



Homes
England

Making homes happen

Community newsletter · Issue 4 · January 2021
Keeping you up to date with progress

Northern Arc



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Welcome

Welcome to the fourth edition of the Northern Arc newsletter.

In this edition we provide a site progress update including how we designed the eastern bridge and link road and updates from John Sisk & Son who will build it. We'll hear from Countryside Properties who are on-site at Freeks Farm and look at how we're working with existing, natural landscape features across the whole of the Northern Arc.

On 27th January we'll be holding another online community drop-in session.

We're keen to hear from the local community on how you'd like to be kept informed, and

what topics are of most interest to you. Please use the contact details on the back page of this newsletter to let us have your thoughts and find more information about how to join the session.

Our aim is to hold events in person as soon as we are safely able to do so whilst ensuring project updates are accessible online.

Ken Glendinning

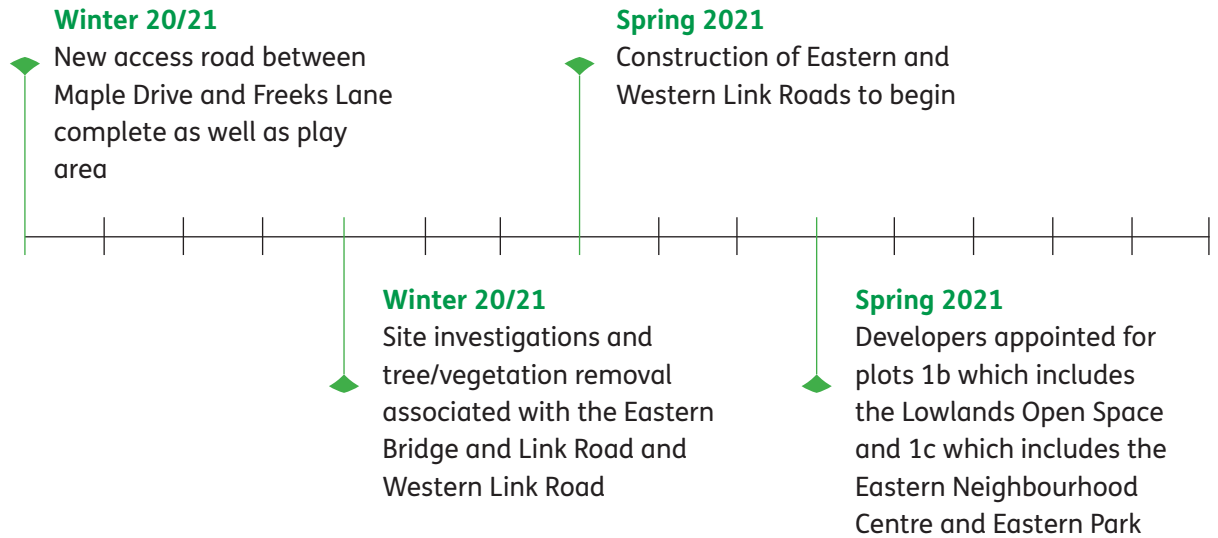
**Project Director,
Homes England**



Cover image: Protected ancient woodland at the Northern Arc, captured by Sussex-based photographer Scott Ramsey

Development timeline

Progress at the Northern Arc



◆ Masterplan for the Northern Arc



ARTICLE 1

Trees and biodiversity

Working with the natural features of the landscape

The Northern Arc is set within a mature landscape of habitats including ancient woodland, mature trees, species-rich hedgerows, semi-improved grassland, watercourses and ponds.

Protecting and enhancing this existing habitat is vital to ensure the Northern Arc has a long-term positive impact on local biodiversity and wildlife.

From the outset, all areas of ancient woodland habitat have been protected. Ancient woodland is an irreplaceable habitat that has existed since at least the start of the 17th Century. Special consideration has also been given to protecting species-rich hedgerows, a traditional feature of the Sussex agricultural landscape. This has led to approximately 10km of existing hedgerows being retained and incorporated into the design

of the Northern Arc. Trees with the potential to be affected by the development have been considered through an Arboricultural Impact Assessment submitted alongside the planning application, which can be viewed in the Northern Arc project library on burgesshill.net.

When it comes to protecting trees, Mid Sussex District Council and West Sussex County Council were closely consulted during the early design stage of the Northern Arc. Satellite data, aerial imagery and data from DEFRA were used from the outset to highlight areas of woodland which should be protected. In addition, buffer zones were established around these highly valued ecological areas which cannot be built on, which include areas of Ancient Semi Natural Woodland. Key areas of importance have been surveyed by a qualified

tree specialist to provide the most up to date and detailed information possible.

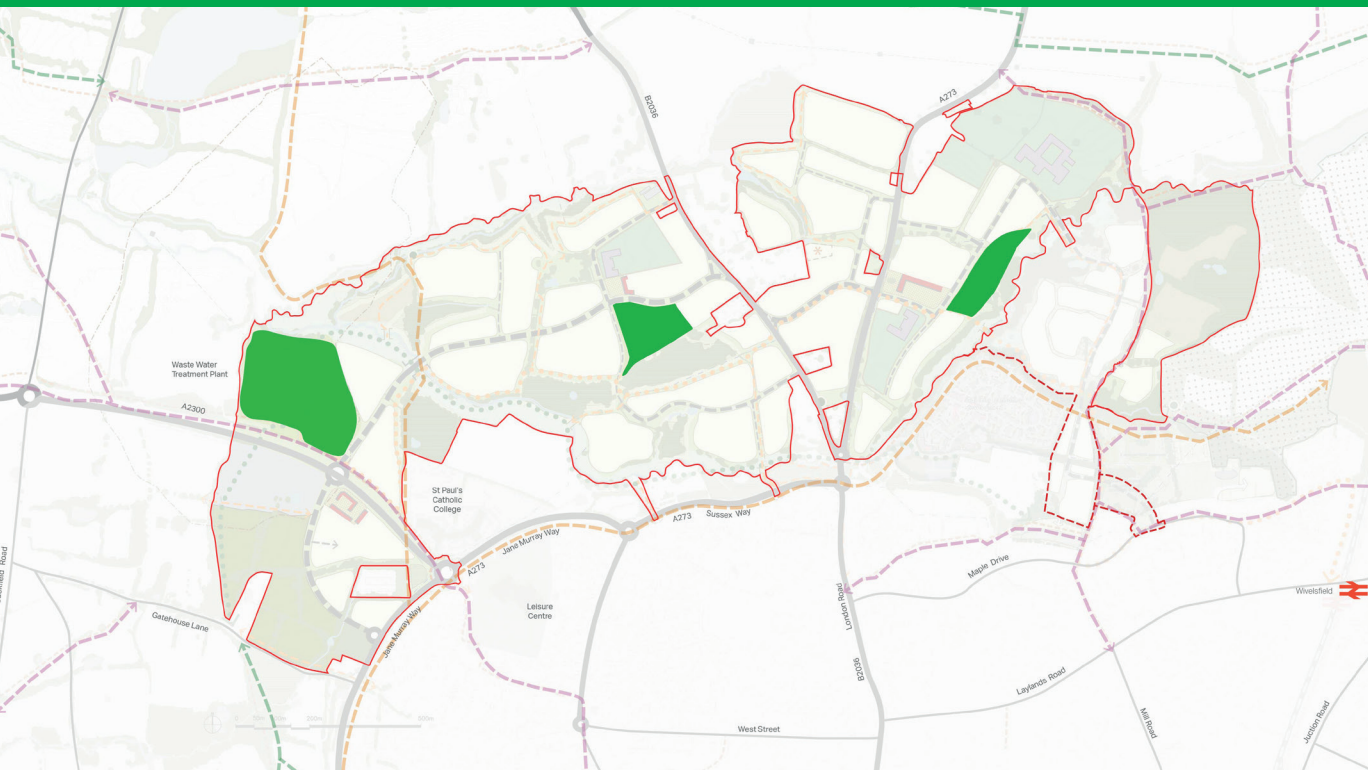
The information collected from the surveys were used to categorise all the trees within the development and nearby surrounding area. The trees are categorised by their quality, value and estimated remaining lifespan. The design of the Northern Arc was refined to protect as many higher value trees as possible. Buffer zones where development is restricted have been placed around the highest value trees. Protective measures such as exclusion zones have been put in place around retained trees to protect them from any construction works at the Northern Arc.

Where tree loss is unavoidable, such as the recent works to widen Isaacs Lane at the site of the new road junction, tree specialists have worked closely with ecology and landscape professionals

and MSDC to develop a tree planting plan to counterbalance the tree losses. The new trees will be planted to complement the existing species already present, and to increase resilience, especially in respect of a changing climate and the threat of pests and disease. New broadleaved planting will be 80% native species, including species such as Alder, Holly, Aspen and Sweet Chestnut, whilst 20% will be non-native species, such as Sweet Gum, River Birch, Pin Oak and Common Walnut.

Through this planting plan, the Northern Arc will increase the long-term quality, diversity and resilience of the local tree population. Because of the relatively small range of species on site at the moment, the existing trees are at risk of diseases such as Ash Dieback and Acute Oak Decline. The new woodland planting will create a

Location of the neighbourhood parks at the Northern Arc



varied woodland mosaic to provide a diverse range of habitat for biodiversity, as well as extending existing habitat corridors, boosting resilience to future climate change, pests and disease. The mixture of native and non-native species will provide a variety of colour, texture and seasonal interest to the area, and will help break up the development's visual impact on the landscape.

The planting will be visible throughout the Northern Arc, including its Western, Central and Eastern Neighbourhood Parks. Homes England are determined that the planting should occur as soon as possible. A request for early funding has been submitted to the Government to bring forward some of the planting and woodland enhancement. This will mean that the trees and shrubs will be planted and begin to grow before developers are appointed.

As detailed designs for the Eastern Neighbourhood Park are created by developer partners in 2021, you will have the chance to see what's planned for planting and have your say. Keep an eye on the Northern Arc web page at burgesshill.net for news and updates.

All areas of ancient woodland habitat will be retained and protected with buffer planting



ARTICLE 2

Designing the Eastern Bridge and Link Road

One of the key commitments Homes England has made towards building a successful community at the Northern Arc is that the right kind of infrastructure will be provided, at the right time, to meet the needs of Burgess Hill.

Cycling and walking will be prioritised with the extension to Burgess Hill's Green Circle network and the creation of the Green Super High Way - a traffic-free route through the development linking neighbourhood facilities, parks and schools. The Northern Arc avenue will be the main road through the development. At the eastern and western ends of the Northern Arc avenue, two link roads will be built: the Eastern Bridge and Link Road will link Freeks Lane with Isaacs Lane, crossing the River Adur. When complete, it will allow construction traffic to access development plots for housing and the primary and secondary schools, routing

heavy vehicle traffic away from Freeks Lane.

John Sisk & Son is the contractor who has been appointed to bring forward detailed design and build the bridge and road, and you can read about their site progress since September in their update section on page . However, a lot of work needs to be done to design a road bridge before it gets to this stage of development. We caught up with Thassos Frangeskou from AECOM's infrastructure team to find out more about what it takes to get a road off the drawing board.

What do you need to take into account when you start to design a new road?

There are many factors which need to be considered and balanced against each other when roads are designed. One priority for the eastern Bridge and Link Road has been trying to minimise the effect of the proposals on trees



An illustrative sketch of the Eastern Bridge

and hedgerows. The location of the bridge was reviewed and altered to take into account the root protection zones of mature trees in the vicinity. The embankments at either side of the bridge span have also been reduced in size in order to preserve trees and vegetation.

The construction of the bridge will lead to some building in flood zone areas. In order to maintain the same volume and total area of flood zones at the same point on the river, landscaping will maintain flood resilience and also provide good quality replacement flood zone habitat for wildlife. (For more information about sustainable drainage, see article on page 16).

The ecology of the area has been incorporated into the design in other ways too: there will be a wildlife tunnel to allow animals like badgers to cross underneath the road and provision for

smaller animals such as dormice to use a wildlife bridge suspended underneath the road bridge. Lighting on the bridge will be reduced to avoid disruption of existing nocturnal flight paths.

Who makes the rules?

There are several different statutory bodies who have requirements to be met when a new road is designed and built. For example, in the case of the Eastern Bridge and Link Road, Mid Sussex District Council required that the bridge match the existing topography of the site as far as possible, keeping it short and low to minimise visual impact on the landscape. However, the Environment Agency required the height of the bridge to be at least 600mm above the highest predicted flood level of the river, so the bridge was designed to accommodate both these requirements.

West Sussex County Council will be responsible for the ongoing maintenance of the bridge after the Northern Arc is complete, and some of their requirements involve gradient constraints. This is because vulnerable road users like cyclists need to avoid steep slopes. Active travel will be a key part of life at the Northern Arc, so the footpath and cycle path running alongside the eastern bridge and link road will be separated from vehicle traffic with a planted and tree-lined landscaped verge.

Public transport provision for Burgess Hill residents at the Northern Arc will mean two buses may pass each other anywhere on the road - this requirement set the minimum width for the Eastern Bridge and Link Road.

What did you have to consider when designing the junction with Isaacs Lane?

The size of the junction onto Isaacs Lane is dictated by traffic modelling and national Government regulations for the creation of safe roads. The size of the junction has been reduced as far as possible. The number and length of traffic lanes have been designed to make sure road safety factors like congestion, visibility and stopping distance are all safely taken into account. These requirements will mean a widening of Isaacs Lane close to the junction. Existing properties on the western side of Isaacs Lane must be avoided, so widening works will mainly happen on the eastern side of the road.

Sisk & Sons will be working on the Eastern Bridge and Link Road throughout 2021 with an anticipated completion date of spring 2022.

To be kept up-to-date, visit the Northern Arc facebook page @NorthernArcBH.



◆ A wildlife bridge used to maintain habitat connectivity, image courtesy of Animex



◆ A hibernating Hazel Dormouse - a protected species known to be present on site

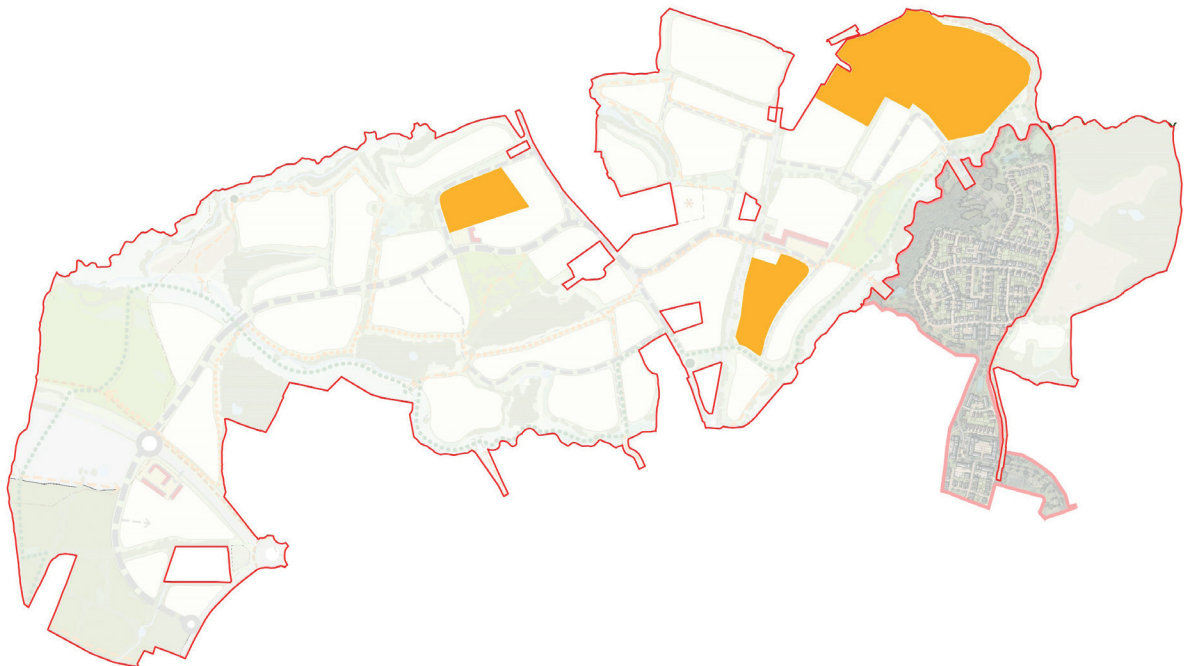
Schools update:

Primary and secondary provision

There is a significant number of new homes proposed in Burgess Hill (up to 5,000 dwellings), the majority of which will be built at the Northern Arc but also at the major developments to the East of Kings Way and the former Keymer Tiles works. This level of housing triggers the need for new schools, with two primary schools and a new secondary school to be built at the Northern Arc. The first of the two new primary schools is due to open in September 2023 as part of the first phase of the development to the eastern side of Isaacs Lane. Both primary schools will be built in neighbourhood centres, close to community buildings, local shops and neighbourhood parks. All schools will be built with safe walking and cycling routes which will be separated from vehicle traffic.

The two new primary schools will be built by contractors appointed by Homes England. The contractor responsible for building the Eastern Primary School will be announced in the spring of 2021. The new secondary school will be developed by West Sussex County Council, with Homes England providing land for the school and making a significant financial contribution towards the cost of the facility and towards local off-site sixth form provision. West Sussex County Council are currently finalising their programme for the new secondary school which is due to open in September 2024. The new secondary school will reduce pressure on demand for secondary school places in Burgess Hill, as well as Haywards Heath and Hassocks.

A plan of the Northern Arc showing the location in yellow of two primary schools (smaller areas) and one secondary school (larger area)



Contractor update: Countryside properties



Countryside Properties are the first house builder to be appointed at the Northern Arc and will be building 460 homes - over 50% of them affordable housing - in the Freeks Farm area to the east of the site.

Land near Maple Drive which had previously been used as a landfill site has now been fully cleaned up by specialists. The landfill waste was sorted on site, and all recyclable materials were processed. Soil from the landfill has been tested and has only been reused on site once chemical laboratory analysis has confirmed it's suitable - prioritising safety and sustainability.

The Covid-19 lockdown in March led to an unavoidable delay in the work while site safety plans were drawn up to protect workers, but the Countryside programme is now proceeding without further delay. The construction of the access road between Maple Drive and Freeks Lane is now under way and is anticipated to be

completed by the end of January 2021. Once finished, this road will allow construction traffic direct access to the site. The installation of the play area on Maple Drive, which was designed with input from pupils at Sheddingdean Primary School, is under way and is anticipated to be completed in February.

Elsewhere at the Freeks Farm site, work has progressed on the gas, electricity, water and sewage infrastructure required to supply the new homes. Power lines have been lowered underground, removing the visual impact of the overhead lines on the landscape and making sure energy supplies are available wherever required.

For more information visit countrysideproperties.com, or twitter [@CountrysideProp](https://twitter.com/CountrysideProp).

View of the new access road under construction



Contractor update: John Sisk & Son



Sisk will be building the Eastern Bridge and Link Road which will join Freeks Lane to Isaacs lane, providing pedestrian and vehicle access to the eastern part of the Northern Arc site.

Between August and December 2020, John Sisk & Son has been preparing for the construction of the Eastern Bridge and Link Road (EBLR). During this time, archaeological works were undertaken by Archaeology South East at two locations to investigate whether there were any features of historical significance. Once all analysis is complete, the finds will be offered to a local museum. You can read more about what it's like to be an archaeologist, and what was discovered on site, overleaf. Other investigations have also been carried out recently, which include ground investigation works for the design and future construction of the road and bridge.

Other works which have progressed include site preparation works, which involved the removal of hedgerows and trees near Isaacs Lane. Tree and vegetation removal took place in accordance with the associated planning consents and licenses. Ecological mitigation works have also taken place, such as the surveying and moving of reptiles. The next phase of works on Isaacs Lane will require traffic management to be put in place in order to undertake further tree and vegetation removal as agreed with Mid Sussex District Council as part of planning consent. The traffic management will be in place for a week at the start of February.

Work on the Eastern Bridge and Link Road has happened in the first phase of the Northern Arc's development because it is a vital piece of connecting infrastructure. To start with, this link road will enable construction vehicles to access the Freek's Lane and Bedeland's Corner construction

sites via Isaacs Lane, avoiding Maple Drive. Once the eastern development plots are completed and occupied by future residents, the Eastern Bridge and Link Road will provide key access for those residents to the new secondary school and eastern neighbourhood centre by car, bicycle or foot. It will also enable public transport connections towards Wivelsfield Station and the town centre.

For more, see johnsiskandson.com, follow on Twitter @JohnSiskandSon or on LinkedIn at John Sisk & Son Ltd.

Archaeology update: Archaeology South East

Following the site investigations at the EBLR, we caught up with Simon Stevens of Archaeology South East. We asked him to tell us what it's like to work as an archaeologist on a Homes England site.

Hello Simon, thanks for talking with us. What made you want to be an archaeologist?

Good question! I filled out a computer questionnaire about careers when I was at school, and it came back with 'Archaeologist, Archivist or Army'. All three sounded quite interesting, but my eyesight wasn't good enough for the forces, and dust makes me sneeze, so that just left archaeology. Now after 27 years as a full-time archaeologist I still wonder if the computer just got stuck on 'Ar'.....

What do you love the most about the job?

It's a bit of cliché, but I love the variety. I've been lucky enough to work on hundreds of sites all across the south-east of England and beyond, and you can never be sure what is going to turn up. A close second would be the on-site camaraderie; there's nothing like being part of a close-knit (but currently socially-distanced) team.

Tell us a bit about the known archaeology of the local area.

The Burgess Hill area is very rich in known archaeological finds. Recent excavations have uncovered flint tools suggesting local activity dating right back into the Palaeolithic era, hundreds of thousands of years ago. There's plenty of local evidence of Roman activity too, including

a Roman road which runs through the centre of Burgess Hill. Add in remains of Anglo-Saxon, medieval, and later remains of local iron and glass industries and you are a bit spoilt for choice.

What techniques were used during the investigations?

Initially, trenches were dug along the line of the new road to investigate whether any archaeological remains survived that might be affected during construction work. The work involved the removal of recent layers of soil by a machine to reveal any underlying archaeological deposits. The most recent archaeological work on site involved more detailed excavation and recording in this area, again using a machine to strip larger areas in search of features so they could be investigated by members of the team.

What were the finds of the investigations, and were there any surprising finds?

The investigations have revealed a number of archaeological features. The most common were small cooking pits, located apparently randomly across the landscape. The presence of a small number of worked flints suggests they may be prehistoric in date, but samples of soil taken from them will be radiocarbon dated to give a clearer picture. Interesting finds ranged from a broken Neolithic leaf-shaped flint arrowhead to Victorian military buttons, proof that this part of the Sussex Weald has seen human activity over thousands of years.

When dating and investigations are complete, we will post further details on the Northern Arc facebook page @northern.arc.BH.



Dramatic weather at the EBLR archaeological site investigations, images courtesy of Simon Stevens and Archaeology South East



ARTICLE 3

Rivers and rain

Protecting watercourses, preventing flooding

One of the most important features in the landscape of the Northern Arc is the eastern arm of the River Adur. This 32km-long watercourse was once navigated by large boats to an important Saxon port at Steyning, and the estuary at Shoreham is an important habitat for wildfowl. In the area to the north of Burgess Hill, the Adur has three tributaries: Copyhold Stream to the north, World's End stream in the east and the little Pook Bourne to the south west.

The masterplanning team at Homes England has worked hard to protect and enhance these waterways. They feature heavily in the plans to achieve a biodiversity net gain of at least 10% - projected to be 23% - on completion of the project, but also are important in the plans for managing flood risk and rainwater on site. The team is making sure the building of new homes

at the Northern Arc will not increase the risk of flooding anywhere, whether that's on site or downstream.

The majority of the Northern Arc site is at very low risk of flooding. Modelling was carried out at the beginning of the planning stage that looked at the volume of water that would be deposited by very severe storm events, including an allowance for climate change in the future, and it was determined that most of the site would still be flood-free. There are some areas near the river and streams that are at a slightly higher risk of flooding during these severe storms, and there will be no residential development in these areas. Instead, public open spaces such as the Western Neighbourhood Park have been designed to incorporate these zones and provide habitats such as wet woodland that will benefit wildlife.



Examples of sustainable drainage features

All surface water runoff (from roofs, driveways, streets and roads) must be managed within the site. That means that while water will drain into the existing watercourses, it won't happen at a higher rate than it did before development. Of course, the water quality of the river and its tributaries is of paramount importance, and measures such as trapped gullies, fuel & oil separators, grass-lined swales and ponds will be included to make sure that pollutants are removed before water reaches the Adur.

The Design Guide is a very detailed document which lays out the requirements that housing developers will have to consider when they create detailed designs for individual housing plots. Part of this document specifies the way the developers must contain rainwater in the plots and release it slowly. These might include, for example, storage

areas underneath trees planted on the street – so what the tree does not need when the rain falls is kept to water it later. It might mean rainwater from roofs drains into specially created planters for each home. We won't know exactly what the measures will be until individual developers bring forward their detailed designs for each housing plot in their reserved matters planning applications, but we do know that they will have to consider sustainable drainage as part of their design process.

If you're interested in learning more about the River Adur, including how you can volunteer your time, visit the Ouse and Adur Rivers Trust website at oart.org.uk. For more information about plans for drainage at the Northern Arc, see the Northern Arc Design Guide in the project library at Burgesshill.net.

ARTICLE 4

Meet the team



Rob Morley is a Senior Development Manager for Homes England.

What do you do on the project?

I manage the delivery of the strategic infrastructure that Homes England are to facilitate across Northern Arc, to prepare the individual land parcels for the house builders to construct new homes. This includes the main link road through the site, known as the Northern Arc Avenue, along with the drainage and other utilities required to serve the house building. Other infrastructure considerations are off site utilities upgrade works, transport and mobility improvements into and through Burgess Hill to support the new Northern Arc population, and areas of ecology mitigation.

What have been the best bits so far?

Being able to see what's involved in planning and delivering a development of this scale from an overarching perspective, which is a position few are fortunate enough to have, with an appreciation for all the individual tasks and challenges that must be overcome in order to achieve the first houses

being occupied by new residents. Developments such as the Northern Arc take years of planning and require a delicate balance of working with numerous stakeholders, local authorities and existing residents. There's also a raft of local and national regulations to contend with to ensure everyone involved is adequately represented, with a system of checks and balances in place.

While no disruption to the existing natural environment is desirable and is something we try to minimise, I'm constantly impressed by the robust ecology regulations that are in place and have a substantial influence on a development of this size. Great efforts have been made to protect species that have been identified as most at risk of habitat loss with careful mitigation strategies and habitat creation schemes required before work begins, along with an overall biodiversity net gain requirement for the scheme.

Check the next issue of the Community Newsletter to find out more about the Northern Arc team.





Northern Arc virtual drop-in

Our next community drop-in session will be held on **Wednesday 27th January at 6.30pm**, when we will provide you with an update on progress at the Northern Arc. We'll be streaming the presentation and you'll be able to watch it in a web browser, or via the MS Teams app on iPhone, iPad or Android.

<http://bit.ly/northern-arc-27-01>

You're welcome to submit questions at that link before or during the event. If you'd like us to address your question during the event **please submit by 5pm on Tuesday 26th January**. Questions submitted after this deadline will be responded to via a Q&A document shortly after the event.

You can read the Q&As from previous drop-ins at:

burgesshill.net/housing/northern-arc/project-library/

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[@NorthernArcBH](https://www.facebook.com/NorthernArcBH)

Accessibility statement

We want to be accessible to all. If you would like to receive this newsletter in a different format, or have accessibility requirements in order to join the virtual drop-in session, contact us.

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