee University**

1.. S. McWhinnie and J. Peters, 'Diversity in Engineering', Womens Engineering Society
2. 'Engineering UK 2015: The State of Engineering'.
3. A. P. Buunk, J. M. Peiró, and C. Griffioen, 'A Positive Role Model May Stimulate Career Oriented Behavior1', JASP J. Appl. Soc. Psychol., vol. 37, no. 7, pp. 1489–1500, 2007.
4. The relationship among career aspiration, multiple role planning attitudes, and wellness in African-American and Caucasian undergraduate women. 2005.
5. T. Fried and A. MacCleave, 'Influence of Role Models and Mentors on Female Graduate Students' Choice of Science as a Career', Alta. J. Educ. Res., vol. 55, no. 4, pp. 482–496, 2009.

In Profile: Gemma Montrose - Project Sponsor for Transport Scotland

To celebrate International Women in Engineering Day 2020 on 23 June, who better to interview than the woman charged with managing the delivery of the A9 Dualling project between Luncarty and Birnam on behalf of Transport Scotland.

We asked Gemma Montrose to take some time out from her busy schedule to talk about her career journey and what attracted her to engineering as a profession.

Name: Gemma Montrose

Job title: Project Sponsor, Transport Scotland

Where are you from? I'm originally from Banff, a small town north of Aberdeen, before I left to study Product Design Engineering at Strathclyde University in Glasgow.

Qualifications: MEng in Product Design Engineering, University of Strathclyde, Glasgow. CEng – Chartered Engineer, Member of the Institution of Civil Engineers

What interested you in Engineering?
To be honest, I really didn't know what engineering involved as a profession when I was at school and I certainly didn't have any awareness of the wide range of disciplines within the industry that are required to construct a road. I enjoyed design subjects including graphics and craft & design, understanding how things were built, for example, how a building stands and solving practical problems at the design stage through technological studies – these subjects all helped me to visualise how all of this linked to engineering from a practical point of view, but I didn't know at that point that it was called civil engineering!

It was when I was looking at career options I wanted to have a career doing something that would encompass those things that I enjoyed and was aligned to my strengths – one of my teachers recommended Product Design and having looked into it, I applied for the Product Design Engineering course at Strathclyde University.

I didn't decide on any particular sector of engineering until I was almost finished my degree – the transport sector had always interested me, but a factory-based environment didn't appeal. I discovered the variety of roles available within Civil Engineering that allowed a variety of both indoor and outdoor working and numerous possibilities – working on roads or rail infrastructure, or building developments – and having the option to work anywhere in the world all really appealed to me. Shortly after graduating, I secured my first job with Amey, working on Roads Maintenance for Scotland's trunk roads.

What types of projects have you worked on?

I've worked on numerous projects from roads maintenance and accident investigation projects with Amey, to various roles within Transport Scotland including flood prevention, bridge schemes, the A83 Rest and Be Thankful, the M8 M73 M74 Motorway Improvements Project and managing the trunk roads network across southern Scotland. I have also been lucky enough to spend some time working in New Zealand which opened my eyes to a completely different approach to culture and engineering, with much more focus on urban design. I learned a lot about myself during that process! As well as valuable professional development, I worked on really exciting projects such as major new link road developments in Auckland, transport assessments for new developments and the redesign of the transportation network for the Christchurch International airport. I also worked for a roads contractor out following a major earthquake, assisting with the recovery efforts on the road network which was a really valuable experience.

What is the best and worst things about working in construction / engineering industry?

The civil engineering and construction industry is so varied and wide ranging - there is role that will appeal to everyone. I didn't take the traditional route by studying civil engineering at university, but that has never held me back achieving my career goals. I've never felt limited within the engineering industry – although it can be a challenging and pressured environment to work in, the outputs and meeting great people along the way are definitely worth it! As a female in engineering, my experience on sites has always been encouraging – most people genuinely want you to do well and want to deliver a successful outcome. Having the opportunity to work on major projects such as the A9 Dualling project, which is a route that I personally travel on often is really exciting, however working as a team is the best part of the job. It's not so much about a particular project – it's the people that make all the difference. When you have a team you really enjoy working with, and everyone is working to the best of their ability to deliver something great, it's the best job in the world.

What advice would you offer to your younger self?

I think it's really important to enjoy what you do in your career. We spend so much of our day working and it's important to get the right balance of doing something you enjoy and having something that challenges you.

Speaking to people with experience within the industry is really one of the best ways to get a feel for what a job involves. Parents, friends or neighbours can help you to find what the job really entails, from the environment you can expect to work in, to the hours you are likely work and salary you can expect. Take every opportunity to gain work experience – it's invaluable and can provide an insight you wouldn't otherwise get until you secure your first job.

I also believe it's important to engage with young people so that they are aware of how varied Civil Engineering is, and the numerous roles and disciplines that are available to them – designers, structural engineers, finance – if we don't tell them about these roles when considering their career options, how can we expect more people to choose engineering as a profession. What we have been able to achieve with the project and our engagement with schools is really great. We have been able to demonstrate to pupils of all ages the different elements that go into building a road and they can see it as they will drive it often and it will make sense to them.

Contact Us
Project Enquiries Line: 0800 193 7313
Project Email: A9L2B@BalfourBeatty.com

/transcotland
/trafficscotland
/BalfourBeatty

/TransportScotland
/BalfourBeatty

@transcotland
@trafficscotland
@balfourbeatty

flickr.com/photos/transportscotland

For regular, live traffic updates please visit:
trafficscotland.org

Plan your journey at:
trafficscotland.org