A284 Lyminster Bypass (North) – August Progress Update

Date: 29/08/2024

This is the latest monthly newsletter updating you on progress made in the construction of the Lyminster Bypass. We hope you find it useful, but please contact us if there is anything you would like more information on or would like to give us any feedback.

As you may be aware, the traffic has been temporarily rerouted onto a section of what will become the new carriageway. This is to allow works to progress in the footprint of the existing carriageway, while reducing the wider impact of the general public.

North of Ancient Hedgerow

A lot has happened this month to the North of our site. We began with the road diversion on 2nd August which now carries the traffic along a section of what will be the new carriageway. The site team spent all day ensuring the switch went smoothly and as planned, and it did.

The traffic switch allowed us to access the existing road initiating the start to Phase 2 of the Culvert works. This has included digging out and exposing the water mains which ran under the existing road and installing a new pipeline which will run across the back of the culvert temporarily. The mains water was turned off for 3 hours so the diversion was able to happen. They are yet to cut off the current water pipe, leaving the temporary pipe in full flow.

Image 1 Traffic switch

Image 2 Exposing water mains

Image 3 Water diversion

Ancient Hedgerow to Bridleway

The only works in this section has been the traffic switch due to all the current works being completed here and a run of live traffic on the carriageway now.

Image 4 Traffic switch

Bridleway to Black Ditch

The remaining combined kerb drainage units have been installed on the viaduct as well as a majority of the subsurface drainage. The subsurface drainage is built up from half pipes welded to flat plates, adhered to the waterproofing on the deck. Along the runs there are access boxes that have been cut down to suit and concreted into position to make flushing points through the system. We have then been able to pour the concrete infills making the base of our cycleway/footpath and verge next to the road.

Looking out from the viaduct, the aquatic plants in the southern pond continue to bloom, contributing to the site's biodiversity.

Image 5 Drainage on the viaduct

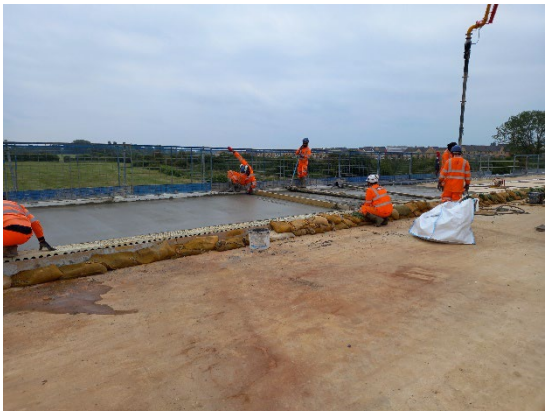

Image 6 Verge infill pours

South of Black Ditch

The soil improvement was completed this month by the south abutment. This process is employed in challenging ground conditions to enhance the area's properties. It involves blending the existing soil with cement and GGBS (a cement-like substance). It underwent CPT (Cone Penetration Tests), PLT (Plate Loading Tests) and cores from the ground were taken to be strength tested, all to ensure the foundation is solid enough for the works to continue.

After these works were completed, we have been able to begin digging out where an Attenuation tank is going to be installed. These are flow control chambers that manage the amount of water going in and out of it. They prevent the area flooding as it is where all the drainage systems flow to. As well as this, we have had a large amount of muckaway removed from site from the dig out for the tank, as well as the excess material from the soil mixing.

Image 7 Deep Soil mixing

Image 8 Digging out for Attenuation tank

Community works

We have recently donated a brand-new gate to Saint Nicholas Church in Poling. We organised this earlier in the year as a donation to the church after our Public Liaison Officer attended a local parish council meeting, where they expressed their need to update it as the old gate was rotting. After speaking to the site team, we decided this was something we could do to help the local community.

A few team members attended the church in August to place the plaque on the newly installed gate. The Parish council lead and a few of the residents joined us for this – They expressed how grateful they were for the new gate, and that they are very happy with the new entrance to the church.

For further information about the scheme, visit the Lyminster Bypass North web page.

Should you have any specific scheme enquiries, please contact lyminsterbypass@jackson-civils.co.uk

A284 Lyminster Bypass (North) – September Progress Update

Date: 27/09/2024

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North of Ancient Hedgerow

For the next stage of the culvert, we have now saw cut the existing tarmac along the lines where the sheet piles will be driven in next month. This is to allow our team to carefully break away the unwanted tarmac whilst still leaving a platform in the middle for the piling rig to sit, minimising the size of the machine needed.

As well as this, after getting positive results back from Southern Water regarding the quality of the water through the new pipe, the existing water mains has been capped off and cut, now leaving the water to run through the new diversion out of the way of our works.

Image 1 Saw cuts in tarmac

Image 2 Exposing water mains again

Image 3 Complete water diversion

Ancient Hedgerow to Bridleway

No works occurred in this area, the traffic switch remains live and is running smoothly with no interruptions.

Image 4 Live road

Bridleway to Black Ditch

The embankment to build the road up to formation level has been constructed this month. It is made from a class 1 granular material and has now been bought up to a level where the drainage can be installed completely. The perforated pipe has been installed on the West side already where the excavation is filled with shingle to allow the surface water to drain into the system.

Image 5 Embankment and drainage works

Image 6 Embankment and drainage works

South of Black Ditch

We continued with reducing the levels of the soil improvement, mainly along the back of the southern abutment to allow us to install the drainage required through and along the back of the abutment. This included installing the rest of the sub-surface drainage in the gallery of the abutment, as well as installing a stainless steel pipe through the back wall which will run into a manhole. The drainage also includes a perferated pipe being concreted on top of the base of the abument and hollow blocks installed to allow any excess surface water to run down the back of the abutment. We completed the same procedure on the north abutment back in March.

To protect the concrete we also installed a product called Matacryl along the top of the abutment which prevents water ingress into the concrete and allows it to flow straight into this back of wall drainage.

Behind the abutment, the attenuation tank works have continued. This has involved placing plastic crates with voids, wrapped in a waterproof material, down in the ground to hold any excess water as when the rain becomes heavy enough it avoids the water flow entering the natural watercourses and flooding.

Image 7 Continued Attenuation tank works

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A284 Lyminster Bypass (North) – October Progress Update

Date: 12/11/2024

The scheme is progressing well and is now in its final stages, but a number of unavoidable events will mean the full completion has been delayed into early 2025.

The material to the south of the viaduct was considerably wetter than expected and increased in bulk when excavated which took longer to dispose of. The wet weather has also delayed activities over this time. The Utility Companies, who are not directly under our control, did take longer to carry out temporary diversion works than we'd initially planned, but we are continuing to do everything we can to work with them to reduce and minimise any further delay where possible.

However, as you will no doubt have seen by now, the traffic has been temporarily re-routed onto a section of what will become the new carriageway. This is to allow works to progress in the footprint of the existing carriageway, while reducing wider impact and disruption to the general public.

North of Ancient Hedgerow

Despite some challenging weather in the last few months, some good progress has been made regarding the culvert works at Brookfield Stream. At the beginning of the month a number of interlocking sheet piles were driven into the ground creating a closed loop called a cofferdam around the extents of where the culvert will be installed. This has allowed us to safely break out and remove the existing road and excavate the ground underneath. The next step was to improve the strength of the foundations/ground using the same soil improvement technique as previously used on this job. We are now currently in the process of digging out the soil improvement material down to the correct level so the new pre-cast concrete culvert units can be installed whilst also providing a safe working space for the site team.

Image 1 Sheet piles being installed

Image 2 Cofferdam installed

Image 3 Beginning of digging out

Image 4 Soil improvement completed

Ancient Hedgerow to Bridleway

The acoustic fencing was completed in this area. The traffic switch remains live and is running smoothly with no interruptions.

Image 5 Live road

Bridleway to Black Ditch

The embankment has now been built up awaiting the final road surface to be placed on top. The footpath along the eastern side has been completed, with installation of the concrete borders of a footpath marking its edges. Pre-cast concrete drainage units have been installed to allow the drainage of water to run off the road and into the drainage system, which has been connected to the existing channel kerbs on the north side of the viaduct.

The farmer's access track has also been completed, with concrete edgings installed around the entire perimeter of the pathway to clearly define its boundaries.

On the north of the viaduct the stairs up to the abutment gallery – to be used for maintenance of the viaduct – have been installed including a handrail system running up the side.

Image 6 Embankment and drainage works

Image 7 North abutment stairs

South of Black Ditch

The soil and mixed materials were levelled to create a solid base for the road. A layer of Terram (a geotextile material used to keep materials separate when layering them) was then added to help with the compacting process for the Type 1 material, which serves as the main foundation layer of the road. This Type 1 layer, a specific class of graded stone with the required properties, was then spread out, shaped to match the shape of the road, and thoroughly rolled to ensure it was well-compacted. Finally, more concrete drainage units, were installed along the edges to help direct water runoff and define the road boundaries.

We have also installed the stairs on the south of the viaduct with a handrail system running up the side.

Image 8 Progress on the South

Image 9 South Abutment stairs

For further information about the scheme please visit the Lyminster Bypass North page on West Sussex County Council's website:

https://www.westsussex.gov.uk/roads-and-travel/roadworks-and-projects/road-projects/lyminster-bypass-north/

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A284 Lyminster Bypass (North) – November Progress Update

Date: 06/12/2024

This is the latest monthly newsletter updating you on progress made in the construction of the Lyminster Bypass. We hope you find it useful, but please contact us if there is anything you would like more information on or would like to give us any feedback.

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North of Ancient Hedgerow

Despite challenging weather conditions in recent months, significant progress has been made on the culvert, a type of structure that channels water under a road to prevent flooding and facilitate drainage. At the start of the month, the second phase of the culvert installation began.

This phase of construction focused on installing the culvert units, which comprised six sections made off-site and designed to connect, including one concrete headwall and four structural concrete wing walls, all of which were safely placed in using a 250-tonne crane on a carefully prepared bed of 6N material. This is a granular fill that compacted to provide a stable and reliable foundation for the culvert system.

The wing walls are designed to provide additional support and to channel water effectively into and out of the culvert, helping to prevent soil erosion and maintain the integrity of the surrounding area. In addition, the headwall was installed at the culvert outlet to reinforce the structure and manage water flow more efficiently.

Once these key elements were in place, the surrounding area was backfilled with compacted 6N material to stabilise the culverts and ensure the system was well integrated into the landscape. To shield the culvert units from water entry and lengthen their durability, a product used to create a waterproof barrier named Blackjack was applied to the outer surfaces, creating a robust seal and ensuring the system's durability.

Image 1 Culvert units being installed

Image 2 Craine lifting precast units

Image 3 6N Backfilled

Ancient Hedgerow to Bridleway

Along the carriageway leading to the bridleway, we applied an additional layer of tarmac to withstand the heavy traffic from construction activities. This protective measure ensured the underlying road surface remained intact during the building phase. After this period, we employed a technique called planing to remove the excess tarmac, effectively smoothing out the surface in preparation for the final layer of tarmac. This process was both efficient and cost-effective, streamlining the preparation without the need for more intricate methods.

Image 4 Plaining tarmac

Bridleway to Black Ditch

During this period, construction activities focused on several key tasks. Street lighting was installed along the road waiting for cable connection. We've installed edgings along this path, which serve to clearly define its edges and prevent the paving materials from spreading outward. Kerbs were also placed to offer structural support and clearly define the road's boundaries.

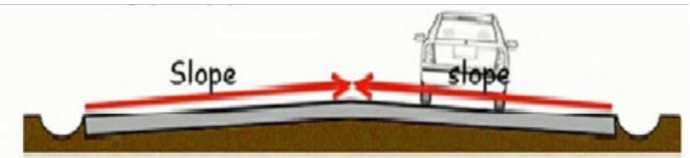
Progress continued in the landscape zones, the material was rotavated, a process that involves breaking up and loosening the soil to improve its structure and ensure it meets the required

standards for compaction and drainage. Once this was completed, topsoil was evenly spread over the prepared areas. This step is essential to create a suitable base for the final stages of landscaping and planting.

Work on duct boxes and ductways for traffic management progressed, ensuring the site was prepared for future utility connections. Ducts are underground protective channels designed to house utility cables, such as those for electricity.

These ducts enable utility companies to install, repair, or upgrade their networks without the need for extensive excavation or disruption to traffic, as cables and pipes can be accessed through the duct boxes or pulled through the ductways.

For the road itself, the existing subbase stone was adjusted and shaped to match the road's camber, which is the slight slope designed to aid water drainage and ensure proper alignment of the road surface. Once the subbase was prepared, the process of laying tarmac began. This involved laying two base course layers, which are the first layers of asphalt that create a solid base for the road. After that, a binder course, a strong and durable layer that helps support the road and gets it ready for the final surface, was added to key sections of the carriageway.



Camber in a road

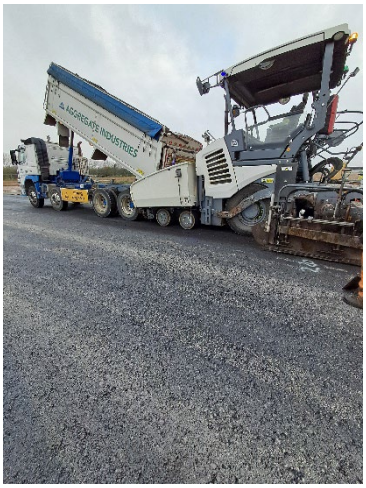


Image 5 Tarmac binder layer on carriageway

South of Black Ditch

This month a multi-layer waterproofing coating system (with a red top layer in photo) was successfully applied to the deck of the viaduct before we were able to apply any tarmac. This layer system is essential as it prevents water from seeping into the concrete viaduct structure, protecting it from potential damage over time. The tarmac layers were then laid in stages to ensure the road is well-protected, durable, and drains effectively.

Tarmac began with a layer of Hot Rolled Asphalt (HRA) applied. This type of asphalt is very strong and designed to last a long time. It also provides a safe, non-slip surface for vehicles. To give the road its different sloped surface, known as the camber, which allows water on the road to drain off into the Combined Drainage Kerbs, two layers of binder material were added. These layers were carefully shaped and compacted to make sure the road drains water properly and remains strong enough to handle the weight of traffic.

Image 6 waterproofing on the viaduct

Image7 Tarmac getting laid on the viaduct

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A284 Lyminster Bypass (North) – December Progress Update

Date: 13/01/2025

This is the latest monthly newsletter updating you on progress made in the construction of the Lyminster Bypass. We hope you find it useful, but please contact us if there is anything you would like more information on or would like to give us any feedback.

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North of Ancient Hedgerow

In December, our team tackled several crucial phases of the culvert installation under challenging weather conditions, with heavy rainfall present, a culvert is a structure that channels water under a road or railway to prevent flooding and facilitate drainage. The month started with applying a waterproof coating to the culvert units and wing walls. This step is vital for preventing water from seeping into the concrete and causing potential damage over time.

Once the waterproofing was complete, we placed hollow blocks against the culvert's walls. These blocks allow for drainage behind the walls, helping to relieve hydrostatic pressure that can build up and threaten the structure's integrity.

The next step involved backfilling with 6N material, a type of compactable aggregate, up to the level of the weep holes in the culvert structure. Weep holes are small openings that allow water to drain out, preventing it from accumulating and exerting pressure against the culvert. After reaching this level, an additional 6N material was added up to the sub-surface level of the planned road, providing a stable foundation for the road construction above.

We then removed the sheet piles' temporary structure, used to hold the earth back, using a 250-tonne crane.

We also installed block-up brickwork on the face of the culvert. This step involved placing bricks on the exterior surface to make the culvert look better and help protect it.

Image 1 - 6n Backfilled and hollow blocks installed

Image 2 - Brickwork on face of culvert

Ancient Hedgerow to Bridleway

In the landscaping areas, we prepared the ground and planted hedging whips. This helps establish new hedge lines and supports biodiversity around the project area.

Image 3 - landscaped areas

Bridleway to Black Ditch

Preparation of tactile paving has commenced, which involves creating raised surfaces on the pavement to help visually impaired pedestrians navigate safely. This began with precisely cutting the pavement edges to shape the space where the tactile paving will be installed.

At the same time, over at the pedestrian farm access and horse crossing known as Pegasus Crossing, we've been busy laying and testing underground ducting to ensure they can house the cables for street and traffic signal lighting. This is important for things like traffic lights and sensors that help keep the crossing safe and functional.

We've also installed new timber fencing beams around the crossing to define the boundaries between different crossing areas. This fencing will then separate the areas used by pedestrians, horses, and farm vehicles, ensuring that each has a designated and safe path to cross.

Traffic loops were installed at the Pegasus crossing, which is essential for detecting vehicles and helping to manage the traffic flow safely and efficiently. These loops are embedded in the road surface and connect to the traffic signal system to control light changes based on the presence of vehicles.

Image 4 - Pegasus crossing and fencing beams

South of Black Ditch

This month, we've made several important improvements to the viaduct area. On the viaduct's footpath, we installed a subsurface drainage system, which is for managing rainwater and preventing waterlogging.

Additionally, we added concrete along the edges of the bridge to prepare for a new layer of tarmac. This preparation ensures that the pathway will be robust and durable.

We also installed a rodding eye to the attenuation tank; this is a maintenance access point that helps ensure our drainage system continues to function properly. Moreover, we fully installed the ducting for future street lighting, laying the groundwork for enhancing safety and visibility once the lights are activated. These updates are part of our ongoing efforts to improve safety and efficiency in the area.

Image 5 - Attenuation tank rodding eye

Image 6 - Concrete infills on viaduct

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