

Hinkley Connection Project

Project update

Welcome to the summer update

Over the last three months we've achieved a number of significant milestones to connect low carbon energy. We've started work to build the world's first operational T-pylons, completed two work stages of the 14 that make up the project, and taken down the first of 67km of pylons owned by WPD.

We've adapted to new ways of working since the outbreak of COVID-19 and we're continuing to work under stringent site operating procedures to protect our workforce, their families and the local communities we are working in.

We're exploring new ways to keep local communities updated. We're continuing to support Engineering Positive Futures and have set up online training sessions as part of the Adult Skills programme. The sessions provide local unemployed people with skills and qualifications to help them find new jobs.

Read on to find out how it's all taking shape and to see what's coming next.

James Goode
Project director

Supporting communities during construction

We've had to postpone our scheduled programme of meetings and briefings with local residents, businesses and elected bodies due to Coronavirus.

We want to continue to talk to our local stakeholders and keeping residents and businesses up to date with our activity remains a priority.

We've been meeting virtually with parish councils and we've set up a community portal on our project website to help people easily access information on all stages of our project. We're also looking at ways we can hold socially-distanced meetings for those who feel more comfortable talking face to face.

Before any work starts, we write to local residents to let them know what we are doing.

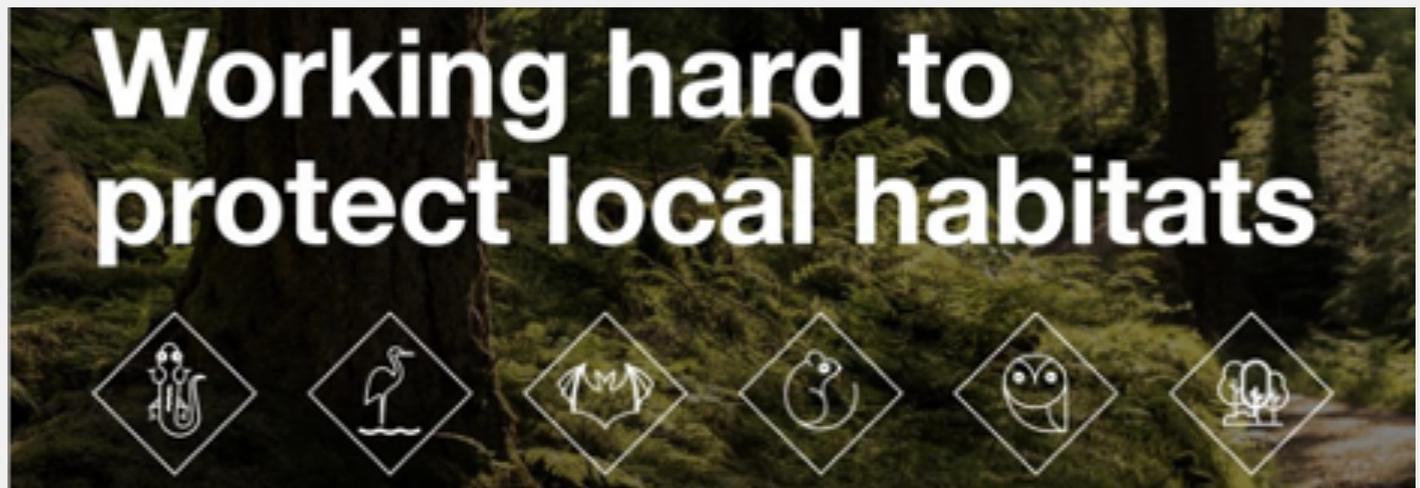
Our community relations team remains on hand 24/7 on **800 377 7347** to answer any questions or concerns. Or you can email us anytime on hinkleyconnection@nationalgrid.co.uk

When the restrictions are lifted, we will reschedule those meeting to provide updates on our progress during this challenging time, and talk through what's next.



Local resident, Reggie (age 2½) keeps a watchful eye on progress in Nailsea

Celebrating World Environment Day



The theme of World Environment Day on 5 June 2020 was biodiversity. And with more than one million plant and animal species facing extinction, there has never been a more important time to focus on the issue of biodiversity.

Teams from National Grid's Hinkley Connection project are working hard to make sure habitats and plants can thrive in the areas they work in. Some of our actions over the last 18 months include:

- A £20,000 community grant award to Bristol Avon Rivers Trust and Somerset Wildlife Trust's year-long study into the effect of American Mink on native water vole populations in Somerset.



Installing owl boxes in Portbury Wharf Nature Reserve

- As part of preparation work for the installation of underground cables between Nailsea and Portishead, more than 350 great crested newts and 1000 smooth newts have been relocated to safe areas.
- Four new barn owl boxes have been installed at Portbury Wharf Nature Reserve near Portishead.
- 2400m of bat flyways have been installed where hedgerows have been disturbed, maintaining habitat connectivity for bat roosts and protecting Somerset's 16 species of bat.
- National Grid has partnered with University of West of England (UWE) to fund a full-time PHD to research the most effective ways of mitigating construction impact on bat populations. Jack Hooker will be the project's 'batman' on the project.

His findings will help inform future construction projects and help local planning authorities.

- We installed a specially designed 'tilting weir' in Tickenham to raise water levels to encourage wading birds to nest and breed.
- Working with landowners within 3km of the cable route, we have planted more than 330 trees, more than 2800 linear metres of hedgerow and 880 square metres of woodland so far. Any trees or hedges removed as part of our works will be replaced at a ratio of 4 to 1 along the route.

Simon Hunter, Head of Operations at Bristol and Avon Rivers Trust said: "We are pleased to be working in partnership with National Grid and Somerset Wildlife Trust to monitor the number of American mink throughout the River Chew catchment and Avalon Marshes.

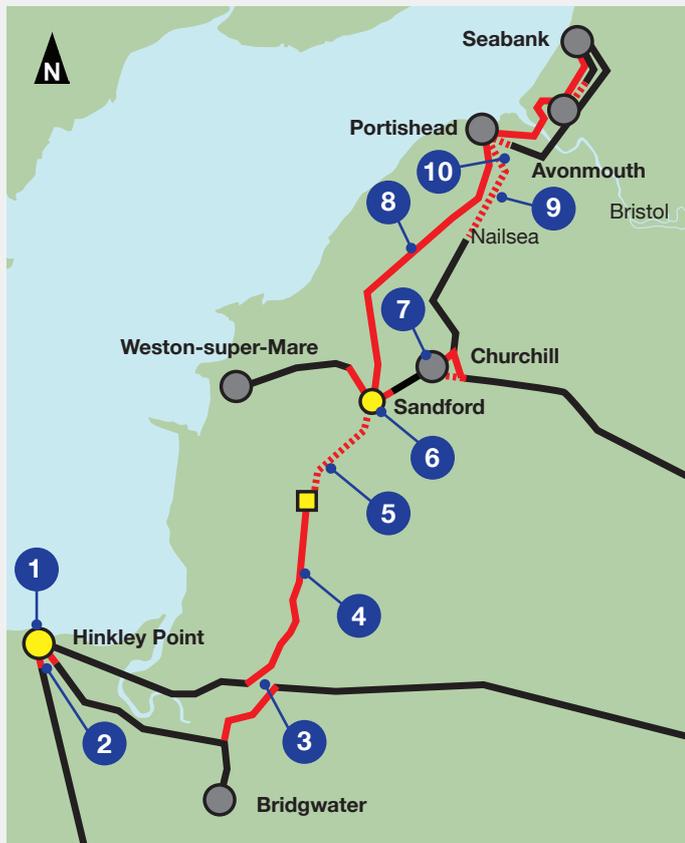
"The results of the study will help us develop a programme to remove mink from the area. As well as working towards increasing populations of water vole, removing American mink from the ecosystem, is likely to help increase populations of other native species, including fish and nesting birds."

Leading UK bat expert, Dr Paul Lintott who is supervising the PHD project says, "This is an exciting opportunity for us to work with industry to ensure that our research produces timely and useful applied outcomes. Bats are vital for maintaining the health of our ecosystems in the UK, yet mitigation work is often costly, time-consuming and its effectiveness is rarely tested. This innovative project will therefore provide greatly enhanced confidence that future conservation strategies for bats are cost-effective, reliable and evidence-based."

James Goode, Hinkley Connection Project Director said: "Minimising our environmental impact and supporting wildlife and habitats on and around our infrastructure is a crucial element of the Hinkley Connection Project and I'm delighted the work we are doing continues to promote biodiversity and its importance."

Live projects update

Along the route



1 Shurton substation - celebrating over a year of perfect safety days

We're continuing to make good progress with the new substation to connect EDF Energy's new power station to the grid. We're on target for when EDF Energy starts testing their equipment. The new nuclear power station will generate enough low-carbon electricity for around six million homes.

Connecting Hinkley Point C will make a major contribution to the UK's move to reduce carbon emissions. The electricity generated by its two reactors will offset nine million tonnes of carbon dioxide emissions a year over its 60-year lifespan.

We appointed Linxon as the principal contractor to build the new National Grid substation at EDF Energy's site. In April, Linxon reported that the Shurton site had achieved a year of continuous 'Perfect Days' on site. A Linxon 'Perfect Day' is recorded when no safety injury, security event or environmental release has occurred.

"Linxon Perfect Days recognise the efforts that our teams put into ensuring that people and our environment remain unharmed. The main reason why

this has been achieved is because of the consistent focus from the Shurton team on maintaining high Quality and Sustainable standards on site," says Claire Warman, UK HSE Manager for Shurton.



Linxon staff celebrate over 400 'perfect days'

2 & 3 Surveys near to existing pylons

Over the next six months, we will continue to survey the land and ecology near the existing overhead lines.

In the Hinkley Point area, we will remove some existing pylons and build new ones to connect into the new Shurton substation.

At Bridgwater Tee, this is where the new T-pylons will connect into the existing overhead line on Horsey Level.

4 Work starts along the route of the new T-pylon

It's nearly nine years since the innovative T-pylon design scooped first prize in a competition to find the next generation of electricity pylons. Danish engineering firm Bystrup beat 250 rivals to win contest organised by the Royal Institute of British Architects.

In May, work finally started in Somerset to build the first operational T-pylons in the world.

Our first activity is building a temporary haul road and the road access along the route of the pylons. Once built, the haul road will reduce the amount of construction and other project traffic on local roads.

When we are working on public highways we will need to put up traffic lights or close narrow roads to keep everyone safe.

We've already completed work to build a road access south off the A38 near Rooks Bridge and on Causeway in Woolavington.



We've completed work to build the road access south off A38

The table below show where we are currently carrying out work and all the locations where we will build haul road access and crossing point along the route.

Location	Parish	Scheduled dates	More information
Pill Road	Rooks Bridge	13 July to 15 October	Road closure
Butt Lake Road	Mark Causeway	13 July to 9 August	Road closure
Burtle Road	East Huntspill	10 August to 11 September	Road closure
Factory Lane	East Huntspill	August TBC	Traffic lights
B3141 The Causeway	Woolavington	1 to 30 September	Traffic lights
A39 Puriton Hill	Puriton	1 to 30 September	Traffic lights
Country lane south of Southwick Farm	Southwick	1 to 30 September	Road closure
Vole Road	Mark	1 October (TBC) to 1 November	Road closure
A39 Bath Road	Bridgwater	1 October to 1 November	Traffic lights
Southwick Road	Southwick	1 October to 1 November	Road closure
Woolavington Road	Woolavington	October 2020 to November 2020	Traffic lights
Northwick Road	Mark	November to December 2020 (TBC)	Road closure
B3141 The Causeway	Woolavington	December 2020 to January 2021 (TBC)	Traffic lights

Please note these dates may change at short notice.



Once we've completed the road accesses, we start to build the construction haul road

We recognise this work will cause delays to journeys and we're sorry for any inconvenience. We're working closely with our contractor, Balfour Beatty, to reduce disruption as best we can and aim to complete the roadworks as quickly as possible.

Before work starts, we will write to nearby residents and keep parish councils updated. More information, including detailed information on locations and timings for our roadworks, can be found on our project website www.hinkleyconnection.co.uk/in_your_area or by calling our community relations team on **0800 377 7347**.

5 Major Mendips milestone in sight as haul road nears completion

In August, the two sections of haul road north from A38 and south from A368 - will meet to complete the 8.5km carriageway. Once in place, the majority of construction traffic for the Mendips underground cables will come in directly from the M5 at the A38 entrance. This will greatly reduce the number of HGVs travelling through local villages, including Lower Weare, Cross, Churchill and Sandford.

We are now installing underground cable ducts and joint bays. For the majority of the route we will dig trenches for the ducts. In sensitive areas, including under main roads, we will use horizontal directional drilling (HDD) to push the ducts through the ground.



HDD machine for drilling under roads and rivers

We had hoped to use HDD to install cables under Webbington Road and Max Mill Lane, but following detailed surveys, it became clear that we would not be able to in the space available. Instead, we will need to dig cable trenches. Both roads are very narrow, so we need to close the roads to traffic to keep everyone safe. We've agreed the following dates with the local highways authority:

Location	Closure date
Webbington Road	29 July to 11 September
Max Mill Lane	3 August to 11 September

Please note these dates may change at short notice.

We've put up advance closure notices to alert road users and diversion signs for motorists. The official diversion routes can be seen [here](#) on our project website.

We know Webbington Road is a popular walking and cycling route and Balfour Beatty will maintain pedestrian and cycle access along Webbington Road. We will escort people through the working areas during the day and leave a safe walkway when we are away from site. Cyclists will need to dismount.

Max Mill Lane is too narrow for us to maintain a safe walkway, but pedestrians will be able to use the public footpath that runs parallel to the lane.

6 Sandford substation build continues

Our contractor, Siemens, started work to build the new substation in April. We're sharing the temporary haul road built for the underground cable's installation to access site.

To reduce lorry deliveries, we're using an innovative new material called Sureground for the hard-standing area and a section of the haul road. The Sureground solution is mixed on site with existing sub soil and reduces the amount of aggregate needed for construction.

Siemens are carrying out earthworks and building the foundations for the main substation buildings. We will start to install electrical equipment and the new electricity transformers next year.

When the substation is operational, we will be able to take down existing pylons owned by Western Power Distribution (WPD) – including the line that currently crosses the Mendip Hills down to Bridgwater.

7 Churchill substation work complete

WPD has completed the work to upgrade the existing substation and modify the electricity network to the east of the substation. The haul road and temporary entrance used during the construction were removed and the land reinstated back to its original use.

This is a major milestone in our programme to build the Hinkley Connection Project. The upgrades reinforce the local electricity network. They are part of the work needed for us to remove the existing WPD pylons from Bridgwater to Avonmouth.

8 Surveys continue for new overhead line from Sandford to Avonmouth

We're carrying out ecology and ground investigation surveys along the route of the new overhead line that will run from the north of the Mendip Hills to Avonmouth.

The findings from these surveys will help us plan the final designs for the overhead line.

We'll start construction work next year. Over the next few months, we will carry out ecological mitigation, clear vegetation and some hedgerows, and erect stock fencing along the route in preparation.

As the works progress, we'll provide more information on the construction programme.



We will use T-pylons for most of the route

9 Installing cable ducts between Nailsea and Portishead

Our contractor, Murphy, has completed work to build temporary traffic access points and haul roads along the route of the underground cables between Nailsea and Portishead. They are now digging trenches and laying cable ducts along the route before we start to install underground cables towards the end of the summer.

We are progressing well with our work in the west end of Nailsea. So far, we've installed ducting in the fields adjacent to Engine Lane and along the lower end of Hanham Way, near our temporary site entrance. By mid-August ducting along Blackfriars Road and Hannah More Road will be finished and we will continue along Queens Road towards the four-way junction at North Street. We will need to put up traffic lights while we carry out this work.

When working on the public highways we need to manage traffic to keep everyone safe. We recognise the disruption our roadworks are causing and we are working closely with Murphy to reduce this as best we can.



In Nailsea, we're working very close to peoples' homes

We're currently working in Caswell Lane installing cable ducts under the M5. We expect to reopen the lane in early September.

In August our team will be in Whitehouse Lane. We had hoped to install the ducts without closing the road but surveys have shown that we need to dig deeper trenches across Whitehouse Lane than we originally expected. We will need to close a section of the road for approximately two weeks from 19 August. We know the closure will cause disruption and cause delays to journeys. We are sorry about this and we'll work with our contractor to reopen the road as quickly as possible.

During September, we will return to Hanham Way and will need to close the upper section of the road

towards North Street while we install the cable ducts and joint bays.

Good weather is helping us to make good progress along the more rural sections of the route and in some places, we've already installed cable ducts and have started to reinstate the land.

10 Major milestone achieved at Avonmouth

We started work in March 2019 to modify the substation and replace a section of overhead lines going north out of the substation with underground cable. This work, carried out by WPD and Balfour Beatty, has just been completed – right on schedule.

It has involved:

- Building a construction compound to the east of the substation
- Building temporary entrances and an access road to allow construction traffic to enter the undergrounding site from the local highway
- Laying underground electricity cables
- Constructing a cable sealing end (CSE) pylon to connect the new underground cable to the overhead line
- Removing seven existing pylons, involving two short-term closures of the M49
- Changes inside Avonmouth substation to enable the connection of the new underground cable.

Completing this on time is an important milestone for the project.

The construction compound near St Anthony's Park and part of the haul road will now be removed and the land reinstated. We're keeping the road access and some of the haul road in place for when we come back to build the new overhead line connection.

Ever wondered how pylons are taken down? Read more on page 7.



Taking down pylons over M49

Going...going...gone – taking down pylons

We've just completed a major milestone in Avonmouth to remove seven pylons and replace them with underground cables. We needed to clear the way for the new overhead line connection between Sandford substation and Seabank substation.

1. When we take down pylons, the first step is to remove the cables.



2. Then we attach a winch to the top of the pylon and cut each of the four legs.



3. We use the winch to pull the tower carefully down to the ground.



4. We cut the steel frame into sections and take it away in a skip for recycling.



5. Lastly, we remove the base and make the area good for use again.



Engineering positive futures

Celebrating International Women in Engineering Day

Tuesday 23 June was International Women in Engineering Day and National Grid is sharing the stories of some of our women engineers to help encourage others to consider a career in the industry.

Wherever possible, we want to employ local people on the project and Lucy Fox-Russell is from Bristol. She is a project supervisor trainee on the Hinkley Connection Project, which will connect six million UK homes and business to low carbon energy when it completes in 2025.

Lucy said: "I'm from Bristol so being part of the Hinkley Connection Project is great for me as I've grown up hearing about when Hinkley Point C might be built."

"People might still think that all engineers are men in hard hats building bridges and I think there is a general lack of awareness of the different engineering disciplines and career routes available. I joined National Grid after completing an apprenticeship in mechanical and electrical engineering. The skills you acquire in an engineering course are in demand across lots of industries. The employment rates for people with engineering apprenticeships and degrees are very high. It's definitely worth checking out the options."

"As an engineer on this project I know I am making a real difference. I'm working every day to improve the UK's infrastructure by helping to connect millions of people to low carbon electricity. It's something I'm very excited about and very proud of."

Find out [more information on STEM careers with National Grid](#) or visit the [National Grid website](#) to explore the diverse range of opportunities available within the construction and infrastructure industry.



Lucy Fox Russell: one of our team of engineers building the Hinkley Connection project

Community matters

Providing practical help for schools

As part of our engagement with schools, we contact those closest to the route of the new connection to highlight some of the initiatives we've set up to support local schools and how headteachers can access them. These include our curriculum-based Energy and You and Smartbuild workshops and our education and community grant schemes.

When we approached Avonmouth C of E Primary School, the staff highlighted a shortage of up to date laptops for pupils and wondered if National Grid could help.

Avonmouth school is close to our works and we were keen to do all we could. Approaching contacts across the business, we were able to source 40 laptops and have them installed with Windows 10 and MS Office. Buying these laptops would have cost the school £28,000.

Jackie Hall the School Business Manager said "We were delighted to receive the offer of laptops for the school. The donation will enable our pupils and teachers to fully access the computing curriculum."

National Grid Hinkley Connection project shortlisted for major community award

The UK Social Mobility Awards 2020 have announced that the Hinkley Connection Project is a finalist in the Community Programme of the Year category. The awards recognise the achievements of businesses and organisations across the country in their work of advancing social mobility. We are very excited to be shortlisted for our Adult Skills, Education and Community Grants programmes.

The UK Social Mobility Awards is organised by leading social mobility charity Making The Leap, who have supported almost 100,000 young people from disadvantaged backgrounds since 1993.

They share our ambition that social mobility becomes embedded within business to ensure every child in the country has a chance to succeed, no matter the income of their parents.

You can find out more [here](#) on our work to help schools and communities.

Contact us

For further information please contact our Community Relations Team

hinkleyconnection@nationalgrid.co.uk
www.hinkleyconnection.co.uk
 0800 377 7347 (24 hour)
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