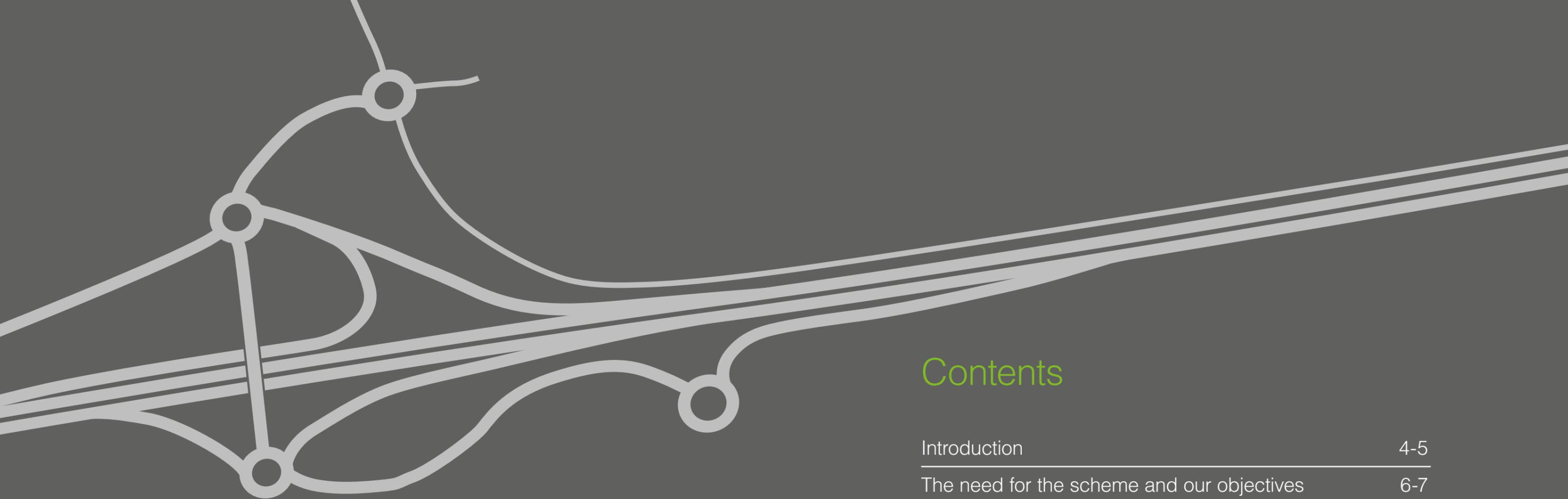


Delivering the benefits

A14 Cambridge to Huntingdon
improvement scheme





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Introduction

The A14 Cambridge to Huntingdon improvement scheme is the first scheme of its size to be delivered since Highways England was created in 2015.

As such, it's been the company's flagship scheme for the first ever roads delivery period (2015-20) and has brought about a high level of positive change.

On the A14 project, we've pioneered a new, much more effective way of managing a complex road scheme through the creation of an integrated delivery team, which included Highways England and our designers and contractors. This helped us identify the best person for each job within the team and work together to deliver more, faster for our customers. As a result, we were able to open the new road for traffic eight months earlier than planned.

We've used innovative as well as more sustainable and considerate construction methods to deliver our scheme, minimising the impact on the surrounding road network and providing better environmental outcomes for the project, which aims to leave a positive legacy.

We've worked closely with customers and stakeholders during construction, to keep them informed, involved and help them plan ahead.

Yes, we encountered challenges along the way but we've made sure the lessons learned will help Highways England deliver future projects better and more efficiently.

I'm immensely proud of our achievements and I'd like to thank each and every one of the more than 14,000 people who've worked on the project – from the various teams based at one of our site offices to our supply chain, who provided materials and workforce – as well as all the drivers and local residents living along the scheme for bearing with us while we delivered this brand new road for them. I hope everyone enjoys using their new section of A14 in Cambridgeshire, whether they are transporting goods across the country, travelling to work, or on their way to see loved ones.



David Bray
A14 Cambridge to Huntingdon improvement scheme
Project Director, Highways England

The need for the scheme

The A14 is a critical link between the eastern ports and the north and west of England, particularly for businesses and freight. It is of local, regional, national, and international significance.

The section of the route between Huntingdon and Cambridge carries a high level of commuter as well as long-distance traffic and provides a strategic link between the A1 and the M11 motorway.

It carries around 85,000 vehicles per day, 26% of which is HGV traffic (against a national average of 10%). The old route was frequently congested and traffic was often disrupted by breakdowns, accidents and roadworks.

Our objectives

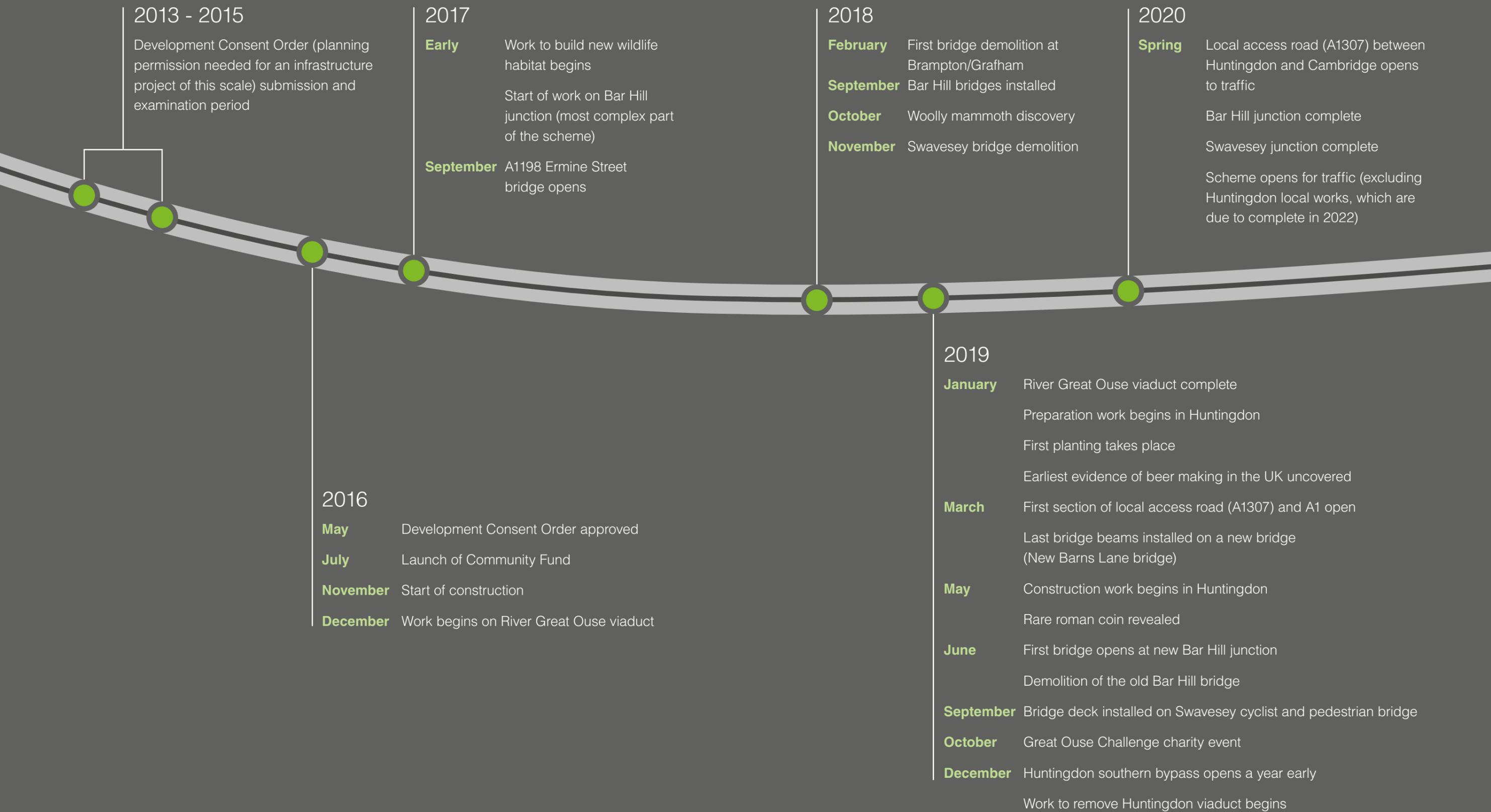
The A14 Cambridge to Huntingdon improvement scheme was developed to:

- combat congestion
- improve safety
- unlock growth
- connect people
- leave a positive legacy

It cost £1.5 billion, including £100 million funded by local partners, and is set to bring nearly £2.5 billion of benefits to the UK economy.



Building the new A14



The size of the challenge



10 million m³ of material (almost four times the Great Pyramid of Giza)

A huge amount of material was required to build the scheme, including a total of 5 million m³ of general fill and 3 million m³ of sand and gravel, which were sourced locally from seven borrow pits. We removed about 1 million lorry journeys from the road network by building haul roads across the scheme. These allow construction traffic to travel around the site without using local roads.

5 miles of new local roads

We built new local roads connecting Swavesey to Dry Drayton and Dry Drayton to Girton.



14,127 people

A scheme of this size creates work for thousands of people during its lifecycle.



14 million hours worked

The amount of work required to build the scheme was equivalent to one person working for 1598 years.

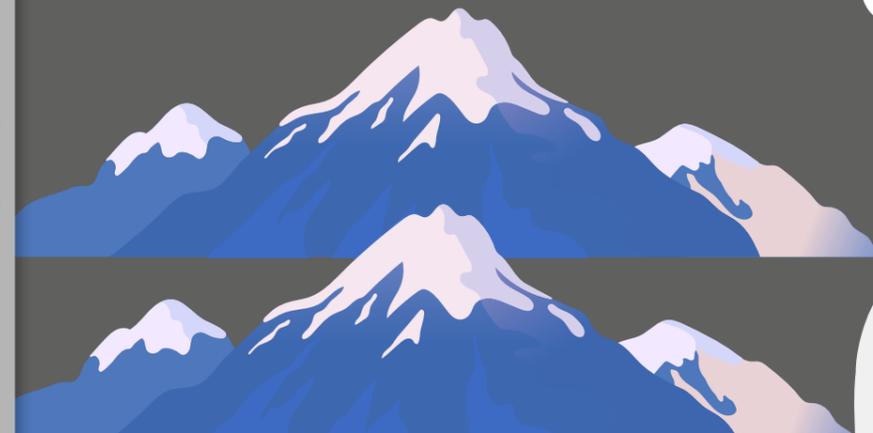
34 new bridges and structures

We've connected a number of villages to each other, to the new A14, and built the road over railways and waterways.



12 mile Huntingdon southern bypass

That's a new A road with a length that is twice the height of Mount Everest.



126 new lane miles

It's a big addition to the road network, equivalent to half the length of the Grand Canyon.

300 miles of utility cabling

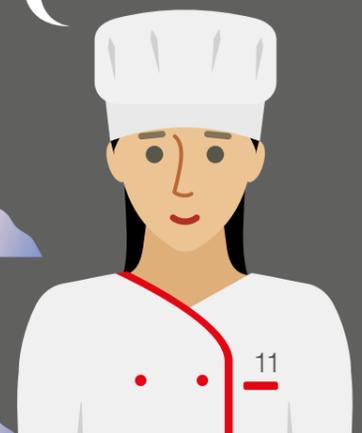
We've added cabling to provide electricity and communications for the new A14.



22 different departments

The roles of people working on the project included: commercial, engineering, environmental, finance, health, safety and wellbeing, project management, traffic management, operations, planning, procurement, quality, stakeholder engagement and communications, surveying, utilities, security and facilities management.

Over 85,000 meals served on-site



Considerate construction: Minimising our impact during construction

During construction, we worked hard to reduce our impact on local communities and the environment.

We used considerate construction methods including:

- sourcing 80% of the building materials locally
- using haul roads throughout the scheme
- fabricating bridges and bridge components on-site and installing them when ready

This helped us to:

- remove construction traffic from the congested road
- reduce our carbon footprint
- reduce the amount of closures needed

We further reduced the carbon footprint of the project by using:

- 100% renewable energy sources for our four construction compounds at Brampton, Ermine Street, Swavesey and Milton
- untreated water in construction activities, to minimise the impact on the local drinking water supply
- hybrid generators, solar powered floodlights and hydrogen powered vehicles to reduce our use of fossil fuels

We took a community-focussed approach to our communications and engagement through:

- dedicated social media and website pages
- regular newsletters and coverage in the media
- face-to-face events, including many using the first Highways England mobile visitor centre, which held over 70 events and welcomed almost 7,000 visitors.





Meeting our objectives:

Combatting congestion

The new A14 provides 21 miles (with 2, 3 and 4 lane sections) of best-in-class A-road.

A new local road, the A1307, was built alongside the new A14 to allow local people to make local journeys, ensuring that the right traffic uses the right roads.

We've added 126 new lane miles to the network and improved several junctions, including Bar Hill and Swavesey, to provide better capacity at these locations. Improvements at Girton and Brampton Hut also help to improve capacity by allowing free-flow movements to existing roads.

The new road has been designed to cut peak time journeys by up to 20 minutes and reduce incidents by 3,000 over the next 60 years.

Improving safety

The new A14 helps to improve safety by separating strategic road traffic from local traffic, including pedestrians and slow-moving vehicles (cyclists, horse riders, agricultural vehicles, mopeds and horse drawn vehicles).

The road also includes the latest safety features, such as:

- incident management equipment including electronic messaging signs and CCTV
- emergency refuge areas for those with urgent vehicle problems
- variable speed limits to steady the flow of traffic and reduce 'stop-start' traffic jams
- red X signs to manage traffic during vehicle incidents and roadworks

Highways England produces Post Opening Project Evaluation reports following the opening of a road scheme. These are published one year and five years after the scheme opens and will examine how the scheme is meeting all of our objectives, including our objective to improve safety.

Meeting our objectives: Unlocking growth

Long term economic growth

The opening of the new A14 Cambridge to Huntingdon scheme supports the growth of the national economy by enabling the efficient movement of people and freight from our largest ports to other parts of the country.

The population of Cambridgeshire is expected to rise by 24% between 2011 and 2031, and employment growth is expected to rise by 16% in the same period.

The wider Cambridgeshire economy, which was frustrated by a lack of housing and constraints on movement caused by road traffic congestion, now has a road that will help unlock the development of 23,000 new homes and improve access to labour markets.

Goods will now be transported much more efficiently across the country, saving on average £70 million per year to the UK economy.

“The Freight Transport Association and its members are thrilled to see the upgraded A14 Cambridge to Huntingdon route is now open. This stretch represents an important strategic link for freight transport, connecting the ports in East Anglia with the Midlands and the rest of England; logistics businesses will benefit hugely from faster and easier journeys.

“The economy relies on efficient and reliable road networks to keep goods moving across the UK, but for too long, poor road connectivity in the heart of England has impacted businesses and slowed economic growth; this will all change with the opening of the new A14 Cambridge to Huntingdon stretch.”

Natalie Chapman

Head of East of England, South of England, and Urban Policy at Freight Transport Association (FTA)



K2 Recovery provided colouring sheets to families who had broken down.

Supporting small and medium businesses

Locally, we sourced over £120 million of goods and services for the scheme through over 50 businesses.

Kettering based **K2 Recovery** provided free vehicle recovery for breakdowns and incidents across the A14 Cambridge to Huntingdon improvement scheme. The company is very customer focussed, understanding that vehicle recovery is a very small part of their job, and the most important role they play is looking after people who might be stressed, late or worried about the breakdown.

The organisation's grown from a small team of 16 to over 50, and the vehicle fleet has also grown from 10 to more than 60 vehicles.

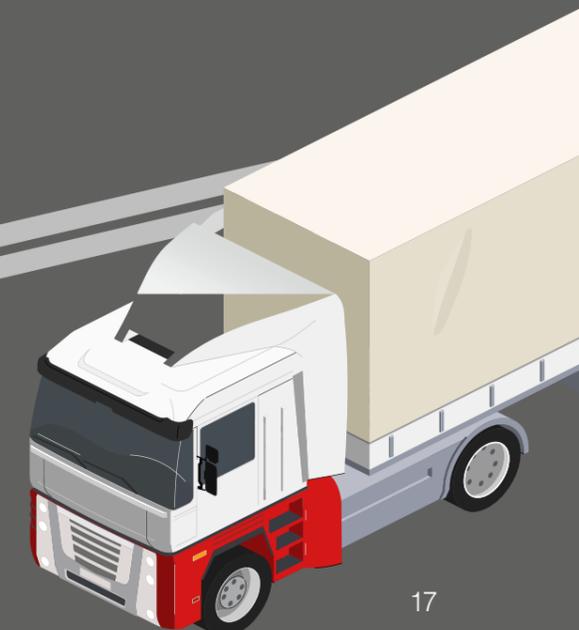
For further examples of how we supported local businesses during construction, please visit www.highwaysengland.co.uk/A14C2H

“When this opportunity arose we didn't think we'd be successful because of the size of the contract and the size of us, but we went for it, gave it our best shot and here we are!

“Highways England and the A14 team helped us get our brand out there and that's probably the key thing for us.”

David Bown

Company Director of K2 Recovery



Meeting our objectives: Connecting people

Cyclists, walkers and horse riders can now enjoy approximately 24 miles of new routes, which were included in the scheme. These are highlighted below.



This includes:

- approximately eight miles of new route between Cambridge and Fenstanton, allowing onward access towards Huntingdon via existing routes
- over seven miles of connections in and around the upgraded A1 near Brampton, Buckden and Alconbury
- approximately nine miles of other connections around the scheme

Meeting our objectives: Connecting people

The A14 Community Fund

Our £450,000 Community Fund supported 55 local initiatives focusing on leisure, skills, safety improvements, flood alleviation and communal facilities. This map shows a few examples of the projects we've funded.

- 1 **Alconbury:** An artist worked with the community to update five murals in the primary school hall.
- 2 **Brampton:** The Wildlife Trust for Bedfordshire, Cambridgeshire and Northamptonshire Ltd installed a new welcome barn in Brampton Wood nature reserve.
- 3 **Buckden:** A circular walking route was established and advertised to encourage greater use of Buckden's footpaths.
- 4 **Grafham:** We contributed toward the purchasing of a building to house a new community pub.

- 5 **Huntingdon:** We supported Huntingdonshire History Festival, promoting the history of the area.
- 6 **The Offords:** Cambridge Curiosity and Imagination ran a creative programme with the local community to explore local spaces.
- 7 **Godmanchester:** Groundwork East helped people with learning disabilities to develop employment skills.
- 8 **Hemingfords:** Bus stops were built on the A1123.
- 9 **Fen Drayton:** Outdoor activity equipment was purchased for the local community.

- 10 **Swavesey:** Fen Edge Runners set up local running groups aimed at complete beginners.
- 11 **Lolworth:** Resurfacing of Church Lane to encourage walkers and make it safer for those in wheelchairs and mobility scooters.
- 12 **Bar Hill:** A play area was built for use by school pupils and the wider community.
- 13 **Madingley:** Community speedwatch equipment purchased.
- 14 **Histon and Impington:** A music and film programme was funded to help young people express themselves.

- 15 **Histon and Impington:** A flood alleviation project was set up.
- 16 **Cambridge:** Charity and arts centre Rowan worked with 68 student artists with learning disabilities to explore the connections between communities and the A14 through visual art.
- 17 **Cambridge:** Acting Now worked with people experiencing mental health issues to create and perform a theatre piece about life around the A14.
- 18 **Cambridge:** Cambridge Cyrenians provided support for 40 homeless people to access employment, education, training and volunteering opportunities.



Meeting our objectives: Connecting people

Community Fund case studies



Huntingdonshire History Festival

We helped to fund the second annual history festival for Huntingdonshire, allowing the month-long festival to grow to over 150 different events and attract around 10,000 visitors (more than double the previous year).

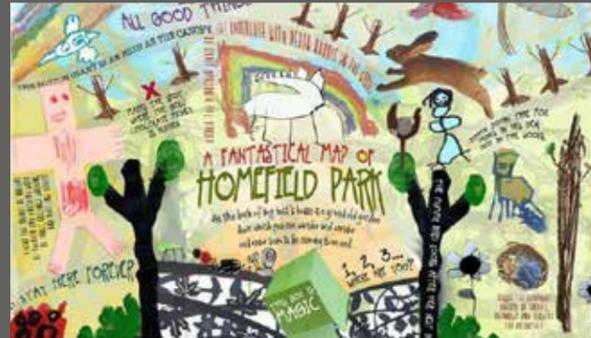
The festival included two re-enactments, various creative activities for people of all ages and several historical music events.

Donald* was encouraged to leave his home for the first time since the death of his wife, attending a talk on the Spy Centre in Godmanchester, where his wife had worked.

Donald said: "It was good to get out for the first time in months and I met so many lovely and interesting people."

The organising team went on to win an annual tourism award for doing the most to attract tourists to Huntingdonshire.

**Names have been changed*

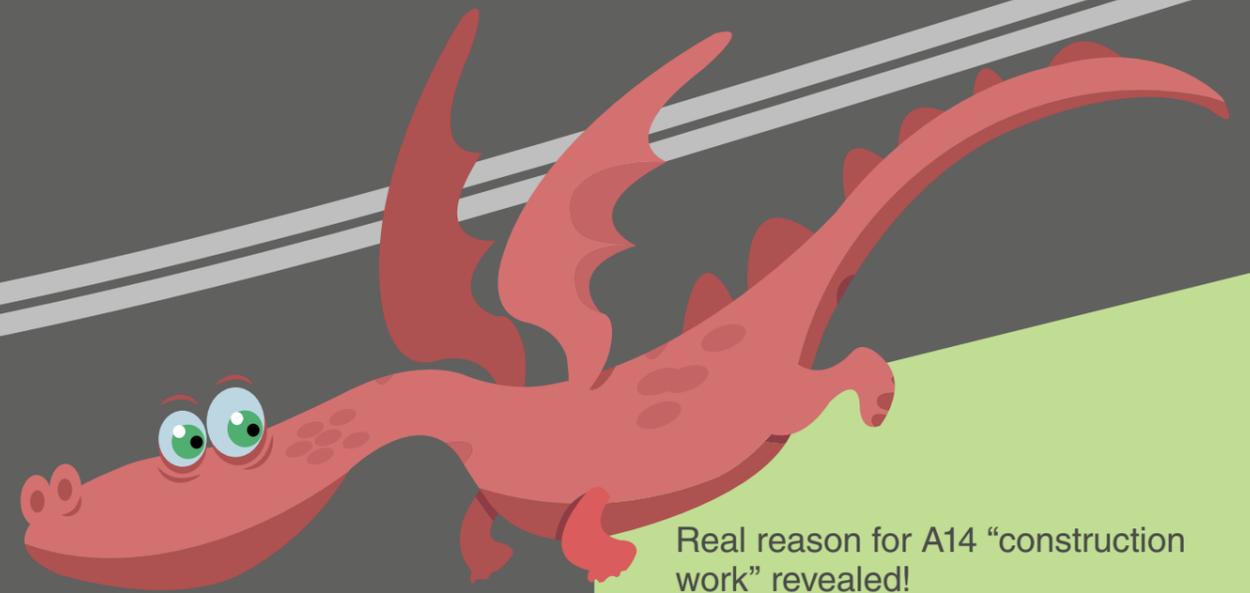


Cambridge Curiosity and Imagination

With support from the Community Fund, Cambridge Curiosity and Imagination ran a series of art workshops and community events aimed at encouraging local people to engage with and help protect wildlife along the A14 in Histon and Impington.

273 people took part in a variety of workshops to discover new spaces, protected species and new habitats in intriguing ways. The fantastical map shown above was created by capturing the memories, stories and favourite places of the participants and then compiling this to create a map which tells the wider story of the area and the community that live there.

Four year-old Emma* was involved in the project and eventually got to see her work included in the fantastical map. Her father noticed a considerable increase in confidence levels and her teacher said she was struck by how good Emma became at working with a variety of other people.



Real reason for A14 "construction work" revealed!

Every witching hour, when the A14 has "construction work" on it, all the street lamps glow ever so slightly brighter and the sensors emit a thin, eerie yellow beam towards the heavens. All the street lamps involved are changing to portal mode, these streetlamps will stay like this from 12am to 4am. At 1.30am near Cambridge, these street lamps (which are now magical portals) will teleport in witch and wizard families.

These families (which are not wicked or evil) have come to watch the dragon races and the A14 is the racetrack. From mud dragons to molten dragons, most dragon types are racing. If you look carefully, you might see a micro dragon taking part with no rider! The reason they use the A14 is the fact it's long and straight, but these are the first races for 30 years.

Don't be alarmed if a streak of light goes flying past your car - it could be a gold medal dragon racer!

William Langridge (then aged 9)

A14 Voices: stories inspired by the A14

University of Cambridge Institute of Continuing Education received funding to hire an A14 Writer in Residence encouraging road users to engage with their surroundings through creative writing. Inspired by this project, nine year-old William Langridge wrote this fantastic story:



Meeting our objectives: Creating a positive legacy

Skills and education

We worked with local communities to pass on our expertise by encouraging young people to consider construction and engineering as an exciting career choice, and by helping unemployed people into construction jobs.



We shared our knowledge and passion by welcoming over 450 people on our training programmes, including:

- 149 apprentices
- 75 work experience placements

We attended over **260** events at local schools to talk about careers in construction.

The Apprentice: Q&A with James Stewart, Highways England



Q: How did you end up working as an apprentice for Highways England?

A: In college I studied sport and hoped to get involved in the nutrition industry, but that changed after looking at apprenticeship options on the Government's website. An opportunity with Highways England caught my eye because it was the only project management role going. The apprenticeship application process was quite long. I applied in early September, interviewed in late September then started at the beginning of November.

Q: What kind of work do you do as a Highways England apprentice?

A: I work for the project management team on the A14 scheme. I spend most of my time on the Huntingdon Town works, engaging with stakeholders and customers. I've also worked with the handover and closeout team, ensuring that the completed roads are handed over to the operations team at Highways England, for the upgraded A14, or to Cambridgeshire County Council for the local roads (A1307 and A141).

Q: What's the most valuable thing you've learned working on the project?

A: The most important thing that I've learned through my apprenticeship is to believe in myself. It can be intimidating to be challenged by stakeholders, but through experience and knowledge gained working on the project I've built up my confidence in working with them.

Q: Was there anything unexpected about your experience as an apprentice?

A: Coming straight out of college I wasn't expecting to make friends in work, however the kindness, advice and support shown by many people on the project has led me to have a great network of colleagues and friends.

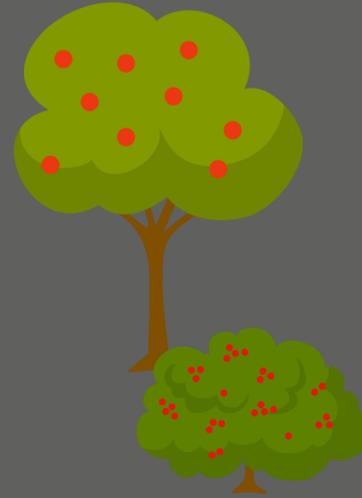
Q: What does the future hold for you?

A: I hope to lead and manage my own project one day. I feel that working on the A14 as my first project has instilled a high standard for ways of working and good values to take with me to future projects.

Meeting our objectives: Creating a positive legacy

Environment

Our overall aim was to not only protect species along the route, but to provide enhanced habitat for many of the more vulnerable species.



270 hectares of new habitat

More than a square mile of new habitats have been created for local wildlife, including 24 wildlife tunnels. Across the scheme, we've planted 40 different native tree and shrub species, replacing the trees we've removed at a ratio of two to one. It will take about 15 years for the plants to mature and fully realise our objectives of nature conservation and biodiversity, but we expect wildlife to begin using it much sooner than that.



Great crested newts

have newly created habitat including ponds, log piles and safe spaces for them to hibernate during winter.

Dormice

have newly created hedgerow of native tree and shrubs to provide a corridor for them to forage and commute to new habitats.

Birds and bats

have gained enhanced habitats with 360 bat boxes, 90 bird boxes (for smaller species, such as songbirds), 24 swift boxes, 22 barn owl boxes, and 24 kestrel boxes.

Fact: Barn owls live in grassland areas, heath and moorland, farmlands, wetland and coastal areas.

Toads

now have new habitat, which includes grasslands and ponds.

Water voles

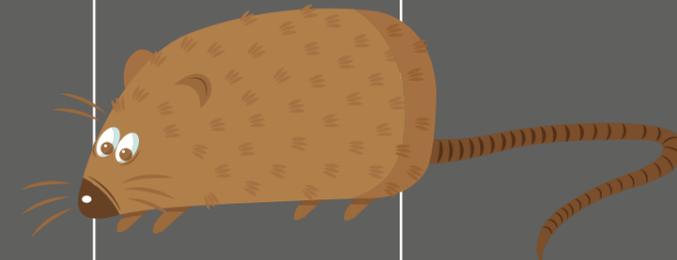
were captured and rehomed to five new habitats, where they are thriving.
Fact: Water voles live along rivers, streams and ditches, around ponds and lakes, and in marshes, reedbeds and areas of wet moorland.

Insects

have new loggeries which are made from between five and 30 logs (with bark retained) partly buried vertically in the soil at different heights. They provide habitat for deadwood beetles and other invertebrates and fungi.

Reptiles

large logs provide new habitat and basking areas, while hibernation areas and log piles have been reinstated along road verges.



Meeting our objectives: Creating a positive legacy

Archaeology

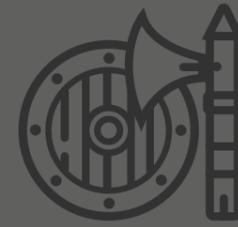
This was the biggest archaeological project in the history of Highways England. We uncovered 6,000 years of human history with finds including Neolithic henges, Bronze and Iron Age burial grounds, Roman and Anglo-Saxon settlements, as well as remains of woolly mammoths and rhinos dating back to the Ice Age.

We worked closely with Cambridgeshire County Council to ensure that areas of archaeological and historical interest were either investigated or preserved. There are still several years of work ahead for a team of up to 30 specialists to record and analyse the material found.

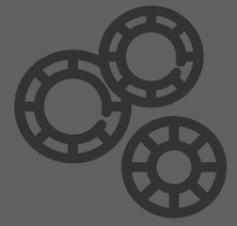
Together with Cambridgeshire County Council and Homes England, we're working to set up a heritage facility to showcase discoveries on the A14, along with existing local collections and finds from Northstowe New Town. Planning permission for the building was submitted in December 2019 and subject to approval, Northstowe Heritage Facility may open later this year (2020).



2 tonnes of pottery



3 Anglo-Saxon settlements



15,000 objects such as coins, broaches and ironwork



over 250 archaeologists at peak



1,678 trial trenches



11 woolly mammoth tusks dating back nearly 40,000 years



3 Neolithic henges between 4 - 5 thousand years old



15 Iron Age and Roman settlements



4 tonnes of animal bone

Meeting our objectives: Creating a positive legacy

Archaeology

Along the A14 Cambridge to Huntingdon improvement scheme, we've uncovered thousands of items that provide a glimpse into 6,000 years of human history demonstrating the food and drink, living quarters, trade roads, arts, and materials used by past civilisations. We've also uncovered the bones of the great mammals that once roamed the land as far back as 40,000 years ago.

This map shows just a few examples of our finds.



Archaeology volunteers at Houghton medieval village



Medusa pendant, Roman (43-400 AD)



Pottery kiln, Roman (43 - 400 AD)



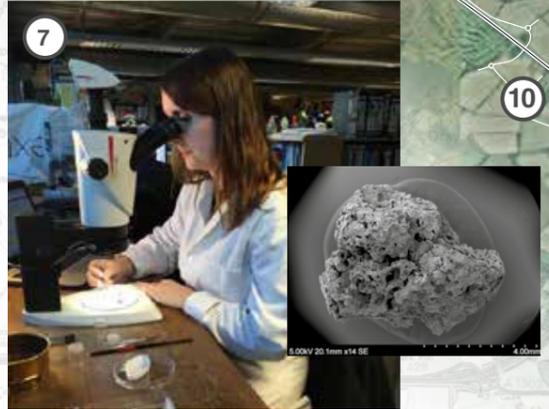
Stone axe, Neolithic (4000 - 2000 BC)



Bone flute, Anglo-Saxon (410 - 1066AD)



Henge, Neolithic (4000 - 2000 BC)



Earliest evidence of beer, Iron Age (800 BC - 43 AD)



Woolly Rhino skull, Ice Age



Woolly Mammoth, Ice Age



Laelianus coin, Roman (43-400 AD)



Weaving comb, Iron Age (800BC- 43 AD)

What's left to do?

Now that the A14 and A1307 are open to traffic, work to finish the foot and cycle paths, and landscaping is being carried out at the side of the roads. We are also working with landowners along the length of the scheme to return land we no longer need and will decommission the site compounds that we've finished using.

The works in and around Huntingdon are continuing. They're an important part of the project, benefitting Huntingdon and residents in the surrounding area by reducing noise and air pollution, and improving development opportunities within Huntingdon. A major part of this work is the removal of the old Huntingdon railway viaduct.

Work to improve Huntingdon includes:

- a new Mill Common link road
- removal of the old A14 viaduct and work around the train station
- a new Views Common link road
- a new Pathfinder link road

Work to build the new Views Common, Pathfinder and Mill Common link roads is well underway. We anticipate that people will be able to start using some of the link roads later this year, although work will not be fully completed until the end of the project in 2022.

Following the opening of the new Huntingdon southern bypass in December 2019, we were able to begin work to remove the old A14 railway viaduct. This is a complex piece of work which required the installation of a protection deck over Brampton Road and the East Coast mainline. We expect the viaduct removal to be complete by autumn 2021.



The A14 scheme was Highways England's first road project of this size. We've pushed boundaries using innovation, and in our engagement with local communities. The lessons we've learned from this scheme will help us to deliver future schemes better and more efficiently.

Now it's open for traffic, the new road will deliver its benefits for many years to come, connecting people to places, people to jobs, and people to people.

We hope this brochure has given you a good insight into the story of the A14 Cambridge to Huntingdon improvement scheme. For more information about the project, and our work to benefit local communities, please visit www.highwaysengland.co.uk/A14C2H.

Thank you once again for your patience and support while we carried out this essential work.

An award-winning team

With thanks to

Our funding partners

Department for Transport
 The Business Board of the Cambridgeshire and Peterborough Combined Authority
 Cambridgeshire County Council
 Huntingdonshire District Council
 South Cambridgeshire District Council
 Cambridge City Council
 Fenland District Council
 East Cambridgeshire District Council
 Suffolk County Council
 Peterborough City Council
 Norfolk County Council
 Essex County Council
 Northamptonshire County Council
 Local Enterprise Partnerships in South East Midlands and East Anglia

Our partners in the A14 Integrated Delivery Team

Atkins
 Balfour Beatty
 Costain
 Skanska
 Jacobs



Highways Magazine
2017



HE Supplier Awards
2018



BIM Show Live
2018



Construction News
2018



Considerate Constructors
Scheme Ultra Site Awards
2018



Chartered Institute
of Procurement and
Supply Chain Awards
2018



The Royal Society for the
Prevention of Accidents
Awards
2018 + 2019



Construction Enquirer
Awards
2018



Institute of Collaborative
Working Awards
2018



Highways England
Supply Chain Awards
2018



Constructing
Excellence Awards
2019



Current Archaeology
Awards
2019



Risk Management
Awards
2019



British Construction
Industry Awards
2019



Considerate Constructors
Scheme Ultra Site Awards
2019



Chartered Institute
of Public Relations
Excellence Awards
2020

In addition to these 25 award wins we were also shortlisted for a further 32 awards, a few of which are yet to be judged.

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